ARKEMA INNOVATIVE MATERIALS FOR A SUSTAINABLE WORLD

UNIVERSAL REGISTRATION DOCUMENT 2023

including the Annual Financial Report

Content

The different parts constituting the annual financial report are identified in the table of contents by the pictogram **|AFR|**

ARKEMA

Universal registration document **2023**

Including the annual financial report

INNOVATIVE
MATERIALS
FOR A SUSTAINABLE WORLD

AUTORITÉ DES MARCHÉS FINANCIERS
AMF

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This English version of the Universal Registration Document in PDF format is a free translation of the official French version of the Universal Registration Document established in XHTML, filed with the AMF on 28 March 2024 and which is available on the website of the AMF, as well as on the Company's website.

MESSAGE

Arkema delivered a solid financial performance in a demanding macroeconomic environment.

Thierry Le Hénaff
Chairman and Chief Executive Officer

Ladies and Gentlemen,

In 2023, Arkema delivered a solid financial performance in a demanding macroeconomic environment and continued to implement its strategy focused on Specialty Materials.

After a record year for the Group in 2022, the operating context was considerably less favorable in 2023, marked by overall weak demand and significant destocking in supply chains. In this more challenging environment, driven by the commitment of its employees and its ability to adapt, Arkema delivered a solid financial performance, with annual EBITDA of €1,501 million, in line with its guidance, an EBITDA margin of 15.8% and excellent cash generation, which enabled to keep net debt slightly below 2x EBITDA. The Group leveraged its balanced geographic footprint, strict price management in a more normalized raw materials environment, and the evolution in its product mix towards higher value-added solutions.

In line with the policy of a gradual increase in its dividend, which the Group reaffirmed at its last Capital Markets Day in September 2023, the Board of Directors decided that it would recommend, at the annual general meeting of 15 May 2024, a dividend of €3.50 per share for 2023, an increase of 3% relative to last year, reflecting in particular the Board's and management's confidence in Arkema's growth prospects.

Moreover, the Group's profile in Specialty Materials was further strengthened last year with the acquisition of 54% of the South Korean company PI Advanced Materials, which specializes in very high performance polymers, namely polyimides. This deal completed Arkema's portfolio of cutting-edge technologies for the fast-growing electronics and electric mobility markets. The year was also marked by the progress of major organic growth projects in Asia, the United States and France, focused on solutions for sustainable development, and which will contribute to the Group's growth over the coming years.

CSR remains at the heart of the Group's priorities, with a strong emphasis on decarbonization

In 2023, the Group further strengthened its commitment to the climate and obtained SBTi validation of its 1.5°C trajectory by 2030 across its entire value chain, thus paving the way for Net Zero by 2050. Arkema thus aims to reduce its greenhouse gas emissions by 48.5% for Scopes 1 and 2 and by 54% for

Arkema unveiled an ambitious new roadmap by 2028.

Scope 3 by 2030 relative to 2019. At the end of 2023, we were on track with this trajectory, and we continue to implement our initiatives to further decarbonize our production, most recently by signing several long-term renewable energy supply contracts in the United States, which will cover 40% of our needs in the region by the end of 2024.

In addition, Arkema maintained very high standards to ensure the safety of the Group's employees, and thanks to everyone's vigilance, the accident rate per million hours worked remained stable at 0.9, a level that positions Arkema among the leaders of the industry.

We also attach great importance to the development of our employees, and we are proud to have been certified Top Employer in five new countries and obtained the Top Employer Europe certification. In addition, our commitment to promoting diversity and equal opportunity is bearing fruit, as the percentage of women in senior management and executive positions now stands at 29%.

Building on its achievements and its numerous initiatives for the sustainable and responsible growth of its activities, the Group continues to be ranked among the best performers in the sector by non-financial rating agencies.

Lastly, like every year, Arkema renewed its adherence to the ten principles of the United Nations Global Compact, on issues including notably human rights, international labor standards, environmental protection and anti-corruption.

Arkema unveiled an ambitious new roadmap by 2028, aimed at accelerating its organic growth

Last September at the Capital Markets Day, Arkema unveiled a new stage of its development and set ambitious medium-term financial targets, with average organic EBITDA growth at 7% to 8% per year over the next five years, more than double the growth observed since 2010, while maintaining strict financial discipline and strong operating cash flow.

With an unparalleled portfolio of cutting-edge technologies based around materials science built up since its stock market listing, Arkema is now ready to embark on the next stage of its journey, with a portfolio for the most part stabilized and a greater focus on organic growth. To successfully implement its new strategic roadmap, the Group will leverage its innovation and organic projects in key technologies to support its customers in targeted, high-potential markets driven by sustainable megatrends. Arkema will also continue to pursue a bolt-on acquisition policy, more targeted towards small and mid-sized companies, to complement its technologies or geographic presence in attractive markets.

Over the next five years, the return to shareholders is estimated at close to €2 billion, a 30% increase compared with the prior five-year period, including mainly the continuation of our dynamic and growing dividend policy.

I know that I can count on the unwavering commitment of our 21,000 employees to the Group's five values of solidarity, performance, simplicity, empowerment and inclusion, in order to achieve our vision and strategy around our three Specialty Materials segments, and to offer our customers and our partners innovative solutions for a more sustainable world. Lastly, I am confident, along with the members of the Board of Directors and the Executive Committee, in our capacity to pursue the Group's development and create value over the long term for our stakeholders.

Thierry Le Hénaff

Arkema at a glance

Arkema is a major player in Specialty Materials whose business is focused around three coherent and complementary segments, Adhesive Solutions, Advanced Materials and Coating Solutions. The Group has a leading industrial and commercial presence, and benefits from a balanced geographical sales split between Europe, North America and Asia.

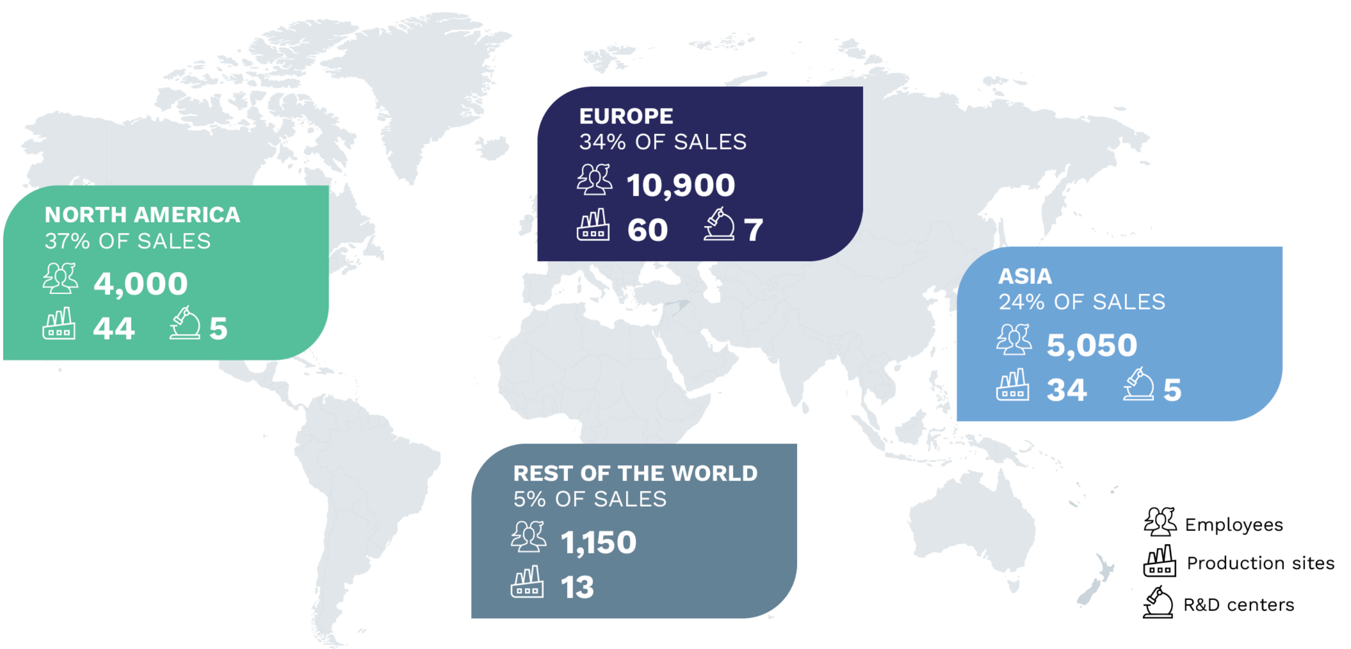
Thanks to its innovative, high performance solutions, developed within its three business segments dedicated to Specialty Materials, Arkema contributes to addressing the major challenges arising from global megatrends, in particular expectations regarding sustainability. The Group thus supports its customers in their long-term development and their quest for sustainable performance. With leading positions in its main product lines and operating on every continent, Arkema strives to achieve continuous improvement in terms of both operational excellence and corporate social responsibility, driven by the commitment of its 21,100 employees around a shared set of values.

Since its stock market listing in May 2006, Arkema has deeply transformed its profile, strengthening its competitiveness and refocusing its business portfolio on specialty activities. The Group has thus developed unique expertise in materials science, and in 2020 reorganized, in line with its ambition to become a pure Specialty Materials player, around three complementary, coherent business segments: Adhesive Solutions, Advanced Materials and Coating Solutions. In addition, some activities to be deconsolidated are grouped together in the Intermediates segment. At the Capital Markets Day in September 2023, the Group launched a new phase in its development focused on accelerating organic growth.

2023 KEY FIGURES

€9.5bn Sales	21,100 employees	55 countries
151 production sites	€275m R&D expenditure	€634m Capital expenditure

A balanced geographic footprint



Diversified end-markets

Arkema's broad range of solutions and applications caters to a large number of attractive end markets. This diversity makes the Group more resilient.

General industry (27%)

- Chemical industry (additives and initiators)
- Industrial assembly and packaging (Bostik)
- Industrial equipment (Kynar® PVDF)
- Industrial refrigeration (Forane®)
- Mineral and metal extraction and processing (performance additives)
- 3D printing (Sartomer, high performance polymers)
- Industrial coatings (resins and additives, Kynar® PVDF, polyamide powders, Coatex)

Consumer goods and electronics (19%)

- DIY (Bostik)
- Mass-market consumer and sporting goods (Rilsan® polyamides and Pebax®)
- Food packaging (Sartomer, Bostik)
- Hygiene and disinfection (Bostik, acrylics, hydrogen peroxide)
- Air conditioning (Forane®)
- Smartphones, tablets and TVs (Sartomer, Rilsan® polyamides, polyimides)
- Electrical cables and wires (high performance polymers, Bostik)

Building and construction (31%)

- Floor, wall and tile preparation (Bostik)
- Home thermal and acoustic insulation (Bostik, molecular sieves, Kynar Aquatec®, Forane®)
- Architectural coatings (resins and additives, Kynar® PVDF, polyamide powders, Coatex)

Transportation and energy (11%)

- Cooling circuits, fuel lines and air brake systems (Rilsan® polyamides)
- Batteries (Kynar® PVDF, polyimides, Foranext® electrolytes, Bostik)
- Photovoltaics (Kynar® PVDF, Luperox® organic peroxides), wind power (Elium®)
- Car interiors (Bostik)
- Oil and gas industry (sulfur derivatives, specialty surfactants, high performance polymers), biofuels (DMDS)
- Aeronautics (high performance polymers, Bostik)

Water, health and nutrition (12%)

- Water treatment (acrylics, Coatex, hydrogen peroxide), filtration (Kynar® PVDF) and water transportation (polyamide powders)
- Animal nutrition (methylmercaptan)
- Crop nutrition (specialty surfactants)
- Medical devices (high performance polymers, molecular sieves)

2023 data.

PROFILE

A know-how centered on materials science

Faced with growing demand for materials to meet the major challenges of climate change and sustainability, Arkema has developed leadership positions in high performance materials through its innovation, organic growth projects and acquisitions.

A world transformed by disruptive megatrends

The intensity of disruptive megatrends has accelerated in recent years, shaping demand from end consumers, who are mindful of the need to preserve natural resources and reduce CO_2 emissions. As a result, they are increasingly turning to high performance solutions that are bio-based, recyclable and more environmentally friendly.

Natural resources preservation and decarbonization

Urbanization and improved living standards

Transition to electric mobility

Technology disruptions and AI

Social change and consumer behaviors

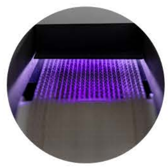
Three key capabilities in materials

The Group's know-how revolves around three key capabilities: creating new materials or substituting traditional materials with more sustainable alternatives, bonding them and protecting them. These unique and highly complementary capabilities are based on in-depth expertise in materials science, particularly in polymerization and formulation, and on strong application know-how. They enable the Group to seize opportunities linked to global megatrends, by developing high performance, sustainable and innovative solutions for its customers who operate in demanding sectors.

Creating and strengthening materials

Bonding and assembling materials

Protecting and modifying materials



Our three Specialty Materials segments

Since 2020, Arkema has structured its capabilities into three coherent and complementary segments: Advanced Materials, Adhesive Solutions and Coating Solutions. Today, these segments are the pillars of the Group's organization.

Over the past ten years, through its innovation, investments and acquisitions, Arkema has built a portfolio of over ten highly profitable, cutting-edge technologies in these three segments. This combination, unique in the chemical industry, offers strong commercial, operational and innovation synergies, and differentiates the Group's positioning, which will enable it to seize opportunities linked to global megatrends.

38 %

Advanced Materials

Creating and strengthening

- High performance polymers (bio-based PA11, PA12, Pebax®, PVDF, PEKK, Polyimide)
- Fluorospecialties (1233zd, electrolyte salts)
- Niche performance additives (DMDS, bio-surfactants)

29 %

Adhesive Solutions

Bonding and assembling

- Pressure sensitive adhesives
- Engineering and thermal adhesives
- Specialty hot melt adhesives
- High performance sealants (MS, PU)

25 %

Coating Solutions

Protecting and modifying

- UV curing monomers
- Waterborne resins
- Rheology additives
- Powders

8%

Intermediates

Fluorogases and Asia Acrylics

Key figures

Key financial data

(In millions of euros unless otherwise stated)	2023	2022	2021	2020	2019
Sales	**9,514**	11,550	9,519	7,884	8,738
EBITDA	**1,501**	2,110	1,727	1,182	1,457
EBITDA margin	*15.8%*	*18.3%*	*18.1%*	*15.0%*	*16.7%*
Recurring operating income (REBIT)	**939**	1,560	1,184	619	926
REBIT margin	*9.9%*	*13.5%*	*12.4%*	*7.9%*	*10.6%*
Net income – Group share	**418**	965	1,309	332	543
Adjusted net income	**653**	1,167	896	391	625
Earnings per share *(euros)*	**5.39**	12.81	17.15	3.98	6.45
Adjusted earnings per share *(euros)*	**8.75**	15.75	11.88	5.11	8.20
Dividend per share *(euros)*	**3.50** (1)	3.40	3.00	2.50	2.20
Payout ratio	**40%**	22%	25%	49%	27%
Shareholders' equity	**7,455**	7,339	6,350	5,235	5,324
Net debt and hybrid bonds	**2,930**	2,366	1,177	1,910	2,331
Net debt and hybrid bonds/EBITDA	**1.95**	1.1	0.7	1.6	1.6
Capital employed	**10,777**	10,023	7,957	7,364	7,917
Return on capital employed	**9.6%** (2)	15.5%	14.9% (3)	8.2% (4)	11.7%
Working capital to sales	**13.1%** (2)	12.6%	12.7% (5)	11.8%	13.8%
Free cash flow	**625**	784	479	651	667
Recurring cash flow	**761**	933	756	762	N/A
EBITDA to cash conversion rate (6)	**51%**	44%	44%	64%	52%
Recurring capital expenditure	**608**	584	506	460	511
Exceptional capital expenditure	**26**	123	252	140	96

Definitions of the main financial indicators are given in the glossary and in note 4 "Alternative performance indicators and information by segment" to the consolidated financial statements at 31 December 2023 in section 5.3.3 of this document.

(1) Dividend proposed at the annual general meeting of 15 May 2024.
(2) Excluding PIAM.
(3) Excluding recurring operating income (REBIT) from PMMA for the first four months of 2021, return on capital employed amounts to 14.4% in 2021.
(4) Return on capital employed adjusted for employed capital classified in 2020 as assets held for sale.
(5) Excluding PMMA.
(6) The EBITDA to cash conversion rate has been calculated on the basis of recurring cash flow since 2021. For previous data, only 2020 data has been restated according to this definition.

Key non-financial data

Sustainable solutions

	2023	2022	2021	2020	2019
Percentage of sales that significantly contribute to the United Nations' Sustainable Development Goals (1)	51%	53%	51%	50%	46%
Percentage of sales from products made from renewable or recycled raw materials (2)	11%	10%	10%	10%	9%
Percentage of sales covered by a life-cycle assessment	56%	41%	27%	22%	N/A
Percentage of patent applications filed relating to sustainable development	94%	92%	90%	78%	67%
R&D expenditure (in €m)	275	270	243	241	249

(1) On the basis of an assessment of 84% of the Group's third-party sales in 2023, 84% in 2022 (figure restated to take into account Ashland's adhesives), 85% in 2021, 72% in 2020 and 44% in 2019.
(2) Sales of products made with at least 25% renewable or recycled raw materials since 2021 and at least 20% for the previous years.

Climate and environment

	2023	2022	2021	2020	2019
Scope 1 and 2 greenhouse gas emissions	0.61	0.66	0.77	N/A	1.00
Scope 3 greenhouse gas emissions	0.47	0.53	0.63	N/A	1.00
Volatile organic compound emissions	0.49	0.53	0.50	0.58	0.60
Chemical oxygen demand	0.38	0.42	0.45	0.45	0.50
Water withdrawals	0.79	0.83	0.88	0.98	1.00
Net energy purchases	0.91	0.87	0.85	0.90	0.91

Greenhouse gas emissions in absolute terms relative to 2019. Water withdrawals (excluding water sales to third parties) in absolute terms relative to 2019.
In EFPI terms relative to 2012 for the other indicators.

Safety

	2023	2022	2021	2020	2019
Total recordable injury rate (TRIR) (1)	0.9	0.9	1.0	1.0	1.4
Process safety event rate (PSER)	2.8	2.8	3.1	4.0	3.7

(1) The TRIR includes injuries to both Group and subcontractor employees.

Employees and responsible procurement

	2023	2022	2021	2020	2019
Headcount	21,125	21,116	20,209	20,576	20,507
Percentage of women in senior management and executive positions	29%	26%	24%	23%	23%
Percentage of non-French nationals in senior management and executive positions	40%	40%	40%	41%	40%
Percentage of purchasing spend with relevant suppliers covered by a *Together for Sustainability* assessment	76.5%	75%	73% (1)	68%	68%

(1) The 2021 value has been adjusted following the correction to the selection of relevant suppliers.

Strong assets

Arkema can leverage solid assets to roll out its strategy and successfully complete its numerous projects and acquisitions, which will enable the Group to accelerate its organic growth and strengthen its position among the world leaders in Specialty Materials.

A competitive and global presence

to support the Group's customers in their geographical expansion thanks to:

- a **strong manufacturing footprint** in Europe, North America and Asia;
- complex, **proprietary manufacturing processes**; and
- proven **expertise** in **carrying out large-scale investment projects** combining cost and timing optimization, and superior technical implementation.

Strong R&D capabilities

enabling the Group to launch new innovative and sustainable solutions on the market, provide its customers with the technical support they need, and further improve the efficiency of its manufacturing processes, thanks to:

- the **expertise of more than 1,800 researchers** at **17** research centers worldwide;
- a large portfolio of **over 10,000 patents**;
- **216** new patent applications filed in 2023, **204** of which related to sustainable development;
- specific focus on **five key high-growth markets** identified by the Group; and
- **four Group programs** on transversal themes linked to sustainability.

A solid financial structure

giving the Group the flexibility needed to carry out its ambitious investment and bolt-on acquisition policy while ensuring an attractive dividend policy, thanks to:

- an **excellent cash generation** and a high EBITDA to cash conversion rate; and
- a **tightly controlled net debt** including hybrid bonds, not exceeding 2 times EBITDA.

Our talents, the pillars of the Group's success

Arkema strives to foster the individual development and collective engagement of all the Group's people, who contribute to shaping Arkema into a leading industrial group.

Committed employees

77% state they are fully engaged

Arkema Cares global internal satisfaction survey (2023)

7.7% employee share ownership

at 31st of December 2023

Strong civic engagement

As part of its commitment to societal issues, the Group undertakes **corporate sponsorship and philanthropy** initiatives that are aligned with its values, sometimes involving employee participation.

In 2023, notably:

- Arkema strengthened its partnership with **Sport dans la Ville**, a French non-profit that helps young people from disadvantaged neighborhoods find their place in society.
- The Group has become a partner to **Habitat for Humanity**, a Philadelphia-based non-profit that helps low-income people gain long-term access to decent housing, relying on employee volunteers to help build or renovate homes.

Diversity and inclusion, a strength for Arkema

The Group places **diversity** and **inclusion** at the heart of its project and values.
In 2023, Arkema:

- **Joined the Women Empowerment Principles (WEP) program** alongside UN Women to promote professional gender equality;
- Increased the percentage of women holding senior management and executive positions to **29%**, that of non-French nationals coming in at **40%**.

A Group recognized as an employer of choice

- **Top Employer Europe** certification in 2024, as well as in **four other countries** (USA, Brazil, China, the Philippines), recognizing the Group's excellence in HR practices.
- Higher ranking in **Forbes' World's Best Employers** 2023, coming in 94th out of 700 companies and 12th among French companies, demonstrating Arkema's ability to foster a **motivating and attractive work culture**, as well as a climate of well-being for its employees.

A Group committed to a more sustainable world

Three key commitments structure the Group's CSR policy, which aims to create long-term value for all its stakeholders.

The three CSR commitments

Arkema strives to provide its customers with sustainable and innovative solutions that contribute to the United Nations' Sustainable Development Goals (SDGs). To achieve this, the Group acts as a responsible manufacturer by resolutely aiming for an approach of operational excellence and continuous improvement. Arkema also cultivates its position as an employer of choice and seeks an open and constructive dialogue with all of its stakeholders.

RESPONSIBLE MANUFACTURER

Being among the top performers in terms of safety and environmental footprint reduction

- → Employee health and safety
- → Process safety
- → Climate
- → Environmental footprint reduction
- → Resources management
- → Biodiversity

SUSTAINABLE SOLUTIONS DRIVEN BY INNOVATION

Meet customers' main challenges and help improve their sustainable performance

- → Responsible product stewardship
- → Innovation-driven activities
- → Solutions to meet societal challenges linked to the climate and the circular economy

EMPLOYER OF CHOICE AND OPEN DIALOGUE WITH STAKEHOLDERS

Building relationships based on trust and cooperation, creating value for all customers, and contributing to improving their sustainable performance

- → Ethics
- → Human rights
- → Diversity and inclusion
- → Employee development
- → Well-being at work
- → Responsible value chain
- → Corporate citizenship

Recognized ESG performance in 2023

The Group's approach and performance in relation to environmental, social and governance (ESG) aspects are regularly assessed by external stakeholders including customers and non financial rating agencies. These agencies place Arkema among the leaders in the chemical sector, and recognize its very high levels of commitment and performance in these aspects.

CDP	A- (climate change); B (water security)
ISS ESG	1st decile globally (rating C+)
ecovadis	Top 4%
Sustainalytics	Rated
MSCI	A
Moody's ESG Solutions	69

2023 Highlights

- **Reinforcement of the Group's climate plan** with a 1.5°C trajectory by 2030 across its entire value chain, validated by the Science-Based Targets Initiative (SBTi). Arkema now aims to reduce its greenhouse gas emissions by 48.5% for Scopes 1+2 and by 54% for Scope 3 by 2030 *versus* 2019.
- **Long-term agreement with ENGIE** in France for the supply of 300 GWh/year of renewable biomethane. Together with ongoing energy efficiency projects, this will enable the Group to further reduce the carbon footprint of its high performance bio-based ranges of Rilsan® polyamide 11 and Pebax® Rnew® elastomers.
- **Signature with EDF Renouvelables** of a 20-year contract for the supply of 20 GWh/year of renewable electricity, covering 70% of Bostik's electricity consumption in France from 2026.
- **Announcement** of a €130 million investment project in a new patented purification technology at the Carling acrylics production site in France, to improve the site's operational efficiency and environmental footprint toward the highest standard. It will enable to cut the site's CO_2 emissions by 20%, thus contributing to the Group's ambitious climate plan.
- **Arkema joined the CAC® SBT 1.5° index** launched in early 2023, which includes SBF 120 companies with emissions reduction targets with a 1.5°C trajectory aligned with the Paris Agreement and validated by the SBTi.
- **Arkema maintained in the CAC 40 ESG®** index on the Paris stock exchange, listing the 40 companies that have demonstrated ESG best practices.

Ambitious targets

Since its creation, Arkema has significantly improved its profitability and has profoundly transformed itself into a leading player in Specialty Materials. It has a unique portfolio of cutting-edge technologies, well positioned to capture opportunities linked to global megatrends.

On the strength of this strategic repositioning and its more robust profile, Arkema unveiled a new phase in its evolution at the Capital Markets Day in September 2023, which will **focus primarily on organic growth.** This new phase is reflected in ambitious financial targets for 2028, underpinned by strict financial discipline.

2028

c. €12bn Sales

c. 18% EBITDA margin

Sales **+4%/year**
EBITDA **+7-8%/year**
Organic CAGR (1) over 2024-28

Strict financial discipline

Net debt/EBITDA **≤2**
Solid investment grade rating

Operating cash flow conversion rate (2) **~70%**

Return on capital employed **~ 10%**

Forecasts defined in normalized macroeconomic and market conditions.

(1) CAGR: compound annual growth rate.
(2) Free cash flow before capital expenditure divided by EBITDA.

Our targets in

Advanced Materials

The Advanced Materials segment includes High Performance Polymers and Performance Additives. Boasting exceptional technical and mechanical properties, High Performance Polymers offer innovative solutions with high growth potential that meet the major challenges arising from global megatrends. As for Performance Additives, they enable the improvement or the modification of the functional properties of materials, or play a critical role in optimizing production processes.

To develop this segment, the Group has made major industrial investments in recent years notably in Singapore with the world's biggest integrated factory for bio-based polyamides. These investments have been supplemented by targeted acquisitions, in particular ArrMaz and Agiplast. More recently, Arkema took a key step in strengthening the segment by finalizing the acquisition of a majority stake in PI Advanced Materials, the leader in polyimide films serving the attractive advanced electronics and electric vehicle battery markets.

KEY FIGURES

€3.6bn
2023 sales

18.7%
2023 EBITDA margin [(1)]

8 - 9%
Capex intensity [(1)]

3 - 4%
R&D intensity [(1)]

(1) As a percentage of sales.

KEY TECHNOLOGIES

High performance polymers
(Bio PA11, PA12, Pebax®, PVDF, PEKK, PI)

Fluorospecialties
(1233zd, electrolyte salts)

Niche performance additives
(DMDS, bio-surfactants)

STRATEGIC PRIORITIES

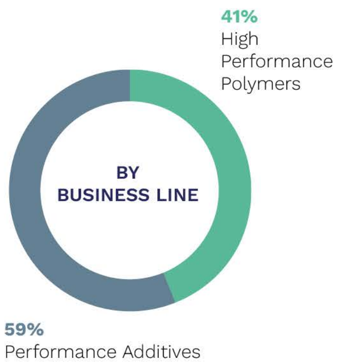
- Accelerate on **three opportunities** driven by **global megatrends**: green energy & electric mobility, bio-based solutions, electronics
- Deliver the **PIAM** roadmap
- Ramp up our recently finalized **major capital expenditure projects**
- Prepare the next **growth phase** with **new investment projects** presented at the 2023 CMD

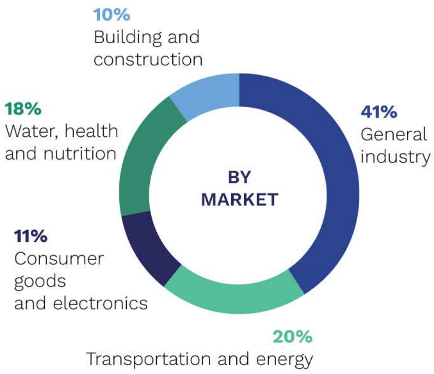
2028 AMBITION

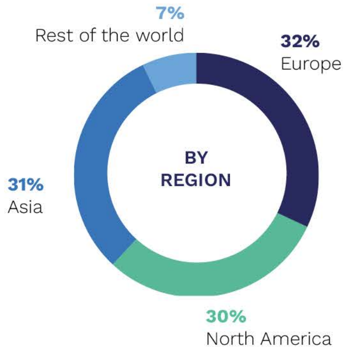
- **Average annual sales growth** over the period 2024-28: **+6%** per year
- **Percentage of** Group sales **c. 45%** in 2028
- **EBITDA margin** **23%** in 2028

In normalized macroeconomic and market conditions.

BREAKDOWN OF 2023 SALES







AMBITION

Our targets in
Adhesive Solutions

Following the integration of Bostik in 2015, the Group developed the Adhesive Solutions segment notably by making numerous bolt-on acquisitions in the construction sector, in particular in sealants and flooring solutions (Den Braven, XL Brands, LIP, Permoseal, etc.), as well as in high performance industrial adhesives and engineering adhesives (Prochimir, Fixatti, Edge Adhesives Texas, Polytec PT, etc.).

In 2022, Arkema achieved an important milestone with the acquisition of Ashland's Performance Adhesives business, a first-class leader in high performance adhesives in the United States, boasting very strong technological and geographical complementarities with Bostik.

These transactions, combined with operational excellence initiatives and an improved product mix towards higher value-added sustainable solutions, have contributed to an improvement in the segment's performance, with EBITDA margin increasing from approximately 10% in 2014 to 14% in 2023.

KEY FIGURES

€2.7bn
2023 sales

14.0%
2023 EBITDA margin (1)

2.5 - 3.0%
Capex intensity (1)

2.0 - 2.5%
R&D intensity (1)

(1) As a percentage of sales.

KEY TECHNOLOGIES

- **Pressure sensitive adhesives**
- **Engineering and thermal adhesives**
- **Specialty hot-melt adhesives**
- **High performance sealants**

STRATEGIC PRIORITIES

→ Accelerate in **high performance bonding for sustainable solutions** in industry, construction and DIY

→ Sustain a strong focus on **operational excellence**

→ **Pursue bolt-on acquisitions** to benefit from the consolidation of the global adhesives market

2028 AMBITION

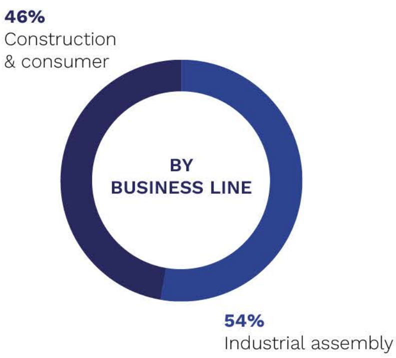
→ **Average organic sales growth** over the period 2024-28
+3.5% per year
Objective to double this organic growth through bolt-on acquisitions

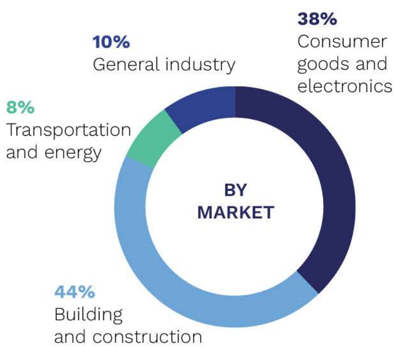
→ **Percentage of Group** sales
c. 30% in 2028

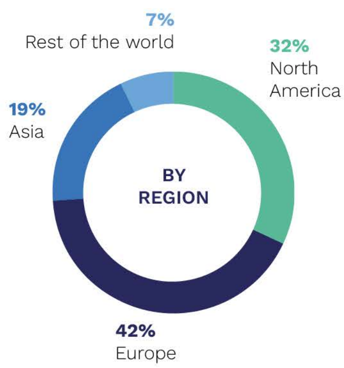
→ **EBITDA margin**
17% in 2028

In normalized macroeconomic and market conditions.

BREAKDOWN OF 2023 SALES







Our targets in

Coating Solutions

The Coating Solutions segment includes the entire range of Arkema's solutions for the coatings market, which are notably used in decorative paints and for industrial applications, as well as key technologies for electronics, batteries, 3D printing and renewable energies.

With competitive, world-scale acrylics facilities, the Group has developed this segment by making several acquisitions in coating resins and additives, in particular Coatex, Sartomer and Cray Valley. Integrating these downstream activities, as well as developing innovative technologies and more environmentally friendly, high value-added solutions, has helped improve the segment's resilience and performance.

KEY FIGURES

€2.4bn
2023 sales

13.6%
2023 EBITDA margin (1)

5 - 6%
Capex intensity (1)

1.5 - 2.5%
R&D intensity (1)

(1) As a percentage of sales.

KEY TECHNOLOGIES

UV curing monomers | **Waterborne resins** | **Rheology additives** | **Powders**

STRATEGIC PRIORITIES

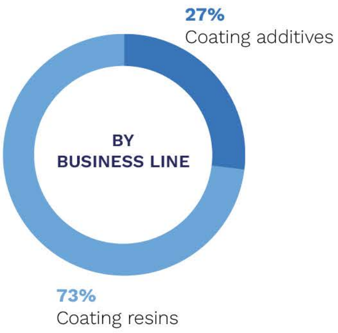
- Optimize the **operational integration model** further
- Accelerate on more **sustainable** and **lower carbon footprint solutions**
- Drive growth through differentiated **One Arkema** sustainability value proposition

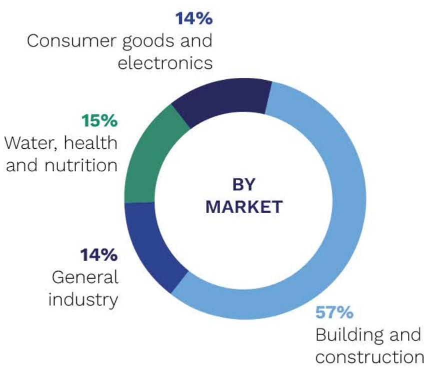
2028 AMBITION

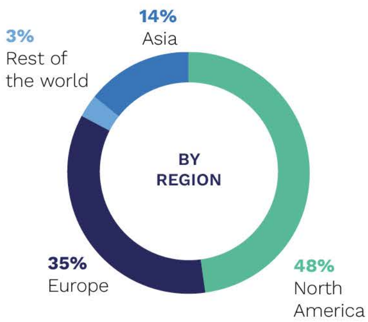
- **Average organic sales growth** over the period 2024-28
  +3% per year
- **Percentage of Group** sales
  c. 25% in 2028
- **EBITDA margin**
  17% in 2028

In normalized macroeconomic and market conditions.

BREAKDOWN OF 2023 SALES

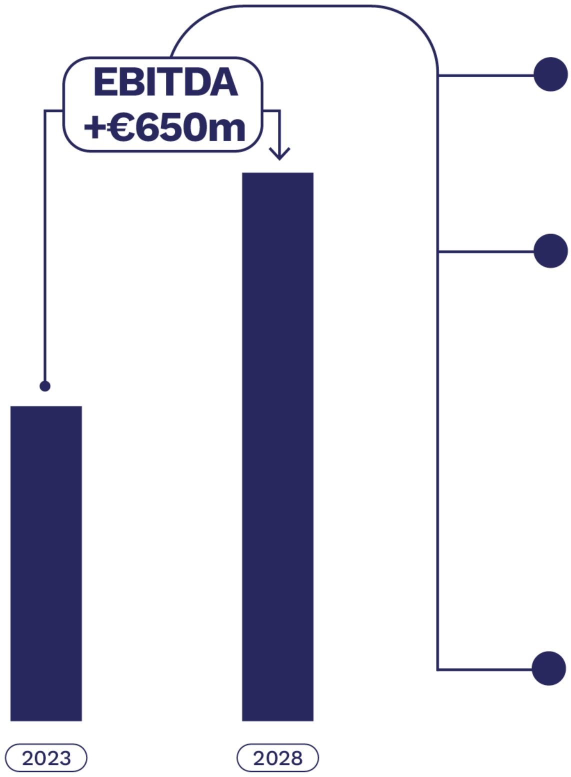






EBITDA growth over the 2024-28 period driven by well identified levers

The Group's EBITDA growth is estimated at €650 million over the 2024-28 period, of which just over half is expected to come from the contribution of major capex and the remainder from organic growth, with a relatively neutral scope effect over the period.



+€350m
relating to **major capex** focused on superior growth markets

+€300m
from ongoing **organic growth**, combining:

- → c.**+€500m** from increased volumes, pricing and product mix, including recovery from 2023 destocking
- → c.**-€200m** from inflation net of the €250m savings plan

Neutral scope effect with **PIAM** [(1)] acquisition and further **bolt-ons** offset by the **disposal of Intermediates**

Forecasts defined in normalized macroeconomic and market conditions, as indicated in the "Lead for sustainable growth – Strategy Update" presentation of 27 September 2023.
(1) Acquisition of a 54% controlling stake in PIAM, finalized on 1 December 2023.

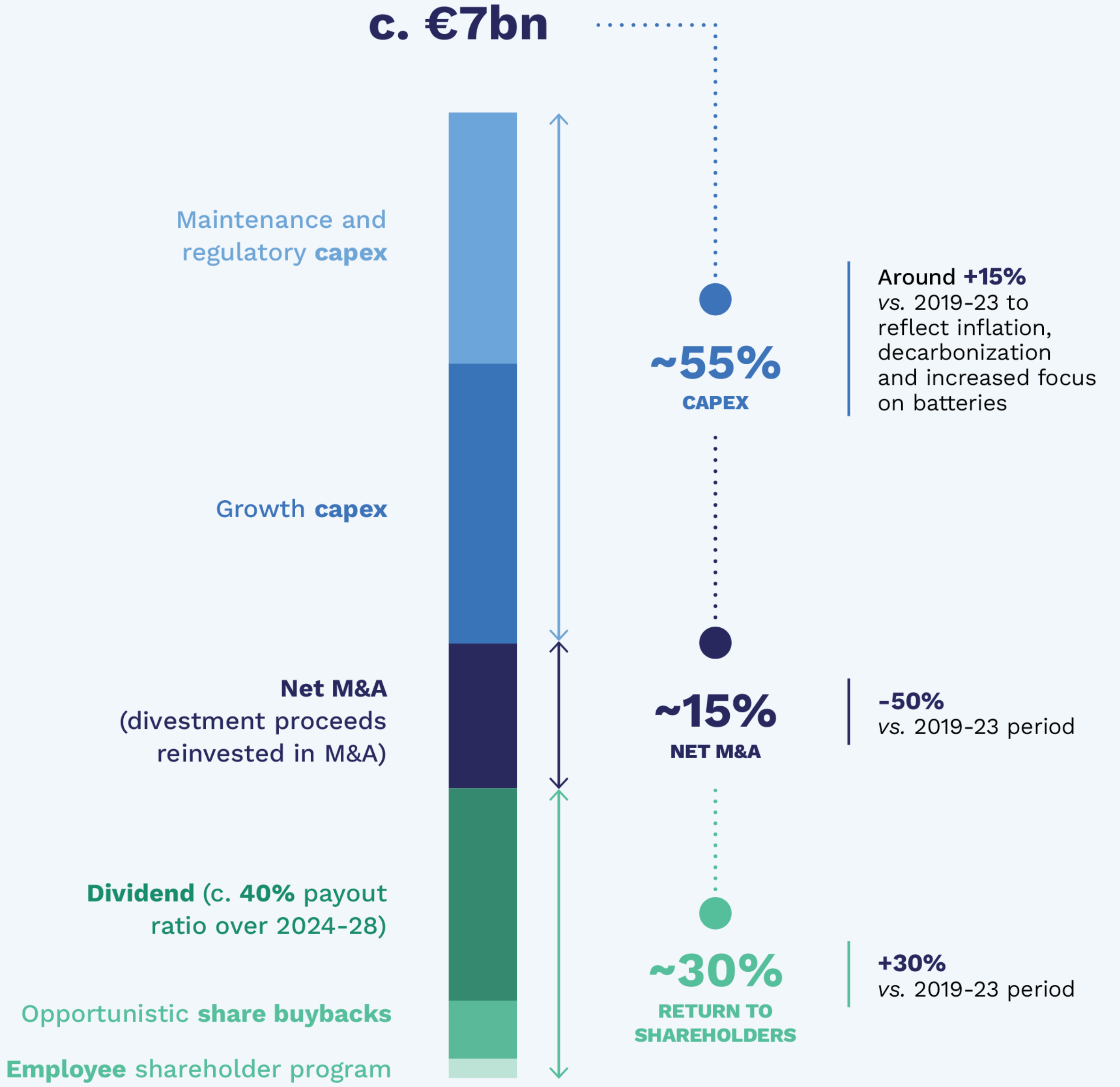
Total EBITDA for the period 2024-28 is expected to reach around **€10** billion.

Around 30% of this amount will be used to finance taxes, financial interest and the incremental increase in working capital.

Residual cash flow, defined as **cash flow from operating activities**, which refers to free cash flow before capital expenditure, will be around **70% of EBITDA**, i.e. around **€7** billion.

Capital allocation will be value-driven and attractive to shareholders

Operating cash flow over 2024-28 period



Forecasts defined in normalized macroeconomic and market conditions, as indicated in the "Lead for sustainable growth – Strategy Update" presentation of 27 September 2023.

A clear CSR roadmap integrated into our strategy

The Group rolls out its CSR roadmap to support the sustainable and responsible growth of its activities and by offering its customers solutions that contribute to their own sustainable performance. The Group's commitment is reflected in numerous ambitious objectives across the whole value chain.

By 2030

CLIMATE (1)

Scopes 1 and 2 GHG emissions

-48.5%

Scope 3 GHG emissions

-54%

Near-term SBTi targets

ENVIRONMENT (2)

Chemical oxygen demand

-65%

VOC emissions

-65%

Net energy purchases

-25%

Water withdrawals

-25%

CIRCULAR ECONOMY

Percentage of sales covered by a life-cycle assessment

90%

SUSTAINABLE SOLUTIONS

Percentage of sales that contribute significantly to Sustainable Development Goals (3)

65%

SAFETY

Total recordable injury rate (TRIR)

0.8

Process safety event rate (PSER)

2.0

DIVERSITY

Senior management and executive positions

Percentage of women

30%

Percentage of non-French nationals

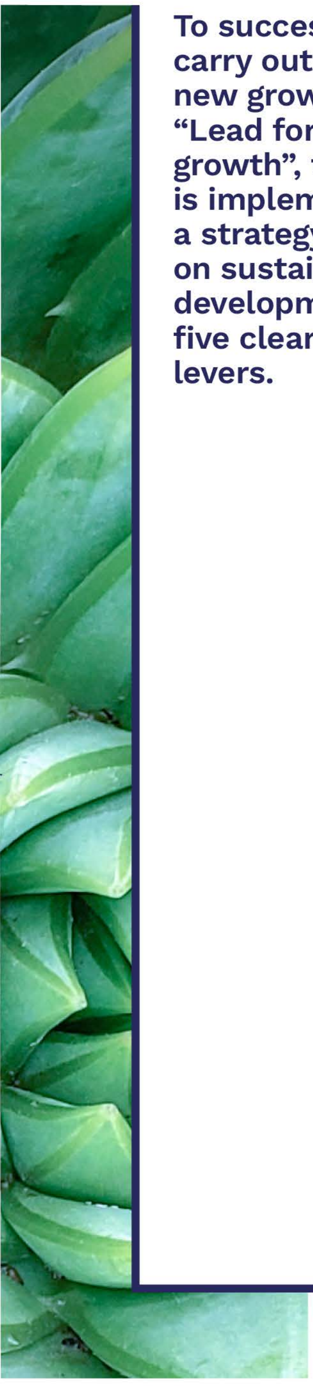
50%

EMPLOYEE ENGAGEMENT (4)

≥80%

(1) Greenhouse gas emissions in absolute terms relative to 2019. 1.5°C trajectory validated by the SBTi.
(2) EFPI indicators relative to 2012, except for water withdrawals (excluding water sales to third parties), which are reported in absolute terms relative to 2019.
(3) For further details concerning this target, named ImpACT+, see section 4.2.3 of this document.
(4) Percentage of employees who stated they were fully engaged, in responses collected for the Arkema Cares global internal satisfaction survey.

Our 5 main strategic levers



To successfully carry out its new growth phase "Lead for sustainable growth", the Group is implementing a strategy focused on sustainable development, with five clearly identified levers.

LEVERAGE

the strength of **One Arkema** to enhance employee **empowerment** and **customer intimacy**

ACHIEVE

superior growth from **sustainable innovation** in key technologies and markets

RAMP UP

recent major capex and carry out **new**, targeted **high-return projects**

FURTHER STRENGTHEN

the portfolio with **bolt-on M&A** and finalize the divestment of **Intermediates**

DRIVE

our manufacturing excellence, including a strong focus on **decarbonization** and **digitalization**

Leverage the strengths of One Arkema

Through the One Arkema culture, employees from different Business Lines share their expertise to develop significant technological, industrial and commercial synergies within the Group, enabling to amplify the strength of Arkema's three Speciality Materials segments.

Three complementary capabilities in materials driving cross Business Line expertise

Joint communication strategy and **key account managers**

Five embedded **corporate values**

Enhanced **career development opportunities** for our employees

Shared support services for better efficiency and quality

Our customers at the heart of our actions

To successfully implement its new growth phase "Lead for sustainable growth", the Group, leveraging the strengths of One Arkema, is implementing strong initiatives aimed at increasing customer intimacy, notably by developing more targeted and more effective digital tools.

Operate as One Arkema to strengthen customer intimacy

The Group ensures it strengthens the cross-business approach among customers and markets, to develop the multiple commercial synergies between the Group's different business activities and increase customer knowledge and intimacy.
The Group thus leverages a network of global key account managers and internal working groups that meet regularly.

Develop joint innovation to foster partnerships

The Group works closely with its customers to develop solutions and materials that contribute to a more sustainable world. These partnerships also help to better understand and therefore better anticipate customers' needs, and to proactively offer them solutions. Arkema has thus developed strong, long-term partnerships with leading players in areas such as 3D printing, batteries, water treatment, composites and wind power.

Implement new digital channels, in particular the *My.Arkema* customer portal

The Group is committed to developing new digital solutions, in particular for customers that want more autonomous browsing or more advanced functionalities for customized solutions. The Group is also developing hybrid commercial offers (face-to-face, remote or digital) to facilitate interaction with customers and enable sales teams to be more proactive.
Finally, Arkema is continuously expanding its My.Arkema portal, which customers can use to track the status of their orders and access a wide range of information in real time.

Increase teams' proactivity and agility

The implementation of digital tools and reporting systems gives access to a growing amount of data in real time, enabling finer analysis and more relevant management of customer relations.
Sales teams also benefit from dedicated ongoing training courses through the Sales Academy program, providing expertise in sales processes. This program has recently expanded to include several training modules on sustainability, to improve support for customers in their quest for sustainable performance.

NPS target: 30 by 2030

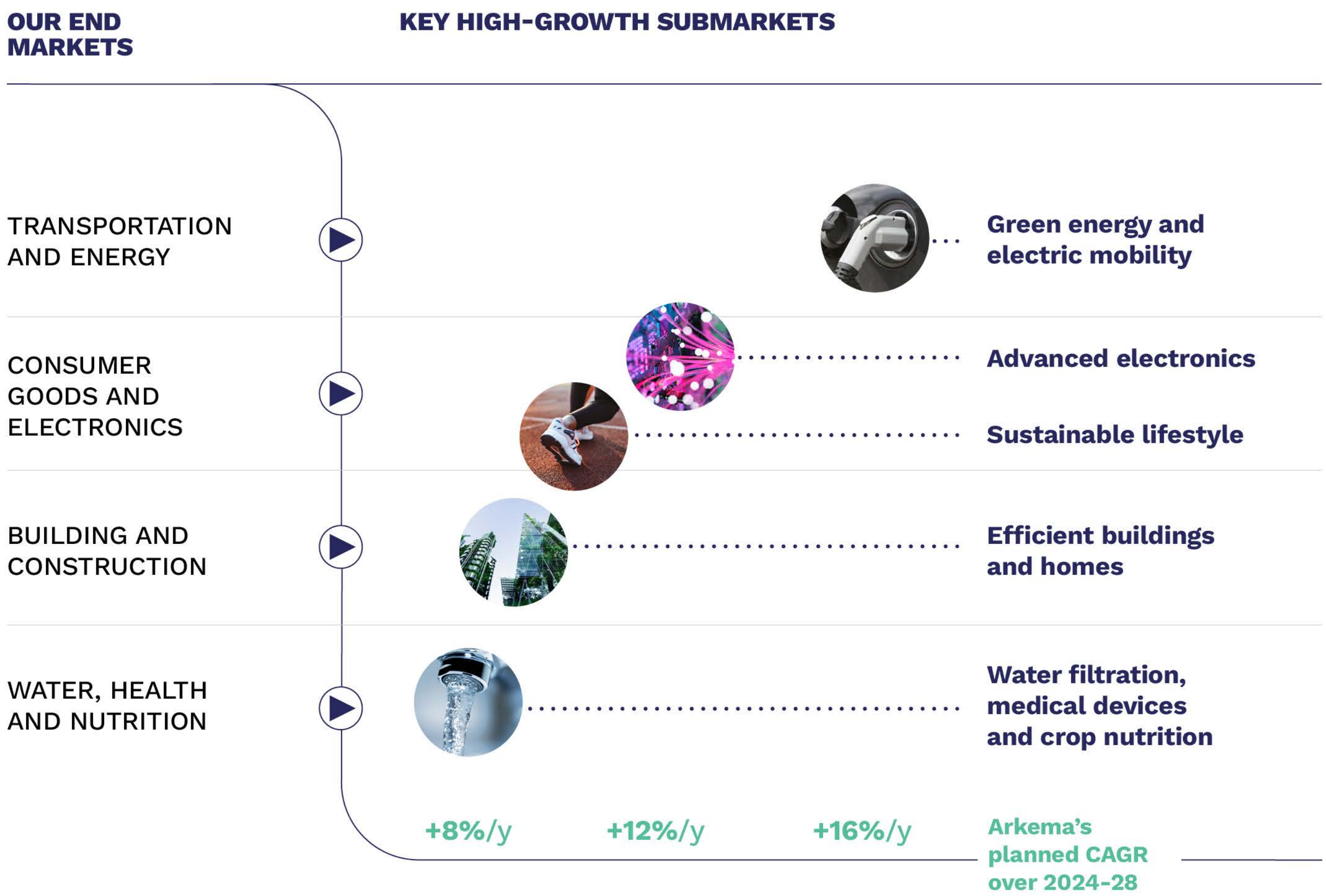
The Group takes an approach of continuous improvement and customer focus, as measured by annual global satisfaction surveys. In 2023, this survey found that 82% of customers were satisfied or extremely satisfied and showed an NPS of nearly 29. The Group aims to maintain this high level of satisfaction with an NPS of 30 by 2030.

Achieve superior growth from sustainable innovation in key technologies and markets

Within its end markets, the Group has identified five key high-growth markets driven by global megatrends such as urbanization, natural resources preservation and decarbonization, the transition to electric mobility and technology disruptions.

Our five key high-growth markets

Through its three Speciality Materials segments, Arkema is present in those 5 key markets in many high value-added applications for example lithium-ion batteries, photovoltaic panels, new-generation smartphones, high-end eco-designed sporting goods, more environmentally friendly paints, thermal and acoustic insulating materials for buildings, and also filtration modules for water treatment.



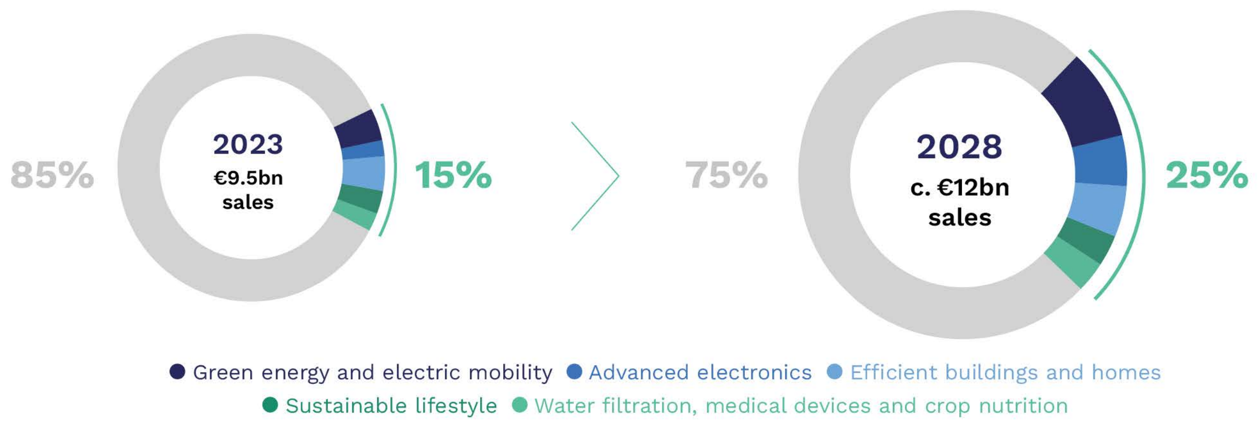
A unique positioning thanks to differentiated technologies to serve these key markets

Over time, through innovation, investments and acquisitions, Arkema has built a unique portfolio of high performance technologies that are essential to these five key markets.

Thanks to the versatility of these technologies, the Group can maximize development and growth opportunities, drawing on the strength of the shared One Arkema approach.

	Advanced materials			Adhesive Solutions				Coating Solutions			
	High performance polymers	Fluorospecialties	Niche performance additives	Pressure sensitive	Engineering and thermal	Specialty hot-melt	High performance sealants	UV curing	Waterborne	Rheology additives	Powders
Green energy and electric mobility	●	●	●	●	●			●	●	●	●
Advanced electronics	●	●			●			●			
Sustainable lifestyle	●				●	●		●			
Efficient buildings and homes		●		●	●		●		●	●	●
Water filtration, medical devices and crop nutrition	●		●	●				●			

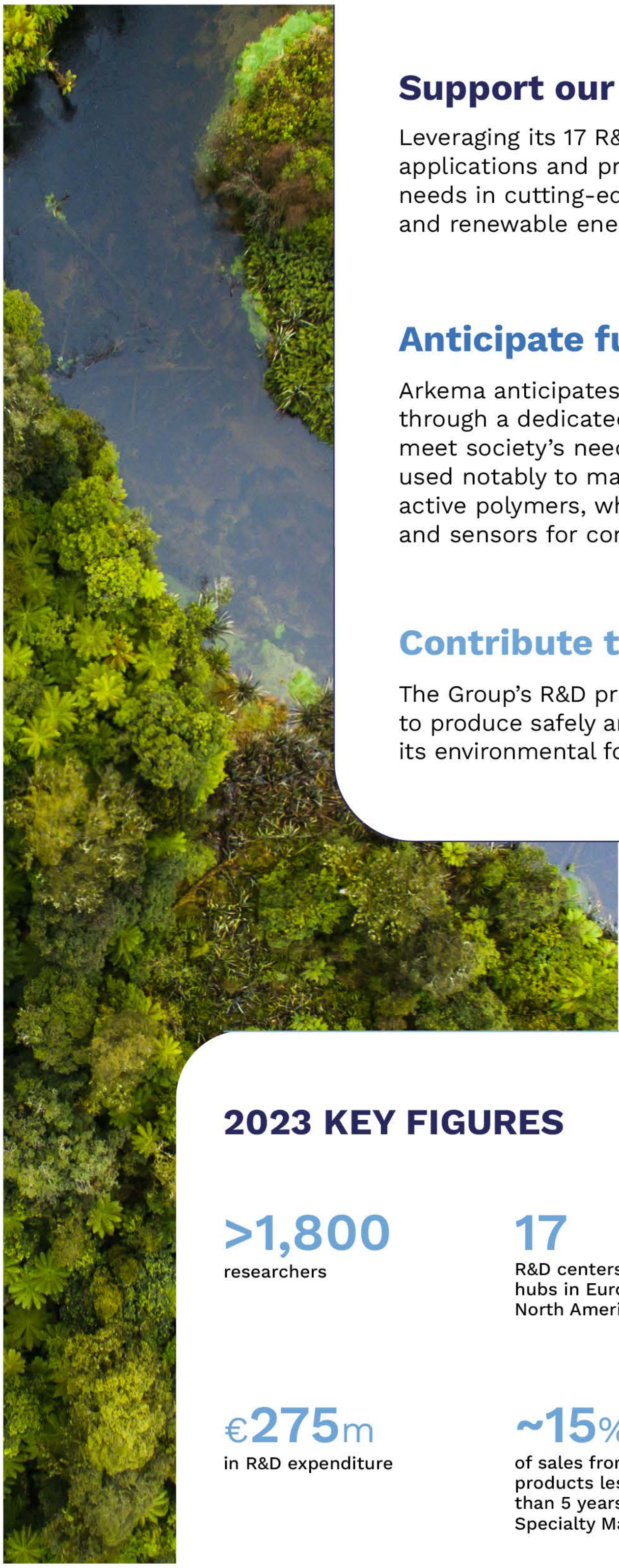
Sales generated by these technologies in the five identified markets represent 15% of Arkema's total sales in 2023, and have a growth potential three times higher than the Group average over the period 2024-28. A significant share of Arkema's growth capex and more than 50% of its R&D expenditure will be allocated to ramping up these technologies. By 2028, Arkema thus estimates that these technologies could account for one quarter of its sales.



Forecasts defined in normalized macroeconomic and market conditions.

Innovate for sustainable development

Technological innovation is at the heart of Arkema's strategy and a key growth driver. It enables to address major economic and societal challenges through solutions that contribute to the United Nations' Sustainable Development Goals and support the Group's customers in their quest for sustainable performance.



Support our customers to address their challenges

Leveraging its 17 R&D centers across the world, Arkema develops new products, applications and production technologies to meet customers' particularly demanding needs in cutting-edge sectors such as electric mobility, advanced electronics and renewable energies.

Anticipate future trends

Arkema anticipates technological and market changes and is developing today, through a dedicated incubator structure, the breakthrough innovations that will meet society's needs in the years to come. Arkema has thus developed Elium® resin, used notably to make recyclable wind turbine blades, as well as Piezotech® electro-active polymers, which are used in particular in the area of haptics for virtual reality and sensors for consumer electronics.

Contribute to our operational excellence

The Group's R&D provides innovations to production facilities enabling to produce safely and competitively while reducing as much as possible its environmental footprint.

2023 KEY FIGURES

>1,800
researchers

17
R&D centers across three hubs in Europe, Asia and North America

216
patent applications filed, **>90%** relating to sustainable development

€275m
in R&D expenditure

~15%
of sales from products less than 5 years old in Specialty Materials

Numerous partnerships
with universities and research laboratories, both public and private

In a world marked by the acceleration in sustainable development challenges and technological disruptions, Arkema focuses its research efforts on ensuring its solutions offering adequately addresses market needs and specific customer expectations worldwide.

The 5 key high-growth markets

identified by the Group, to which it plans to devote more than 50% of its R&D expenses.

GREEN ENERGY AND ELECTRIC MOBILITY

ADVANCED ELECTRONICS

SUSTAINABLE LIFESTYLE

EFFICIENT BUILDINGS AND HOMES

WATER FILTRATION, MEDICAL DEVICES AND CROP NUTRITION

Transversal themes

with Group programs that contribute to the decarbonization of its value chain and the development of more environmentally friendly solutions.

LIGHTWEIGHT MATERIALS AND DESIGN

BIO-BASED OR BIO-SYNTHESIZED MATERIALS

CIRCULAR ECONOMY

MORE EFFICIENT AND VIRTUOUS PROCESSES

Toward a portfolio of ever more sustainable solutions

The Group is actively assessing its portfolio of solutions in light of sustainability criteria.

At end-2023, 84% of sales had been assessed, of which **51% significantly contribute** to the United Nations' Sustainable Development Goals.

Ramp up recent major investments

To achieve its target of organic EBITDA growth of 7 to 8% on average per year over the 2024-28 period, Arkema will notably leverage the start-up of its recent projects and pursue its ambitious investment policy, particularly in high-growth markets.

The Group thus plans to devote around **55%** of available cash to its maintenance and growth capex program over the period 2024-28, subject to appropriate market conditions.

This amount, around **15%** higher relative to that of the 2019-23 period, includes notably inflation, decarbonization projects linked to the Group's climate plan and an increased focus on batteries.

Recent investments

Advanced Materials

Bio-based PA11/Pebax®

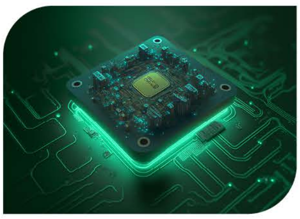
2023-24

New units and expansions in **Singapore**, **China** and **France** for consumer goods, sustainable lifestyle and mobility

PVDF

2023

Expansions in **China** and **France** for batteries and semiconductors

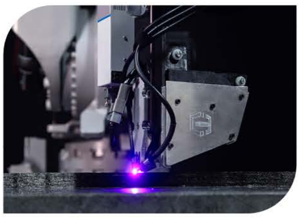


Fluorospecialties

2023-24

- **Hydrofluoric acid** with Nutrien to strengthen the supply chain in the **United States**
- **HFO 1233zd** in the **United States** for building insulation and batteries

Coating Solutions



UV curing resins

2023

Expansion in **China** for new energies, electronics and 3D printing

These projects represented
€800m
in capital expenditure

and are expected to generate
~€250m
in EBITDA in 2028 *vs.* 2023

Carry out new, targeted high-return projects

New attractive capex

New DMDS plant in the United States for the biofuels market

35% increase in global capacity for DMDS (dimethyl disulfide), an additive that is key in the production of renewable fuels, to support this fast-growing market. This €130 million investment in Beaumont (United States) is scheduled to come on stream in mid-2025 and will supplement capacities in Lacq (France) and Kerteh (Malaysia).

Decarbonization of acrylics production in France

Implementation of a new patented purification technology at Carling by 2026, to improve the site's operational efficiency and environmental footprint toward the highest standard. This €130 million investment will reduce the site's CO_2 emissions by 20%, contributing to the Group's ambitious climate plan in line with a 1.5°C trajectory by 2030.

Expansion of the organic peroxides site in China

A two-and-a-half-fold increase of the organic peroxide production capacities at the Changshu site, to support the Group's Asian customers in fast-growing markets, particularly in renewable energies. This niche additive plays a critical role in many applications, including the manufacture of photovoltaic panels. This investment of around €50 million is expected to start up in early 2025.

Capex projects under review

Solutions for batteries

Significant investment in PVDF and new electrolyte salts unit to support strong global growth in electric vehicle batteries, with priority given to the United States (Calvert City).

Bio-based PA11 value chain

Continue to leverage the Amino 11 backbone by investing in high-end bio-based polymers, including transparent and recycled grades.

Preliminary amount estimated at between

€900m and €1bn
in capital expenditure

expected to generate

c. €250m
EBITDA at maturity of which c. €100m in 2028

Further strengthen the portfolio

Since 2006, Arkema has made active portfolio management a major transformation lever and notably aims, by 2028, to continue to make bolt-on acquisitions that will strengthen its portfolio of technologies, particularly in the five high-growth markets identified by the Group and in the fragmented adhesives sector. Arkema also plans to deconsolidate its Intermediates activities.

Transformative portfolio management that creates long-term value

In line with its ambition to carry out transformative transactions that create value, the Group aims to:

- make acquisitions offering significant synergies, thereby enabling to reduce the enterprise value to EBITDA multiple to around 7-8x, four to five years after the acquisition, taking into account organic growth and the implementation of synergies; and
- divest cyclical and non-strategic businesses with more volatile results.

Since 2006, the Group has in particular carried out the following deals:

- the acquisition of Bostik in 2015, followed by many small- to medium-sized acquisitions aimed at developing its Adhesive Solutions segment;
- the strengthening of high value-added downstream activities of its Coating Solutions segment; and
- the divestment of the vinyl products business in 2012, and more recently of Functional Polyolefins and PMMA.

Recently, the Group has made two significant acquisitions, the first one in 2022 in Adhesive Solutions with Ashland's performance adhesives and the second one at the end of 2023 in High Performance Polymers with a 54% stake in PI Advanced Materials (PIAM). Subject to appropriate market conditions, Arkema plans to allocate to its acquisition program, net of divestments, around 15% of its available cash over the period 2024-28, which represents approximately €1 billion, i.e., about half of the amount allocated over the period 2019-23.

PIAM, a major acquisition in Advanced Materials

On 1 December 2023, the Group finalized the acquisition of a 54% stake in the listed South Korean company PIAM, which, with a market share of over 30%, is the global leader in polyimide films used in the attractive markets of smartphones and electric vehicles.

This acquisition offers unique opportunities in increasingly advanced applications, including lithium-ion batteries, 5G antennas, high-resolution OLED displays and flexible screens, also benefiting from recent capacity expansions.

In addition, this operation offers significant pre-tax synergies, based on the perfect fit between the product ranges, Arkema's geographical coverage and PIAM's strong customer relationships in Asia. These are estimated at around €30 million in terms of EBITDA and should gradually be achieved over the next five years.

The transaction price is based on an enterprise value of €728 million for the 54% stake.

ACQUISITIONS

27 acquisitions

c. €5bn of sales

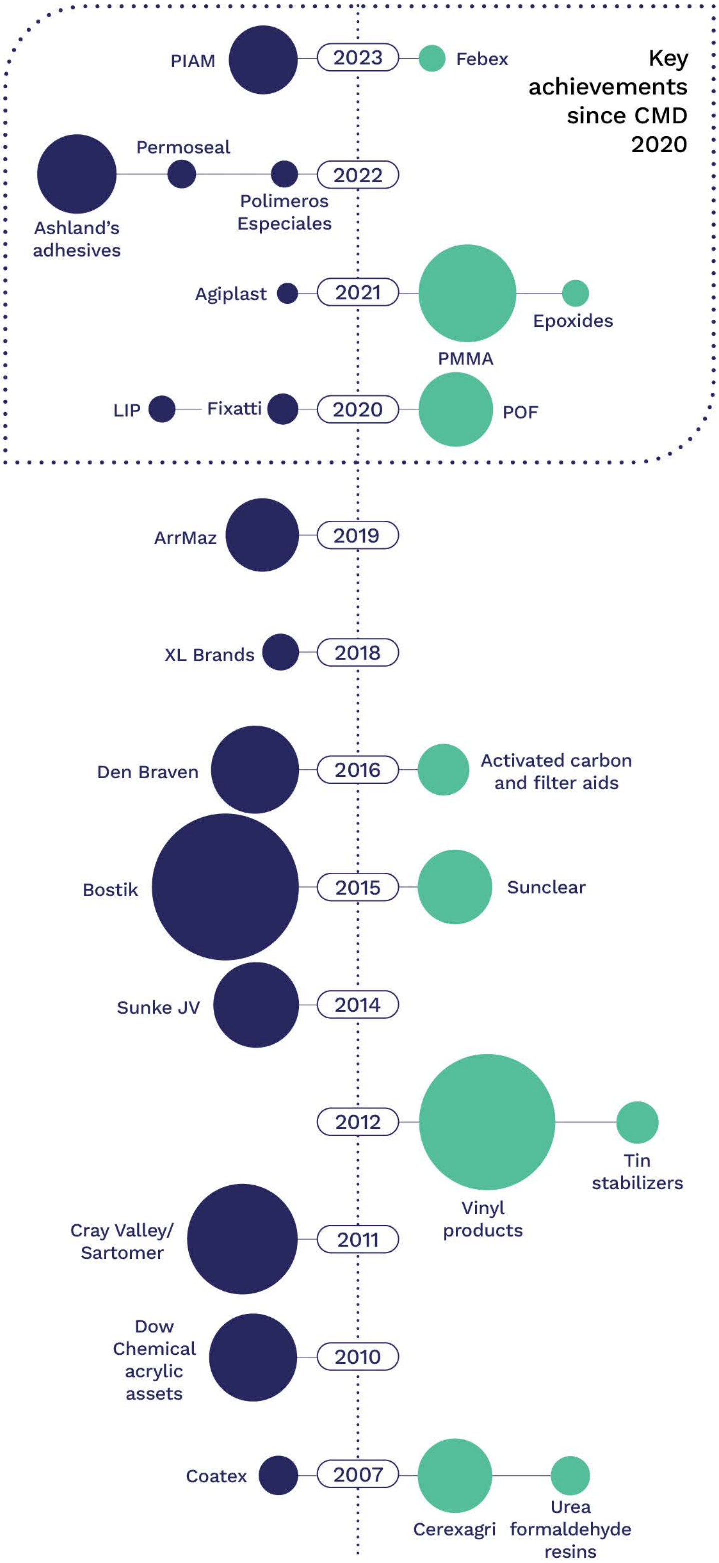
Average EV/EBITDA multiple
11.2x → 6.9x
after synergies [1]

DIVESTMENTS

20 divestments

c. €3bn of sales

Average EV/EBITDA multiple
9.6x



(1) Calculation includes total synergies expected within five years for Ashland's adhesives and PIAM, and 2022 figures for other acquisitions.

Other 2023 highlights

Bolt-on acquisitions in Adhesive Solutions

On 1 June 2023, Arkema expanded its offering of high performance adhesives by finalizing the acquisition of **Polytec PT**, a German company specialized in adhesives for batteries and electronics applications. This business generates annual sales of around €15 million.

On 2 January 2024, the Group also finalized the acquisition of Irish manufacturer **Arc Building Products**, specialized in construction adhesives and sealants with annual sales of around €15 million.

Divestment of a non-strategic business

The Group also continued its dynamic business portfolio management and, on 3 January 2023, finalized the divestment of **Febex** to Belgian group Prayon. Specialized in phosphorus-based chemistry, Febex reports annual sales of around €30 million.

STRATEGY

Drive our manufacturing excellence, including a strong focus on decarbonization and digitalization

Our approach

The Group aims to ensure the competitiveness and sustainability of its production sites around the world, through strong initiatives in the area of operational excellence. Arkema develops this operational excellence culture among all employees and values their day-to-day actions that contribute to the Company's continuous progress.

As part of this approach there are precise and ambitious targets for each production site on safety, the environment, reliability, productivity and raw materials consumption, and improvement plans are carefully managed.

Our priorities

- **Review the overall efficiency of internal processes** and interfaces between functions, constantly assess areas of improvement and the potential for progress of each of the Group's businesses, and share best practices
- **Position the Group among reference players in the chemical industry** in terms of safety and continue to reduce its environmental footprint, in particular by successfully achieving its decarbonization trajectory
- **Continue to optimize production costs by:**
  - reducing variable costs through the optimization of raw materials consumption and energy efficiency thanks to continuous process improvement and by minimizing the manufacture of off specification products; and
  - optimizing fixed operating and industrial investment costs through a global procurement strategy for goods and services
- **Continue to enhance the reliability** of production facilities
- **Accelerate digitalization,** automation and process simplification

The Group aims to **reduce its annual operating expenses** by **€250 million a year** by 2028, with half of this figure related to variable costs and the other half to fixed costs. The implementation of this target will be accompanied by **€100 million** one-off costs.

Continue to decarbonize our value chain

To meet customers' growing demand for more sustainable products, Arkema is stepping up its efforts to decarbonize its products offering by acting on its entire value chain.

UPSTREAM - Scope 3

- → Increase the share of **bio-based** and **recycled** raw materials
  E.g.: New Amino 11 and Polyamide 11 (Singapore)
- → Encourage our **suppliers** to reduce the carbon footprint of their products
  E.g.: Partner to accelerate Biomass Balance solutions

OPERATIONS - Scopes 1 and 2

- → Switch to **low-carbon** energy and steam
  E.g.: Biomethane contract with Engie (France)
- → Optimize production process and energy **efficiency**
  E.g.: New patented purification technology at Carling (France)

DOWNSTREAM - Scope 3

- → Grow our portfolio of **sustainable** solutions
  E.g.: 65% of sales contributing significantly to the UN SDGs by 2023
- → Further develop **recycling** loops for our products
  E.g.: Ramp-up of Agiplast (Italy)

Toward Net-Zero in 2050

In May 2023, Arkema set itself new ambitious objectives across its whole value chain. These targets, aligned with a 1.5°C trajectory by 2030 and validated by the SBTi (Science-Based Targets initiative), pave the way to Net-Zero by 2050.

2019

GHG emissions baseline

3.7 Mt CO_2e (Scopes 1 + 2)

152 Mt CO_2e (Scope 3)

2023

-39% Scopes 1 and 2

-53% Scope 3

2.3 Mt CO_2e (Scopes 1 + 2)

71 Mt CO_2e (Scope 3)

2030

1.5°C near-term targets approved by the SBTi

SCIENCE BASED TARGETS – DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

-48.5% Scopes 1 and 2

-54% Scope 3

1.9 Mt CO_2e (Scopes 1 + 2)

70 Mt CO_2e (Scope 3)

Toward Net-Zero in 2050

▼

-90%
Scopes 1 + 2 & Scope 3

Our business model

Be the leader in Specialty Materials offering the most innovative and sustainable solutions to meet our customers' current and future challenges.

OUR STRENGTHS

COMMERCIAL STRENGTHS

- **Leadership** positions in our main product lines
- A worldwide presence in **55 countries**
- A portfolio of cutting-edge technologies
- Strong partnerships with leading customers

OPERATIONAL STRENGTHS

- A global footprint with **151 sites**
- **€9.2 billion** in tangible and intangible assets

R&D

- Specific focus **on five key** high-growth **markets**
- Four transversal Group programs linked to **sustainability**
- **More than 1,800 researchers in three regional hubs** worldwide
- Robust intellectual property with more than **10,000 patents**

EMPLOYEES

- **21,100 employees** embracing the Company's values and committed to its long-term plan

FINANCIAL STRENGTH

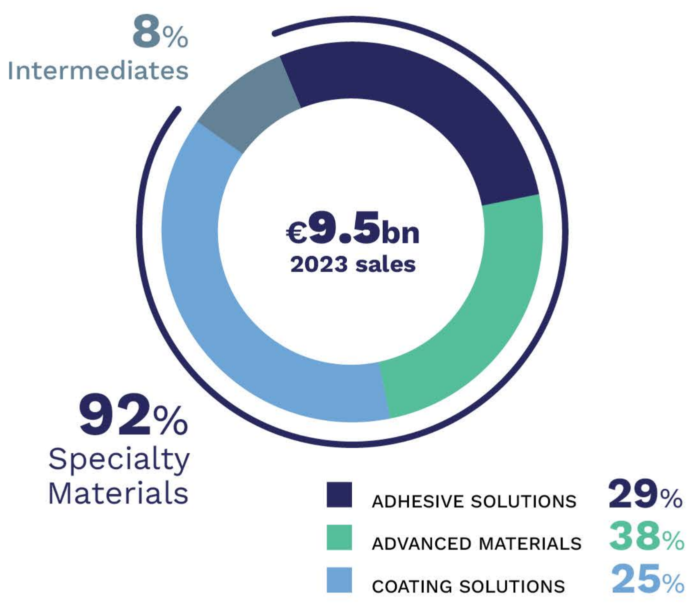
- Indebtedness well under control, with **net debt** (including hybrid bonds) not greater than **2x EBITDA**

OUR VALUE CREATION MODEL

OUR VALUES

Solidarity
Performance
Simplicity
Empowerment
Inclusion

OUR ORGANIZATION



OUR CONTRIBUTION

SUSTAINABLE DEVELOPMENT GOALS

INNOVATIVE **MATERIALS** FOR A SUSTAINABLE WORLD

OUR PRIORITIES

OFFER SUSTAINABLE SOLUTIONS
driven by innovation in key markets and applications

- Participate in the growth of **green energy** and **electric mobility**
- Develop **solutions for advanced electronics**
- Enhance **living comfort** and **home efficiency**
- Offer sustainable consumer goods
- Design cutting-edge solutions in targeted areas such as health, water or nutrition
- Contribute to **materials lightweighting** and **design**

with responsible product stewardship

- Develop **bio-based** or **bio-synthesized materials**
- Manage **natural** resources responsibly
- Deploy the **circular economy**

SUPPORT
our customers in their quest for sustainable performance with a targeted investment strategy

ACT
as a responsible manufacturer

- Ensure **employees' health** and **equipment safety**
- Act for **climate and biodiversity,** and reduce our **environmental footprint**

REAFFIRM
our commitment to our stakeholders

- Promote **employee commitment and well-being at work**
- Promote **diversity and inclusion**
- Contribute to **the development of territories**
- Develop **a responsible value chain**

OUR AMBITION

FINANCIAL TARGETS (2028)

- Sales of around **€12bn**
- High profitability of **c. 18% EBITDA margin**
- Average organic sales growth over the period 2024-28:
  - **sales: +4%/year**
  - **EBITDA: +7-8%/year**

Underpinned by strict financial discipline

- Net debt (including hybrid bonds) **≤2x EBITDA**
- **Solid Investment grade** credit rating
- Operating cash flow conversion rate **~ 70%** (1)
- ROCE **~ 10%**

NON-FINANCIAL OBJECTIVES (2030)

Sustainable offering
- Percentage of ImpACT+ sales (2): **65%**

Circular economy
- Percentage of sales covered by a life-cycle assessment: **90%**

Safety
- Total recordable injury rate (TRIR) (3): **0.8**
- Process safety event rate PSER (4): **2.0**

Climate and environment (5)
- GHG emissions, 1.5°C trajectory validated by the SBTi:
  - Scopes 1 and 2: **- 48.5%**
  - Scope 3: **-54%**
- Volatile organic compound emissions: **-65%**
- Chemical Oxygen Demand (COD): **-65%**
- Net energy purchases: **-25%**
- Water withdrawals: **-25%**

Diversity in senior management and executive positions
- Percentage of women: **30%**
- Percentage of non-French employees: **50%**

(1) Free cash flow before capital expenditures divided by EBITDA.
(2) Share of sales which contribute significantly to the United Nations' Sustainable Development Goals.
(3) Total recordable injury rate per million hours worked with or without lost-time.
(4) Process safety event rate per million hours worked.
(5) In absolute terms relative to 2019 for the climate and water withdrawals; in terms of intensity relative to 2012 for VOC, COD and energy.

Our value creation

Since its stock market listing in 2006, Arkema has engaged in an in-depth transformation through an ambitious plan to create long-term value for all of its stakeholders.

Regions and communities

2023 data

Contribute to the social and economic development of the regions where Arkema operates

€191m
in income tax paid

€634m
in recurring and exceptional capital expenditure

Numerous partnerships

focused on research with public laboratories and universities (École Polytechnique in France, CNRS, Université de Haute Alsace, Université Claude Bernard Lyon 1, CPE Lyon)

Financing

of projects to support education, inclusion and diversity, through a dedicated fund, led by non-profit organizations in **16 countries**

Suppliers and customers

2023 data

Offer innovative, sustainable solutions tailored to customers' specific needs

51%
of sales assessed significantly contributing to the SDGs (1)

216 patent applications filed
of which >**90%** relating to sustainable development

76% of the Group's purchases with relevant suppliers (2)
among the more than **1,800** suppliers assessed (2)

Partnerships

with Nippon Shokubai for batteries, Brunswick for composites

82%
of customers satisfied or extremely satisfied

(1) On the basis of an assessment of 84% of the Group's third party sales in 2023.
(2) Covered by a Together for Sustainability (TfS) assessment.

Planet

2023 data

Commit to the environment and biodiversity

-39%
Scopes 1 + 2 (3) greenhouse gas emissions

-53%
Scope 3 (3) greenhouse gas emissions

-9%
Net energy purchases (4)

-51%
Volatile organic compound emissions (4)

-62%
Chemical oxygen demand (4)

-21%
Water withdrawals (5)

Employees

2023 data

Promote the individual and collective development of the Group's men and women

€1.6bn
in personnel expenses

21,100 employees
of which **26.5%** women

0.9
Injury rate (TRIR)

7.7%
of capital owned by employees

22 hours
of training on average per employee per year

Shareholders

2023 data

Create long-term value thanks to an ambitious transformation plan while gradually increasing the dividend

9.6%
Return on capital employed

€761m
Recurring cash flow

€3.50 (6)
2023 dividend per share

(3) Greenhouse gas emissions in absolute terms relative to 2019 (for Scopes 1 + 2, as well as Scope 3).
(4) In EFPI terms compared with 2012.
(5) Water withdrawals (excluding water sales to third parties) in absolute terms relative to 2019.
(6) Dividend proposed at the annual general meeting of 15 May 2024.

An experienced and diversified Board of Directors

Arkema's governance includes a Board of Directors with a Chairman and Chief Executive Officer, a senior independent director, and three specialized committees. The Chairman and CEO is furthermore supported by an Executive Committee comprised of a Chief Operating Officer, five operational and functional Executive Vice-Presidents and three Senior Vice-Presidents. There is also a Group management committee with 25 members, including the Executive Committee members.

14 directors

1 senior independent director

45% women (1)

73% Independence rate (1)

The Board of Directors AT DECEMBER 31, 2023

Thierry Le Hénaff (60)
Chairman and Chief Executive Officer, Arkema
Year current term expires: 2024

Bpifrance Investissement
Represented by **Sébastien Moynot (51)**
CICD
Head of Bpifrance's Development Capital Department
Year current term expires: 2025

Séverin Cabannes (65)
CAC
Company Director
Year current term expires: 2027

Marie-Ange Debon (58)
CAC ✪
Chairman of the Management Board, Keolis
Year current term expires: 2026

Fonds stratégique de Participations
Represented by **Isabelle Boccon-Gibod (55)**
CICD CAC
Company Director
Year current term expires: 2026

Ilse Henne (51)
CAC
Member of the Executive Board of Thyssenkrupp AG
Year current term expires: 2025

Ian Hudson (66)
CICD ✪ CAC
Company Director
Year current term expires: 2027

Florence Lambert (51)
CICD
Chairman, Genvia
Year current term expires: 2027

Hélène Moreau-Leroy (59)
CNRG
Senior Independent Director, Chairman and CEO of Hutchinson
Year current term expires: 2027

Nathalie Muracciole (59)
CNRG
Employee rep. – Group Communication Department
Year current term expires: 2024

Nicolas Patalano (52)
Employee shareholder rep. – HPP Project Technician
Year current term expires: 2026

Thierry Pilenko (66)
CNRG ✪
Company Director
Year current term expires: 2025

Susan Rimmer (48)
CICD
Employee rep. – Global Product Stewardship Manager
Year current term expires: 2024

Philippe Sauquet (66)
CNRG
Company Director
Year current term expires: 2026

CAC Audit and Accounts Committee
CNRG Nominating, Compensation and Corporate Governance Committee
CICD Innovation and Sustainable Growth Committee
✪ Chairman

(1) Excluding directors representing employees and shareholder employees, in line with the recommendations of the AFEP-MEDEF Code.

The Board is attentive to maintaining:

- a diversity of experience and skills complementarity, notably with current and former executives with experience in industry (the chemical industry and customer-driven businesses in particular), finance, acquisitions and their integration, corporate social responsibility and digital, some of them having also spent an important part of their career abroad;
- a large majority of independent directors; and
- a high level of gender balance.

Proposed changes to the composition of the Board of Directors

- Reappointment of office of Thierry Le Hénaff, Chairman and Chief Executive Officer, for a four-year term, submitted to the annual general meeting of 15 May 2024; and
- Reappointment and/or replacement of employee representatives (Nathalie Muracciole and Susan Rimmer) by the European Works Council at the first meeting following the annual general meeting of 15 May 2024, scheduled on 2 July 2024.

Directors' skills matrix (EXCLUDING THE CHAIRMAN AND CEO)

	CHEMICALS	INDUSTRY	INTERNATIONAL	CEO	FINANCE	CSR	M&A
Sébastien Moynot		●			●	●	●
Marie-Ange Debon *		●	●	●	●		●
Isabelle Boccon-Gibod		●	●		●	●	●
Ilse Henne *		●	●		●		
Ian Hudson *	●		●		●	●	
Florence Lambert *		●		●		●	
Séverin Cabannes *	●	●		●	●		
Hélène Moreau-Leroy *		●	●	●			●
Nathalie Muracciole	●					●	
Nicolas Patalano	●						
Thierry Pilenko *		●	●	●			●
Susan Rimmer	●					●	
Philippe Sauquet *	●	●				●	●
	46%	69%	46%	38%	46%	54%	46%

* Independent directors.

The Board's work

The Board of Directors

It determines the Group's strategic guidelines and oversees their implementation.

Its approval is required for:

- **investments** in excess of **€80m**;
- **acquisitions** or **divestments** with an **enterprise value** in excess of **€130m;** and
- financial statements, with oversight on the quality of information provided to shareholders and financial markets.

More generally, it promotes the Group's long-term value creation for all of its stakeholders, taking into consideration notably the social and environmental implications of its activities.

7 meetings
including one meeting dedicated to Group strategy

93%
Attendance rate in 2023

To accomplish its missions, the Board is supported by the work of 3 specialized committees

Audit and Accounts Committee

Oversees matters including the quality of internal control and the reliability of information provided to shareholders and financial markets, including non-financial information.

6 meetings | **97%** Attendance rate | **80%** Independence rate

Nominating, Compensation and Corporate Governance Committee

Issues, in particular, recommendations on matters including the composition of the Board of Directors, the compensation policy for the Chairman and Chief Executive Officer, and good governance practices.

4 meetings | **94%** Attendance rate | **100%** Independence rate

Innovation and Sustainable Growth Committee

Assesses the contribution of Arkema's innovation and strategy to environmental challenges and sustainable growth. Together with the Audit and Accounts Committee and the Nominating, Compensation and Corporate Governance Committee, it helps perform a full review of the Group's ESG and non-financial challenges.

3 meetings | **100%** Attendance rate | **50%** Independence rate

Annual assessment of the Board of Directors' operating procedures

The Board of Directors carries out an annual self-assessment of its operating procedures using a questionnaire that it validates. An external assessment is carried out by an independent consulting firm in cooperation with the Chairman of the Nominating, Compensation and Corporate Governance Committee and the Secretary of the Board of Directors every three years.

The 2021 Board of Directors' annual assessment was carried out by Spencer Stuart at the start of 2022. Generally speaking, the assessment showed that Arkema's governance was in line with best practice.

For 2023, the assessment was carried out using self-assessment questionnaire. The vast majority of directors remain very satisfied with the functioning of the Board and its committees.

The Executive Committee

It supervises the Group's operational management and coordinates and monitors the implementation of the Group's strategy.

Composition of the Executive Committee AT 31 DECEMBER 2023

Name	Position	Area of responsibility
Thierry Le Hénaff	**Chairman and Chief Executive Officer**	
Marc Schuller	**Chief Operating Officer**	Advanced Materials, Coating Solutions and Intermediates segments, North America region, commercial excellence, raw materials and energy procurement
Reporting to Marc Schuller:		
Richard Jenkins	**Operational Senior Vice-President**	Coating Solutions segment
Laurent Tellier (1)	**Operational Senior Vice-President**	Performance Additives Business Line
Erwoan Pezron	**Operational Senior Vice-President**	High Performance Polymers Business Line
Vincent Legros	**Chairman and Chief Executive Officer, Bostik**	Adhesive Solutions segment
Luc Benoit-Cattin	**Executive Vice-President, Industry and CSR**	Industrial safety, environment and sustainable development, technique and construction, supply chain, quality and goods and services procurement, processes and operational excellence
Bernard Boyer	**Executive Vice-President, Strategy**	Planning, economic studies, acquisitions/ divestitures, internal audit and internal control, insurance and risk management, and legal affairs
Marie-José Donsion	**Chief Financial Officer**	Accounting, financial control, treasury management, financing, taxation, investor relations, IT and digital transformation
Thierry Parmentier	**Executive Vice-President, Human Resources and Communication**	Human resources and communication

(1) As Marie-Pierre Chevallier retired on 31 December 2022, Laurent Tellier joined the Executive Committee as Senior Vice-President Performance Additives, replacing her on 16 February 2023.

Group management committee (CODIR)

The Chairman and Chief Executive Officer is also supported by a Group management committee comprising 25 members, including the members of the Executive Committee and certain heads of businesses, support functions, regions and countries.

The R&D department falls within the remit of Armand Ajdari, Chief Technology Officer (CTO) of Arkema, and reports directly to the Chairman and Chief Executive Officer.

20% OF CODIR MEMBERS ARE WOMEN

General comments

In this document:

- the term “Company” refers to the company named Arkema, whose shares are traded on the regulated market of Euronext Paris;
- the terms “Arkema”, “Group” or “Arkema Group” refer to the group composed of the Company and all the subsidiaries and shareholdings it holds directly or indirectly; and
- the term “Bostik” refers to the Bostik group.

This document contains forward-looking statements about the Group’s targets and outlook, in particular in the “Profile, ambition and strategy” section and section 5.2. Such statements may in certain cases be identified by the use of the future or conditional tense, or by forward-looking words including but not limited to “believes”, “targets”, “expects”, “intends”, “should”, “aims”, “estimates”, “considers”, “wishes”, “may”, etc. The Group notes that all its targets are set under the assumption of standard market conditions and in line with current International Financial Reporting Standards. It also notes that these statements are based on data, assumptions and estimates deemed reasonable by the Group at the date of this document and within the time frame in question, in particular with regard to future development of global demand, conditions relating to raw material and energy costs, balance between supply and demand for products marketed by the Group and their price levels, and currency exchange rates. They may change or be amended due to uncertainties linked to the economic, financial, competitive and regulatory environment in which the Group operates, as well as to health conditions relating to pandemics such as the Covid-19 crisis, geopolitical equilibriums and climate change. In addition, the business activities and the Group’s ability to meet its targets may be affected if one or more of the risks described in section 2.1 of this document were to materialize. Furthermore, achievement of the targets implies the success of the strategy presented in the “Strategy” section of this document.

The Group does not undertake to meet and does not give any guarantee that it will meet the targets described in this document.

Investors are urged to pay careful attention to the risk factors described in section 2.1 of this document. The materialization of one or more of these risks could have an adverse effect on the Group’s activities, condition, financial results or targets. Furthermore, other risks not yet identified or considered as not material by the Group could have the same adverse effect.

This document also contains information on the markets in which the Group operates. This information is derived in particular from research produced by external organizations. Given the very rapid pace of change in the chemicals sector in France and the rest of the world, this information may prove to be erroneous or out of date. Accordingly, trends in the Group’s business activities may differ from those set out in this document.

For 2023, the Company has prepared annual financial statements and consolidated financial statements for the period between 1 January and 31 December. These financial statements are presented in chapter 5 of this document. Chapter 5 of this document provides a comparative analysis between the 2023 consolidated financial statements and the 2022 consolidated financial statements.

The alternative performance indicators used by the Group are defined in note 4 of the notes to the consolidated financial statements in section 5.3.3 of this document.

A glossary defining the technical terms used in this document can be found at the end of this document

INNOVATION AND BUSINESS OVERVIEW

1

The different parts constituting the annual financial report are identified in the table of contents by the pictogram **|AFR|**

1.1 Innovation strategy

As Arkema's signature, “Innovative materials for a sustainable world”, indicates, its growth strategy is based on its ability to develop materials that meet the current and future needs of its customers, linked to global megatrends. To do this, the Group leverages its three specialty segments’ differentiating technologies and expertise in creating and reinforcing materials, bonding and assembling them, and modifying and protecting them. This unique combination, reinforced by our One Arkema approach for efficiently exploring identified opportunities, structures our innovation program.

This innovation program enables Arkema to:

- support its customers as they grow, by constantly developing high performing, differentiated products and solutions that meet their needs, while contributing to planet-friendly, sustainable development;
- anticipate market trends and societal expectations, by developing an offering that combines performance and sustainability; and
- enhance the Group’s operational excellence and reduce its environmental footprint, by providing production facilities with new technologies and processes, thereby enabling the Group to produce safely, competitively and sustainably, in line with its responsible strategy.

With €1.3 billion in sales from products less than five years old in Specialty Materials, innovation is at the heart of the Group’s growth strategy and is based on:

- an adapted organization, including an incubator to foster the emergence of new offerings;
- a large portfolio of research and development (R&D) projects;
- active patent and trademark management;
- a collaborative innovation ecosystem; and
- the progressive development of digitalization.

1.1.1 An adapted organization

Innovation is underpinned by an adapted global organization that enables all stakeholders to get involved and make a contribution at the right level. The Vice-Presidents of the Group’s various Business Lines are in charge of innovation in their global scope, supported by their own R&D managers. At the Group level, initiatives and resources are coordinated by the Research and Development department, which leads worldwide programs and resources through three geographic hubs, overseeing:

- an R&D committee that brings together representatives of the segments’ R&D departments and regional platform coordinators;
- coordination of R&D sites spanning three regional hubs (Americas, Asia and Europe); and
- a scientific committee that includes the Sustainable Development department, the Process department, the Industrial Property department, the Group segments’ global R&D departments, the scientific departments and Arkema’s main R&D centers.

This organization ensures that innovation projects led by the various Business Lines are scientifically and technologically relevant, that technical and market synergies are realized and that project portfolios are in line with the Group’s strategy and sustainable development commitments. It enables the R&D department to identify disruptive innovation opportunities and new research focus areas, drive the development of long-term research platforms, create and lead Group R&D programs and form strategic partnerships.

Talent, skills and technical equipment are managed within the regional platforms. One of the priorities is to train and develop the women and men who drive innovation forward, while promoting a culture of innovation that values initiative, collaboration, diversity and inclusion.

To stay up to date with the latest knowledge and technologies in their fields, the Group’s researchers are encouraged to regularly attend scientific seminars and conferences, participate in innovation days organized by key customers and suppliers, and collaborate with academic partners, notably by contributing to the supervision of doctoral theses. Collaboration with world-renowned scientific advisors and numerous academic and industrial partnerships further provide Arkema’s R&D teams with the opportunity to extend and strengthen their technological expertise.

In 2023, R&D expenditure totaled €275 million, representing 2.9% of Group sales. R&D expenditure as a percentage of sales varies between businesses. It is higher in specialty areas that require more work with its numerous customers and substantial resources to address global megatrends. Arkema’s R&D teams comprised more than 1,800 researchers in 2023, spread between the Group's three regional research and innovation hubs and various product lines.

R&D expenses break down among Arkema’s four segments and its corporate research program as follows:

- **9% for corporate research**

Defined by the R&D department and subject to the approval of Arkema’s Executive Committee, the corporate research program’s mission is to prepare breakthrough innovations addressing major challenges arising from global megatrends, which are developed commercially by the Group’s segments at a later stage. In particular, it coordinates and stimulates research efforts in such high-potential cross-cutting areas as batteries, production, hydrogen storage and conversion into electrical energy, materials lightweighting, photo-polymerization processes for faster material implementation with lower energy consumption, bio-based, biodegradable or bio-synthesized materials, and the recycling of polymer materials. Corporate research also coordinates initiatives on the digital transformation of R&D;

- **46% for the Advanced Materials segment**

The challenges of sustainability and energy transition require the development of new, innovative materials which combine extreme performance, onsite implementation productivity, light weight and recyclability. These new materials are being developed for high value-added applications in markets such as mobility, production and storage of renewable energy, sustainable lifestyle products, water treatment, semiconductors and advanced electronics. R&D in this segment also focuses on the development of new-generation fluorospecialties for use in battery electrolytes and new-generation etching gases for electronics;

- **23% for the Adhesive Solutions segment**

In the highly diverse area of adhesives, Arkema is focusing its R&D efforts on sustainable solutions, primarily by developing new adhesives and more efficient assembly technologies. Specifically, a large portion of Bostik's R&D is dedicated to reducing the environmental impact of buildings and developing innovative, functional adhesives and waterproofing products used to make insulation materials and building components. Another major innovation focus is on engineering adhesives, which are experiencing high growth in the electronics, renewable energy production and storage, and medical markets.

Recent acquisitions have significantly expanded Bostik's portfolio, with key technologies in the areas of structural bonding for transportation and buildings, pressure sensitive adhesives and flexible packaging. The acquisition of Polytec PT in 2023 thus brings cutting-edge expertise in thermally and electrically conductive adhesives for electronics and batteries;

- **21% for the Coating Solutions segment**

The coatings market is constantly evolving in response to societal and environmental challenges, and in particular to increasingly strict requirements with regards to the protection of people and the preservation of natural resources. R&D in this segment develops resins and additives for high-performance coatings that are free of volatile organic compounds and reduce energy consumption during application. Environmental footprint reduction is being accelerated by the development of materials derived from bio-based, bio-attributed or recycled raw materials. UV/LED-curing solutions for 3D printing and advanced electronics use new generations of resins and additives in order to adapt the offering to these constantly evolving, cutting-edge applications;

- **1% for the Intermediates segment**

This segment's R&D objectives focus on ensuring that its processes are competitive and finding new applications for its products. R&D teams continuously improve the processes as a major lever for making them safer, more reliable and more productive, while minimizing their environmental impact with a particular emphasis on reducing direct and indirect greenhouse gas emissions. To this end, R&D teams examine the use of new raw materials, new catalysts and reactor types, and develop new synthesis pathways.

1.1.2 A portfolio of research and development projects

Global population growth and changing lifestyles intensify the imperative on preserving the planet's climate and natural resources. This calls for massive investment by governments and all stakeholders in the transition to low-carbon energies, green mobility and the energy performance of buildings. The rise in living standards across emerging countries intensifies the demand for bio-based or recycled high-end consumer products, particularly in the sports and electronics markets. Working from a forward-looking analysis of these global megatrends, the Group is driving growth through innovation *via* a portfolio of R&D projects that provides solutions to economic and social challenges and contributes to the United Nations (UN) 2030 Agenda for Sustainable Development and its 17 Sustainable Development Goals (SDGs).

The R&D portfolio draws on a range of cutting-edge technologies developed by the Group or acquired over the past ten years, based on Arkema's expertise in materials science in three key areas: creating and strengthening materials, bonding and assembling them, and modifying and protecting them. The innovation program across all our businesses is framed by complementarities and synergies across these technologies from the Group's three Specialty Materials segments, reinforced by the One Arkema approach.

Arkema incorporates corporate social responsibility into all of its R&D projects and implements the eco-design and circular economy techniques described in section 4.3 of this document. In addition, the processes used to steer Business Line innovation projects ("Stage-gate") incorporate the sustainability compliance criteria of the Archimedes program, actively orienting the Group's product range toward sustainable solutions (see section 4.2.3 of this document).

The Group has identified **five key high-growth markets** in which it holds leading-edge technologies which will allow to generate one quarter of Arkema's sales by 2028 and for which it assigns more than 50% of R&D spending:

- green energy and electric mobility;
- advanced electronics;
- sustainable lifestyle;
- efficient buildings and homes; and
- water filtration, medical devices and crop nutrition.

Business line R&D is bolstered by a set of cross-functional Group R&D programs to support developments in these five markets. **Four of these Group programs** complete the project portfolio in order to support sustainable innovation, contribute to Arkema's CSR roadmap and accelerate the decarbonization of its value chain:

- lightweight materials and design;
- circular economy;
- bio-based or bio-synthesized materials; and
- more efficient and virtuous processes.

1.1.2.1 Key high-growth markets

1.1.2.1.1 Green energy and electric mobility

The development of low-carbon energies is a fundamental societal trend driven by government and corporate commitments on a transition to an economy less dependent on fossil fuels. Arkema's innovative materials used in the production, transport, storage and use of low-carbon energies contribute to the fight against climate change and to the UN SDG 7: "Ensure access to affordable, reliable, sustainable and modern energy for all" and SDG 13: "Take urgent action to combat climate change and its impacts". These materials help reduce the Group's downstream carbon footprint (scope 3 emissions).

Arkema thus harnesses its technological expertise to offer a range of new products aimed at improving the technical and environmental performance of photovoltaic panels, wind turbines, batteries, fuel cells and electrolyzers, as well as materials for hydrogen storage.

Solutions for batteries

Innovation in its three Specialty Materials segments enables Arkema to master a range of solutions for developing batteries offering higher energy density, faster charging, enhanced safety and lower carbon impact across its lifecycle.

The Group's portfolio of solutions covers the cell interior and exterior, and battery assembly through to integration and interfacing with the vehicle's other functions.

Inside the cell, for example, the Kynar® PVDF fluoropolymer is used in the main components of lithium-ion batteries – in the electrodes as the binder for the active phase and as a protective coating for the separator. Incellion™ acrylic polymers bring optimized formulations for anodes, adhesion primers and ceramic-coated separators. Ultra-pure Foranext® lithium salts inside the cell move lithium ions from one electrode to the other. Graphistrength® carbon nanotubes improve electrical conductivity in the electrodes for faster charging and greater power delivery. These products play an important role in the battery's lifespan and performance. For this reason, they are the subject of constant, innovative research to improve current-generation batteries and to develop tomorrow's semi-solid and solid-state batteries.

On the outside of the cell, Sartomer® UV resins provide cell and module protection for electrical insulation. Bostik® adhesives ensure mechanical integrity and thermal management between cells, and protect the battery's active elements from external aggression, while enabling disassembly and recycling. Rilsan® PA11 coating resins provide external protection for the battery and the metal conductors that distribute power to the vehicle's subsystems.

Incellion™ materials and additives for higher-performance lithium batteries

With this new range of acrylic binders and additives, under the Incellion™ brand, electric vehicle battery manufacturers can optimize their electrode and separator formulations for both existing and new-generation cell technologies. These innovations deliver higher-performance batteries, with faster charging, longer life and higher energy density, while guaranteeing the highest levels of safety and environmental compliance. These acrylic innovations are the fruit of unique synergies between Arkema's Coating Solutions, Adhesive Solutions and Advanced Materials business segments. This technology strengthens Arkema's commitment and prospects in the new mobility and energy markets.

Materials solutions for hydrogen mobility

Arkema has positioned itself as a benchmark "materials" partner for hydrogen mobility systems. The technical challenges to address correspond to the areas of development of high performance materials that are both lightweight and resistant to extreme conditions. Moreover, the deployment of hydrogen as the energy solution of the future will require an industrial scale-up. As a major chemicals group, Arkema has the appropriate know-how to achieve this.

Rilsan® polymers offer low hydrogen permeability and so can be used in the manufacture of tank liners resistant to low temperatures (-40 °C). Rilsan® polyamide 11 liners are already used in high-pressure hydrogen tanks for road transportation.

The carbon fiber composites and related processes developed by Arkema open up possibilities for the production of entirely thermoplastic high-pressure (700 bars) tanks for cars, trucks, buses or trains, which would be more resistant to alternating stress and fully recyclable at the end-of-life stage. The Group is also looking into composite solutions for cryogenic (liquid hydrogen) tanks for long-distance or air transportation. In addition, studies are underway to equip hydrogen tanks with sensors using Piezotech® electroactive polymers, which could monitor potential damage to the composite structure in real time and thereby improve the safety of fuel cell electric vehicles (FCEVs).

Lastly, Kynar® high-chemical resistance fluoropolymers are prime candidates for electrolysers and fuel cells to improve the durability of bipolar plates and to provide innovative and competitive solutions for materials comprising membrane electrode assemblies (MEAs).

All of these research areas were recognized as Important Projects of Common European Interest (IPCEIs) by the European Union in 2022.

Materials for the wind turbine industry

With its Elium® thermoplastic liquid resin and its Bostik® structural adhesives, Arkema offers a breakthrough innovation in the composites market, especially in the production of wind turbine blades. The resin's recyclability represents a significant advantage for wind turbine blades, for which end-of-life recycling is a major industrial and environmental issue. Arkema has been participating in the Zero wastE Blade ReseArch (ZEBRA) project since September 2020. Led by IRT Jules Verne, this project aims to create the first 100% recyclable wind turbine blade and brings together Arkema, Engie, LM Wind Power, Owens Corning and Suez. Arkema's position in this consortium demonstrates the Group's commitment and drive to be part of a product design model with a circular economy approach.

In 2020, the Elium® technology won the Pierre Potier prize, which is awarded by the French Ministry of Industry to commend sustainable development initiatives by the chemical industry.

Materials for photovoltaic cells

Photovoltaic cells are made up of a number of high-technology polymer materials that protect the silicon layer from outside elements. Arkema harnesses its performance materials expertise to bring to this market a large number of innovations, such as:

- Apolhya® grafted polyolefins and Luperox® organic peroxides, for the protection of photovoltaic cells by encapsulation;
- Kynar® fluoropolymers, for panel backsheet protection; and
- Bostik® EPS polyester adhesives, used to laminate panel backsheet protection films.

A 93-meter wind turbine blade in Elium® resin

In 2023, the Chinese company Sinoma Wind Power Blade Co manufactured its first wind turbine blade in a recyclable thermoplastic composite, based on Elium® liquid resin. At 93 meters, this sets a new world record for the length of a thermoplastic composite wind turbine blade. Following European production of 62- and 77-meter blades by LM Wind Power for the ZEBRA project, this latest achievement further confirms the capability of Elium® resin to be used in the manufacture of very large parts by resin infusion. The composite materials made from this substance deliver the same performances as those made from thermoset resins with an added unique benefit: recyclability.

1.1.2.1.2 Advanced electronics

The numerous innovations for electronics contribute to the UN SDG 9: "Build resilient infrastructure, promote sustainable industrialization and foster innovation".

Through its high performance polymers range (specialty polyamides and fluoropolymers), Arkema offers innovative solutions for the mobile device market, such as smartphones and tablets. These solutions relate to battery safety and life per charge and to the internal structural parts of these devices, which are required to be increasingly thin while offering ultra-high rigidity and made using the same simple injection molding process, as well as to the external parts, which need to be stain- and shock-resistant but also have aesthetic and haptic qualities. Rilsan® polyamide 11 is the foundation for these latest innovations, combining the very high level of performance required for these applications with its 100% bio-based and recyclable qualities. Arkema has developed an elastomer version of Rilsan® material, Pebax® Rnew®, and a transparent version, Rilsan® Clear Rnew®.

With the acquisition of a majority stake in PI Advanced Materials in late 2023, Arkema is expanding into ultra-high-performance polymers for electronics: polyimides. In film or varnish form, polyimides, with their high thermal resistance, are key components in OLED displays, flexible screens and 5G antennas. Arkema completes this range of materials with adhesive solutions for their assembly. A new range of engineering adhesives has been developed and marketed by Bostik under the Born2Bond® brand. The range includes photocure adhesives for the assembly of electronic equipment with enhanced precision and productivity, and photocure sealants shaped in situ, which ensure that the devices are watertight and can be dismantled and repaired. With the acquisition of Polytec PT in 2023, Bostik has also expanded its range of high value-added adhesives for electronics, with conductive adhesives for the assembly and thermal management of semiconductors, printed circuits, photovoltaic panels and flexible electronics. With its Piezotech® fluorinated electroactive polymers, Arkema provides an innovative range of materials for emerging electronics trends, such as organic, flexible and printed electronics. Piezotech® fluorinated polymers and inks have unique properties, making them central to the development of next-generation sensors, actuators and flexible transistors. Already used in smartphones and acoustic sensors, these materials also offer attractive possibilities in consumer applications such as car dashboards and seats, virtual reality gloves, smart textiles and footwear, fitness trackers, video game controllers, flexible screens, smart pill dispensers and more. Professional applications currently being assessed include connected packaging, border controls and medical imaging. In the field of renewable energy, these materials are the foundation of real-time monitoring systems for batteries and hydrogen tanks, optimizing their lifespan, safety and operating costs. To develop these innovations, Arkema draws on an ecosystem of partnerships, including universities, industrial companies and trade organizations in the European Union and around the world.

Foranext® high-purity fluorinated solutions also play an important role in the various stages of the manufacture of semiconductors, where they are used to selectively eliminate matter through plasma etching. Similarly, Peroxal® high purity hydrogen peroxide grades enable efficient and more environmentally friendly wet etching processes.

In addition, E-Pure MSA® high purity methanesulfonic acid is a biodegradable electrolyte medium used for electroplating in the printed circuit board manufacturing process.

In the Coating Solutions segment, specialty monomers and Sartomer® and Sarbio® photocure resins have been developed to protect printed circuits and electronic components through encapsulation and coating. They improve the mechanical resistance of electronic devices and provide better protection against damage caused by the environment, thus increasing longevity.

Moreover, the arrival of 5G technology brings a strong increase in demand for functional materials (dielectric properties, microwave transparency) and for specific energy storage systems, which represent development opportunities for the Group's innovative materials such as Kynar® fluoropolymers, Elium® resins, Nanostrength® additives and Sartomer® resins, as well as PI Advanced Materials polyimide films and varnishes.

1.1.2.1.3 Sustainable lifestyle

With living standards improving, particularly in emerging countries, and the need to preserve the climate and natural resources, demand for consumer products that are both high-end and more sustainable is rising significantly. The trend is particularly strong in sports equipment, consumer electronics and luxury.

The technologies developed by Arkema offer an ever-expanding range of innovative materials that combine performance and sustainability, particularly in terms of carbon footprint reduction. Examples include materials that are recyclable or made from renewable, bio-based or recycled raw materials.

Such innovations contribute to the UN SDG 12: "Ensure sustainable consumption and production patterns".

Arkema has been working for a long time on the development of Rilsan® bio-based polyamides that are widely used in sporting goods such as tennis rackets, bicycle saddles, running shoes, watch cases and bracelets, as well as in structural parts for digital mobility equipment such as phones and tablets. The Pebax® Rnew® range of thermoplastic elastomers, which deliver outstanding energy return, light weight, and durability, has become the benchmark for ski boots and sports shoe soles.

The Rilsan® Clear Rnew® transparent polymer is used in eyewear frames, watches and respiratory masks. Rilsan® Invent Natural fine powders are used in powder-melting 3D printing for making custom items such as racing shoes, protective helmets and eyeglass frames.

In these applications, the range of high-performance polymers is complemented by complexing adhesives for textiles, and by N3xtDimension® photocure resins for 3D printing of custom accessories.

Arkema wins the ICIS 2023 award for "best innovation by a large company"

This award was in recognition of work by Arkema and its partner ON on developing the Cloudneo high-performance running shoe, designed for full recycling. This "mono-material" shoe is made entirely from Arkema's bio-based polyamide resins, and is therefore easily recyclable. The shoe is rented to the runner under the Cyclon™ monthly subscription service. The runner returns the used shoes for recycling through Arkema's Virtucycle® recycling program. This success was made possible thanks to the many years of technological development across a range of high-performance materials meeting the technical requirements of the various shoe components.

1.1.2.1.4 Efficient buildings and homes

Energy efficiency, health, comfort and environmental friendliness are key concerns in developing the building of the future, with market demand in this area growing rapidly. The responses provided to these needs contribute to the construction of sustainable cities and communities, the focus of the United Nations' SDG 11: "Make cities and human settlements inclusive, safe, resilient and sustainable". This long-term trend is strengthened by government initiatives on reducing CO_2 emissions from new and old buildings. It generates a fast-growing market for which Arkema has made R&D a key focus.

Arkema thus offers solutions for the thermal and acoustic insulation of buildings, achieved by combining vacuums or air, fibers and foam, which have low thermal conductivity, with structural materials such as glass, metal and wood. In particular, Arkema offers a range of adhesives for the construction of windows, doors and insulation panels, as well as Coatex® formaldehyde-free acrylic binders for the manufacture of fiber insulation materials. The Group has also developed innovative solutions for the production of ultra-high performance double-glazed windows, including Siliporite® molecular sieves and Bostik® 5000 sealants for the long-term performance of double-glazed windows, and Durastrength® and Clearstrength® additives to optimize the mechanical strength of PVC frame profiles. Bostik's high-performance self-adhesives are used for airtightness and waterproofing purposes. New-generation Forane® HFO blowing agents, with low global warming potential, are used for making thermal insulation foams.

The health impact of products used and indoor air quality are powerful drivers of innovation in the home. This is a major R&D focus for Bostik, and particular attention is paid to formulations which proactively limit the use of additives with unfavorable toxicity profiles. For example, the most recent floor covering adhesives are phthalate- and solvent-free and have sufficiently low volatile organic compound (VOC) content to obtain health certifications like EMICODE® EC1 Plus and to meet the environmental standards required for LEED® and BREEAM® certification. The latest grades are 35% bio-based.

The coating resins activity in the Coating Solutions segment also contributes to the development of healthier, more environmentally friendly homes. Most new grades of acrylic and alkyd emulsions, which are developed by this business, can be used without the addition of a coalescing agent, enabling customers to prepare very low VOC coatings. Some grades also capture formaldehyde from ambient air. Moreover, the new binders for exterior paints offered by Arkema have enhanced dust and water resistance and excellent stability with regard to environmental conditions.

Lastly, the Kynar Aquatec® PVDF emulsion is used in the formulation of white coatings for cool roofs, which reduce buildings' energy consumption. These resins are exceptionally durable, thus preserving the white finish for an especially long time without maintenance. Thanks to these improvements, consumers can use the coatings for a number of years, thereby reducing the environmental impact of maintenance and replacement works.

Research on efficient buildings and homes also benefits from the Arkema Smart House development, which is located at the Venette R&D site in France. This one-of-a-kind laboratory-house was designed to bring together players in construction to cooperate on innovation and sustainable development. The purpose of the concept house is to test, develop and approve new solutions to major challenges facing the construction industry, particularly energy efficiency, environmental footprint and the health and comfort of building occupants. Since its creation, the project has offered a real-scale illustration of several innovative solutions, including solutions that improve occupants' acoustic comfort and new adhesive concepts that make it possible to recycle plastic flooring by simplifying the replacement process and reducing the associated costs. The improved functionality of construction components such as walls and floors is also under review.

1.1.2.1.5 Water filtration, medical devices and crop nutrition

2 ZERO HUNGER

3 GOOD HEALTH AND WELL-BEING

6 CLEAN WATER AND SANITATION

Water filtration

Worldwide population access to drinking water is a major challenge, the focus of the UN SDG 6: "Ensure access to water and sanitation for all". This is also a high-potential market, particularly as regards industrial, agricultural and domestic water treatment. Arkema develops a highly innovative material for the membrane filtration process, Kynar® PVDF resins, which are used as ultrafiltration membranes to treat wastewater or make water drinkable. They allow for much finer filtration of suspended matter, bacteria and viruses while increasing the volumes of treated water by 20%, at constant energy levels. When used with Nanostrength® copolymers, they can double the service life of certain filtration systems, from 5 years to 10 years.

Medical devices

Innovation in the medical sector contributes to the UN SDG 3 "Empowering people to live healthy lives and promoting well-being at all ages". Arkema's performance materials are used in the manufacture of medical and paramedical equipment and accessories, replacing traditional materials such as glass or metal, while meeting requirements for robustness, safety, resistance to sterilization and microbial attack, and good light transmission. Pebax® MED copolymers are used for making catheters. Rilsan® Clear MED polyamides are used for making catheters, breathing masks, syringes and transfusion and perfusion lines. Bio-inert, sterilizable and highly resistant, Kynar® PVDF can be used for making single-use equipment, autoclaves and filtration membranes. All these products meet all the stability, purity and safety requirements of the medical industry.

In the dental field, Arkema develops light-sensitive resins for photopolymerization 3D printing, along with fine polyamide powders for powder-bed fusion 3D printing, which are seeing strong growth in the printing of dental models and molds for making custom orthodontic prostheses.

Manufacturers in the medical sector also use Born2Bond® adhesives in the production of advanced medical and surgical equipment, where compatibility with medical-grade polymer materials is paramount. Main applications include the assembly of needles, syringes, catheters, tubes and masks, along with electronic medical devices such as hearing aids, and equipment such as medical imaging scanners.

Piezotech® electroactive polymers are the focus of numerous developments in the medical field. They are used to manufacture flexible sensors for measuring heart rate and other vital signs, ultrasound probes for imaging, pressure sensors for catheters or robots, and actuators for catheters or steerable guide wires. Given their unique haptic properties, work is also under way on possible applications in virtual and augmented reality devices in surgery.

Lastly, a new generation of compact, mobile oxygen concentrators uses Nitroxy® molecular sieves to produce oxygen-enriched air on demand for patients suffering from respiratory diseases.

Crop nutrition

Many operational challenges are raised with regard to the efficient production, blending, storage, handling, transportation and application of fertilizers and crop nutrients. To address the expectations of this dynamic market and contribute to the UN SDG 2 “Eradicate hunger, ensure food security, improve nutrition and promote sustainable agriculture”, Arkema designs and supplies additives and formulations to optimize fertilizer production and application. Defoamers, filtration aids, clarification aids and corrosion inhibitors optimize the performance and efficiency of production processes. They are complemented by dust- and water-repellent coatings. These additives are an integral part of the finished fertilizer product, improving its quality, durability, functional value and agronomic efficiency.

1.1.2.2 Group-wide R&D programs

1.1.2.2.1 Lightweight materials and design

In addition to their use in the wind power and hydrogen storage markets, thermoplastic composite materials and adhesive bonding offer lightweighting design solutions for energy-efficient mobility. Replacing steel parts with substitutes made from these thermoplastic resins is expected to deliver weight savings of between 30% and 50%. By developing solutions that can be used to reduce the weight of materials used in land and air vehicles and thereby lower fuel consumption, Arkema contributes to the UN SDG 13: “Take urgent action to combat climate change and its impacts”.

Current carbon- or glass-fiber-based composites make heavy use of thermoset polymers, for which the cross-linking process is irreversible. These resins present two limitations: they are extremely hard to recycle and their production cycle time makes them difficult to use in high throughput industries such as automotive.

Arkema has developed thermoplastic-polymer-based composites with innovative resins (Elium®, Kepstan® and Rilsan®), which are adapted to the specific needs of various markets. The recyclable Elium® resin is used in applications in the automotive, wind power, shipbuilding and construction industries, while Kepstan® PEKK makes it possible to obtain particularly hard-wearing and flame-retardant parts that meet the stringent specifications of the aerospace industry.

3D printing, or additive manufacturing, also addresses lightweight manufacturing challenges. By making it possible to design complex parts, these technologies simplify assembly and make it possible to replace metal parts traditionally derived from smelting or tooling, with a subsequent reduction in weight. Arkema occupies a unique position, with a range that now covers all additive manufacturing technologies: powder bed fusion, filament extrusion and UV curing with Rilsan® polyamide 11, Kepstan® PEKK, N3xtDimension® curable resins and Pebax® thermoplastic elastomers.

Arkema has set up a digital platform dedicated to 3D printing to spur the development of innovative solutions and meet the needs of end customers by offering them development partnerships, a unique range of materials and services and Arkema’s application-oriented expertise. To support the accelerating rise of 3D printing as an industrial manufacturing method, Arkema has a global centre of excellence for each of the three additive manufacturing technologies: powder bed fusion in Serquigny (France), photosensitive liquid resins in Exton (Pennsylvania, United States), and filament extrusion in King of Prussia (Pennsylvania, United States). These centres of excellence, all featuring advanced 3D printing equipment, are collaborative spaces where the Group’s materials experts, technology partners and customers can speed up the development of additive manufacturing.

1.1.2.2.2 Bio-based or bio-synthesized materials

Global population growth, rising living standards and industrial intensification are all driving an increase in the use of fossil fuels and therefore contribute to global warming. Mindful of the need to reduce the use of non-renewable fossil resources, Arkema has long been involved in the development of bio-based products, thereby supporting the UN SDG 12: “Ensure sustainable consumption and production patterns”.

Arkema has developed a wide range of bio-based polyamides derived from the castor plant, which is mainly grown in water-scarce regions of India. This range of high performance polymers has grown considerably in recent years. The Group’s expertise and innovation mean that it can offer a wide range of renewable polyamides in diversified markets such as transportation, consumer goods, energy and 3D printing.

Since 2021, Arkema has also marketed a new range of fluoropolymers produced with carbon derived from bio-feedstock, using the mass balance approach. These Kynar® CTO bio-attributed PVDF grades are ISCC+ certified. In 2022, the Coating Solutions segment expanded its offering with a new range of bio-attributed specialty acrylic monomers, resins and additives, which are also ISCC+ certified under the mass balance approach, enabling Arkema’s customers to reduce their Scope 3 greenhouse gas emissions.

Lastly, Arkema has developed a special sulfur-based intermediate for the production by its partner, South Korea-based CJ CheilJedang, of L-methionine, a methionine from renewable sources produced by replacing the use of propylene with a unique fermentation process. These innovations have been implemented at the Kerteh production facility in Malaysia. The remarkable results obtained have led Arkema to set up a research program on enzyme catalysis as a synthesis process for other products in its portfolio.

1.1.2.2.3 Circular economy

As a key component of the circular economy, recycling is addressed by the Group from several angles:

- the use of recycled raw materials, whether sourced directly from the market or resulting from the recycling of end-of-life Arkema products collected on the market;
- the development of recycling technologies for the Group's innovative materials in partnership with the relevant industrial sectors; and
- the contribution of Arkema customers to the circular economy by offering solutions that can be recycled within their own value chains.

Bostik® SF10M: the first RecyClass-approved adhesive for recyclable PE packaging

Recycling of multilayer plastic films in foodstuff packaging is a major challenge where the choice of adhesive is a key factor: it must ensure the packaging is solid enough and protect the food, while maximizing the quality of the recycled output from the used packaging to enable reusability. Bostik is highly active in sustainable flexible packaging technologies and has brought to market the pioneering SF10M, the first adhesive approved by the RecyClass protocol for the polyethylene packaging recycling sector in Europe. Qualification tests have shown that up to 50% of the multilayer films obtained with Bostik® SF10M adhesive, once recycled and granulated, can be reused to produce new polyethylene films of very high quality.

Recycled raw materials and production of recycled polymers by the Group

In 2019, Arkema launched the Virtucycle® program in collaboration with Agiplast to develop loops for the collection and regeneration of high performance polymers while minimizing CO_2 emissions. Thanks to the acquisition of Agiplast in 2021, Arkema became the first fully integrated high performance polymer manufacturer offering both bio-based and recycled materials. The strong know-how acquired in mechanical recycling technologies will now enable Arkema to offer high quality recycled polymers to its customers.

Developing technologies for recycling the Group's materials

Arkema provides materials for applications in which recycling will become a key issue. Examples include the thermoplastic polymers (Elium®, Rilsan® Matrix) used to manufacture wind turbine blades and hydrogen tanks. Through its proactive work on recycling capabilities, Arkema has demonstrated the feasibility of mechanically or chemically recycling scraps and end-of-life wind turbine blades made from Elium® thermoplastic resin. Since it is chemically recyclable, the resin can be used over and over again while preserving the same properties as a virgin resin, making this technology a perfect fit for the circular economy.

Arkema's contribution to the circular economy downstream of its products

Among the many solutions offered by the Group are Kercoat® and Opticoat® coatings, which allow glass bottles to be recycled, and Bostik® adhesive grades for the lamination of flexible food films, which can be mechanically recycled with other used packaging.

1.1.2.2.4 More efficient and virtuous processes

Innovation in manufacturing technologies helps to improve reaction yield and reduce the environmental footprint of manufacturing processes, by reducing energy and water use, limiting air emissions and effluent discharges, minimizing waste generation and cutting down direct and indirect greenhouse gas emissions. Arkema has thus deployed several technology innovation programs that enable it to contribute to the UN SDG 12: "Ensure sustainable consumption and production patterns". These platforms notably focus on:

- the use of the latest innovations derived from molecular modeling to more accurately predict chemical phenomena;
- new solutions that intensify the separation of the primary product from the reaction by-products;
- the development of online analyses that monitor changes in the reaction process and the purity of products without the need for human intervention to obtain samples, thereby avoiding drifts in the production and ensuring consistent product quality; and
- the use of innovative technologies to recycle effluents and/or recover the chemical components present.

In 2022, a new process innovation program on carbon footprint reduction technologies was set up. This program helps incorporate innovative decarbonization technologies, including new-generation heat pumps and unit operation electrification solutions, into Arkema's process portfolio. It will also study the potential of other technologies, such as carbon capture and storage and organic waste-to-energy techniques using pyrolysis and methanization.

An innovative process for the decarbonization of acrylics production at the Carling site (France)

An innovative acrylic purification technology has been developed and patented. Partially funded by the French government, when this comes into industrial operation at the Carling site (France) in 2026, it will enable the Group to decarbonize production through a 20% reduction in the site's greenhouse gas emissions, while improving its operating efficiency, environmental footprint and competitive performance. This innovation will help Arkema to position itself as a leader in low carbon acrylic materials and help customers reduce their Scope 3 emissions.

1.1.3 Patent and trademark management

Arkema notably uses patents to protect the innovations generated by its research and development efforts, whether in relation to its innovative manufacturing technologies or products. Intellectual property rights also enhance the value of the Group's products and brands in the eyes of its customers and enable it to be recognized as one of the most innovative in its industry. The Group's portfolio of patents and trademarks therefore represents a key asset for its business.

1.1.3.1 Patents

Protecting the Group's technologies, products and processes with patents is key in optimally managing its business.

Consequently, Arkema files patent applications in its main markets in order to protect new chemical compounds, new materials with high technical performance, new synthesis processes for major industrial products and new product applications.

The number of patents granted and the number of patent applications filed annually are good indicators of R&D investment and performance. In 2023, Arkema filed 216 priority patent applications, of which 204 related to sustainable development. At 31 December 2023, it had 5,351 patent applications pending [(1)] and held 10,047 patents. The high ratio of pending patent applications to patents filed per year is due to the lengthy examination process.

Patent protection, in countries where Arkema seeks it, is typically granted for the maximum legal period of twenty years, calculated from the application date. The level of protection varies from one country to another, depending on the patent type and scope. Arkema seeks patent protection in many countries and regions, primarily in Europe, Asia, North America and South America.

Arkema actively protects its markets. To this end, it monitors competitors and takes action against any third-party infringements of its patents. The Group also challenges third-party patents that are granted without justification and takes legal action to have them declared null and void.

The expiration of a basic patent for a product or process can lead to increased competition as other companies bring new products to market. In some cases, however, the Group may continue to benefit commercially from a patent after its expiration by leveraging expertise related to a product or process or by filing for application or improvement patents.

In line with its Business Lines strategy, Arkema may be open to granting licenses to third parties or negotiating operating licenses for its own needs. For inventions by employees, the Group continues to use the system that it implemented in 1989, whereby it grants additional compensation to employees whose inventions have given rise to a commercially exploited patent.

1.1.3.2 Trademarks

Trademark protection varies from country to country. While in most countries, trademark rights are the result of registration, in some, they may be based on usage regardless of registration. Trademark rights are obtained by registering the trademark nationally, internationally or even supra-nationally in the case of EU trademarks. Registrations are usually granted for a ten-year term and can be renewed indefinitely.

Arkema implements a centralized, dynamic trademark registration policy that draws on a worldwide network of intellectual property advisors.

In particular, Arkema holds the trademark rights to its main products. Examples of Arkema Group flagship brands include Kynar®, Pebax®, Rilsan®, Forane®, Carelflex®, Sartomer®, Bostik®, Sader®, Quelyd® and Fix & Flash™. Arkema has also trademark protected the names of its latest innovations, such as Elium®, Sensio® and N3xtDimension®. More recently, the Group expanded its portfolio with trademarks such as Flexcryl®, Pliogrip® and Aroset® following the acquisition of Ashland's performance adhesives business.

Mindful of the importance of its brand portfolio, Arkema monitors trademark registrations by competitors in similar business sectors and has a policy of taking legal action against infringements.

(1) All patent applications filed as part of a centralized procedure – with the World Intellectual Property Organization (WIPO), for example – are counted as a single application, even though the application may result in several patents being granted depending on the number of countries subsequently selected.

1.1.4 Research incubator

The aim of the research incubator is to bring new products to market by carrying out disruptive innovation projects.

These projects are characterized by:

- their anticipation of changes in technologies or markets;
- significant project risks but high value added if successful;
- a market approach closely coordinated with that of the relevant business segments (one project may involve several Group activities); and
- a portfolio that is balanced between projects that are expected to be brought to market within five years and projects with longer timelines.

Since its creation, it has notably developed Nanostrength® nanostructured copolymers, which enhance polymers' shock resistance, and Apolhya®, used notably for photovoltaic cell protection, as well as piezoelectric polymers *via* the Piezotech subsidiary. Working closely with academic and industrial partners, Piezotech is developing applications for electroactive polymers, notably in the area of haptics for virtual reality devices and sensors for consumer electronics.

The incubator was also behind the 2016 launch of Arkema's thermoplastic composites range, which includes:

- the Elium® range of solutions for infusion molding or Resin Transfer Molding (RTM) technologies; and
- impregnated continuous fiber-reinforced thermoplastic solutions, such as the Rilsamid® Matrix range, for automatic fiber placement and thermo-stamping.

An eco-responsible concept boat in Elium® resin

The *First 44 E* sailboat from the Beneteau Group, presented at the Paris Boat Show in December 2022, is the first production model to be made entirely using Elium® resin for recyclable composites, in partnership with Arkema. This progress marks a major step forward for the boating industry in circular economy, by enabling to contribute to the improvement of boats' lifecycle.

Lastly, the incubator developed PEKK, a polymer withstanding ultra-high temperatures, under the Kepstan® brand. This activity was initiated in 2010, production capacities were doubled in France in 2017 and a world-scale PEKK plant at the Mobile, Alabama site in the United States started production early 2019. These investments will help to meet growing demand in the carbon fiber reinforced composites and additive manufacturing (3D printing) markets (for further details, see section 1.1.2.2.1 of this chapter). Since 2021, this activity has been part of the High Performance Polymers Business Line.

1.1.5 A collaborative innovation ecosystem

The aim of collaborative innovation is to develop innovative solutions with both academic research teams and industrial partners. These partners may be existing customers or suppliers, or new players in markets with which the Group is not yet familiar. This open innovation approach takes the form of participation in industrial research chairs, sharing of laboratories with recognized research institutions, public-private research partnerships and industrial partnerships. The ecosystem also includes technical collaboration or equity investments in startups or innovative companies.

1.1.5.1 Research chairs, shared laboratories and partnerships with universities

The R&D department has set up numerous upstream partnerships with scientific organizations, universities and public and private research laboratories, such as the CNRS and the CEA in France and several universities in France, the United States, Canada, Belgium, Japan, South Korea and Malaysia. These partnerships take the form of research chairs, shared laboratories and doctoral and post-doctoral research contracts. The contribution made by these external experts enables the Group to advance its research in scientific areas related to its R&D projects.

In 2022, Arkema joined forces with the CNRS and partner universities to set up two new joint laboratories. The first is iHub Poly-9 in Lyon (France), which conducts research into new fluorinated materials for batteries (see focus below). The second is LAMPS (Light for Advanced Materials and Processes), a joint laboratory based at the *Institut de Science des Matériaux* (France) that focuses on the use of light to synthesize and apply coating and 3D printing resins, adhesives and composite materials using photopolymerization.

iHub Poly-9: a new laboratory to design the batteries of the future

In 2022, Arkema, the CNRS, Claude Bernard Lyon 1 University and CPE Lyon created a joint laboratory: iHub Poly-9. This joint laboratory, which forms part of the CP2M (Catalysis, Polymerization, Processes and Materials) laboratory, specializes in the design of new fluoropolymers for future generations of batteries. The laboratory works in partnership with Arkema's battery center of excellence located on the Pierre-Bénite (France) site.

In 2022, Arkema also launched the Arkema-*Académie des sciences* Prize for innovation in chemistry for sustainable materials, in association with the *Institut de France*. Bestowed annually, it is intended to reward a scientist for breakthroughs in the development of sustainable materials. This philanthropic initiative will help build a network of high-level scientists and foster opportunities for collaborative innovation.

1.1.5.2 Industrial partnerships and technology acquisition policy

Arkema also forms downstream partnerships with industrial companies, as part of joint research programs with customers, suppliers and even competitors to develop new products and technologies. Arkema thus uses its many research partnerships with customers in order to better understand market demand and to accelerate the development and time-to-market of innovative technical solutions.

The R&D department has a policy of mutually beneficial collaboration with high value-added SMEs and start-ups and supports them in their development process. These partnerships may begin with technical collaborations and follow through even with the acquisition of equity interest in the companies, as was the case with ERPRO 3D Factory, Verkor, Continuous Composites and Tiamat, or outright acquisition, as with Colorado Photopolymer Solutions and Afinitica. Thanks to the resources and expert staff that Arkema provides, these start-ups can grow in an application-oriented environment.

At the same time, the investments enable the Group to position itself in the ultra-innovative product and high-tech markets. In 2021, Arkema launched the “Start-up Connect” program, which invites start-ups specialized in advanced materials from around the world to approach Arkema with a view to establishing a dedicated research collaboration and benefiting from the Group's technological support and experience. This initiative combines the dynamism of small, agile, innovative organizations with Arkema's unique expertise in specialty materials to develop the innovations of tomorrow.

1.1.6 Digital transformation in R&D

Digital transformation is a new and structural component of Arkema's R&D. Digital transformation seeks to accelerate innovation in terms of internal processes, industrial and operational performance, and development of new offerings (products, formulations, materials, services). It has three main focuses:

- acceleration of R&D activities: working from restructured laboratory data, machine learning or artificial intelligence (AI) systems are used to predict the final properties of our formulations and materials, and to simplify our research approach to obtain optimum properties for our customers in the shortest possible timeframe. Generative AI facilitates access to literature and patents by rapidly summarizing corpora of thousands of documents, thus simplifying information retrieval. Drawing on years of research and innovation in our laboratories, semi-automatic approaches to spectrum analysis using AI accelerate our chemical analysis activities. These advances enable us to work more efficiently on repetitive tasks and to focus our research on discovering innovative, sustainable materials for our customers;
- sustainable innovation: the combination of simulation, modeling and artificial intelligence helps us understand the complex interactions governing the properties of our materials. This new understanding, coupled with the acceleration mentioned above, extends our capacity for innovation and enables us to reduce the environmental impact of our solutions. The structuring of industrial data enables us to optimize our processes and reduce CO_2 emissions or electricity consumption at our industrial facilities; and
- the creation of new customer interaction vectors: digital transformation facilitates exchanges both inside and outside organizations, through data sharing. We are developing digital co-creation platforms with the aim of offering customers solutions tailored as closely as possible to their needs.

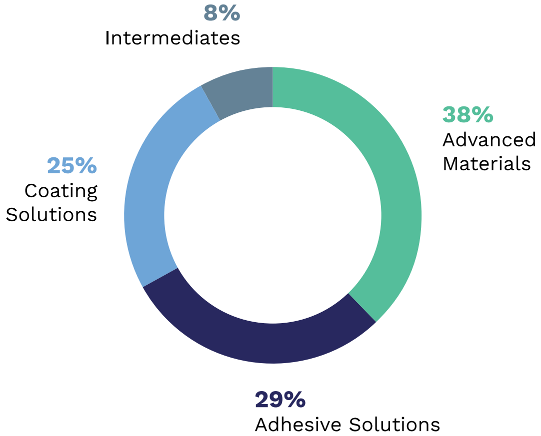
The digital revolution depends on the strong commitment of all our employees. It must therefore be accessible to all, and provide simple, effective solutions. Easy-to-use digital platforms enable all Arkema teams to benefit from the added value offered by digital systems. A wide-reaching training program is underway in collaboration with the Group's Human Resources Development teams to facilitate this transformation and digital acculturation.

1.2 Business overview

As a leading player in Specialty Materials, Arkema aims to offer the most innovative and sustainable solutions to meet its customers' current and future challenges, notably those linked to major climate and societal issues. The Group's signature "Innovative materials for a sustainable world" reflects this ambition. At the Capital Markets Day on 27 September 2023, Arkema announced it would be building on its achievements over the past few years to step up organic growth in high-performance materials and sustainable solutions over the period 2024-28.

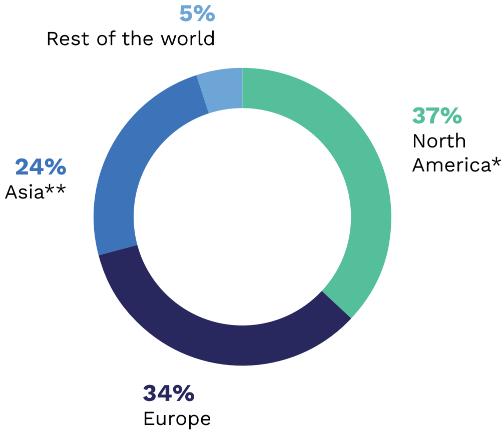
The Group is organized around three key capabilities in materials science: creating and strengthening materials, assembling and bonding them, and protecting and modifying them. These capabilities define the three Specialty Materials business segments : Advanced Materials, Adhesive Solutions and Coating Solutions. The strength of these three segments is amplified by the Group's One Arkema culture, which aims to share technical and market expertise across the different Business Lines to develop substantial technological, industrial and commercial synergies. These three segments accounted for 92% of the Group's sales in 2023 and offer attractive growth prospects. The Intermediates segment consists of activities with more volatile results for which the Group will implement differentiated strategies and whose share will be gradually reduced over time, and eventually disappear.

The breakdown of 2023 sales by segment, reflecting the ongoing refocus towards Specialty Materials, was as follows:



The breakdown of 2022 Group sales by segment was as follows: 25% for Adhesive Solutions, 38% for Advanced Materials, 28% for Coating Solutions and 9% for Intermediates.

The breakdown of 2023 sales by region, based on the geographic location of customers, reflected a balanced footprint among regions and was as follows:



* *United States, Canada and Mexico.*
** *Asia and the Middle East.*

In 2022, the breakdown of the Group's sales by region was as follows: 33% in Europe, 35% in North America, 28% in Asia and 4% in the rest of the world.

At the Capital Markets Day on 27 September 2023, Arkema outlined its next development phase. Building on the achievements since the April 2020 strategy update, the Group now aims to accelerate its organic sales growth in the medium term, by capitalizing on its recent or future industrial investments in high value-added technological solutions serving fast-growing market segments supported by sustainable megatrends. By 2028, Arkema aims to achieve sales of around €12 billion with an elevated EBITDA margin of around 18%, translating into average organic sales growth of around 4% per year, and average organic EBITDA growth of between 7 and 8% per year in the period 2024-28. The Group will also maintain its strict financial discipline, with net debt not exceeding 2x EBITDA.

1.2.1 Adhesive Solutions

Adhesive Solutions (Bostik) includes all of Arkema's adhesives, glues and sealants for the construction and DIY markets, as well as a large number of industrial markets. With sales of €2.7 billion in 2023, Bostik is one of the global leaders in adhesive solutions.

Adhesive Solutions are organized into two Business Lines:

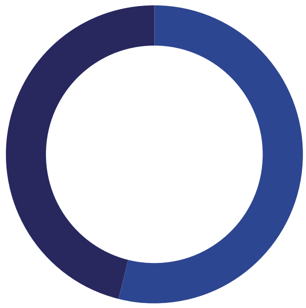
- **Construction & Consumer**, which includes Bostik's solutions for construction and building renovation (adhesive solutions for floors, tiles, waterproofing, joints, assembly, insulation and wall and floor surface preparation); and
- **Industrial Assembly**, which includes Bostik's solutions in industrial adhesives for durable goods (transportation, assembly, etc.) and consumer goods (hard and soft packaging, labels and tapes, etc.), as well as in hygiene.

Adhesive Solutions at a glance

Key figures

(In millions of euros)	**2023**	2022	2021
Sales	2,714	2,898	2,278
EBITDA	380	366	316
EBITDA margin *(%)*	14.0%	12.6%	13.9%
Recurring operating income (REBIT)	293	288	250
REBIT margin *(%)*	10.8%	9.9%	11.0%
Recurring capital expenditure	82	85	77
Capital employed	4,247	4,414	2,864

TOTAL SALES BY BUSINESS LINE



Main products and markets

Bostik is the world number three in adhesives and sealants [(2)]. Its main competitors are Henkel, HB Fuller and Sika.

	Solutions/main markets
Construction & Consumer	
Sealants	Sealing, insulation and waterproofing solutions
Walls and floors	Floor and wall preparation products, tile, wall, floor and ceiling adhesives
Consumer/DIY	Adhesive solutions for repairs, attachment, assembly, decoration and renovation
Industrial Assembly	
Durable goods	Assembly (electronics, engineering adhesives), automotive and other means of transportation (air, rail, etc.)
Packaging	Packaging, labels and adhesive tapes
Non-woven	Hygiene and personal care

Main growth drivers

The global adhesives and sealants market is estimated at some €60 billion [(2)]. It covers the industry and hygiene sector (50%), the construction market (40%) and consumer products (10%). From a geographic point of view [(2)], North America represents around 25% of global demand, Europe around 25%, Asia around 44% and the rest of the world around 6%.

Over the next few years, annual global adhesive market growth is expected to be in line with GDP, underpinned by the increasing replacement of traditional mechanical assembly systems with new adhesive-based bonding and assembly solutions that contribute to **materials lightweighting** and can be used for the **assembly of new materials** such as composites. The use of adhesives is therefore increasing in markets such as batteries and electronics.

(2) *Source: IHS Chemical Economics Handbook – Adhesives, Sealants, and Their Raw Materials, December 2022.*

Adhesives and sealants also help **improve the energy efficiency** of buildings and contribute to the fight against climate change thanks to the development of numerous insulation and waterproofing solutions. Over the coming years, growth in these areas will be driven notably by stimulus plans deployed, for example in European countries as part of the Green Deal.

More generally, the adhesives market will benefit from global population growth, in particular from the use of adhesives to make baby diapers, feminine hygiene products and adult incontinence products. It will also be driven by strong momentum in emerging countries, where per capita consumption of adhesives is still significantly lower than in Europe and the United States.

Lastly, the adhesives market is still very fragmented with a large number of local players, continuing to offer opportunities for consolidation through small- or medium-sized bolt-on acquisitions.

Main assets

To support its development, the Adhesive Solutions segment can capitalize on:

- strong customer proximity, solid commercial positions and a large portfolio of high performance technologies;
- strong and well-known brands, both global (Bostik®) and local (Sader®, Quelyd®, Evo-Stik®, Mem®, Fortaleza®, XL Brands®) that contribute to customer loyalty, especially in construction and consumer products;
- a global footprint, spanning 43 countries, with 71 production units in Europe, North America and Asia, and 4 regional R&D centres;
- a unique model in the adhesives industry, combining Bostik's expertise in formulations and applications with Arkema's materials science know-how and, in particular, its in-depth knowledge of polymers, additives and coatings. This combination, which offers strong technological and business synergies (access to OEMs and the Group's markets expertise), enables Bostik to enhance its innovation capacity, develop tailor-made solutions for its customers and reduce the time-to-market;
- strong positions, primarily in the four cutting-edge technologies of pressure-sensitive adhesives (PSA), technical and thermally conductive adhesives, hot-melt adhesives and high-performance sealants; and
- an ability to carry out and integrate small- to medium-sized bolt-on acquisitions and generate significant synergies.

Ambition, strategy and projects

2028 ambition

At the Capital Markets Day on 27 September 2023, the Group confirmed its ambition to consolidate its position as one of the world leaders in adhesives, targeting average annual organic sales growth of 3.5% over the period 2024-28, and an EBITDA margin of 17% by 2028. It also aims to double this organic sales growth through targeted acquisitions depending on opportunities that arise.

Strategy

To support its ambition for 2028, the segment will focus on three strategic priorities:

- accelerated development in sustainable high-performance adhesive solutions for industry, construction and DIY, driven by new environmental regulations and their increasingly widespread application in emerging countries. In industry, high-performance adhesives notably meet customers' technical requirements in batteries for electric mobility and in the field of lightweighting. Moreover, sealants and flooring adhesive systems for the construction and consumer markets help to improve the energy efficiency of buildings. The Group also aims to develop solutions to address customer needs with regard to recycling and performance and productivity improvement;
- sustained focus on operational excellence. In order to continue improving its performance, Bostik regularly carries out operational excellence programs aimed at optimizing its industrial base and maximizing synergies with the rest of the Group, whether in procurement, talent management or shared services (finance and IT);
- further bolt-on acquisitions to benefit from the consolidation of the adhesives market.

Main projects completed or underway

As part of its bolt-on acquisition strategy, Bostik regularly acquires small- and mid-sized businesses with a view to enhancing its technology portfolio and expanding its geographic footprint. These transactions offer significant synergies in terms of geographic, technological and business development thanks to highly complementary ranges and know-how. Since acquiring Bostik, the Group has made over 15 acquisitions, including the two major ones of Den Braven and Ashland performance adhesives.

On 28 February 2022, Arkema finalized the acquisition of Ashland's performance adhesives business, based on an enterprise value of US$1,650 million, marking another key step in Bostik's growth. Ashland's performance adhesives, a first-rate leader in high performance adhesives in the United States, benefits from a large range of cutting-edge technologies and well-known brands. It has enjoyed sustained growth in recent years and has significant growth potential in Europe and Asia. Given the very strong complementarities in terms of geographic exposure, applications and integration in acrylics, synergies for the Group are estimated at around US$45 million in EBITDA by 2026.

In addition, on 1 July 2022, Bostik finalized the acquisition of Permoseal in South Africa, one of the leaders in adhesive solutions for woodworking, packaging, construction and DIY. Its well-known brands, including Alcolin®, and its extensive range of high performance adhesive solutions complement Bostik's offering in the region, strengthening its positions in South Africa's and Sub-Saharan Africa's dynamic industrial, construction and DIY markets.

More recently, with the acquisition of Polytec PT, finalized on 1 June 2023, Arkema has strengthened Bostik's product offering to address the fast-growing battery and electronics markets. In particular, Polytec PT has developed strong expertise in thermal interface materials, essential for rapid battery charging and efficient heat dissipation.

Arkema recently acquired Arc Building Products in Ireland, a company specializing in construction adhesives and sealants. This acquisition, finalized on 2 January 2024, strengthens Arkema's position in Ireland's growing construction adhesives market, through a broader range of solutions and a local industrial footprint.

Acquisition	Description	Sales [(1)]	Acquisition date
Construction & Consumer			
Poliplas	A Brazilian leader in hybrid-technology sealants and adhesives	~€10m	March 2021
Edge Adhesives Texas	Manufacturer of hot-melt adhesives and pressure sensitive adhesive tapes for residential construction	~US$12m	June 2021
Permoseal	One of the leaders in adhesive solutions for woodworking, packaging, construction and DIY in South Africa	~€44m	July 2022
Arc Building Products	Irish company specializing in tile adhesives, floor preparation systems and waterproofing and bonding solutions	~€15m	January 2024
Industrial Assembly			
Ashland Performance Adhesives	A leader in high performance adhesives in the United States (pressure-sensitive adhesives, structural adhesives for bonding in construction, composites and transportation, and adhesives for flexible packaging)	~US$360m	February 2022
Shanghai Zhiguan Polymer Materials (PMP)	Company specialized in hot-melt adhesives for the consumer electronics market	>€1m	April 2022
Polytec PT	Company specializing in thermal interface materials for batteries, and high-performance adhesives for the electronics market	~€15m	June 2023

(1) Based on press releases published when the acquisitions were announced.

1.2.2 Advanced Materials

Broadly exposed to the major challenges of sustainable development, the Advanced Materials segment offers a wide range of high-tech solutions. Through substantial investments in innovation and R&D, these address the growing and increasingly complex needs of customers in the fields of lightweight materials, renewable energies (batteries, wind power, solar power, etc.), bio-based or recyclable materials, and in new production methods (3D printing), particularly for cutting-edge sectors such as green energy, electric mobility, advanced electronics, sustainable lifestyle, efficient buildings and homes, water filtration, medical devices and crop nutrition.

Advanced Materials are organized into two Business Lines:

- **High Performance Polymers**, materials with excellent mechanical, chemical and thermal resistance properties that can be used in a very wide range of high-value added applications. Since 1 December 2023, this Business Line has included polyimides from PI Advanced Materials (PIAM); and
- **Performance Additives**, which are made-to-measure solutions essential for improving the properties of certain materials and which play a critical role for Arkema's customers to optimize their production processes and accelerate the implementation of their sustainable development roadmaps.

Advanced Materials at a glance

Key figures

(In millions of euros)	**2023**	2022	2021
Sales	3,562	4,341	3,307
EBITDA	666	941	671
EBITDA margin *(%)*	18.7%	21.7%	20.3%
Recurring operating income (REBIT)	366	663	388
REBIT margin *(%)*	10.3%	15.3%	11.7%
Recurring capital expenditure	363	333	283
Capital employed	4,538	3,529	3,084

2021 data has been restated following the reclassification of upstream PVDF from the Intermediates segment to the Advanced Materials segment as from 1 January 2022.

TOTAL SALES BY BUSINESS LINE

Main products and markets

	Ranking [1]	Main markets
High Performance Polymers		
Specialty long-chain polyamides (PA11, PA12)	No. 2 worldwide	Automotive and transportation, electronics, consumer goods (sports equipment, textiles), electric cables, water transportation, energy, medical
Fluoropolymers (PVDF)	No. 1 worldwide	Architectural coatings, chemical industry, new energies (lithium-ion batteries, photovoltaics), water treatment, energy
Polyimides	World number one in polyimide films	Electronics, electric vehicles
Fluorospecialties (1233zd, electrolyte salts)		Thermal insulation, batteries
PEKK	No. 2 worldwide	3D printing, aeronautics, oil & gas
Performance Additives		
Thiochemicals	No. 1 worldwide	Animal nutrition, energy, biofuels, solvents, polymers
Specialty surfactants	No. 1 worldwide in crop nutrition	Crop nutrition, infrastructures, mineral extraction, energy
Organic peroxides	No. 2 worldwide	Polymers, renewable energies
Hydrogen peroxide	No. 3 worldwide	Paper pulp, chemical products, water treatment, disinfection, electronics
Molecular sieves	No. 2 worldwide	Energy, gas separation, petrochemicals, healthcare (medical oxygen), buildings, pharmaceutical packaging

(1) *Sources: internal estimates based notably on market studies.*

Arkema's main competitors in these markets are Evonik, Ems-Chimie, Syensqo, Kureha, Wanhua, Victrex and DuPont in High Performance Polymers, and Chevron Phillips Chemical, Evonik, Nouryon, Clariant and Syensqo in Performance Additives.

Due to their properties, Advanced Materials serve a very broad range of markets. They are particularly well positioned to address growing demand for sustainable materials, thus offering very attractive growth prospects.

Advanced Materials and in particular specialty polyamides, or PEKK, are especially sought after for **materials lightweighting** in several markets such as automotive, aeronautics, sports equipment and wind power. These materials can be used as a substitute for metal in a certain number of applications, thereby significantly reducing the weight of vehicles and their CO_2 emissions. 3D printing also helps to meet this goal by designing complex parts that replace traditional metal components. Arkema has therefore developed a comprehensive range of unique solutions for these markets, with PVDF, Pebax® and polyamide 11.

In addition, in order to address the challenge of **natural resources preservation**, Advanced Materials offer a broad range of innovative solutions in:

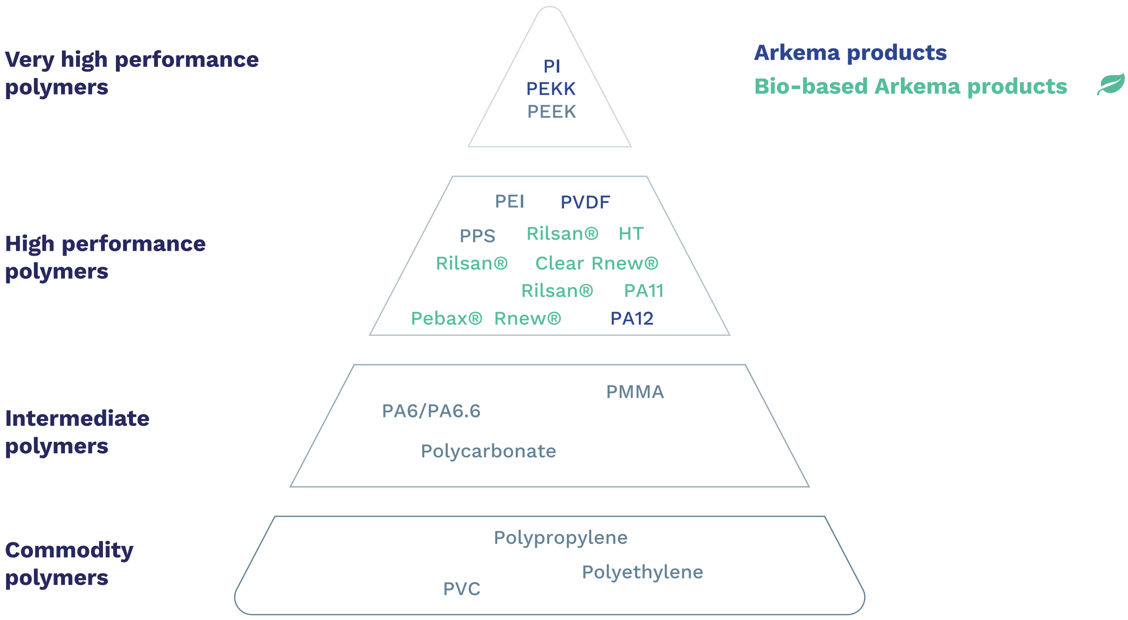
- **green energy**, where Arkema's materials are widely used in the lithium-ion battery and photovoltaics markets, and in biofuels with DMDS. The Group is also working on highly promising new solutions for batteries (electrolyte salts, thermoplastic composites for cases, Forane® 1233zd for cooling systems, polyimides, hydrogen peroxide for recycling, surfactants for lithium extraction) and for hydrogen;
- **bio-based and bio-attributed** solutions such as polyamide 11, derived from castor oil, or bio-surfactants, thereby helping to reduce consumption of fossil fuel-based raw materials;
- **recyclable solutions**, or solutions contributing to improved recyclability for products that use them, such as Cecabase RT® additives for asphalt. In 2021, Arkema strengthened its recycled solutions portfolio with the acquisition of Agiplast, a company specializing in the regeneration of high performance polymers (specialty polyamides and PVDF), which launched a new series of recycled high performance polyamides in 2022; and
- **low-carbon solutions** using renewable or low-carbon energy sources. The carbon footprint of Rilsan® polyamide 11 is now less than 2 kg CO$_2$e/kg [3], which, taking into account that this resin is bio-based, represents a saving of around 70% compared with traditional polyamide resins using raw materials of fossil origin and conventional energy sources.

More generally, Arkema's Advanced Materials addresses the growing needs of the world population in the areas of water treatment and management (specialty polyamides, Kynar® PVDF, hydrogen peroxide), electronics (high performance polymers, polyimides), animal nutrition (intermediates for methionine), consumer goods (high performance polymers for sports, technical textiles, etc.) and energy efficiency solutions for buildings (Forane® 1233zd-based insulating foam).

Main assets

Arkema has strong foundations to develop innovative, high performance solutions for cutting-edge markets and support its customers in their growth. In particular, it holds strong positions in leading-edge technologies: high performance polymers, fluorinated specialties and niche performance additives.

RANKING OF POLYMERS BY PERFORMANCE [4]



(3) *According to ISO14040, 14044 and 14067.*
(4) *Arkema's ranking based on available market information.*

Furthermore, supported by strong technical and commercial proximity with its customers, the Group:

- holds **leading commercial positions** and is one of the world's leading players in its main product lines (see above table entitled "Main products and markets");
- dedicates significant resources to **innovation**, enabling it to regularly launch new applications and provide customers with the technical support they need. In 2023, Advanced Materials thus spent 3.5% of sales on R&D;
- forges **partnerships**:
  - **strategic and technological** long-term partnerships with industrial customers that are leaders in their field, such as Hexcel in aerospace composites, CJ CheilJedang in animal nutrition, and EOS and HP in 3D printing. Arkema became a shareholder in two French startups specializing in high performance batteries: Verkor in 2021 and Tiamat in early 2024,
  - **strategic partnerships to secure and decarbonize its supply**. Arkema has thus signed a long-term contract with ENGIE for the supply of 300 GWh/year of renewable biomethane in France from 1 January 2023. This was one of the largest private biomethane contracts in Europe in 2023. This contract, along with ongoing energy efficiency projects, enable Arkema to achieve further significative reduction of carbon footprint of its bio-based Rilsan® polyamide 11 and Pebax® Rnew® elastomer ranges;
- offers **innovative and more sustainable solutions** in collaboration with leading companies in their sectors. For example, Arkema won the 2023 ICIS (Independent Commodity Intelligence Services) award for "best innovation by a large company" with its partner ON for the joint development of the Cloudneo running shoe. This high performance running shoe is made entirely from bio-based polyamide resins and designed to be 100% recyclable;
- draws on **well-known brands** such as Rilsan®, Kynar®, Kepstan®, Pebax®, Luperox® and Carelflex® that help secure customer loyalty;
- offers a **unique portfolio of high-performance bio-based solutions** including notably Rilsan® polyamide 11, bio-based Pebax® Rnew® (thermoplastic elastomer), Rilsan® ClearRnew® (bio-based transparent polyamide), for which Arkema is the world's only producer, and Sensio™ biosurfactants launched in 2019; and
- has a **competitive industrial footprint on three continents** to serve these markets worldwide. This geographical presence was recently extended with a production unit for polyamide 11 and its monomer in Singapore, along with units in China to develop the specialty polyamide range.

Ambition, strategy and projects

2028 ambition

At the Capital Markets Day on 27 September 2023, the Group announced it was targeting average annual organic sales growth of 6% for the Advanced Materials segment over the period 2024-28, and an EBITDA margin of 23% by 2028.

Strategy

To support its ambition for 2028, the segment will focus on four strategic priorities:

- accelerated growth in three opportunities linked to global megatrends: green energy and electric mobility, bio-based solutions and electronics, thanks to new developments driven by innovation and high value-added applications in these fast-growing markets;
- delivering the roadmap envisaged in the context of the acquisition of a majority stake in PIAM, and the implementation of synergies. PIAM sales, supported by recent capacity expansions, are expected to grow by around 13% per year over the next few years, driven by new cutting-edge applications in 5G antennas, high-definition OLED displays, flexible screens and electric vehicles. Synergies are estimated at around €30 million in EBITDA by 2028;
- ramp-up of our recently completed major investments; and
- preparation for the segment's next stage of growth, with new projects, either announced at the Capital Markets Day or under review. Arkema intends to maintain a high level of investment and innovation in Advanced Materials in order to meet the exponential demand for sustainable and high performance materials.

Although future growth in Advanced Materials is expected to remain essentially organic, Arkema does not exclude the possibility of making bolt-on acquisitions in order to strengthen its portfolio of technologies in fast-growing markets.

Main projects completed or underway

Investments

In Advanced Materials, Arkema has completed over the last three years or is currently carrying out numerous investment projects.

Thus, Arkema is currently finalizing the start-up of a 50% expansion of its global production capacity for bio-based Rilsan® polyamide 11 and its monomer in Singapore, a major investment of €450 million that also includes units in China to develop the specialty polyamide range.

To support the strong demand in lithium-ion batteries and other key markets such as water filtration, high performance coatings and semiconductors, Arkema has increased its fluoropolymers capacity at its Changshu site in China by 50%, which came on stream mid-2023. Arkema also announced a 50% increase in PVDF capacity at its Pierre-Bénite site in France, which started up in the fourth quarter of 2023.

In fluorospecialties, the Group is working to develop less cyclical, high value-added applications that are in line with its sustainable innovation trajectory. Arkema has thus developed 1233zd, a new generation of fluorospecialties with no or minimal emissive impact, used as a new blowing agent in polyurethane foams for insulation and in new applications such as electric vehicle battery thermal management.

In June 2021, Arkema signed an agreement to manufacture 1233zd in China with Aofan, whose 5 kt/year production line successfully started up in November 2022. Arkema also announced an investment of around US$60 million in a 1233zd production unit with a capacity of around 15 kt/year at its Calvert City site in the United States, which is expected to start up in the second half of 2024.

Lastly, to secure its supply of hydrofluoric acid in the United States at a stable and competitive price, Arkema signed a long-term supply agreement with Nutrien Ltd in 2020 for the supply of its fluorogases and fluoropolymers production site in Calvert City. As part of this project, a 40 kt per year hydrofluoric acid production plant at Nutrien's Aurora site in the United States was built and start-up is currently underway. In line with the Group's climate plan, this investment helps reduce the Group's overall energy consumption and greenhouse gas emissions.

At the last Capital Markets Day, Arkema announced two new investments:

- a 35% increase in global production capacity at its Beaumont site in the United States for DMDS (dimethyl disulphide), a key additive for the production of renewable fuels. As the world leader in DMDS, Arkema is keen to support the strong growth of the biofuels market, driven by the imperatives of sustainable growth and lower-carbon road and air transport in particular; and
- a 2.5-fold increase in the organic peroxides production capacity at its Changshu site in China. This investment of around €50 million will enable the Group to support its Asian customers in fast-growing markets, particularly in renewable energies.

	Project description	Site	Main markets	Starting period
High Performance Polymers				
Specialty polyamides	+50% global production capacity of amino 11 monomer and polyamide 11	Singapore	Automotive, 3D printing, consumer goods such as sports and electronics	First-half 2024
	Polyamide 11 powder plant	Changshu, China	Sustainable home appliances, transportation, 3D printing	First-half 2023
	+40% global production capacity of Pebax® elastomers	Serquigny, France	Sports, consumer goods	Second-half 2023
Fluoropolymers	+50% production capacity	Changshu, China	Lithium-ion batteries, water filtration, semiconductors, coatings	First-half 2023
	+50% production capacity	Pierre-Bénite, France	Lithium-ion batteries	Second-half 2023
Fluorospecialties	New ~15 kt/year Forane® 1233zd unit	Calvert City, United States	Thermal insulation, lithium-ion batteries	Second-half 2024
Performance Additives				
Thiochemicals	+35% global production capacity of DMDS	Beaumont, United States	Biofuels	First-half 2025
Organic peroxides	+150% production capacity	Changshu, China	Renewable energies, photovoltaic panels	First-half 2025

At the Capital Markets Day in September 2023, Arkema also announced that it was considering several significant projects:

- in batteries, the Group is examining a project to invest in PVDF and a project to build a new electrolyte salts production unit. Both projects aim to support strong growth in batteries for electric vehicles, especially in the United States; and
- in bio-based materials, the Group plans to capitalize on its Amino 11 production to develop high performance bio-based polymers, especially in transparent and recycled grades.

Partnerships

Arkema is also actively expanding its partnerships in Advanced Materials.

In batteries, Arkema invested in Verkor, a French start-up specialized in high performance batteries, in 2021, and more recently in Tiamat, a pioneering start-up in sodium-ion battery technology.

In 3D printing, Arkema acquired in 2021 a 10% stake in ERPRO 3D FACTORY, a company specialized in large-series additive manufacturing, mainly using polyamide 11 powder, thus enabling the Group to gain new expertise and accelerate its development in this market.

Lastly, in thiochemicals, Arkema partners with the Korean group CJ CheilJedang (CJ), supplying methylmercaptan (MeSH) to their methionine production site in Malaysia. In the United States, Arkema Inc. has collaborated with Novus International, Inc. for 20 years in the context of a long-term contract to produce 3-methylthiopropionaldehyde (MMP), an intermediate in the manufacture of methionine, at its Beaumont site in the United States.

Acquisitions

On 1 December 2023 Arkema finalized the acquisition of a 54% stake in the South Korean listed company PI Advanced Materials (PIAM), based on an enterprise value of €728 million. This marks another major step forward in Arkema's transformation to become a pure player in Specialty Materials.

PIAM's ultra-high-performance polyimides are cutting-edge materials offering exceptional heat resistance, dimensional stability, flexibility and electrical insulation. This acquisition is also in line with Arkema's strategy of expanding into high-growth applications driven by global megatrends. PIAM's polyimides are used in electronics, semiconductor manufacturing, electric vehicles and other advanced industrial applications. The business saw sales growth averaging 12% a year over the period 2012-21, achieving an EBITDA margin approaching 30% in 2022 with sales of around €200 million. Its 2023 performance was temporarily affected by significant destocking and lower demand in the global consumer electronics market. With two production sites and two R&D centres in South Korea, PIAM employs around 320 people. Given the complementarity with Arkema's activities, pre-tax synergies are estimated at around €30 million in EBITDA within the next five years.

Arkema also pursues a policy of targeted acquisitions to strengthen its positioning and expand its portfolio of sustainable solutions. Thus, in polymer recycling, in June 2021 Arkema acquired Agiplast, a company specialized in the regeneration of high performance polymers, in particular specialty polyamides and fluoropolymers. Thanks to this acquisition, Arkema has become the first fully integrated high performance polymer manufacturer, offering both bio-based and recycled materials in order to address the challenges of resource scarcity and end-of-life products.

Divestments

At the same time, Arkema has continued the repositioning of its portfolio on its strategic activities, with the following divestments:

- on 1 December 2021, the divestment of its epoxides business for an enterprise value of US$38.8 million. Based in Blooming Prairie (United States) and employing close to 45 people, this business generated annual sales of around US$40 million; and
- on 3 January 2023, the divestment of its phosphorus derivatives business (Febex). Part of the Performance Additives Business Line and with little integration within the Group's other activities, Febex reported sales of around €30 million, with 59 employees and one site in Switzerland.

1.2.3 Coating Solutions

The Coating Solutions segment includes the entire range of Arkema's materials and technologies for the coatings market (decorative paints, industrial coatings, and high-tech coatings for high-growth markets such as advanced electronics, electric mobility, 3D printing and renewable energies). Thanks to its high-performance solutions, innovative technologies and strong customer proximity, Arkema is a global leader in this market, that is exposed to increasingly strict environmental standards. This coherent group of activities is backed by a competitive upstream in acrylics.

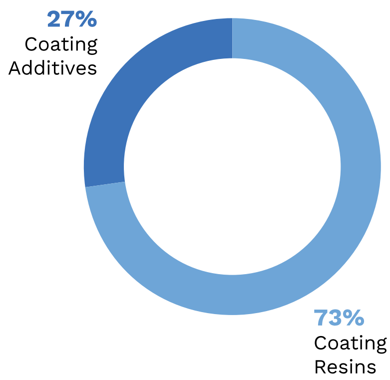
The segment is organized into two Business Lines: **Coating Resins** and **Coating Additives**.

Coating Solutions at a glance

Key figures

(In millions of euros)	**2023**	2022	2021
Sales	2,402	3,250	2,746
EBITDA	327	593	525
EBITDA margin *(%)*	13.6%	18.2%	19.1%
Recurring operating income (REBIT)	201	466	407
REBIT margin *(%)*	8.4%	14.3%	14.8%
Recurring capital expenditure	115	127	97
Capital employed	1,448	1,520	1,509

TOTAL SALES BY BUSINESS LINE



Main products and markets

	Ranking [1]	Main markets
Coating Resins		
Acrylic monomers	No. 2 worldwide	Coatings (decorative paints and industrial coatings), superabsorbents, adhesives, water treatment, energy
Coating resins	No. 4 worldwide	Decorative paints, industrial coatings, sealants, adhesives, electric mobility, energy-efficient housing
Coating Additives		
Photocure resins (Sartomer)	No. 2 worldwide	Industrial coatings, graphic arts, mobility, renewable energies, optics, advanced electronics, 3D printing
Rheology additives (Coatex)		Paper, paint, water treatment, detergency, cosmetics, textiles

(1) Sources: internal estimates based notably on market studies.

Arkema's main competitors in the Coating Solutions segment are BASF, Nippon Shokubai, Dow, PTT GC, Covestro, Miwon and Eternal.

Main growth drivers

Over the next few years, the expansion of the Coating Solutions segment should be driven by growing demand for more sustainable, decarbonized, high performance and easy-to-use solutions, notably addressing the challenges of resource preservation, decarbonization, electric mobility and technological disruptions.

For several years, the paints and coatings market has had to adapt to increasingly stringent environmental requirements. Thanks to the continued development of a range of solvent-free powder resins and photocure resins, water-based emulsions, and bio-segregated and biomass-balance solutions, the Coating Solutions segment offers its customers more environmentally friendly solutions to meet the growing demand for products with a lower carbon footprint and comply with increasingly demanding standards on low emissions of volatile organic compounds.

The challenges of decarbonization and circularity are accelerating the development of these cutting-edge technologies towards new substrates and new applications.

Main assets

To pursue its development, the Coating Solutions segment can notably capitalize on:

- its positioning among the **leading world players** in its various product lines (see above table entitled “Main products and markets”);
- its **integration across the entire value chain**, with competitive, world-scale plants in acrylics and, downstream, businesses specializing in solutions for coatings;
- the broadest **range of products and technologies** on the market: a unique downstream offering spanning all cutting-edge technologies (performance resins and additives for powder, UV/LED/EB, water-based and high solid systems);
- customer proximity thanks to the implementation of high performance digital tools;
- **long-term partnerships** with customers that are leaders in their markets, whether in acrylics or in the various downstream activities;
- solid **R&D capabilities**, with five R&D centres around the world specializing in materials for coatings. Beyond providing technical assistance to customers, these centres contribute to the development of innovative low environmental impact solutions (formulations with low volatile organic compound content, bio-based products, solutions enabling less energy-intensive applications, etc.); and
- a global **industrial footprint**.

Ambition, strategy and projects

2028 ambition

At the Capital Markets Day on 27 September 2023, Arkema announced its target to increase organic sales growth to 3% per year on average for its Coating Solutions segment over the period 2024-28, with an EBITDA margin target of 17% by 2028.

Strategy

To support its ambition for 2028, the segment will focus on three strategic priorities:

- continuing to optimize its operational integration model. Arkema is implementing additional measures on operating efficiency, energy optimization and integration between upstream and downstream acrylics, to support growth, and improve the segment's overall performance and resilience;
- accelerating toward more sustainable solutions with a lower carbon footprint. The Coating Solutions segment will actively continue the development of its sustainable offering through the use of materials of bio-based or circular origin and of solutions with low volatile organic compound content, thus addressing customers' growing needs for solutions that are ever more respectful of well-being and the environment;
- stimulating growth through the One Arkema approach, offering a differentiated value proposition thanks to the complementarity and synergies across the Group's business segments. This complementarity and these synergies are effective in a variety of markets, from batteries and electronics through to coatings and sealants for energy-efficient housing.

Main projects completed or underway

Investments

Arkema has completed over the last three years or is currently carrying out various investment projects.

At the Capital Markets Day of 27 September 2023, the Group notably announced a €130 million investment in its Carling site in France. This strategic project is part of its investment program linked to decarbonization and is being partly funded by the French government under the France 2030 program, managed by ADEME, and financed by the European Union (NextGenerationEU).

The objective is to implement by 2026 a new patented purification technology at one of the main acrylic monomer factories in Europe, which will improve the site's operational efficiency and environmental footprint toward the highest standards. The investment will cut the site's CO_2 emissions by 20%, thus contributing to the Group's ambitious climate plan on a 1.5 °C trajectory by 2030, validated by the SBTi.

	Project description	Site	Main markets	Starting period
Coating resins				
Polyester resins	Doubling of production capacity in India	Navi Mumbai, India	Powder coatings	Second-half 2022
Acrylic monomers	New purification technology to decarbonize the site and optimize its competitiveness	Carling, France	Coatings, adhesives, water treatment	2026
Coating additives				
Photocure resins (Sartomer)	Doubling of production capacity in China	Nansha, China	Electronics, 3D printing, renewable energies	Second-half 2023

Partnerships

The Coating Solutions segment has formed several major partnerships to support its customers' growth and reduce their carbon footprint.

In the field of 3D printing, for example, Arkema has forged strategic partnerships with Carbon®, a world leader in digital printing, and with Continuous Composites, creator of the patented Continuous Fiber 3D (CF3D®) printing technology. Bringing together the high performance UV/LED photocure N3xtDimension® range and some of the most innovative leaders and startups is driving 3D printing technology towards greater circularity (less production waste, raw materials of renewable origin) and optimized productivity (energy savings, short development cycles, etc.). Through these partnerships, 3D industry leaders are able to offer customized products for applications ranging from precision modeling to high-volume industrial applications.

Regarding the carbon footprint reduction of the Group's products:

- Celanese Corporation has announced it will be incorporating solar energy into the power supply for its acetyl chemical intermediates manufacturing plant in Clear Lake, Texas, and will offer the solar power it produces to other site partners, including Arkema;
- Arkema Inc. and Nippon Shokubai American Industries, Inc., through their acrylic monomer joint venture American Acryl L.P. in Bayport, Texas, have strengthened their commitment to accelerate the decarbonization of electricity sourcing through a long-term electricity purchase agreement with EDF Energy Services, LLC, with wind power destined to cover 100% of their annual consumption.

Acquisitions

Arkema also carries out bolt-on acquisitions to continue to strengthen its portfolio of technologies and its geographic presence in downstream activities.

On 1 September 2022, Arkema finalized the acquisition in Mexico of Polimeros Especiales, a major player in high performance waterborne acrylic resins for a broad range of applications in markets such as architectural and decorative paints, textiles, pressure-sensitive adhesives and construction. With this acquisition, Arkema has strengthened its position in this fast-growing region, where it will be developing its full range of products and services.

Lastly, Arkema is continuing the downstream integration of its acrylics, notably through the development of long-term partnerships with industry leaders, the geographic expansion of downstream activities in higher growth areas, and possibly bolt-on acquisitions downstream of its value chain.

1.2.4 Intermediates

The Intermediates segment combines two activities in which the Group has strong positions and high quality assets, but in which results are more volatile: Fluorogases and Asia Acrylics. The segment also used to include the PMMA business, whose divestment was finalized on 3 May 2021.

Intermediates at a glance

Key figures

(In millions of euros)	**2023**	2022	2021
Sales	797	1,020	1,158
EBITDA	213	306	307
EBITDA margin *(%)*	26.7%	30.0%	26.5%
Recurring operating income (REBIT)	170	245	239
REBIT margin *(%)*	21.3%	24.0%	20.6%
Recurring capital expenditure	28	20	27
Capital employed	266	300	324

2021 data has been restated following the reclassification of upstream PVDF from the Intermediates segment to the Advanced Materials segment as from 1 January 2022.

Strategy

Arkema intends to implement differentiated strategies for each of its Intermediates businesses, in order to maximize their value and progressively reduce their share. The Group is thus reviewing various alternatives that may include divestments and partnerships.

In this context, the Group finalized the divestment of its PMMA business to Trinseo on 3 May 2021, based on an enterprise value of €1,137 million, *i.e.,* over nine times its EBITDA. With 7 production sites and some 860 employees, the PMMA business generated annual sales of over €500 million.

In Fluorogases, the Group is examining potential alternatives to reduce its exposure to the most emissive applications, particularly those used for air conditioning and industrial refrigeration (divestments or deconsolidating partnerships).

Arkema is broadly reviewing options that will enable it to rebalance its acrylic activities in Asia between upstream and downstream (divestment and partnership).

Description and main projects of the Intermediates businesses

Fluorogases

The Fluorogases Business Line offers a range of HCFC and HFC products under the Forane® brand. These products are used in refrigeration, air-conditioning and foams. These so-called “emissive” usages are subject to regulatory changes and annual average growth is limited to approximately 2% [5].

Arkema is the world number three in fluorogases [6], its main competitors being Chemours, Honeywell, Orbia and several Chinese players.

Implementation of the Montreal and Kyoto Protocols and the Kigali Amendment has led to a change in fluorogas regulations in a certain number of countries, with timeframes that vary by region, application and product.

Thus, in Europe, the F-gas regulation introduced a quota system that aims to gradually reduce or, in some cases, ban the use of HFCs in certain applications. After a further reduction in quotas on 1 January 2021, the European Parliament and Council reached a provisional agreement in October 2023 on a target of zero HFC by 2050, with a new trajectory for reducing consumption in the EU from 2024 to 2049. If this agreement were to be formally adopted by these institutions and come into force, it would only have a very limited impact on the Group's business. In addition, the European Directive on mobile air conditioning systems (MACs) forbids the use of refrigerant gases having a global warming potential higher than 150 in all new vehicles sold in Europe after 1 January 2017.

Similarly, the United States has introduced regulations (the AIM Act) that came into effect in 2022, aiming to gradually reduce HFC production and consumption by 85% over a 15-year period. Also in the United States, since the ban on producing and importing HCFC-22 in early 2020, only sales of existing stockpiles and recycled products are authorized. Lastly, in Asia, sales and production allowances were implemented in line with the Kigali Amendment, based on average sales and production during the period 2020-2022, leading to the start-up of numerous new HFC plants in China in the second half of 2019.

These regulatory changes weigh on volumes and may lead to high selling price volatility. The sale of HCFC-22 thus represented a significant share of results in the United States in recent years. Since sales are now limited to stockpiled and recycled products, the Group expects this contribution to shrink in the coming years, and completely disappear in 2025.

Asia Acrylics

Through its subsidiary Taixing Sunke Chemicals, specialized in the production of acrylic monomers in China, Arkema has a production capacity of 480,000 tonnes of acrylic acid per year.

1.3 Corporate departments

The corporate departments provide continuous support to Arkema’s business segments, mainly in the areas of industry, accounting, taxation, legal affairs, IT, human resources and communication. They play a key role in enhancing Arkema’s operational excellence and have enabled the Group to become one of the most efficient companies in its industry in numerous areas.

Under the authority of the Executive Committee and in particular the corporate Executive Vice-Presidents (see section 3.2.2.2 of this document), the corporate departments are responsible for ensuring the overall coherence and control of Arkema. More specifically, they coordinate procurement and logistics and maintain expertise in such key areas as safety, the environment, R&D and process control. Some of the corporate departments work for Arkema as a whole. This is notably the case for Internal Audit and Internal Control, Communication, Investor Relations, Accounting, Controlling, and Legal Affairs.

As an exception to the general organizational principles governing the corporate departments, the Raw Materials and Energy Procurement department and the Commercial Excellence department report directly to the Chief Operating Officer.

In addition, the R&D department reports directly to the Chairman and Chief Executive Officer, reflecting the importance of R&D in the Group’s strategy.

[5] *Source: internal estimates and IHS Chemical Economics Handbook – Fluoropolymers, November 2022.*
[6] *Source: Arkema internal estimates.*

The table below shows Arkema's corporate departments at 31 December 2023.

Corporate department	Units within the corporate department	Main responsibilities
Human Resources & Communication	HR Development	Ensure that the Group has the people and skills it needs to carry out its strategy
	Labor Relations and Remuneration Systems	Implement lasting solutions to facilitate social dialogue within the Group
	Institutional Relations	Establish and maintain constant dialogue between the Group and its various stakeholders
	Communication	Communicate and share the Group's strategy and ambitions with external parties (customers, journalists, civil society representatives and the general public) and with employees internally
Industry & CSR	Safety and Environment	Manage personal and environmental risks by implementing a management system that meets the highest international standards and by instilling a culture of excellence in health, safety and the environment (HSE) across the Group
	Sustainable Development	Roll out the sustainable development strategy validated by the Executive Committee and coordinate initiatives relating to corporate social responsibility, product stewardship and regulatory compliance
	Technical/Construction	Oversee the design and construction of new industrial facilities, leverage technical expertise and organize technical support for the Group's operational units
	Supply Chain	Optimize customers' supply chain by meeting their quality of service expectations, while also optimizing Arkema's working capital and transportation costs both safely and responsibly
	Operational Excellence	Develop a culture of operational efficiency to ensure the competitiveness of Arkema's industrial sites
	Goods and Services Procurement	Develop and deploy a goods and services procurement strategy that optimizes the operating costs and investments of Group entities over the long term
	Processes	Coordinate the development of process optimization and technological innovation policies in the Group's various businesses
Finance	Accounting/Consolidation	Prepare the Group's consolidated financial statements in accordance with IFRS. Define the guidelines and help optimize the preparation of financial statements by Group subsidiaries by setting up shared services centers
	Controlling	Prepare performance analyses. Organize the budget process, financial forecasts and the monitoring of financial objectives
	Financing/Treasury	Set up the financing of activities and cash management, manage banking relationships and anticipate the Group's strategic developments
	Taxation	Ensure compliance with tax laws and regulations, documentation of intragroup transactions and follow-up of tax audits
	Information Systems	Define the Group's information systems strategy, organize its networks, infrastructure and applications and ensure their secure and optimized management, supervise the implementation of IT projects, and support users in their application of IT solutions and their adoption of new practices
	Investor Relations	Manage investor and analyst relations, organize the annual general meeting and contribute to communicating the Group's strategy
	Digital Transformation	Define the Group's digital transformation strategy and roadmap. Implement the appropriate governance and organizational structure. Coordinate the various actions taken by the digital managers appointed within the corporate departments and activities
Strategy	Acquisitions/Divestitures	Manage acquisitions and divestitures, as well as joint venture projects
	Legal Affairs	Ensure that operations are conducted in compliance with the applicable laws and regulations, as well as Group procedures, and participate in defending Arkema's interests
	Planning/Economic Studies	Undertake the studies and analyses necessary to guide the Group's strategic decisions
	Internal Audit/Internal Control	Define internal control guidelines and ensure their application within the Group's various entities
	Insurance	Set up and manage all forms of insurance coverage (property damage, civil liability, etc.)

Corporate department	Units within the corporate department	Main responsibilities
R&D	Research Program	Drive commercial development of products and solutions with the aim of continually improving the Group's performance and enhancing its operational excellence, while contributing to sustainable development goals. Provide production facilities with new technologies and processes that will enable the Group to produce safely and competitively while reducing its environmental footprint
	Project portfolio	Coordinate R&D efforts in the five key high-growth markets and the four Group-wide R&D programs supporting sustainable innovation and contributing to the Group's CSR roadmap and the decarbonization of its value chain
	Incubator	Lead the development of breakthrough innovation products through to integration into a Group business
	Partnerships	Set up partnerships with academic research teams and industrial partners (customers, suppliers and even competitors). Manage the start-up detection program
Raw Materials & Energy Procurement	Raw Materials, Energy and Packaging Procurement	Ensure the Group is provided with a secure supply of energy, raw materials and packaging by selecting suppliers that meet the Group's competitiveness, quality, performance and security requirements and that share Arkema's expectations in terms of corporate social responsibility and the values of its Business Conduct and Ethics Code
Commercial Excellence	Global coordination and management of the sales network	Deploy best practices across the sales network. Promote cross-business cooperation and the adoption of new tools. Strengthen customer proximity and the development of associated innovations and new commercial opportunities

1.4 Material contracts

There are no other material contracts than the ones Arkema has entered into in the ordinary course of its business, which notably include multi-year sales contracts, agreements that relate to certain operating procedures at production sites and contracts to secure access to raw materials or energy resources. These contracts, which represent a material source of supply or financial income for certain Group activities, are described in section 1.2 or 2.1 of this document, as appropriate.

Moreover, in connection with the Spin-Off of Arkema's Businesses in 2006, TotalEnergies SE and certain TotalEnergies group companies have made certain guarantees or commitments, many of which are still in effect, for the benefit of Arkema relating to Arkema's actual or potential environmental liabilities arising from certain sites in France, Belgium and the United States, at which operations have ceased in the majority of cases. These guarantees and commitments are described in note 11.3 to the consolidated financial statements at 31 December 2023 in section 5.3.3 of this document.

RISKS AND INTERNAL CONTROL

2

The different parts constituting the annual financial report are identified in the table of contents by the pictogram **|AFR|**

2.1 Main risks

Arkema carries out its business activities in a rapidly changing external environment, which creates various risks that may be beyond its control. On the geopolitical front, the situation has deteriorated again since November 2023, with the conflict in the Middle East leading to renewed tension on oil prices. This has revived the volatility caused by Russia's invasion of certain parts of Ukraine in 2022. The ensuing resurgence in inflation and the subsequent rise in interest rates continued to weigh heavily throughout 2023. At the same time, a general slowdown in most sectors and regions added to the headwinds that the Group faced. Against a backdrop of heightened geopolitical tensions and a deteriorating macroeconomic environment, the risk mitigation and prevention measures in place continued to enable the Group to diminish the consequences thereof.

The items described below constitute the main risks and uncertainties to which Arkema considers itself to be exposed at the date of this document. The occurrence of one or more of these risks could have a material adverse impact on the Group's business activities, financial position, earnings or future prospects, as well as on its image and reputation.

The means implemented by Arkema to identify, assess and manage risks, particularly the set-up and regular update of its risk map, are outlined in this section, as well as in section 2.2 of this chapter.

At the date of this document, the main risks to which Arkema considers itself to be exposed have been categorized as follows without any order of precedence being established between the risks:

- industrial risks;
- risks relating to compliance, legal proceedings, societal expectations and internal control;
- operational risks;
- economic and business risks;
- project and innovation risks; and
- financial risks.

In accordance with regulation (EU) 2017/1129 of the European Parliament and of the Council of 14 June 2017 (known as "Prospectus 3") and ESMA Guidelines published in October 2019, the risks are ranked within each category. The risks are classified by descending order of importance at the date of this document, based on their potential negative impact and their probability of occurrence, after factoring in risk mitigation measures deployed by the Company. Each risk presented has a clear and direct link with the Group and its business activity. However, this list is not exhaustive and other risks of which Arkema is currently unaware or that the Group deems not to be significant at the date of this document could also occur and adversely affect its business activities, financial position, earnings or future prospects, as well as its image and reputation. Moreover, Arkema may alter its assessment of the order of importance of the risks to which it is exposed at any time, notably as a result of external developments or changes in the Group's business activities.

Risks related to non-financial issues are identified by the CSR icon.

2.1.1 Industrial risks

The industrial risks described below are considered in view of the potential impact they could have both on Arkema and on the environment and stakeholders (notably customers, suppliers and people living nearby).

Accidents at sites, external storage or warehouse facilities, or during transportation |CSR|

Because of the very nature of the Group's operations and the level of hazard, toxicity or flammability of certain raw materials or finished products, as well as production, supply or delivery processes, different kinds of accidents (such as explosions, fires and pollution) may occur at Arkema's facilities, at storage and warehouse facilities used by Arkema or during the transportation of various products and raw materials by road, rail, sea or air.

In particular, Arkema operates many industrial facilities, including 33 "Seveso" classified sites in Europe (as defined by directive SEVESO 3 2012/18/EU of the European Parliament and of the Council of 4 July 2012 on the control of hazards linked to major accidents involving dangerous substances), i.e., more than half of the Group's European sites. Outside Europe, the Group operates industrial facilities that fall under a similar classification, including 21 such facilities in the United States where hazardous substances that are liable to present significant risks to the health or safety of neighboring communities and to the environment are used, produced or stored. These classified sites accounted for approximately 54% of Arkema's total sales in 2023.

Incidents or accidents at certain Group sites may also occur due to certain weather phenomena (storms, floods, droughts), the frequency and intensity of which may have increased due to climate change. For further details on this subject, see the "Climate" heading in section 2.1.3 of this document.

In addition, like other chemical sector players, Arkema owns or uses a small number of pipelines to transport hazardous chemical products.

Finally, Arkema may suffer the consequences of possible malicious acts against its facilities or equipment, notably those manufacturing hazardous products and/or "Seveso" classified sites.

Any accident, regardless of whether it occurs at one of the Group's production sites or during the transportation or use of products manufactured by Arkema, may adversely affect the operation of certain units at its industrial sites and cause delays in production. This could lead to commercial problems, generating significant losses in terms of sales and earnings for the activities concerned, as well as significant potential costs, in particular due to administrative authorizations or insurance deductibles and damages not covered by current insurance policies. Should an accident occur, Arkema could also be held liable (i) owing to injury or damage to people (notably due to exposure to hazardous substances being used, produced or destroyed by Arkema or present on its sites), and/or to property, or (ii) for having caused damage to natural resources. In addition, any accident may give rise to compensation claims on grounds of contractual liability (in particular in its role as the shipper, in the case of transportation), tort liability or, as appropriate, product liability.

Risk management

In order to best prevent the risk of accidents, the Group defines scenarios that enable it to assess and anticipate the consequences of various events. As part of its preventive measures, all Arkema facilities and activities worldwide are also covered by a Group-wide safety management program adapted to the risks that each may face. Details are provided in section 4.5 of this document.

In addition, in order to minimize the risk of accidents related to transportation and storage, Arkema endeavors to:

- use transportation means that are deemed less dangerous (barge, pipeline, road-rail or rail), when technical and financial conditions allow it;
- where possible, strictly select suppliers based on the Warehouse Safety and Quality Assessment System (SQAS), which was established under the aegis of the European Chemical Industry Council (CEFIC) by a consortium of European chemical manufacturers and which also covers the Middle East and Asia, and the Chemical Distribution Institute – Terminals (CDI-T) scheme at a global level;
- assess the quality and safety performance of the carriers used;
- ensure regular maintenance of the transportation equipment that it owns, hires or leases (freight cars, ISO-containers, tankers and pipelines);
- carry out systemic risk assessment studies when a modal shift is required;
- implement a variety of operational risk assessment measures, including vetting bulk charter vessels and having the transportation safety management system maintained by the Transportation Safety team, which reports to the Group Safety and Environment department; and
- conduct storage audits prior to signing contracts – repeated every three years for warehouse facilities housing hazardous materials – under the responsibility of the relevant business management.

For pipelines, Arkema notably carries out hazard studies that specify consequence prevention and mitigation measures and implements regularly tested monitoring and response plans.

Security directives are regularly updated in line with recommendations from the public authorities in order to strengthen the security of the Group's industrial facilities. In France, the Group's upper-tier Seveso sites have undergone and are regularly subject to security audits by the authorities. The audits did not reveal any significant deviations from required standards, but they did enable minor adjustments to be made where necessary. In addition, in the context of continued high caution surrounding potential terrorist attacks and malicious acts, additional security measures have been put in place.

Lastly, in order to effectively manage potentially critical situations on Group sites and during transportation, Arkema has defined crisis management procedures for its various plants based on the Group Crisis Management directive. A year-round on-call system enables the Group to supervise any crisis that may occur by setting up a dedicated crisis management team. The Group also regularly offers training courses in "Crisis management and communication" and conducts simulations of crises and of setting-up of crisis management teams.

Exposure to chemicals |CSR|

Arkema has used substances that are or are alleged to be toxic or hazardous to manufacture its products in the past, and continues to do so in certain circumstances. Employees and former employees of Arkema and, in some cases, employees of external companies and service providers, Arkema customers, people living near Arkema's industrial sites and other individuals may have been exposed or may still be exposed to these substances (by ingestion, inhalation, skin contact, etc.) and, as a result, may have developed, may develop or may claim to have developed specific illnesses from such exposure. In addition, for certain substances that are currently regarded as risk-free or whose use has not been regulated, chronic toxicity, even at very low concentrations or exposures, could be discovered in the future. In 2023, 36 occupational illnesses were reported by employees or former employees Group-wide in France, of which 17 were related to exposure to asbestos and 6 to exposure to chemicals. These figures include illnesses not yet included in the tables listing occupational illnesses. In France, 4 Group sites have been included by ministerial decree on a list of sites whose current employees would be entitled to the early retirement provisions for asbestos workers. The Group cannot exclude that other Group sites may be added to the list in the future. For further details, see section 4.5.2.2.4 of this document.

Certain Group products may moreover be used directly or indirectly in sensitive applications, such as medical and food applications.

In the event that specific pathologies were to be linked to substances used by the Group or present in the products that it sells, the Group cannot rule out the possibility that it may be held liable. Should Arkema be held liable, the amounts covered by provisions could prove to be insufficient due to the intrinsic uncertainties involved in projecting expenditure and liabilities relating to chemical exposure.

Risk management

Through product stewardship, Arkema takes care to ensure that its products do not impact people's health or safety in general. These aspects are taken into account during the product design stage. Regulatory compliance plays a key role in ensuring product safety for the entire value chain, customers and stakeholders.

Arkema has put in place safety and monitoring procedures for its products and the products it uses in its manufacturing processes. The Group also regularly conducts research on the toxicity of its products and the products it uses, and in addition has developed a tool for monitoring individual exposure to toxic products. For this purpose, the Group employs regulatory experts supported by a global network of correspondents based in its industrial sites and within its businesses and subsidiaries, and experts in physicochemistry, toxicology and ecotoxicology who work to improve knowledge and understanding of the hazard characteristics of the substances and products used, manufactured, imported and marketed by Arkema. The various procedures in place are described in section 4.2.4 of this document.

In the particular case of medical applications, Arkema has put in place strict rules governing the applications for which Arkema markets its products. In addition, two committees – the Europe/Asia Medical Device Risks Committee and its equivalent for the Americas – are responsible for giving their preliminary opinion regarding all decisions in this area. These two committees communicate regularly to coordinate opinions while taking into account the specific regulations of each region.

Furthermore, Arkema may, if necessary, be forced to withdraw certain products from the market or to cease using certain substances or find substitutes for them in its manufacturing processes, particularly in certain sensitive markets.

Group employees who may potentially be exposed to toxic or hazardous substances in the workplace benefit from medical monitoring adapted to the specific risks related to their activities. When they leave the Group, particularly for retirement, they may benefit, in accordance with applicable legislation, from specific post-occupational medical monitoring established on the basis of information provided by Arkema on the hazardous chemicals they handled over the course of their professional career.

Pollution at sites, warehouse facilities or during transportation |CSR|

Arkema has activities in business areas that entail significant environmental liability risks, with respect to both the operation of its industrial units and to accidents resulting in pollution at one of Arkema's production sites, at a warehouse or during the transportation of products manufactured by Arkema. The Group cannot rule out the possibility that claims will be made in connection with its operations or products, seeking to hold it liable for uninsured events or for amounts exceeding the cover limits. Should Arkema be held liable for environmental claims, the amounts covered by provisions or included in its investment plans could prove to be insufficient due to the intrinsic uncertainties involved in projecting expenditure and liabilities relating to the environment. In particular, the assumptions used to determine these provisions and investments may need to be adjusted, mainly due to changes in regulations, changes in the interpretation or application of regulations by the relevant authorities, the technical, hydrological or geological constraints of environmental remediation or the identification of as yet unknown pollutants. Moreover, achieving compliance with environmental protection regulations for Arkema sites that are still in operation or were previously operated, or for sites where operations have ceased, is likely to generate substantial financial costs for Arkema.

Contingent environmental liabilities and provisions are detailed respectively in notes 11.1.2 and 11.2.1 to the consolidated financial statements at 31 December 2023 in section 5.3.3 of this document.

Risk management

Environmental risk is managed by the implementation of a policy defined and monitored by the Environmental Remediation team within Arkema's Safety and Environment department and rolled out within its various businesses under the responsibility of the industrial Vice-Presidents. The components of this policy are detailed in sections 4.5.1 and 4.5.3 of this document.

Arkema also benefits from guarantees from subsidiaries of TotalEnergies SE with respect to former industrial sites, which were granted prior to Arkema's stock market listing. A description of these guarantees can be found in note 11.3 to the consolidated financial statements at 31 December 2023 in section 5.3.3 of this document.

Risk of loss of occupancy of certain industrial sites

Arkema owns most of the land on which its industrial sites are built, but some of the Group's industrial facilities in its worldwide network, especially in Asia, are located on land that belongs to third parties, either due to local regulations or for technical or strategic reasons. In such cases, Arkema occupies the land under the terms of leases or similar agreements. If these agreements were to be terminated or not renewed, or if a site were to be expropriated, it could lead the Group to incur significant expenses related in particular to the demolition of existing facilities, the clean-up or remediation of these sites or the reconstruction of new facilities. The Company may even be forced to cease certain production activities. All these consequences could, among other things, have a material adverse impact on its business activities, financial position and earnings. Such an event could lead to several scenarios, including having to move production (and thus incur the costs this would involve), or a loss of earnings or margins. For further details on the location of the Group's industrial sites around the world, see the "Profile, ambition and strategy" section of this document.

Risk management

When negotiating contracts, Arkema secures its right to occupy land by implementing sufficiently long terms and lengthy notice periods. Contractual expiration dates are monitored regularly to anticipate any problems regarding renewals. Where applicable, in the event of an expropriation, the Group endeavors to negotiate compensation with a view to reducing future costs related to rebuilding or relocating the units concerned.

2.1.2 Compliance, legal proceedings, societal expectations and internal control

Non-compliance with business practices |CSR|

Unethical conduct by Arkema, its employees or third parties acting in its name and/or on its behalf, or conduct that does not comply with applicable laws and regulations, particularly with respect to corruption or fraud, could expose the Group to legal action that could result in financial penalties and damage its reputation.

The Group operates in many countries worldwide, including countries that rank high on Transparency International's Corruption Perceptions Index. As indicated in section 4.6.2.2 of this document, Arkema pays special attention to the commercial intermediaries it uses in order to prevent situations that could lead to corruption or fraud. Despite this vigilance, there is still a risk that an intermediary may violate anti-corruption laws, resulting in liability on the part of Arkema. Moreover, 21 of the countries in which the Group operates are subject to financial or commercial restrictions and some of the Group's products fall within the definition of dual-use goods regulated by international conventions (notably diethylamine and diisopropylethylamine), which limits their marketing potential. Finally, the Group is exposed to the risk of anti-competitive business practices, including price-fixing and cartel-type arrangements for markets and/or customers. This risk is accentuated by the fact that there are a limited number of competitors in many markets in which the Group does business.

More generally, failure by Arkema, its employees or third parties acting in its name and/or on its behalf in one or more countries to comply with all of these regulations could expose the Group and/or its employees to investigations, administrative or legal proceedings, or even criminal or civil penalties.

Risk management

Arkema has put in place a business compliance and ethics program, which notably covers antitrust, international economic sanctions and anti-corruption laws, an overview of which is provided in section 4.6.2 of this document. This compliance program is communicated electronically to all Group employees every year. As part of this awareness campaign, employees are invited to reiterate their commitment to respecting the Group's principles and rules on ethics and compliance by signing a compliance statement *via* the program's distribution platform. Regular training is also given within the Group to prevent risky behavior and maintain a suitable level of awareness in these areas. In 2023, 67% of the Group's employees took the anti-corruption training module.

Integrity checks and other due diligence on third parties who interact with Arkema have been implemented at the Group level. Particular attention is paid to the risks of corruption and failure to comply with international economic sanctions.

Lastly, pursuant to the provisions of France's "Sapin II Law", a corruption risk map was drawn up in 2018 and continues to be refined and updated regularly based, in particular, on interviews. The corruption risk map is part of the general risk map exercise performed by the Group (see section 2.2.4 of this chapter).

Regulatory requirements and societal expectations |CSR|

Arkema's operations are subject to constantly changing national and international laws and regulations in a large number of fields, including safety, environmental protection, antitrust legislation, company law, commercial law, intellectual property, labor law, personal data protection, tax law, customs regulations and product stewardship. These laws and regulations impose increasingly strict obligations, particularly concerning industrial safety, occupational health, emissions and discharges into air, water and land of toxic or hazardous substances, rational use of resources, labeling, traceability, handling, transportation, storage and disposal of toxic or hazardous substances and exposure thereto, clean-up of past industrial sites, and soil and groundwater remediation.

If existing product regulations were to be amended to become more restrictive for Arkema or if new regulations were adopted, it could (i) compel Arkema to significantly scale back on or even discontinue the production and marketing of certain products, (ii) restrict Arkema's ability to alter or expand its facilities, (iii) possibly compel Arkema to abandon certain markets, incur significant expenditure to produce substitute substances or institute costly emissions control or reduction systems, or (iv) exclude Arkema from certain markets if it could not develop substitute products.

At the date of this document, fluorogases have been identified as the most exposed to regulatory changes. The implementation of the Montreal and Kyoto Protocols and the Kigali Amendment has led to a change in regulations with regard to emissive fluorogas applications in a certain number of countries. For this reason, the transition from old-generation refrigerants (hydrochlorofluorocarbons, or HCFCs) to existing generations (hydrofluorocarbons, or HFCs) then to new generations of low global warming potential refrigerants (hydrofluoroolefins or HFOs) is taking place progressively at different paces depending on the region, application and product. Thus, in Europe, the European F-gas regulation no. 517/2011, which aims to reduce the volumes placed on the market by over 80% between 2015 and 2030, has set up a system of quotas and gradual prohibitions on certain uses. After a new quota reduction that came into effect on 1 January 2021, the European Parliament and Council reached a provisional agreement in October 2023, aiming for zero HFC by 2050, with a new trajectory for reducing consumption in the EU from 2024 to 2049. Should this agreement be officially adopted by the two institutions and come into force, its impact on the Group's business would be minimal. Faster phase-down of hydrofluorocarbons (HFCs) is expected as part of this process, as is the adoption of further restrictions on the use of refrigerants with a higher global warming potential (GWP).

In the United States, the production and import of HCFC-22 are no longer allowed as from 2020. Only sales of stockpiles and recycled products are authorized. In late 2021, the United States also adopted the AIM Act to reduce HFC gas emissions by 85% in 15 years through the implementation of quota allocations starting in 2022.

There have also been discussions, particularly in Europe and the United States, on changes in regulations concerning per- and polyfluoroalkyl substances (PFAS) that could have an impact on certain Group polymer and fluorospecialty chemical activities. In Europe, a proposal was made by five member states of the European Chemicals Agency (ECHA) in mid-January 2023 to ultimately ban or restrict the production, marketing (including imports) and use of approximately 10,000 PFAS. This is the first step in a long process with several stages that will last until 2025. The last major step was a six-month public consultation that was completed in September 2023. Over 6,000 comments are now being reviewed by the Risk Assessment Committee (RAC) and Socio Economic Analysis Committee (SEAC).

Moreover, the article 82 of French law AGEC dated 10 February 2020 relating to the fight against waste and to the circular economy, which introduced restrictions on the use of microplastics intentionally added to products, is in the process of being annulled by a new law aligning it with the European Union.

One will have to wait for its publication before the impact on certain products can be assessed, particularly those products used in cosmetic applications will be possible after. In parallel, the European Commission adopted a proposal to restrict the use of microplastics in certain applications, which came into force in 2023. The ban has a limited impact on certain products, in particular Orgasol®, which will no longer be allowed to be used in "leave on" applications (no-rinse products) from 2029, and in Make up applications from 2035.

As part of the "Green Deal" and with the launch of the "Chemical Strategy for Sustainability", Europe opened a major new regulatory chapter for the assessment and management of chemical risks, based on a heavily revised generic approach to hazard and risk. The strategy will be implemented over the coming years according to the normal process for developing - or revising - the related regulations.

As a general rule, Arkema pays particular attention to ensuring compliance with all laws and regulations to which it is applicable. Non-compliance could result in significant fines being levied on Arkema or in civil or criminal charges being brought against it and/or its employees. As regards tax, Arkema applies documented transfer pricing policies to its inter-company flows that are recognized by the OECD and reasonable with due regard to the risks and functions of Group entities. However, the tax authorities may disagree with these policies or the margins allocated to the various entities, which may lead to tax reassessments. A description of the most significant current or potential litigation is given in note 11.2.2 to the consolidated financial statements at 31 December 2023 in section 5.3.3 of this document.

Lastly, the Group is especially attentive to the societal expectations expressed by civil society, non-governmental organizations and local associations. For a chemical company like Arkema, higher expectations could, in certain cases, lead to more stringent requirements in various areas of the business, such as product stewardship, environmental management and increased consideration of impacts related to climate change and human resources management, resulting in significant additional expenditure and investment to adapt to these requirements. Failure to take action or delays in implementing measures to meet these requirements could result in financial losses through loss of market share or even reputational damage for the Group.

Risk management

All of the Group's operational and corporate departments, both at the corporate and local levels, assisted by the Group's Legal department and, where necessary, specialist consultants or the relevant government authorities, work continuously to ensure that a high level of knowledge of the applicable legal framework is maintained, and to anticipate any future developments in order to comply with the applicable laws and regulations at all times.

The Group is supported by a global network of regulatory experts based in its industrial sites and within its operational units and subsidiaries. These experts are more specifically responsible for monitoring regulatory changes (especially those that concern products being developed in several countries) and producing the documents required to comply with the regulations within the prescribed time limits. These experts are involved in professional associations that monitor proposed legislative or regulatory changes at the state or agency level, thus helping the Group to anticipate regulatory changes and prepare accordingly. For further details, see section 4.2.4 of this document in particular.

In cases where regulatory changes lead to restrictions on the use of raw materials or the marketing of finished products, Arkema works to develop new products or substitutes and relies on its R&D to develop alternative solutions. For further details, see section 1.1 of this document.

Legal, administrative and arbitration proceedings

In the normal course of its business, Arkema is or may become a party to a number of administrative, legal and/or arbitration actions, suits and proceedings, as a result of which it and/or its employees may be found tortiously or contractually liable on various grounds, such as violating the various laws applicable to the Group, full or partial failure to fulfill contractual obligations, termination of established business relationships, pollution, non-conformity of products, counterfeiting, exposure to chemical products, non-compliance with export control regulations, or violating anti-corruption laws, as well as over disagreements concerning the interpretation of the law, established case law, international treaties or tax authorities' commentaries in one of the many countries in which Arkema does business.

A description of the most significant current or potential litigation is given in note 11.2.2 to the consolidated financial statements at 31 December 2023 in section 5.3.3 of this document.

To the best of the Company's and the Group's knowledge, there are no other administrative, legal or arbitration proceedings currently underway that are likely to have or have had over the course of the past 12 months a material adverse impact on the earnings or financial position of the Company or the Group. However, it cannot be ruled out that, in the future, new proceedings, related or unrelated to existing proceedings, could be initiated against an Arkema entity. Should such proceedings have an unfavorable outcome, they could adversely impact Arkema's business activities, financial position or earnings.

Risk management

The Group has implemented a policy whereby the Legal department monitors all administrative, legal or arbitration actions, suits and proceedings, with support from specialist law firms where necessary.

All legal risks related to current or potential litigation are subject to a quarterly review. In this context, each business, corporate department and subsidiary must provide the Group Accounting and Consolidation department and Legal department with a written summary of any legal risks or proceedings that affect, or are likely to affect, the Group's business activities, earnings or financial position. These two departments analyze the risks and legal proceedings that were identified and determine, in liaison with the internal contacts concerned, the amount of the provisions relating to such risks and legal proceedings based on the rules described in note 2 "Accounting policies and new standards" and note 11 "Other provisions and other non-current liabilities, contingent liabilities and litigation" to the consolidated financial statements at 31 December 2023 in section 5.3.3 of this document.

Internal control failures linked to recently acquired subsidiaries

As part of its strategy, Arkema pursues a bolt-on acquisition policy targeting small and mid-sized businesses. Over the past three years, the Group has acquired several industrial businesses, companies or stakes in companies and groups of industrial companies of different sizes, such as Agiplast, Edge Adhesives' business in Texas, Poliplas, Permoseal, Polímeros Especiales, Ashland's performance adhesives business, Polytec PT, PI Advanced Materials and Arc Building. The internal control systems of the subsidiaries acquired vary in terms of their maturity. This may result in errors due to poor knowledge of best practices and attempts of internal or external fraud that may cause financial or even reputational damage to the Group.

Risk management

Following the completion of an acquisition, Arkema needs an average of two years to deploy its global internal control and risk management procedures. This system, its organization, main stakeholders and framework are described in section 2.2 of this chapter.

2.1.3 Operational risks

Dependency on suppliers |CSR|

In the case of certain raw materials, equipment and services (storage in particular) that are essential to its business, Arkema is, to a significant extent, dependent on a limited number of suppliers and, in some cases, a single supplier. Default by a major supplier, the non-renewal of supply contracts for certain raw materials or their renewal on less favorable terms, and significant price increases could therefore have an adverse impact on Arkema's industrial and financial performance.

In particular, the Group has entered into certain multi-year major supply contracts, including those governing Arkema's supply of propylene and oxo alcohols, hydrofluoric acid (HF), 1.1.1-trichloroethane and cyclododecane (CDA), which are used as a main raw material for acrylic monomers, fluorogases, fluoropolymers and polyamide 12, respectively.

Following the shutdown by Total Petrochemicals France of the steam cracker at the Carling site in France, the Group and Total Petrochemicals signed a new agreement on 19 May 2021, extending the long-term supply of propylene to the Carling site.

In September 2022 and on 11 December 2023, Arkema France approved new terms and conditions for the electricity supply to some of its industrial sites to cover its medium-term needs.

Lastly, some of Arkema's French production plants, which consume and ship significant quantities of bulk raw materials classified as "hazardous materials" for transportation purposes, are dependent on the quality of service provided by rail operators and storage authorizations at the sites in question, especially when there are constraints on transportation solutions for operational or regulatory reasons (*e.g.*, single wagons and not full trainloads, no road alternatives). They are therefore monitored very closely, in liaison with the authorities, infrastructure managers and freight operators. The supply chain pressures seen in 2021 and 2022 once again highlighted the importance of this matter.

Risk management

Arkema has implemented a policy of spreading supplier risk at product-line level and at geographic exposure level for its supplies of raw materials, energy resources, services and for some equipment.

The Group's centralized procurement policy for raw materials and goods and services aims in particular to analyze and, insofar as possible, comprehensively address its exposure to the risk of significant dependence on supplies and suppliers.

This policy is based on the following principles:

- diversification of sources of supply when technical conditions allow it;
- the development of long-term partnerships or contracts for supply situations that are subject to severe structural constraints due to the supply and demand balance or the limited number of suppliers; these partnerships also provide the Group with a competitive long-term cost of supply;
- prudent management of the duration of contractual commitments;
- supply chain and inventory management adapted to both business and industrial requirements, particularly for strategic products;
- a thorough assessment of suppliers based on the following criteria: position in the relevant market, industrial and CSR performance, financial strength and development; and
- participation in certain investments or development projects.

Customer risk

For some of its business activities, Arkema has entered into agreements representing significant income with certain customers, the most material of which are described in sections 1.2 and 1.4 of this document for each business concerned. Any crisis affecting an economic sector of Arkema's customers, together with termination, non-renewal or renewal on less favorable terms than those initially agreed for the main contracts, could lead to significant losses in sales and earnings for the businesses concerned, and a sharp deterioration in their profitability. In some exceptional cases, when the customer breaches its contractual commitments, Arkema may initiate legal proceedings or arbitration to enforce its rights. For more information on disputes, see note 11.2.2 to the consolidated financial statements at 31 December 2023 in section 5.3.3 of this document.

More generally, the Group's relationships with a large number of customers expose it to credit risk. At 31 December 2023, accounts receivable net of provisions amounted to €1,261 million. These accounts receivable are detailed by due date in note 12.6.4 to the consolidated financial statements at 31 December 2023 in section 5.3.3 of this document. Arkema's exposure to credit risk is linked to the individual characteristics of its customers.

Risk management

In addition to a highly diversified customer base, the Group's sales are evenly balanced across the different regions in which it operates, thus limiting the geographic concentration of credit risk.

Regarding customer credit risk, Arkema has set up a global credit insurance program that, given the quality of its customer portfolio and low claim rate, allows it to cover a significant proportion of its accounts receivable. Arkema has also deployed a specific credit risk management policy that consists in regularly assessing the solvency of each of its uninsured customers. Uninsured customers whose financial situation does not meet Arkema's solvency requirements are only supplied after payment. For more information, see note 12.6.4 to the consolidated financial statements at 31 December 2023 in section 5.3.3 of this document. The policy concerning provisions for fully or partially uninsured bad debt is also detailed in this note.

IT and cybersecurity risk

The Group's industrial and management processes, and communication between employees and third parties, are highly dependent on information technology systems based on complex and ever-changing technical environments.

Interruptions to the operation of critical applications or loss and corruption of sensitive data (due to system failure or intrusion or malicious use of IT systems) could have a material impact on the Group's business activities, image or reputation, earnings and financial position.

In the event of system failure or intrusion or malicious use of the IT systems, the Group may have to shut down or slow down all or part of one or more industrial units or departments. Given the nature of the Group's business and the sensitive nature of its industrial processes, any interruption in the operation of critical applications or loss of sensitive data (for any reason whatsoever) may result in the shutdown or slowdown of all or part of one or more industrial units or departments as a precautionary measure.

Risk management

The Group's IT department aims to provide systems access to authorized users while ensuring the integrity and confidentiality of sensitive data, in accordance with accreditations issued. Therefore, the Group constantly adapts its IT and industrial systems' prevention, detection, protection and resilience capabilities and implements organizational measures (IT system and industrial security policy, cyber risk exposure assessment, application of international standards, user awareness-raising, user access management, cyber maturity assessment process for goods and services suppliers, and business continuity plan) and technical measures (global cybersecurity operational centre, data protection, networks and infrastructure) that reduce the Group's cyber risk exposure.

To ensure the reliability of its critical processes and compliance with security rules, the Group has set up an internal control system consisting of a number of IT general controls. The effectiveness of these measures, particularly in terms of cybersecurity, is assessed every year and action plans are put in place to address any identified weaknesses.

To boost cybersecurity at a local level and improve security at industrial sites, the IT department has implemented a new organization supported by regional managers as described in section 4.5.2.6 of this document. In addition, each Group site must comply with the security policy intended for industrial systems, implement the Business Continuity Plan and train in cyber crisis management. Accordingly, the technical requirements of the Group's IT systems security policy comprise a human behavioral component, which notably includes the implementation of the iSafe program to raise employee awareness about cybersecurity and data protection, and monthly campaigns of information to build awareness and test responses around new fraudulent practices such as phishing.

Lastly, the Group has taken out a cyber insurance program covering all its subsidiaries worldwide, with a coverage limit of €40 million.

Climate |CSR

The 6th assessment report of the Intergovernmental Panel on Climate Change (IPCC), published in 2021, clearly shows the impact of greenhouse gas (GHG) emissions from human activities on climate change. The report specifically states that limiting climate change by 2100 is contingent on rapidly and substantially reducing GHG emissions and achieving carbon neutrality by 2050. Arkema, as an industrial company, takes into account both "transition" risks, related to the transformation of the economy to limit global warming, and "physical" risks, corresponding to the impacts of climate change on its business activities.

Climate transition risks

To manufacture the products it sells, the Group consumes energy, implements processes that emit greenhouse gases and uses raw materials which themselves emitted greenhouse gases when manufactured. Downstream, the transportation, implementation, use and end of life of products sold also generate greenhouse gas emissions.

Depending on society's expectations linked to the transition to a low-carbon economy, and investors' rapidly changing views on acceptable measures to make progress towards a low-carbon activity, the Group may not be able to meet these societal or investor expectations, which could have a negative impact on its image and reputation.

In addition, the Group could face increased costs, particularly for compliance with new policies and regulations, and new technologies.

A lack of or insufficient commitment, from Arkema, or an inability to meet its greenhouse gas emission reduction targets across its entire value chain, could reduce its attractiveness to stakeholders (investors, customers and employees), thereby limiting the Group's ability to grow.

The ramping up of regulatory requirements in countries or regions with a greenhouse gas emissions reduction policy in place (carbon taxes or quotas) could also generate additional costs (taxes or penalties), significant expenditure and investment to adapt to such requirements, operating constraints due, for example, to drought-related restrictions, therefore reducing the Group's profitability. Fluorogases, for example, have been identified as the products that are most exposed to regulatory changes for many years.

In addition, the economy's shift toward new low-carbon technologies could lead to more competitive solutions. Lastly, difficulties accessing certain low-carbon raw materials could impact their availability or price. These changes could therefore have potential consequences for the Group's business activity or profitability.

Risk management

Arkema has long been committed to meeting the climate challenge and managing the related risks, continuously improving its climate change response policy and stepping up its actions year after year. After raising its level of commitment from well below 2 °C to 1.5 °C in 2022, and in light of the significant progress made, Arkema strengthened its ambition in 2023 and defined new 2030 targets aligned with a 1.5 °C trajectory, validated by the independent global body Science-Based Targets Initiative (SBTi). The SBTi's validation paves the way for an ambition to reach Net-Zero by 2050. Arkema ensures it is taking suitable climate measures by referring to Task Force on Climate-related Financial Disclosure (TCFD) recommendations and, since 2016, by responding annually to the Carbon Disclosure Project (CDP) questionnaire. To strengthen its risk management, in 2023, the Group launched a scenario analysis on one of its businesses to map transition risks and opportunities. The study was in particular based on the International Energy Agency's (IEA) Net-Zero by 2050 scenario. For further information on risk identification, policies, measures and projects implemented, results achieved and the related climate change performance indicators, see section 4.4 of this document. Capex and opex for climate change mitigation action plans within the scope of activities eligible for the EU Taxonomy Regulation are included in the reporting disclosures in section 4.1.5 of this document. Concerning fluorogases in particular, Arkema is already anticipating the applicable regulatory changes which has led the Group to develop new blends and substitutes. For further details, see section 4.4.3.3 of this document.

Physical risks and natural disasters

Climate change has been driving an increase in the frequency and intensity of certain weather events (floods, droughts and storms, in particular), which could lead to incidents or accidents at some of the Group's production sites. Due to their geographic location, 38 of the Group's 151 industrial sites (especially those located in Texas in the United States) are exposed to climate or seismic risks.

In 2023, 26 of these 38 sites were identified as being specifically exposed to climate risks. These classified sites account for around 31% of Arkema's total sales. For most of these sites, there are alternative production arrangements within the Group. Some, however, are the only manufacturing sites for the products in question. If all of these sites were to become unavailable as a result of significant damage resulting from a natural disaster, this could significantly affect the business concerned, leading to material losses in sales and earnings, and resulting in significant costs due to insurance deductibles and damage not covered by current insurance policies.

The effects of climate change could also impact Arkema's supply chain if, for example, a supplier or subcontractor could not supply one or more Group facilities, for reasons also related to climate change, thereby impacting the Group's operating and financial performance and its ability to deliver to its clients.

Risk management

The physical impacts of climate change pose an acute risk when they are caused by one-off events (weather events) and a chronic risk when they concern long-term changes in weather patterns (*e.g.*, regular chronic heat waves). To prevent and limit them, insofar as possible, the Group regularly uses reinsurance company Swiss Re's CatNet® tool to assess site exposure to such risks. In 2022, Arkema also commissioned Ecoact to conduct a climate risk analysis for 2021-2050, based on the IPCC's RCP 8.5 and RCP 2.6 scenarios, for 165 of the Group's industrial sites and research centres and the Group's main critical logistics hubs (19 ports and railway hubs). Section 4.4 of this document, and more specifically sub-section 4.4.4, provides information on all adaptation measures implemented by the Group and the deployment of scenario-based approaches.

Contractual commitments

In the course of its business activities, the Group has entered into multi-annual raw materials and energy procurement contracts to guarantee the continuity and security of supplies to its plants. Based on standard market practices in the Group's business sector, some of these long-term contracts include "take or pay" clauses, requiring the buyer to draw down minimum annual volumes over the term of the contract. Group companies may therefore be obliged to pay for minimum quantities whether or not they actually take delivery of these. In the event of failure to fulfill these contractual commitments or of early termination of the agreements by Arkema, these suppliers could claim compensation or penalties.

In the event of unfavorable economic conditions, a fall in demand or a change in demand for certain Group products, Arkema may not reach the minimum volume and may have to pay a penalty based on the total minimum annual volume cost.

These contractual "take or pay" obligations may therefore have a negative impact on the Group's future operating income and cash flows.

The Group's total financial commitments amounted to €1,219 million at 31 December 2023. For more information, see note 6.3.2 "Contractual commitments related to the Group's operating activities" to the consolidated financial statements at 31 December 2023 in section 5.3.3 of this document.

Risk management

Each Group business deploys an industrial and commercial organization, as well as a quality control system designed to help it fulfill its commitments. Furthermore, the Legal department supports the relevant businesses during the negotiation process for the various agreements.

After being reviewed by the Group's Legal department, material contractual commitments must be approved by the Executive Committee, which, depending on the situation, may request that a specific organizational structure be put in place.

Talent and skills risk |CSR|

Arkema's success is deeply linked to the quality and commitment of its employees and, as a result, to its ability to attract, integrate, motivate, promote and retain skilled employees across all regions in which the Group operates.

Arkema's experienced and committed teams enable the Group to:

- innovate by creating sustainable product and application solutions (at the end of 2023, Arkema's R&D teams numbered more than 1,800 researchers working in 17 research centres structured around three regional research and innovation hubs);
- deploy complex industrial projects (such as the construction of the Thiochemicals platform in Malaysia in a new country using an innovative process and, more recently, the specialty polyamides platform in Singapore);
- successfully integrate acquisitions (in particular within Bostik); and
- more generally, adapt to different macro-economic environments and significantly improve Arkema's financial and non-financial performance.

Given that 34% of Arkema's employees are over 50 years old at the date of this document, the Group is organizing an effective skills transfer process from that generation to a new generation of employees over the coming years.

Since 2021, it has become harder to hire and retain skilled employees. This trend started in the United States before spreading rapidly to other geographic areas and is particularly acute among employees with specific skills in the technologies required in a sector like Arkema's. This phenomenon lessened in 2023, but remains present. Difficulties of recruitment, along with the departure of experienced employees (via resignation or retirement) could hamper the implementation of the Group's strategy and have a negative impact on its business activities and financial position.

Risk management

Arkema has implemented numerous initiatives aimed at attracting quality candidates, retaining top employees and reinforcing their skills, thereby strengthening the Group's overall expertise. These notably include targeted training and development plans, in particular for high-potential employees. For further details on the human resources development and talent management policy, see section 4.6.1 of this document.

Arkema's compensation policies value and fairly reward each employee's contribution to the Group's success. Arkema has also rolled out mechanisms to motivate and retain its employees over the long term by introducing financial incentives (incentive schemes, profit-sharing plans, employee share ownership and performance shares) and by providing its employees with programs and the IT resources needed for new ways of working, particularly remote working. For further details, see sections 4.6.1.5 and 4.6.1.6 of this document.

Lastly, Arkema ensures that skills in certain sensitive technologies are shared by a sufficient number of employees in order to safeguard know-how within the Group.

The 2020-2022 health crisis highlighted the need to adapt ways of working to previously unimaginable circumstances, in particular with the introduction of temporary lockdowns in most countries in which the Group operates. Arkema responded quickly to these situations, implementing a remote working policy tailored to each country.

Risk related to health crises |CSR|

Serious health crises or pandemics, such as the Covid-19 pandemic which emerged in China at the end of 2019 and affects most regions throughout the world, may lead public authorities in France and across the world to adopt measures to restrict the movement of people and the transportation of goods or even to lock down whole populations. These measures could cause disruptions on several levels for the Group. In particular, they could impact supply chains and weigh on customer demand in the different regions of the world. They could also result in partial or total closures of production units, research centres, head offices and other sites.

Health crises or pandemics may impact employees' health and limit their availability, as well as create difficulties with respect to the supply of certain raw materials or the delivery of products to customers.

They may also have a significant impact on the Group's business activity, financial performance and cash flow generation.

Risk management

In the event of a pandemic or serious health crisis, Arkema, in compliance with the applicable regulations, implements the necessary measures to protect its employees' health as a priority, to limit the impact of the exceptional situation on its business activities and earnings to the greatest extent possible, and, lastly, to prepare the return to more normal conditions. To this end, the Group notably deploys crisis management measures at both the central level and in the different countries in which it operates, led by trained personnel.

More generally, the Group ensures that business continuity plans are defined for its main industrial and administrative sites around the world. The plans include actions on three levels:

- health measures to limit the transmission of viruses and protect the health of employees and subcontractors working on the sites by (i) informing all personnel about health measures, raising awareness and providing alcohol-based sanitizers and protective masks, (ii) issuing instructions on how to contain isolated cases, and (iii) reducing the number of meetings and business trips;
- organization measures to ensure business continuity by introducing teleworking solutions and virtual meetings, wherever possible; and
- measures to adapt business activity to the level of absenteeism by organizing work in such a way as to enable a site to continue operating despite the absence of significant numbers of employees and, in extreme cases where a very large number of employees are absent, to ensure the safety of the site in question and environmental protection.

Supply chain disruption

Arkema's customer supply chain may be interrupted due to supplier failure, the unexpected shutdown of a Group production site (supplying other Group sites), supplier or customer, a disruption affecting transportation, logistics or storage and warehousing facilities or regulatory or customs provisions prohibiting transportation, import or export. These disruptions or extended shutdowns impacting a production site may result from problems with raw material or energy resource supplies, technical incidents, industrial action or natural disasters as well as serious government-declared health crises. They may lead to delivery delays over extended periods of time, which could adversely impact the Group's sales and earnings, as well as the quality of its customer relationships.

Moreover, in the event of difficulties with certain raw materials, alternative sources of supply may be limited or non-existent, or only be available at a very high cost.

Regarding transportation, due to stricter regulations on the transportation of hazardous materials, the temporary or permanent lack of transportation means for certain toxic or hazardous products to certain destinations, the market dominance of a single supplier or industrial action affecting transportation, Arkema may face delays in delivery or even refusal by its carriers to collect shipments, difficulties in meeting certain customer demands, increases in certain shipping costs or shipping equipment rental costs and reductions in certain shipments.

Lastly, Arkema uses many storage and warehousing facilities located on its industrial sites and elsewhere. The temporary unavailability of these storage facilities may lead to a production disruption or suspension at certain Group sites or to delivery delays for certain customers as alternative storage solutions are sometimes limited for certain products manufactured by the Group. Such events could have a significant negative impact on the Group's reputation, financial activity and operating income.

Risk management

In order to minimize the risks related to the transportation and storage of its raw materials and own products, Arkema endeavors to strictly select suppliers based on the Warehouse Safety and Quality Assessment System (SQAS), which was established under the aegis of the European Chemical Industry Council (CEFIC) by a consortium of European chemical manufacturers and which also covers the Middle East and Asia, and the Chemical Distribution Institute – Terminals (CDI-T) scheme at the global level. Arkema also endeavors to diversify its service providers and, in particular, split its product shipments between several carriers where possible. Lastly, the Group develops alternative solutions that combine transportation plans and distribution schemes, with a lag time for implementation, and can set up geographic swaps with other manufacturers.

Insurance cover default risk

Arkema's insurance policy is part of the overall risk management framework and, as such, is described in detail in section 2.2.6 of this document.

At the date of this document, Arkema believes that the limits of the insurance cover described in said section take into account the type of risks it incurs. However, in some cases, the possibility that Arkema could be required to pay substantial compensation for claims that are not covered by the existing insurance program, or that it will incur very substantial expenses that will not be reimbursed or only partially reimbursed under its insurance policies, cannot be excluded, notably in the event of an accident at a site or external warehouse, during transportation or in the event of natural disasters.

Arkema selects its insurers from the best and most financially solid companies when taking out policies. However, the possibility cannot be ruled out that, at the time of settling a claim, one or more of these insurers could be in a difficult, even compromised, financial situation that puts payment of the compensation in doubt. Furthermore, recent developments in the insurance market could result in unfavorable changes to the Group's insurance policies and an increase in policy premiums.

The Group's insurers, under certain conditions deemed customary in the insurance industry for those types of contracts, can prematurely terminate insurance policies in the event of a major claim. In such an event, the Group nevertheless remains covered throughout the notice period, which may vary depending on the policy. As a result, the Group may have to bear some or all of the losses itself during the period not covered by insurance.

Risk management

Since its creation, Arkema has maintained a department dedicated to the investment and management of the Group's insurance cover, backed by international insurance brokers to optimize and bolster its cover.

The Group issues regular calls for tenders to insurance brokers and insurers in order to ensure that it is always informed of the best offers available on the market. Insurance cover and insurers are selected based on objective criteria including price, the extent of coverage and the strength, experience and quality of the insurers.

2.1.4 Economic and business risks

Change in prices of key raw materials and energy

Upstream of its activities, the Group uses raw materials and energy resources to manufacture its products, some of which are indirectly linked to the price of crude oil like propylene or butadiene, while others, such as sulfur, castor oil and fluorspar, are only minimally connected or not at all. The prices of these raw materials and energy resources can be highly volatile and therefore lead to significant variations in the cost price of the Group's products. The delayed impact of raw material price increases may have a significant impact on the earnings of certain Group businesses, particularly downstream businesses, which represent a significant portion of its activities.

Moreover, differences in the cost price of the Group's products may exist from region to region, as was the case in Europe in 2022 and 2023 following the increase in energy prices.

Risk management

Arkema strives to optimize the costs of its raw material and energy supplies by diversifying its sources of supply. In some cases, the Group may therefore use derivatives such as futures, forwards, swaps and options, on both exchange and over-the-counter markets. These derivatives are matched with existing contracts (for more details, see notes 12.2.2 and 12.6.5 to the consolidated financial statements at 31 December 2023 in section 5.3.3 of this document).

The Group also forges partnerships with certain suppliers who are leaders in their respective fields in order to build strong, long-term business relationships and ensure a competitive cost of supply.

Lastly, Arkema strives to deploy an appropriate pricing policy, in particular in downstream activities like adhesives or downstream acrylics, in order to pass on, through its selling prices, increases in the cost of the raw materials used to manufacture its products.

Strengthening competition

Arkema is confronted with strong competition in each of its businesses and especially in intermediate activities, with the strengthening of some of its competitors and the emergence of new players that could impact its own competitive position. Regarding the Group's intermediates activities, some competitors are larger and more vertically integrated, which could enable them to benefit from lower production costs for certain products that the Group also manufactures. Moreover, the economic development of certain countries like China has been accompanied by the rise of local competitors, resulting notably in new global capacities and the development of new technologies. This has led to growing competition on certain product lines, which could place lasting downward pressure on the selling prices and margins of these products.

Risk management

With a view to consolidating its competitive position, Arkema has, since its creation, implemented a policy of operational excellence and cost optimization to enhance the competitive advantages that it enjoys in its various product lines and to guarantee the quality and performance of the products offered to its customers.

Moreover, thanks in particular to its innovation, the Group is deploying a repositioning strategy to diversify its portfolio of products and application markets and strengthen its position in niche markets with higher added value.

Lastly, the Group forges long-term partnerships with customers who are leaders in their fields, enabling it to build solid and lasting commercial relationships with its main partners and support them in their development.

Geopolitical and macroeconomic instability

Arkema's global business, which generates a significant portion of its sales in certain regions of the world or countries (notably 34% in Europe, 33% in the United States and 11% in China in 2023), exposes it to the direct and indirect consequences of trade disputes, embargoes, epidemics or pandemics, sudden changes in customs duties, terrorist activities, political instability and armed conflict. These events could, in particular, result in delays or losses in the Group's product deliveries to its customers or in the supply of raw materials and could therefore have a material adverse effect on its sales and earnings. In addition, they could lead to increased costs for products manufactured by the Group, as well as costs relating to security, in particular for its IT system and of insurance premiums.

At the end of 2022, Russia's invasion of certain parts of Ukraine led to a surge in energy prices, followed by a sharp rise in inflation and interest rates, as well as restrictions on sales to certain countries (notably Russia). At the end of 2023, this ongoing conflict was compounded by a conflict in the Middle East, leading to renewed tensions over oil-based products and, more recently, difficulties in maritime flows. Arkema had to adapt to this particularly tense geopolitical context and remains attentive to any developments.

In addition, throughout 2023, Arkema's global business was strongly impacted by a general decline in demand in the different regions of the world and the different markets served by the Group. No improvement was observed up until the end of the year. In this context of heightened geopolitical tensions and a deteriorating macroeconomic environment, the risk mitigation and prevention measures in place enabled the Group to diminish the consequences thereof.

Risk management

With its balanced geographic presence in Europe, North America and Asia, the Group is able to spread its risk between the different geographic regions in which it operates. As Arkema gradually establishes production plants in the main geographic regions, this also secures local supplies to its customers present in the region, limits the flow of products between different regions and locates its IT architecture where necessary. Similarly, the Group's diverse range of activities enables it to limit the impact of fluctuations in the different markets it serves.

In addition, to develop and implement effective policies and strategies in each of its foreign operations, Arkema relies on subsidiaries, which are placed under the supervision of a regional Vice-President, in most countries in which it has industrial and commercial operations. This organization helps the Group maintain relations with local authorities and economic players, defend its interests, and better anticipate changes in the local political and economic environment as well as threats.

2.1.5 Project and innovation risks

Investment, acquisition and partnership projects

As part of its targeted growth strategy, based in particular on developing new products and the Group's geographic expansion, Arkema is involved in complex, sometimes very large-scale projects, such as a recent investment in specialty polyamides in Asia. For the 2024-28 period, the Group estimates that its capital expenditure will total approximately €3.9 billion, more than half of which in development projects designed to ensure its future growth. Some of the Group's investments are made in partnership with third parties, which may increase both their complexity and the related risks. The completion of these projects may be delayed and/or result in expenses in excess of those initially budgeted for by the Group. These elements could weigh on the Group's growth prospects and the expected profitability of these investments and thus have a negative impact on its business, earnings and financial position.

In line with its ambition to become a pure Specialty Materials player, Arkema also deploys an ambitious bolt-on acquisition program that targets small and mid-sized businesses to strengthen its portfolio and Specialty Materials platform. In this respect, the Group has spent approximately €2.5 billion over the past three years. These acquisitions may expose Arkema to various risks, including in particular the risk of bearing potential liabilities or responsibilities related to the businesses acquired (notably relating to real estate owned or leased by companies acquired by Arkema), in spite of the quality of due diligence performed. In addition, the assumptions on which the acquisitions were made may fail to materialize, in particular the development prospects of these activities may not be achieved, or projected synergies may not be fully unlocked, which may adversely impact the valuation of goodwill together with the Group's growth prospects, earnings and financial position.

Lastly, as part of the disposals of non-strategic activities, Arkema may have to provide guarantees to third parties for certain operations. It cannot be ruled out that when some of these guarantees are invoked, the compensation claims could exceed the provisions made by Arkema.

Risk management

For each of its investments, the Group solicits the necessary internal and external resources and expertise to ensure its projects are implemented under the best possible conditions.

Before entering into any external growth transaction, Arkema takes precautions when identifying targets, in particular by conducting in-depth evaluations of the activities and companies concerned and the various liabilities related to the business being sold, and by negotiating appropriate guarantees from the sellers or putting in place insurance cover for the same purpose with the advice of external consultants with expert knowledge in this area. Furthermore, acquisitions are carried out by teams of qualified experts under the responsibility of the Strategy department.

Innovation and technologies |CSR|

The Group's innovation policy, described in section 1.1 of this document, is a strategic pillar in Arkema's targeted growth strategy and a key component in its contribution to sustainable development and to the major challenges arising from global megatrends. Whether aimed at manufacturing technologies, products or their applications, innovation makes it possible to create sustainable solutions. Innovation enables Arkema to:

- launch innovative new products and solutions on the market while continually improving their performance, and provide its customers with the technical support and solutions they need; and
- enhance the Group's operational excellence and reduce its environmental footprint by providing production facilities with new technologies and processes, thereby enabling the Group to produce safely and competitively while limiting its environmental impact, in line with its responsible strategy.

In 2023, R&D expenditure totaled €275 million, representing 2.9% of Group sales.

Despite the investments made, the Group may be unable to develop new products and new applications or to develop new production processes. This inability, or a delay in the development of such new products, could prevent the Company from marketing certain products and could therefore have an adverse impact on its business and earnings. For example, the development of artificial intelligence for the accelerated design and optimization of new materials could lead to innovative materials being made available on the market by third parties that perform better than Arkema's materials in their current applications.

Moreover, changes in processes used by customers or a switch from one technology to another in their products could drag down the Group's sales. In the field of energy generation and storage in particular, many technologies are currently being developed but it is impossible to say which ones will be successful. The Group is devoting significant R&D resources to preparing for the emergence of tomorrow's battery and hydrogen technologies. At this stage, however, the level of uncertainty remains high and the risk of the emergence of disruptive battery technologies likely to affect the Group's activities cannot be overlooked.

Risk management

With more than 1,800 researchers and €275 million in R&D expenditure in 2023, Arkema invests heavily in R&D each year to develop new products and processes that cater to both market demand and major challenges arising from global megatrends. This strong focus on innovation also enables the Group to adapt to regulatory changes. The R&D teams carry out important monitoring work, both in Arkema's own technological fields, but also further downstream in the technologies of its main customers' businesses. In particular, at the end of 2021, the Group inaugurated a centre of excellence for batteries at its Rhône-Alpes research centre. This enables the Group to remain at the cutting edge of this field and prepare as best as possible for future technological developments. The organization and policy priorities of the Group's R&D, as well as the resources dedicated to R&D, are detailed in section 1.1 of this document. In particular, the Group is committed to the digital transformation of its R&D in order to master the use of artificial intelligence in the accelerated design of innovative materials, see section 1.1.6 of this document.

Furthermore, Arkema has a technological development policy for its processes, in particular as part of its R&D programs, to give it ownership and control over the technologies that it uses in its major activities, and to help reduce its level of exposure to third parties in this regard.

Protecting intellectual property and know-how

Arkema is developing an innovation-based growth strategy structured around a dedicated organization, 17 R&D centres spread throughout the world and a research incubator. It therefore has a large R&D project portfolio. Accordingly, the patents that protect the innovations generated by its research together with its trademarks represent a key asset for its business. At 31 December 2023, Arkema owned 10,047 patents and 216 new patent applications were filed in 2023 (*versus* 205 in 2022), 204 of which relate to sustainable development. For further details, see section 1.1 of this document.

Consequently, aside from having an instantly negative impact on Arkema's earnings, patent or trademark infringements committed by a third party and any other type of intellectual or industrial property rights infringement could also harm the reputation and the perceived quality of the products concerned as well as the image of the Group. The Group also monitors patent applications filed by third parties. Such applications are only made public on publication and could have an impact on ongoing developments within the Group or on products recently brought to market. These third-party patent applications could oblige Arkema to modify its product, thereby increasing the related R&D costs, or to negotiate a license to use the patented component.

For further details on patent and trademark management, see section 1.1.3 of this document.

Lastly, the disclosure of confidential documents or the copying of processes or technologies that are critical to its production and to maintaining its international competitiveness could also adversely affect the Group's business and earnings.

Risk management

Arkema has developed an assertive policy to protect its innovations through the registration of patents, particularly with the support of a global network of industrial property consultants. For further details, see section 1.1.3 of this document.

Moreover, to protect its know-how and sensitive data, particularly in terms of confidentiality, the Group has strengthened its security policy through procedures and application guides applicable to all Group facilities and an employee awareness and training program. Only a limited number of workers have access to Arkema's know-how, particularly its process expertise. Strict non-disclosure agreements or clauses are put in place whenever knowledge is shared with third parties.

2.1.6 Financial risks

Arkema is exposed to two types of financial risks: foreign currency risk and liquidity risk.

The information provided below is based on certain assumptions and expectations that, by nature, may prove to be inaccurate, particularly with respect to changes in exchange rates and Arkema's exposure to the associated risk.

Foreign currency

Given its international operations, Arkema is exposed to various types of currency risks:

- transaction risks related to Arkema's day-to-day operations and development projects;
- translation risks related to the consolidation in euros of subsidiaries' accounts that are denominated in currencies other than the euro. Fluctuations in the exchange rates of these currencies, particularly the US dollar-to-euro exchange rate, have had in the past and may have in the future a material impact on Arkema's financial position and operating income. The translation effect on Arkema's income statement and balance sheet resulting from a fluctuation of the US dollar against the euro +/-10% is explained in note 12.6.1 of the notes to the consolidated financial statements at 31 December 2023 in section 5.3.3 of this document; and
- risk of competitiveness related to the fact that, proportionately, in the euro zone, the Group incurs more operating expenses in euros than it generates sales in the currency owing to the fact that it is an export-focused company. As a result, Arkema's competitive position may be affected by the weakness of certain currencies, and in particular the US dollar against the euro, compared with its competitors positioned in countries with a weak currency. Furthermore, the weakness of certain currencies in countries with major imports from Arkema may affect its earnings.

Risk management

Arkema's objective is to minimize the impact of exchange rate fluctuations on its earnings and financial position.

Transactional risks are systematically hedged, at the latest when recorded in the accounts: Arkema companies hedge their foreign currency assets and liabilities against their respective functional currencies. Revenues and costs in foreign currencies are hedged essentially by spot foreign exchange transactions and sometimes by forward transactions.

Foreign currency risk linked to future flows, such as capital expenditure or sales flows, particularly export sales, may also be hedged. The Executive Committee is responsible for deciding whether such hedging is necessary, and the Financing and Treasury department is responsible for its implementation using simple derivatives. For further details, see notes 12.2 and 12.6.1 to the consolidated financial statements at 31 December 2023 in section 5.3.3 of this document.

Translation risk is not hedged as Arkema considers that it is inherent to its worldwide operations. However, Arkema reduces its balance sheet risk through a policy of allowing its companies to contract debt only in their functional currencies, except when a foreign currency loan is backed by a commercial risk in the same currency.

Arkema strives to mitigate the risk of lower competitiveness thanks to its strategy of achieving a greater balance in its geographic exposure.

Liquidity

Arkema reviews its liquidity risk on an ongoing basis and deems it is in a position to meet its future commitments.

Arkema uses bond issues and loans from banking institutions to finance its day-to-day operating requirements and development. However, unforeseen needs may also arise, resulting in particular from an increase in working capital or unfavorable market conditions. Additionally, market conditions may make it difficult to refinance bonds at maturity, or one or more banks may be unable to meet their obligations to Arkema with respect to one of its main credit lines, which would significantly reduce its access to financing under equivalent terms. For further details on borrowing terms and in particular on early repayment clauses, see notes 12.3 and 12.6.3 to the consolidated financial statements at 31 December 2023 in section 5.3.3 of this document.

Risk management

Arkema's financing policy, implemented by the Financing and Treasury department, aims to provide the Group with the necessary financial resources to fund its operations over periods of time adapted to its repayment ability. This policy is based on the following principles:

- having Arkema's long-term credit rated by two rating agencies and maintaining a solid investment grade rating;
- having a net debt (including subordinated debt) to EBITDA ratio of less than 2;
- maintaining cash reserves in excess of €500 million;
- having a Euro Medium Term Note (EMTN) program, to facilitate access to bond markets;
- maintaining average maturity at over three years; and
- diversifying its sources of financing.

In addition, on 6 July 2023, credit rating agency Standard & Poor's raised the outlook associated to the Group's rating from "stable" to "positive" while confirming its rating of BBB+/A-2. Moody's has maintained its Baa1 rating with a "stable" outlook assigned on 28 January 2022.

2.2 Global internal control and risk management procedures

2.2.1 General organization: objectives and scope of internal control and risk management

Objectives

Arkema applies the Reference Framework of the French financial markets authority (*Autorité des marchés financiers* – AMF), published in 2007 and subsequently reviewed and expanded in 2010, which it has adapted to its business activities, size and organization.

Internal control is a Group-wide process defined and implemented by executive management, management and employees. Its objective is to ensure:

- compliance with current laws and regulations;
- compliance with the instructions and guidelines issued by executive management;
- the smooth operation of internal processes, notably those serving to protect assets; and
- the reliability of financial information.

Generally, internal control contributes to the management of Arkema's activities, the effectiveness of its operations, and the efficient use of resources.

However, no internal control process can provide absolute assurance that these goals are met. Despite the processes and controls in place, it cannot guarantee that all Arkema employees will constantly comply with the internal control guidelines and apply all the defined procedures.

Arkema has also implemented a risk management system that enables the Executive Committee to ensure that risks are at a level that it deems acceptable. This system contributes to:

- creating and protecting Arkema's value, assets and reputation;
- securing Arkema's decision-making and other processes so that objectives may be achieved more easily;
- ensuring consistency between Arkema values and actions; and
- rallying Arkema employees around a common vision of the main risks.

Scope

The internal control and risk management procedures are adapted to Arkema's organization, which is structured around three components:

- the segments of the Specialty Materials platform, which each comprise two Business Lines encompassing one or several activities, and the Intermediates segment, which includes two activities, with each activity responsible for its own performance and the implementation of internal control procedures (for further details, see section 1.2 of this document);
- the corporate departments (or support functions), which assist the segments and activities in their area of competence, such as finance, human resources, industry, legal affairs, IT, insurance and procurement, and ensure coherence and optimization at the Group level (see section 1.3 of this document); and
- the subsidiaries, in which Arkema performs its business activities (for further details, see section 6.1.2 of this document).

These internal control and risk management procedures apply to all fully consolidated Arkema Group companies. Internal control is not limited to procedures that improve the reliability of financial and accounting information.

2.2.2 Persons involved in internal control and risk management

Board of Directors and committees

The Board of Directors and its three committees (the Audit and Accounts Committee, the Nominating, Compensation and Corporate Governance Committee and the Innovation and Sustainable Growth Committee), supported by the experience and expertise of their members, contribute to the promotion of an internal control and risk management culture adapted to Arkema's activities.

In particular, it is the responsibility of the Audit and Accounts Committee to oversee the effectiveness of internal control and risk management systems, and assess the schedule of the internal auditors and the results of their work.

Executive Committee

The Executive Committee implements the internal control process and ensures compliance by:

- defining the internal control framework and the rules for delegating responsibility;
- setting targets for each business, corporate department and subsidiary, and ensuring they have the resources for meeting these targets;
- supervising the implementation of the control procedures that help achieve the targets it has set;
- assessing the risks specific to each project submitted to the Executive Committee; and
- carrying out a review (annually and as deemed necessary) of Arkema's major risks, based on the work of the Risk Review Committee and its risk mapping presentation. In order to carry this out effectively, the Executive Committee relies on the Internal Audit and Internal Control department and the expertise of all its own members.

Each member of the Executive Committee is responsible for ensuring that the Internal Control Framework's Group-wide rules and principles (as described in section 2.2.3 of this chapter) are observed for the entities and businesses that he or she supervises.

Risk Review Committee

A Risk Review Committee was set up in October 2007 to strengthen the formal framework of risk identification, analysis and management, and to regularly monitor the development of risk factors. It is made up of the Strategy Executive Vice-President (committee chairman), the Industry Executive Vice-President, the Chief Financial Officer, the Legal Affairs Vice-President, the Sustainable Development Vice-President, the Group Safety and Environment Vice-President, the Insurance Vice-President, the Head of Group Accounting and Consolidation, the Head of IT and the Internal Audit and Internal Control Vice-President (committee secretary).

Every six months, or more often in response to specific events, the committee reviews:

- summaries of audits and assessments carried out by the Internal Audit and Internal Control, the Group Safety and Environment and the Insurance departments;
- reports on fraud or attempted fraud prepared by the anti-fraud unit;
- a summary and progress report of ongoing disputes presented by the Legal department;
- assessments of commercial intermediaries made by the commercial intermediaries' review commission;
- a list of risks identified in the surveys carried out by the Internal Audit and Internal Control, Legal and Group Accounting and Consolidation departments;
- a risk map prepared by the Internal Audit and Internal Control department; and
- the monitoring of corrective measures in all of these areas.

Following its review, the Risk Review Committee can decide on further corrective measures or request additional information, and can also request updates to the risk map.

The conclusions of its review are reported to the Executive Committee, which, upon completion of the process, may decide whether or not to update the main risks described in section 2.1 of this chapter.

The Risk Review Committee met twice in 2023.

Internal Audit and Internal Control department

The Internal Audit and Internal Control department is made up of the Internal Audit sub-department and the Internal Control sub-department, both of which are independent functions under the responsibility of the Strategy Executive Vice-President.

Arkema's internal control system meets the principle of the three lines of defense, as recommended by the IIA (Institute of Internal Auditors) and the IFACI (*Institut français de l'audit et du contrôle internes*). The first line is covered by all the operational departments, the second line by the support functions, including Internal Control, and the third by Internal Audit.

Internal Audit

The role of Internal Audit is notably to improve and develop controls in Arkema's management systems and processes and, more broadly, to ensure that its operating procedures comply with the Internal Control Framework.

All processes and management systems (at the legal entity, Business Line, corporate department or other level) may be subject to an internal audit. At the end of each audit, the Internal Audit department discusses and agrees on its findings with the managers of the audited area before presenting them with a set of recommendations and related action plans that the managers of the entities or management systems commit to implementing.

An internal committee consisting of the Chief Financial Officer, the Strategy Executive Vice-President and the Internal Audit and Internal Control Vice-President regularly monitors the implementation of the recommendations.

The Internal Audit and Internal Control department defines a draft proposal for the audit plan based on:

- risk identification initiatives;
- interviews with Arkema's operational and corporate departments; and
- a selection of priorities from the various proposals gathered.

The final program is validated by the Executive Committee, and then approved by the Audit and Accounts Committee.

In 2023, the Internal Audit sub-department, made up of 8 internal auditors, carried out the following 37 audits:

- 14 audits of industrial sites or R&D centers in Europe, Asia, North America and South America;
- 14 audits of subsidiaries in Europe and Asia;
- 3 audits of shared services centers in Europe, and Asia; and
- 6 audits of businesses and central functions in Europe and North America.

In 2023, all audits were carried out in person.

Internal control

The primary mission of Internal Control is to strengthen Arkema's internal control systems. Its initiatives are communicated and implemented, at subsidiary level, by a network of correspondents within the subsidiaries' Finance and IT departments.

Internal Control is involved in the analysis and formal implementation of processes that impact financial information, for which key controls have been defined.

The methodology consists of:

- analyzing the main risks of error, omission or fraud in processes or sub-processes, which could have a material impact on Arkema's consolidated financial statements;
- identifying and implementing control procedures to minimize any risk of error, omission or fraud;
- periodically checking the existence and effective operation of these controls, carried out by the Internal Control correspondents based in the subsidiaries (self-audit) or by the Internal Audit sub-department; and
- defining corrective measures in the event of shortcomings and overseeing their implementation.

The list of procedures covered by this methodology is based on the 14 procedures of the AMF Reference Framework application guide published in 2007 and updated in 2010. It is adapted to the specific features and size of the subsidiaries.

All significant subsidiaries of the Group were covered by Arkema's internal control system in 2023. Its performance is measured annually, by self- or peer assessment, and recorded in the dedicated GRC (Governance, Risk and Compliance) tool.

Segments, Business Lines, activities, corporate departments and subsidiaries

Arkema is organized into segments as described in section 1.2 of this document. The segments of the Specialty Materials platform each comprise two Business Lines encompassing one or several activities, and the Intermediates segment includes two activities following the divestment of the PMMA activity in May 2021. Each activity coordinates the use of the resources required to meet the targets set in their respective areas and is responsible for its own performance and for implementing suitable control procedures and processes, in accordance with the principles and procedures defined in Arkema's Internal Control Framework, Business Conduct and Ethics Code, charters and guidelines.

The corporate departments ensure that Arkema's organization is consistent and optimized.

Each subsidiary is placed under the responsibility of a local executive who is responsible for employing the resources defined with the businesses and the support functions to meet the subsidiary's targets, in accordance with current laws and the rules and principles defined by Arkema.

2.2.3 Internal control framework

Arkema's internal control and risk management systems are based on three core principles:

- clear definition of responsibilities and delegations of authority, observing rules governing the segregation of duties (in particular distinguishing between those who perform actions and those who approve them), to ensure that any person who makes commitments to third parties on behalf of Arkema has the authority to do so;
- identification, analysis and management of risks; and
- regular reviews, notably *via* annual internal control assessments and the internal audit program, to ensure internal control and risk management systems operate correctly.

Arkema's Internal Control Framework defines its organization and the guiding principles behind its operating procedures. Approved by the Executive Committee and available to all employees, notably *via* the intranet, it is based on the Safety, Health, Environment and Quality Charter, the Users' Guide for IT Resources and Electronic Communication, and the Business Conduct and Ethics Code put in place by Arkema, available on Arkema's website under the heading "Ethics". In line with the AMF Reference Framework published in 2007 and updated in 2010, the Internal Control Framework is based on five components:

- control environment;
- risk management (detailed in section 2.2.4 of this chapter);
- control activities;
- information and communication; and
- continuous assessment of the internal control system.

Control environment

The control environment is the basis for the other components of internal control and refers primarily to Arkema's organizational principles, its values as set out in the Business Conduct and Ethics Code and the level of awareness among employees.

All employees are informed of the importance attached to observing the rules of proper conduct set out in the Business Conduct and Ethics Code, the Health, Safety, Environment and Quality Charter, and the Users' Guide for IT Resources and Electronic Communication.

Arkema has put in place a compliance program described in section 4.6.2 of this document.

In addition, a fraud prevention procedure has been put in place to record and centralize situations of fraud and therefore improve their handling and prevention.

In general, the roles and duties of every operational and corporate manager are set out in a job description. Their objectives, which include an internal control dimension, are set annually by their respective line manager, to whom they must periodically report on their activities.

Lastly, Arkema has set up a dynamic human resources management approach and a policy of ongoing training designed to ensure that employees' skills are continuously adapted, and to maintain a high level of individual engagement and motivation.

Control activities

Control activities involve applying the standards and procedures that help ensure that Group management directives are implemented at every level of Arkema.

To this end, a set of regulations has been formally documented in the Internal Control Framework, and general principles applicable to all Arkema entities have been defined in order to control the application of the operating procedures defined by the Executive Committee. For example, delegations of authority and investment management are the subject of specific notes.

Businesses and subsidiaries are responsible for operational processes and therefore for internal control;

Corporate departments are responsible for defining and communicating policy and best practice guidelines relating to their area of expertise and ensuring that they are correctly applied, particularly in the following fields:

- compliance with laws and regulations,
- safety and environmental protection, and
- the reliability of financial information.

Controlling access to IT systems forms a key part of internal control and is subject to a formal management process, which involves both the departments using the systems and the IT department.

The Internal Audit team notably conducts assessments of Arkema's compliance with its Internal Control Framework in accordance with the audit plan validated annually by the Executive Committee and approved by the Audit and Accounts Committee.

Information and communication

IT systems are a key component of Arkema's organization.

Mindful of the opportunities and risks related to the use of information technologies, Arkema has set up an IT governance structure to control risks while creating value and improving performance.

This approach consists of deploying Group-wide the ten IT management practices drawn up formally by the French IT association for major companies, CIGREF (*Club informatique des grandes entreprises françaises*), as part of Arkema's IT systems security policy. For further details, see section 2.1.3 of this chapter.

Additionally:

- Arkema has a highly detailed financial reporting system, an essential management tool used by executive management;
- the main internal control documents are available on Arkema's intranet; and
- each support function develops professional best practices and communicates them throughout Arkema *via* the intranet.

Continuous assessment of internal control systems

The internal control system is assessed on an ongoing basis. The Executive Committee is responsible for the overall internal control system, its performance and its oversight. However, each subsidiary actively contributes to improving internal control performance within its own scope.

In general, any weaknesses in the internal control system must be reported to line management and, if necessary, to the Executive Committee.

In addition, recommendations made by the Internal Audit sub-department on completion of its audits are systematically reviewed, and a summary is presented to the Audit and Accounts Committee. When decisions to apply corrective measures are adopted, their implementation is monitored on a formal basis.

Furthermore, as part of their engagement, the statutory auditors may alert Arkema (represented by the Finance department and the Internal Audit and Internal Control department) and the Group's Audit and Accounts Committee regarding any weaknesses that they may have identified. These factors are taken into account by Arkema in its efforts to improve internal control.

2.2.4 Risk identification and management

In the course of its business, Arkema is exposed to a number of internal and external risks.

As Arkema's structure is highly decentralized, risk assessment and management is the responsibility of the businesses, corporate departments and subsidiaries. Each of these entities has a duty to reduce the risks inherent in their activities.

Arkema's risk management system is based on regular reviews of risk identification, analysis and treatment, as follows:

- every month, each business presents its results and indicators to its operational Executive Vice-President, who is a member of the Executive Committee, and the Executive Committee reviews the results of the segments and their respective activities;
- the Group Accounting and Consolidation department organizes a quarterly review of risks and legal disputes that may have to be reported in Arkema's financial statements. The businesses, corporate departments and subsidiaries report on their entity's risks, which are analyzed and addressed at quarterly meetings with the Chief Financial Officer, the Group Accounting and Consolidation department, the Legal department, and the Internal Audit and Internal Control department; and
- the Internal Audit and Internal Control department carries out an annual survey of risks among Arkema's main entities, namely the businesses, corporate departments and subsidiaries. The risks are identified and analyzed and the most significant risks are grouped together and positioned on a risk map, which is presented to the Risk Review Committee. The Risk Review Committee then assesses the need to update the risk map and puts forward suitable action plans where necessary. Particular attention is paid to the duty of care, in order to identify the risk of serious violations of human rights and fundamental freedoms, health and safety, and environmental risks, and to put in place, where necessary, action plans to avoid and prevent these risks and mitigate their impact. As part of this map, certain specific risks may be presented on an additional map. The Committee's conclusions are reported to the Executive Committee prior to the definition of the internal audit plan. This plan is drawn up on the basis of the risk map and the need to cover Arkema's scope of activity on a regular basis. Material risks known to Arkema are allocated to a member of the Executive Committee. They are also examined by the Audit and Accounts Committee and presented to the Board of Directors.
- The main risks are set out in section 2.1 of this chapter, where they have been classified into the following sections:
  - industrial risks,
  - risks relating to compliance, legal proceedings, societal expectations and internal control,
  - operational risks,
  - economic and business risks,
  - project and innovation risks, and
  - financial risks.

2.2.5 Accounting and financial control procedures

Operational and corporate managers' control and understanding of their business' financial performance represents one of the key factors in Arkema's financial control system.

Organization of the finance function

The finance function is the responsibility of the Chief Financial Officer and includes:

- a Group Accounting and Consolidation department, which produces the consolidated financial and accounting information and ensures the reliability of the data constituting Arkema's financial information;
- a Controlling department, which provides management analyses and financial forecasts to Arkema's different entities to facilitate their management;
- a Tax department, which ensures compliance with the applicable laws and regulations on tax declarations and payment and carries out the overall tax planning process for the Group;
- a Financing and Treasury department, whose role is to optimize the Group's financing and liquidity and manage counterparty risk; and
- an Investor Relations department, whose remit is to establish, develop and maintain relations with investors, shareholders and financial analysts, and publish financial information once it has been approved by the Board of Directors.

Each business has its own management control team, which monitors and analyzes the business' performance monthly, and each subsidiary is responsible for its own monthly accounts and half-year and full-year financial information.

Accounting reporting and controlling

The Group Accounting and Consolidation department and the Controlling department define the financial principles and guidelines set out in the financial reporting manual and Arkema's management framework. The Group Accounting and Consolidation department also monitors accounting laws and regulations for the Group and ensures that specific technical provisions applicable to Arkema are taken into account.

The purpose of the financial reporting process, established in accordance with these principles, is to analyze actual performance compared with forecasts and prior periods. The reporting schedule is structured around:

- a five-year plan drawn up each year by the Strategy department. The plan is reviewed and approved by the Executive Committee and enables it to understand the financial consequences of the Group's major strategic choices and the main threats identified in the environment under consideration;
- an annual budget, which sets out the financial performance targets for the following year in line with the medium-term plan. The budget preparation process falls within the remit of the Controlling department. The budget represents a key benchmark for measuring the actual performance of the four segments and their respective businesses, the corporate departments and Arkema's subsidiaries as a whole; and
- a monthly forecast and reporting process, which enables business trends to be taken into account in order to refine end-of-period forecasts for the quarter and the year. The Controlling department prepares a consolidated report each month, by segment and by activity, based on the consolidated data provided by the Group Accounting and Consolidation department, that includes the month's significant events, the performance indicators and the updated forecasts. These components are systematically reviewed by the Group's Executive Committee.

The fundamental financial reporting principles are set out in the financial reporting manual and Arkema's management framework. These reference documents are updated regularly by the Group Accounting and Consolidation department and the Controlling department, following approval by the Chief Financial Officer or the Executive Committee, depending on the type of amendment and its significance.

Parent company and consolidated financial statements

Arkema publishes consolidated financial information on a quarterly basis. The half-year financial statements at 30 June are subject to a review by the statutory auditors and the full-year financial statements at 31 December to an audit. The quarterly information at 31 March and 30 September is presented in summary form only (balance sheet, income statement and cash flow statement). Press releases concerning financial information are prepared by the Investor Relations department and submitted to the Company's Board of Directors for approval.

At the end of each accounting period, the Group Accounting and Consolidation department reviews the financial risk portfolio with each business, corporate department and main legal entity of the Group.

The preparation of the parent company's financial statements is part of the general procedure for the preparation of annual financial information. Furthermore, the Company submits management forecast documents to the Board of Directors in compliance with regulatory provisions.

IT systems

The IT department defines and coordinates the IT systems for the entire Group.

Arkema is continuing its program to transform and rationalize its IT systems using SAP integrated software, which is helping to improve the Group's control environment, particularly through procedure review and improved automated checks. This integration effort also applies to Group acquisitions.

Representation letters

Each year, Arkema issues a representation letter attesting in particular to the accuracy and consistency of the consolidated financial statements. This letter is signed by the Chairman and Chief Executive Officer and the Chief Financial Officer and addressed to the Group's statutory auditors. In support of this representation letter, the operational and financial heads of each consolidated subsidiary make an annual undertaking to observe the internal control rules and ensure the accuracy of the financial information supplied, in the form of a representation letter to the Group's Chairman and Chief Executive Officer, the Chief Financial Officer and the statutory auditors.

Following the same procedure, Arkema's half-yearly representation letter is based on the main subsidiaries' half-yearly representation letters, which certify that the subsidiaries' half-yearly consolidated financial statements have been prepared in accordance with Arkema's financial reporting manual.

2.2.6 Arkema's insurance policy

Arkema implements an insurance cover strategy that combines a prevention policy designed in close cooperation with insurers (in particular for property damage, *via* joint periodic visits which result in the regular issuance of technical recommendations implemented by the Group), and the purchasing of insurance policies.

The Group's policy is to centralize its insurance against risks relating to the production, transportation and marketing of its products worldwide. Arkema uses international insurance brokers to optimize its cover of all Group companies. As a general rule, the Group's insurance cover limits apply either to each claim, or to each claim and each year, and vary according to the risks covered. In most cases, cover is limited both by certain exclusions standard to these kinds of contracts and by deductibles that are reasonable given the size of the Group.

For the financial year ended 31 December 2023, total premiums paid by the Group, and relating to the Group's insurance policies presented below, amounted to less than 1% of its sales for the period.

The Group's insurance policies are drawn up to cover current risks while also accommodating any new acquisitions or disposals that may take place during the year.

The Group retains a certain level of risk through the deductibles on its insurance policies, and centrally through a captive insurance company that is active only in property insurance. The objective of the captive company is to optimize the Group's external insurance costs.

Arkema believes that its insurance policies are consistent with those currently available on the insurance market for groups of similar size and involved in similar business activities.

Descriptions of the insurance policies taken out by Arkema are provided below to a level of detail that enables it to comply with confidentiality requirements and protect its interests and competitiveness.

Civil liability

The Group has contracted civil liability insurance policies with leading insurance companies. The civil liability policies cover, under certain conditions and subject to applicable exclusions and sub-limits, the Group worldwide against the financial consequences of civil liability claims in the context of its business activities and in respect of physical, material or non-material damage or losses caused to third parties. These policies cover up to €525 million for the Group. Deductibles vary, particularly depending on the subsidiaries' location.

Property damage

The Group's sites are covered by leading insurance companies against material damage and any resulting business interruption. This cover is intended to avoid any significant financial loss and to ensure the resumption of operations in the event of property damage. However, certain property and types of damage can be excluded from the insurance policy's cover depending on the country in which the loss occurs.

The cover includes a "direct damage" component and a "business interruption" component, with the compensation period for the latter limited to either 12, 24 or 36 months, depending on the site. These policies may include sub-limits, particularly for machinery breakdowns, natural disasters and terrorism. Deductibles vary depending on the risk exposure and the size of the site concerned. The maximum total retention in the event of a claim was €40 million.

The combined cover limit of the policies in place for direct damage and business interruption, over and above the total retention, is €500 million.

Transportation

The Group is insured against the risk of damage to its manufacturing assets, equipment, finished or semi-finished products and raw materials during transportation or storage by third parties up to a limit of €12 million per shipment. The policy includes a deductible and several exclusions that are standard for this kind of agreement.

Environmental risks

Arkema has taken out an environmental liability insurance program with leading insurance companies. For production sites located in the United States, the limit is US$75 million. For production sites outside the United States, the limit is €80 million.

These programs cover, under certain conditions and subject to applicable exclusions and sub-limits, environmental liabilities linked to the Group's production sites. They include, in particular, damage sustained by third parties as a result of pollution generated either on Group production sites or as a result of transporting Group products.

Cyber risks

Arkema has taken out a cyber insurance program covering all subsidiaries worldwide. The coverage ceiling is €40 million with effect from 1 March 2023 to 31 March 2024, with a deductible of €5 million per claim. Arkema has initiated discussions to maintain a cyber insurance program beyond 31 March 2024. These discussions are ongoing at the date of this document.

3 CORPORATE GOVERNANCE

The different parts constituting the annual financial report are identified in the table of contents by the pictogram **|AFR|**

The present chapter constitutes the Board of Directors' report on corporate governance as required under article L. 225-37 paragraph 6 of the French Commercial Code *(Code de commerce)*. This report was prepared by a working group comprising, in particular, the Secretary of the Board of Directors and the Investor Relations and Human Resources & Communication departments, having taken into consideration:

- the AFEP-MEDEF Corporate Governance Code for listed companies, last revised in December 2022 (the "AFEP-MEDEF Code"), and its June 2022 Application Guide, available on the AFEP and MEDEF websites (www.afep.com and www.medef.com);
- the French financial markets authority (*Autorité des marchés financiers* – AMF) recommendation no. 2012-02 on corporate governance and executive compensation in listed companies referring to the AFEP-MEDEF Code, and revised most recently on 28 July 2023, and the recommendations contained in the AMF annual report for 2023 on corporate governance and executive compensation in listed companies published on 14 December 2023;
- the recommendations of the AFEP-MEDEF *Haut Comité du Gouvernement d'Entreprise* set out in its annual report published on 27 November 2023; and
- the AMF position-recommendation no. 2021-02 - "Guide to preparing Universal Registration Documents" of 8 January 2021, updated on 28 July 2023.

It was then reviewed by the Nominating, Compensation and Corporate Governance Committee prior to approval by the Company's Board of Directors.

The other information required under articles L. 225-37, L. 225-37-4, L. 22-10-10 and L. 22-10-11 of the French Commercial Code, namely, the table of delegations of authority currently in force that have been granted by the shareholders in relation to capital increases, the conditions of shareholder participation at annual general meetings, information concerning the structure of the Company's share capital and factors likely to have an impact in the event of a takeover bid, are set out in sections 6.2.5, 6.5.1, 6.2.1, 6.3.1, 6.3.2 and 6.3.3, respectively, of this document.

At the date of this document, there are no agreements between any of the directors of the Company or any of its shareholders holding more than 10% of the voting rights and a company of which the Company owns more than half of the share capital.

3.1 Compliance with the corporate governance system

With regard to corporate governance, the Company refers to the recommendations of the AFEP-MEDEF Code and its Application Guide, available on the AFEP and MEDEF websites (www.afep.com and www.medef.com). In accordance with the "comply or explain" rule provided under article L. 22-10-10 4° of the French Commercial Code and section 28.1 of the AFEP-MEDEF Code, the Company considers, at the date of this document, that it fully complies with the corporate governance system in force in France.

3.2 Composition of administrative and management bodies

3.2.1 Board of Directors

3.2.1.1 Principles for the composition of the Board of Directors

The composition and operating procedures of the Company's Board of Directors are determined by current laws and regulations, by the Company's Articles of Association and by the Board of Directors' Internal Rules.

At the date of this document, the Company is run by a Board of Directors comprising fourteen members, eight of whom are independent. The Board includes seven women, two members representing employees and one member representing shareholder employees.

The conditions for the appointment of directors and the length of their term of office are described in the following table.

Type of director	Method of appointment	Term of office	Number of directors	Reference text
Director	Annual general meeting	4 years	11	Article L. 225-18 of the French Commercial Code
Director representing shareholder employees	Annual general meeting on a proposal by the company mutual funds' (*Fonds Commun de Placement d'Entreprise*) Supervisory Boards	4 years	1	Articles L. 225-23 and L. 22-10-5 of the French Commercial Code
Director representing employees	Appointment by the French delegation of the European Group Works Council, undertaking the responsibilities of the Group Works Council and the European Works Council	4 years	2	Article L. 225-27-1 of the French Commercial Code

Policy on diversity within the Board of Directors

In accordance with the provisions of article L. 22-10-10 2° of the French Commercial Code, the AFEP-MEDEF Code and the AMF recommendations on the composition of Board of Directors, the Nominating, Compensation and Corporate Governance Committee regularly reviews the objectives relating to the diversification of the Board of Directors' membership, in terms of directors' independence, gender balance, age, nationality, and profiles, as well as complementarity of skills and international experience. The committee, if need be with the help of recruiting firms, thus aims to select and propose candidates with recognized and independent personalities, in particular current and former executives, for Board approval, with skills in diverse and complementary areas such as chemicals, industry, finance, acquisitions and integration of acquired entities, sustainable development and especially the climate, as it is an urgent matter, as well as research and innovation. Consequently, the committee makes recommendations to the Board after an in-depth examination of all the factors to be taken into account in its deliberations, in light of the composition and evolution of the Company's ownership structure, the development of its activities, and the directors' terms of office.

At the date of this document, the Board of Directors considers that its members' origins, skills, experience and career paths, as well as their recognized and independent personalities, are diverse enough to allow it to carry out its duties with the necessary skills, independence and objectivity. The professional expertise of each member of the Board of Directors, at the date of this document, is set out in sections 3.2.1.2 and 3.2.1.3 of this chapter.

International experience

In terms of internationalization, the Board of Directors is committed to bringing in candidates with significant international experience in one or more countries that are key for the Group, although it still prefers its members to be physically present at meetings (outside specific contexts requiring another meeting format) and for discussions to be held in French for the sake of fluidity. A growing number of international profiles and/or persons living abroad have therefore joined the Board in recent years, including: Ian Hudson, a British and Swiss national, Susan Rimmer, a British and French national, Ilse Henne, a Belgian national, and Thierry Pilenko, a French and US national who is living in the United States for over 15 years. As a result, at the date of this document, the Board of Directors includes seven members who have spent a large part of their careers abroad (*i.e.*, 50%), of whom four are foreign nationals (*i.e.*, 28%). For further details on these directors' profiles, see sections 3.2.1.2 and 3.2.1.3 of this chapter.

CSR experience

In view of the stricter regulatory framework and the increasing number of applicable regulations relating to CSR, as well as growing expectations in this field, the Board of Directors ensures that it includes members with advanced experience in one or more CSR areas. Seven directors therefore have recognized CSR skills:

- Ian Hudson, Chairman of the Innovation and Sustainable Growth Committee since 11 May 2023, is a specialist in the circular economy, having notably served as Chairman of the Board of Directors of Carbios and as a member of the Management Committee of Europa Bio;
- Isabelle Boccon-Gibod, a member of the Innovation and Sustainable Growth Committee, has built up her knowledge of sustainable development in the paper industry, particularly in her former roles as Executive Vice President of the Arjowiggins group, Chairwoman of Copacel and a director of the Paprec group. She is currently Chairwoman of Demeter, a company specialized in biodynamics;
- Susan Rimmer, a director representing employees, and a member of the Innovation and Sustainable Growth Committee, is currently in charge of product stewardship for the Sartomer and Crayvallac businesses in Arkema's Coating Solutions segment;
- Sébastien Moynot, a member of the Innovation and Sustainable Growth Committee, sits on the Boards of Directors of companies specialized in renewable energy such as notably Green Yello and Verallia;
- Florence Lambert, who joined the Innovation and Sustainable Growth Committee on 11 May 2023, is the Chairwoman of Genvia, a company whose aim is to develop and deploy technology on an industrial scale for the production of carbon-free hydrogen. She previously held several positions within the French Atomic and Alternative Energy Commission (CEA);
- Philippe Sauquet, a member of the Nominating, Compensation and Corporate Governance Committee, was Executive Vice President, Strategy & Innovation, in charge of new energies at the TotalEnergies group between 2016 and 2021; and
- Nathalie Muracciole, a director representing employees and a member of the Nominating, Compensation and Corporate Governance Committee, brings to the Board the people-focused expertise she has built up throughout her career in human resources.

Independence of directors

As part of its process to assess its members' independence and to prevent risks of conflicts of interest between directors and management, the Company or the Group, the Board of Directors takes into account all the criteria of the AFEP-MEDEF Code, which are laid down in its Internal Rules. Accordingly, an independent director is one who, other than his or her position on the Board, has no relationship whatsoever with the Company, the Group or its management. In particular, the director must not:

1) be, or have been within the last five years:
   - an employee or executive director of the Company,
   - an employee, executive director or director of a company consolidated by the Company;
2) be an executive director of a company in which the Company holds a directorship, directly or indirectly, or in which one of its employees (designated as such) or executive directors (currently or in the last five years) holds a directorship;
3) be, or have been, directly or indirectly linked to a major customer, supplier, consultant, corporate or investment banker of the Company or its group, or for which the Company or its group represents a significant portion of the business;

4) have close family ties with an executive officer of the Company;
5) have been a statutory auditor of the Company in the previous five years;
6) have been a director of the Company for more than twelve years; or
7) be or represent a significant shareholder of the Company owning over 10% of the Company's share capital or voting rights.

The annual review of the independence of each member of the Board of Directors, in accordance with the AFEP-MEDEF Code and the Board of Directors' Internal Rules, took place at the Nominating, Compensation and Corporate Governance Committee meeting of 26 January 2024 and at the Board of Directors' meeting of 28 February 2024.

At these meetings, the Nominating, Compensation and Corporate Governance Committee, and subsequently the Board of Directors, reviewed in particular the business relationships in place with companies to which one or several directors are connected and, in that respect, performed materiality tests to establish whether those relationships are significant. To that end, a summary of the transactions carried out between the Group and these companies was submitted in order to assess the volume of business between the Group and each of these companies, individually. No business relationships as described above were identified.

In accordance with the Board of Directors' Internal Rules and with the AMF recommendations, when a conflict of interest arises, the Nominating, Compensation and Corporate Governance Committee informs the Board that the director concerned must not participate in any discussions or votes on the topic in question. For further details on the management of conflicts of interest, see section 3.2.3.3 of this chapter.

In light of the foregoing and as summarized in the table below, the Board of Directors approved the proposal made by the Nominating, Compensation and Corporate Governance Committee to qualify the following Board members as independent directors: Marie-Ange Debon, Ilse Henne, Florence Lambert, Hélène Moreau-Leroy, as well as Séverin Cabannes, Ian Hudson, Philippe Sauquet and Thierry Pilenko.

In accordance with the AFEP-MEDEF Code, which provides that the director representing shareholder employees, Nicolas Patalano, and the directors representing employees, Nathalie Muracciole and Susan Rimmer, should not be included when calculating the percentage of independent directors, the rate of independence of the Board of Directors consequently stood at 73% (eight directors out of eleven) at 31 December 2023. This proportion complies with the AFEP-MEDEF Code recommendation that at least half the Board members of companies with diversified capital and no controlling shareholders be independent.

SITUATION OF DIRECTORS WITH REGARD TO THE INDEPENDENCE CRITERIA SET OUT IN THE AFEP-MEDEF CODE (AND REPRODUCED IN FULL IN THE BOARD OF DIRECTORS' INTERNAL RULES) AT 31 DECEMBER 2023

	Company employee or executive	Cross directorships	Business relationships	Family ties	Statutory auditor	Director for more than 12 years	Significant shareholder	Independent
Thierry Le Hénaff	√	X	X	X	X	X	X	NO
Bpifrance Investissement	X	X	X	X	X	X	√	NO
Séverin Cabannes	X	X	X	X	X	X	X	**YES**
Marie-Ange Debon	X	X	X	X	X	X	X	**YES**
Fonds Stratégique de Participations	X	X	X	X	X	X	√	NO
Ilse Henne	X	X	X	X	X	X	X	**YES**
Ian Hudson	X	X	X	X	X	X	X	**YES**
Florence Lambert	X	X	X	X	X	X	X	**YES**
Hélène Moreau-Leroy	X	X	X	X	X	X	X	**YES**
Nathalie Muracciole	√	X	X	X	X	X	X	NO
Nicolas Patalano	√	X	X	X	X	X	X	NO
Thierry Pilenko	X	X	X	X	X	X	X	**YES**
Susan Rimmer	√	X	X	X	X	X	X	NO
Philippe Sauquet	X	X	X	X	X	X	X	**YES**

X The criterion is not applicable.
√ The criterion is applicable.

Gender balance on the Board of Directors

In accordance with article L. 225-17 paragraph 2 of the French Commercial Code, the Board of Directors ensures that the principle of gender balance among its members is applied. In order to do this, whilst seeking to ensure that the Board has at least 40% of members of each gender, the Nominating, Compensation and Corporate Governance Committee systematically reviews applications from men and women before making recommendations to the Board as to how to change its composition.

At the date of this document, the Company's Board of Directors includes seven women among its fourteen members, *i.e.*, 45%, in accordance with articles L. 225-23, L. 22-10-5 and L. 225-27-1 of the French Commercial Code, given that the directors representing employees, Nathalie Muracciole and Susan Rimmer, and the director representing shareholder employees, Nicolas Patalano, are not taken into account when calculating the gender balance (*i.e.*, five out of eleven members).

Representation of employees and shareholder employees

In accordance with the applicable regulations, the Board of Directors includes a member representing shareholder employees, Nicolas Patalano, who was appointed at the annual general meeting of 19 May 2022. Like all directors, and in accordance with the provisions of articles L. 225-23 and L. 22-10-5 of the French Commercial Code, he receives the training required to perform his duties. The training time is at least 40 hours per year, with the content determined by the Board of Directors in agreement with the director.

In addition, pursuant to the provisions of article L. 225-27-1 of the French Commercial Code and the Company's Articles of Association, Nathalie Muracciole and Susan Rimmer were respectively reappointed and appointed by the European Group Works Council on 3 July 2020 as directors representing employees.

As the terms of office of Nathalie Muracciole and Susan Rimmer are due to expire at the close of the first ordinary meeting of the European Group Works Council following the 15 May 2024 annual general meeting (which will be held in July 2024), two directors representing employees will be elected by this date by:

- the French Works Council (whose duties are carried out by the French delegation of the European Group Works Council); and
- the European Group Works Council.

Like all directors and pursuant to the provisions of article L. 225-30-2 of the French Commercial Code, Nathalie Muracciole and Susan Rimmer receive the training required to perform their duties. The training time is at least 40 hours per year, with the content determined by the Board of Directors in agreement with the directors.

Other characteristics

According to the provisions of the Company's Articles of Association and/or the Board of Directors' Internal Rules:

- subject to the laws applicable to provisional appointments made by the Board of Directors, the directors shall serve a four-year term of office. In accordance with the recommendations of the AFEP-MEDEF Code, the directors' terms of office are staggered in order to avoid reappointment of the Board en masse, and ensure that the directors' reappointment process runs smoothly. As the terms of office of all directors are staggered, the annual general meeting is called upon every year to decide on the renewal of one or more terms of office;
- each director must hold at least 450 of the Company's shares throughout their term of office, except for the director representing shareholder employees, who must hold, individually or through a company mutual fund (*Fonds Commun de Placement d'Entreprise* – FCPE) governed by article L. 214-165 of the French Monetary and Financial Code *(Code monétaire et financier)*, at least one share in the Company, or a number of units of the said fund equivalent to at least one share in the Company, and the directors representing employees who do not have to be shareholders;
- the age limit for directors set in the Company's Articles of Association is 70 years old, and serving directors who reach this age limit are automatically considered as having resigned unless the Board decides that they may complete their term;
- a director may not hold more than four other directorships in listed companies, including foreign companies, outside the Group. The Chairman and Chief Executive Officer may not hold more than two other directorships in listed companies outside the Group and must seek the opinion of the Board of Directors prior to accepting any new directorship in a listed company; and
- each director is subject to an obligation to report any potential direct or indirect conflicts of interest to the Company (see section 3.2.3.3 below).

Pursuant to articles L. 225-18, L. 225-23 and L. 22-10-5 of the French Commercial Code, the term of office of directors appointed by the general meeting of the Company is four years and expires at the end of the ordinary general meeting called to approve the financial statements for the previous financial year and held in the year during which the term of office expires. These directors may be dismissed at any time by a general meeting of shareholders. The term of office of the director representing shareholder employees ends automatically and the director is assumed to have resigned if he or she is no longer an employee of the Company (or a Group company) or a shareholder of the Company (or member of a mutual fund that owns shares in the Company). The term of office of directors representing employees appointed in accordance with the provisions of article L. 225-27-1 of the French Commercial Code is also four years, expiring at the end of the first ordinary European Group Works Council meeting held after the ordinary annual general meeting of the year in which the term of office expires. A director representing employees is also assumed to have automatically resigned if he or she is no longer an employee of the Company or of one of its subsidiaries with its registered office in France.

An induction program is provided for newly appointed directors, enabling them to meet the Executive Vice-President Strategy and the Executive Vice-President Human Resources and Communication for general introductory presentations respectively on the Group's strategy, and on governance and HR policy. Additional meetings are held with the Chief Financial Officer, the Head of R&D and/or the committee Chairs on the Board of Directors when new members of the Board committees are appointed. This program is followed very quickly after the directors are appointed at the annual general meeting, with the yearly Board meeting dedicated to strategy which is held every June and gives the newly appointed directors a detailed global overview of the Group's main challenges.

The same day, they have the opportunity to meet all of the Executive Committee members and the Head of R&D, as well as a host of other Group executives or talents at the dinner reception following the meeting.

The Board's annual visit to one or more Group sites also enables them to increase their knowledge of one or more of the Group's business segments or activities and to meet the local teams. Lastly, site visits can be organized on request, as can information or presentations focusing on specific topics.

Summary of changes in the composition of the Board of Directors

The Board of Directors is paying special attention to its composition, taking account of remarks made by investors and proxy advisors, notably during governance roadshows organized by the Company. The aim is to constantly improve the Board's composition in line with best governance practices, helped by the recommendations of the Nominating, Compensation and Corporate Governance Committee.

The changes described below have enabled Arkema to be in full compliance with the recommendations of the AFEP-MEDEF Code and rank among companies with the best governance practices.

Independence	• Appointment of Thierry Pilenko as independent director and Chairman of the Nominating, Compensation and Corporate Governance Committee (2021) • Appointment of Philippe Sauquet as independent director and member of the Nominating, Compensation and Corporate Governance Committee (2021) • Appointment of Florence Lambert as independent director and member of the Innovation and Sustainable Growth Committee (2023) • Appointment of Séverin Cabannes as independent director and member of the Audit and Accounts Committee (2023) Overall independence rate of the Board of Directors: **73%***
Diversity	***Women on the Board*** • Appointment of Susan Rimmer (2020) • Appointment of Ilse Henne (2021) • Appointment of Florence Lambert (2023) AFEP-MEDEF rate: **45%*** Overall rate: **50%** ***International experience*** • Appointment of Ian Hudson, British and Swiss national (2019) • Appointment of Susan Rimmer, British and French national (2020) • Appointment of Ilse Henne, Belgian national (2021) • Appointment of Thierry Pilenko, French and US national (2021)
Seniority	• Balanced: 5.5 years on average
Senior independent director	• Appointment of Hélène Moreau-Leroy since 2019, who is also a member of the Nominating, Compensation and Corporate Governance Committee since 2021
Director representing employees	• Appointment of Nathalie Muracciole as a member of the Nominating, Compensation and Corporate Governance Committee for compensation-related committee duties (2021) • Appointment of Susan Rimmer as a member of the Innovation and Sustainable Growth Committee (2022)
Board of Directors' committees	• Set-up of the Innovation and Sustainable Growth Committee tasked with assessing the contribution of Arkema's strategy and innovation to environmental challenges and sustainable growth. The new committee will further enhance the mechanism for reviewing CSR matters and complement the related duties already performed by the two other committees (2021)

* *Excluding directors representing employees and directors representing shareholder employees.*

3.2.1.2 Composition of the Board of Directors

At 31 December 2023, the composition of the Board of Directors was as follows:

	Nationality	Age	Independent director	Year of first appointment	Year current term expires	Other directorships in listed companies	Audit and Accounts Committee	Nominating, Compensation and Corporate Governance Committee	Innovation and Sustainable Growth Committee	Expertise
Thierry Le Hénaff Chairman and Chief Executive Officer	French	60		2006	2024	1				Chairman and Chief Executive Officer
Bpifrance Investissement represented by **Sébastien Moynot**	French	51		2021	2025	3 (1)			●	Credit, guarantees, industry, innovation and M&A
Séverin Cabannes	French	65	◆	2023	2027	1	●			Executive management, finance, banking, new information technologies, chemicals, industry
Marie-Ange Debon	French	58	◆	2018	2026	1	Chairman			Executive management, accounting, finance, M&A and industry
Fonds Stratégique de Participations represented by **Isabelle Boccon-Gibod**	French	55		2014	2026	2 (1)	●		●	Industry, finance, M&A, innovation and sustainable development
Ilse Henne	Belgian	51	◆	2021	2025	1	●			Industry, finance and transformation
Ian Hudson	British and Swiss	66	◆	2019	2027	None	●		Chairman	Executive management, chemicals, finance, innovation and sustainable development
Florence Lambert	French	51	◆	2023	2027	None			●	Executive management, industry, innovation and sustainable development
Hélène Moreau-Leroy	French	59	◆	2015	2027	None		●		Industry, M&A and governance
Nathalie Muracciole representing employees	French	59		2016	2024	None		● (2)		Human resources and knowledge of the Group
Nicolas Patalano representing shareholder employees	French	52		2022	2026	None				Chemicals and knowledge of the Group
Thierry Pilenko	French and American	66	◆	2021	2025	None		Chairman		Executive management, industry, M&A and governance
Susan Rimmer representing employees	British and French	48		2020	2024	None			●	Sustainable development and knowledge of the Group
Philippe Sauquet	French	66	◆	2021	2026	None		●		Industry, chemicals, sustainable development and M&A

◆ *Independence in accordance with the AFEP-MEDEF Code criteria set out in the Board of Directors' Internal Rules and as assessed by the Board of Directors.*
● *Member.*
(1) *Concerns only directorships held by the permanent representative.*
(2) *For committee matters relating to compensation.*

The following changes to the composition of the Board of Directors took place in 2023:

Departures	• Victoire de Margerie, independent director and Chairman of the Innovation and Sustainable Growth Committee • Laurent Mignon, director
Appointments	• Florence Lambert, independent director and member of the Innovation and Sustainable Growth Committee • Séverin Cabannes, independent director and member of the Audit and Accounts Committee
Reappointments	• Hélène Moreau-Leroy, independent director, senior independant director and member of the Nominating, Compensation and Corporate Governance Committee; and • Ian Hudson, independent director, Chairman of the Innovation and Sustainable Growth Committee and member of the Audit and Accounts Committee

At its meeting on 8 November 2023, the Board of Directors noted that the term of office of Thierry Le Hénaff was due to expire at the close of the annual general meeting to be held on 15 May 2024. Consequently, on the recommendation of the Nominating, Compensation and Corporate Governance Committee, the Board of Directors decided unanimously to submit to the shareholders at the annual general meeting to be held on 15 May 2024 the reappointment of Thierry Le Hénaff as Chairman and CEO for a new term of four years. Subject to the shareholders approving this reappointment, the Board of Directors also announced its intention to reappoint Thierry Le Hénaff as Chairman and Chief Executive Officer of the Company.

Further information about the Board of Directors' recommendations concerning the reappointment of Thierry Le Hénaff as a director and for him to continue to serve as Chairman and Chief Executive Officer is provided in section 3.2.2.1 of this document.

At its meeting on 28 February 2024, the Board also noted that the terms of office of Nathalie Muracciole and Susan Rimmer expire at the close of the first ordinary meeting of the European Group Works Council following the annual general meeting called to approve the financial statements for the year ended 31 December 2023, and that they will either be reappointed or new employee representative members appointed at that European Group Works Council Meeting, which will meet for this purpose on 2 July 2024.

These changes are summarized in the following table:

Annual general meeting of 15 May 2024	
Reappointment	• Thierry le Hénaff, director and Chairman and Chief Executive Officer
European Group Works Council meeting of 2 July 2024	
Appointments	• Two directors representing employees

The following table summarizes the principles underlying the composition of the Board of Directors.

SUMMARY OF THE COMPOSITION OF THE BOARD OF DIRECTORS

Composition of the Board of Directors	Objectives/priorities	Status at the close of the 2024 annual general meeting
Balance of powers	Appointment of a senior independent director in the event that the positions of Chairman and Chief Executive Officer are combined Large majority of independent directors (at least 50%)	**Senior independent director:** Hélène Moreau-Leroy **Independence rate:** 73%*
Complementarity of skills	Profiles of current or former executives and combination of skills contributing to the Group's transformation strategy	• **Chemicals:** 6 • **Industry:** 9 • **Finance:** 6 • **Innovation and sustainable development:** 7
Gender balance on the Board of Directors	At least 40% of women Board members	**Women Board members:** 45%*
Diversity – international profiles	Appointment, between 2019 and 2021, of at least one director, either a foreign national or someone with significant international experience in one or more countries that are strategic for the Group	**International experience:** 50% **Foreign nationals:** four directors (against one in 2019)
Representation of employees and shareholder employees	Director representing shareholder employees (holding over 3% of share capital) Two directors representing employees	One director representing shareholder employees Two directors representing employees
Age of directors and seniority	Maximum age of 70 Balance in years of seniority on the Board	No director is over 70 years of age **Average age:** 59 years **Average seniority** on the Board: 5.5 years

* *Excluding directors representing employees and the director representing shareholder employees.*

3.2.1.3 Information on the members of the Board of Directors at 31 December 2023

Thierry Le Hénaff

Chairman and Chief Executive Officer
Nationality: French

Date of first appointment:
6 March 2006

Date of last renewal:
19 May 2020

Date term expires:
AGM held to approve financial statements for 2023 financial year

Number of shares held at 31 December 2023:
400,699

Business address:
Arkema,
420, rue d'Estienne d'Orves,
92700 Colombes, France

Professional experience

Born in 1963, Thierry Le Hénaff is a graduate of France's École Polytechnique and École Nationale des Ponts et Chaussées and holds a Master's degree in Industrial Management from Stanford University in the United States. He is a *Chevalier de l'Ordre National du Mérite*, as well as a *Chevalier de l'Ordre National de la Légion d'Honneur* (French order of merit awards). He is lead independent member of the Supervisory Board and a member of the Compensation and Appointments Committee of Michelin. He has also been a member of the Board of Directors of the École Polytechnique Foundation since 2016, and of France Industrie since 2021.

After starting his career with Peat Marwick Consultants, in 1992 he joined Bostik, Total's Adhesives division, where he held a number of operational positions in France and worldwide.

In July 2001, he was appointed Chairman and Chief Executive Officer of Bostik Findley, the new entity resulting from the merger of Total's and Elf Atochem's Adhesives divisions.

In January 2003, he joined Atofina's Executive Committee and then Total's management committee in 2004.

He has been Chairman and Chief Executive Officer of Arkema since the Company's stock market listing in 2006.

Other offices currently held

France

Within the Group

- Chairman of the Board of Directors, Arkema France

Outside the Group

- Lead independent member of the Supervisory Board and member of the Compensation and Appointments Committee, Michelin*

International

- None

Other offices held in the past five years but now expired**

Expired in 2023

- None

Expired from 2019 to 2022

- None

** Listed company. ** Outside the Arkema Group.*

Séverin Cabannes

Independent director and member of the Audit and Accounts Committee
Nationality: French

Date of first appointment:
11 May 2023

Date term expires:
AGM held to approve financial statements for 2026 financial year

Number of shares held at 31 December 2023:
450

Business address:
Arkema,
420, rue d'Estienne d'Orves,
92700 Colombes, France

Professional experience

Born in 1958, Séverin Cabannes is a graduate of France's École Polytechnique and École Nationale des Mines de Paris. He is a senior independent director of Aéroports de Paris, a director of Moody's France SAS, Moody's GmbH and Moody's Investors Service UK, and since 2021 has been Chairman of TOLMACONSEIL.

Séverin Cabannes started his career in 1983 at Crédit National as a financial analyst. From 1986 to 1997, he held various positions at Elf Atochem, including Manager of Polyethylene Manufacturing and Head of Economics and Strategic Planning. In 1997, Séverin Cabannes joined La Poste as international development and strategy Executive Vice-President, member of the Executive Committee, before becoming Deputy Chief Executive Officer, Strategy and Finance in 1998. In 2001, he joined Société Générale as Chief Financial Officer and member of the Management Committee, and between 2002 and 2006, he was Chief Executive Officer of Steria group. He rejoined Société Générale in 2007 as Head of Resources, and then as Deputy Chief Executive Officer from 2008 to the end of 2020. From January to September 2021, he was advisor to the Chief Executive Officer of Société Générale.

Other offices currently held**

France

- Senior independent director, Aéroports de Paris*
- Director, Moody's France SAS
- Chairman, TOLMACONSEIL

International

- Director, Moody's GmbH
- Director, Moody's Investors Service UK

Other offices held in the past five years but now expired**

Expired in 2023

- None

Expired from 2019 to 2022

- None

** Listed company. ** Outside the Arkema Group.*

Marie-Ange Debon

Independent director and Chairman of the Audit and Accounts Committee

Nationality: French

Date of first appointment:
18 May 2018

Date of last renewal:
19 May 2022

Date term expires:
AGM held to approve financial statements for 2025 financial year

Number of shares held at 31 December 2023:
550

Business address:
Keolis,
34 avenue Léonard de Vinci,
92400 Courbevoie, France

Professional experience

Born in 1965, Marie-Ange Debon is a graduate of France's École des hautes études commerciales (HEC) and École nationale de l'administration (ENA), and holds a Master's degree in law. She serves as independent director of Technip Energies and as Chairwoman of its Audit committee.

She has been Chairwoman and Chief Executive Officer of Keolis, a public transportation operator, since August 2020.

Before joining Keolis in 2020, Marie-Ange Debon held several positions in both the public and private sectors, including as auditor and then as magistrate at the *Cour des Comptes* (national audit office) from 1990 to 1994. She served as Deputy Chief Executive Officer at France 3 from 1994 to 1998. In 1998, she began working with the Thomson Group as Deputy Chief Financial Officer, and in July 2003 became General Secretary. In 2008, she joined Suez as General Secretary and member of the Executive Committee. In 2013, she was appointed Head of the international division (North America, Asia, Pacific, Africa, India) and between March 2018 and December 2019 served as Deputy CEO in charge of France, Italy, Central and Eastern Europe.

She is Vice-President of Medef International and Chairwoman of Union des Transports Publics et Ferroviaires.

Other offices currently held**

France
- Chairwoman and Chief Executive Officer, Keolis

International
- Member of the Board of Directors, Technip Energies*

Other offices held in the past five years but now expired**

Expired in 2023
- None

Expired from 2019 to 2022
- Senior Executive VP Group, Suez in charge of France, Italy, Central and Eastern Europe
- Member of the Board of Directors, GRDF (Engie Group)
- Member of the Board of Directors and Chairwoman of the CSR and Responsible Gaming committee, Française des Jeux (FDJ)*
- Member of the Board of Directors of a Suez Group company, Lydec* in Morocco
- Member of the Board of Directors and Chairman of the Audit committee, Technip-FMC*

** Listed company. ** Outside the Arkema Group.*

Ilse Henne

Independent director and member of the Audit and Accounts Committee

Nationality: Belgian

Date of first appointment:
20 May 2021

Date term expires:
AGM held to approve financial statements for 2024 financial year

Number of shares held at 31 December 2023:
800

Business address:
thyssenKrupp,
Allee 1/Q8, 45143 Essen,
Germany

Professional experience

Born in 1972 in Ghent, Belgium, Ilse Henne holds several advanced business management degrees from the Universities of Ghent and Leuven, Belgium, as well as a Master's degree in linguistics and literature, also from the University of Ghent. She is a member of the Executive Board of thyssenkrupp AG since 1 January 2024, responsible notably for the Materials Services segment. She speaks five languages fluently, including French, and has been living in Germany since 2012.

Ilse Henne began her career in 1995 at Sadel NV, a Belgian group specializing in stainless steel products, where she worked in various positions in business development, sales and supply chain management until 2002. She then joined the Materials division of thyssenkrupp Group, which is specialized in the distribution of steel and non-ferrous metals in Belgium. Between 2012 and 2018, she held various management positions in Germany: first as head of the Materials Western Europe/Asia-Pacific operating unit, and as from 2016 as CEO of thyssenkrupp Schulte. From 2019 to 2023, she served on the Executive Board of the thyssenkrupp Materials Services segment in her capacity as Chief Transformation Officer. She was responsible for the Group's operating performance and strategic transformation.

Other offices currently held**

France
- None

International
- Member of the Board of Directors, Rockwool*
- Chairman of the Board of Directors, thyssenkrupp Services GmbH
- Member of the Executive Board, thyssenkrupp AG*

Other offices held in the past five years but now expired**

Expired in 2023
- Member of the Executive Board, thyssenkrupp Materials Services segment as Chief Transformation Officer

Expired from 2019 to 2022
- Member of the Executive Board, thyssenkrupp's Materials Services Western Europe/Asia Pacific operating unit as Chief Operating Officer

** Listed company. ** Outside the Arkema Group.*

Ian Hudson

Independent director, member of the Audit and Accounts Committee and the Innovation and Sustainable Growth Committee

Nationalities: British and Swiss

Date of first appointment:
21 May 2019

Date of last renewal:
11 May 2023

Date term expires:
AGM held to approve financial statements for 2026 financial year

Number of shares held at 31 December 2023:
450

Business address:
Arkema,
420, rue d'Estienne d'Orves,
92700 Colombes, France

Professional experience

Born in 1957, Ian Hudson graduated from Oxford University (United Kingdom) with a Master's degree in French and German.

He started his career with ICI, a former UK-based multinational specialized in chemicals and related industries. In 1998, he joined DuPont de Nemours, where he held a number of management roles over 17 years. He retired in 2016 after serving as President of DuPont Europe, Middle East & Africa for ten years. He was a member of the Executive Committee and Board of the European Chemical Industry Association (CEFIC) and EuropaBio, as well as a member of the Foundation Board of the International Institute for Management Development (IMD) and a member of the Board of the Swiss-American Chamber of Commerce. He served as Chairman of the Board of Directors of Carbios between 2019 and 2022.

Other offices currently held

France
- None

International

Within the Group
- Director, Arkema International

Outside the Group
- Member of the Management Advisory Board, Towerbrook Capital Partners LP
- Member of the Board of Directors, Gamma Fiber Holdings

Other offices held in the past five years but now expired**

Expired in 2023
- None

Expired from 2019 to 2022
- Chairman of the Board of Directors, Carbios*

** Listed company. ** Outside the Arkema Group.*

Florence Lambert

Independent director and member of the Innovation and Sustainable Growth Committee

Nationality: French

Date of first appointment:
11 May 2023

Date term expires:
AGM held to approve financial statements for 2026 financial year

Number of shares held at 31 December 2023:
0

Business address:
Genvia,
Plaine Saint-Pierre,
Avenue Joseph Lazare,
34535 Béziers, France

Professional experience

Born in 1972, Florence Lambert is a graduate of the Institut National Polytechnique de Grenoble and holds a PhD in electrochemistry on renewable energy storage. She is an *Officier de l'Ordre National du Mérite* (French order of merit award). Since 2021, she has been President and Chief Executive Officer of Genvia, a company whose aim is to develop and deploy industrial technology for the production of decarbonized hydrogen.

Florence Lambert began her career in 2000 at the French Atomic Energy and Alternative Energies Commission (CEA) where she held various positions. She was first in charge of a laboratory, particularly in the field of renewable energy storage, and then participated in the creation of the French National Institute for Solar Energy (INES) of the CEA, before joining it in 2006. In 2009, she became Head of the Electricity and Hydrogen for the Transportation Department where she developed the integration of two key components: lithium-ion batteries and fuel cells. From 2012 to 2020, she was head of the CEA-LITEN (Innovation Laboratory for New Energy Technologies and Nanomaterials), bringing together more than a thousand researchers working on the energy transition, and filing more than 200 patents per year.

Florence Lambert has also been Chairman of the Employment, Innovation and Training Commission of the Renewable Energy Union (since 2019), a member of the Academy of Technologies (since 2021) and Ambassador France 2030 - Decarbonization of the Industry (since 2022).

Other offices currently held**

France
- President and Chief Executive Officer, Genvia

International
- None

Other offices held in the past five years but now expired**

Expired in 2023
- None

Expired from 2019 to 2022
- None

** Listed company. ** Outside the Arkema Group.*

Hélène Moreau-Leroy

Independent director, senior independent director and member of the Nominating, Compensation and Corporate Governance Committee

Nationality: French

Date of first appointment:
2 June 2015

Date of last renewal:
11 May 2023

Date term expires:
AGM held to approve financial statements for 2026 financial year

Number of shares held at 31 December 2023:
450

Business address:
Hutchinson,
2 rue Balzac,
75008 Paris, France

Professional experience

Born in 1964, Hélène Moreau-Leroy is a graduate of the Institut national des sciences appliquées (INSA) based in Lyon, France, and holds a Master's in International Business Administration from Australia's University of New England. She is an APICS-certified Supply Chain Professional. She has been Chairman and CEO of Hutchinson since 1 April 2021 and Chairman of the Executive Committee of French rubber industry body Fondation du Caoutchouc (FDCA) since November 2021.

Hélène Moreau-Leroy has held various executive and management positions in the areas of research and development, project and program management, procurement, production and supply chain with different industrial groups and spent 14 years in international positions outside France. She joined Safran Group in 2003, as a member of the Snecma S.A. Group Purchasing department. She was subsequently given responsibility for organizing the supply chain of Messier-Bugatti-Dowty in emerging markets, before becoming Executive Vice-President of Programs director and a member of its management committee. She held the position of Chairman of Safran Transmission Systèmes from 2013 to 2017, and then headed up the integration of Zodiac Aerospace when it was taken over by Safran between 1 December 2017 and 31 October 2020. She joined Hutchinson on 1 November 2020 as Deputy CEO before becoming Chairman and CEO in April 2021.

She is also Vice President of the French association of aerospace and military equipment manufacturers *(Groupement des Équipementiers de l'Aéronautique et de la Défense)*, a Board member of the association representing the French aerospace industry (GIFAS), and a member of various networks and associations set up to promote workplace diversity.

Other offices currently held**

France
- Chairwoman and CEO, Hutchinson

International
- None

Other offices held in the past five years but now expired**

Expired in 2023
- None

Expired from 2019 to 2022
- None

** Listed company. ** Outside the Arkema Group.*

Nathalie Muracciole

Director representing employees and member of the Nominating, Compensation and Corporate Governance Committee

Nationality: French

Date of first appointment:
7 July 2016

Date of last renewal:
3 July 2020

Date term expires:
Meeting of the European Group Works Council (performing the functions of the French Works Council) following the AGM held to approve financial statements for the year ending 31 December 2023

Business address:
Arkema,
420, rue d'Estienne d'Orves,
92700 Colombes, France

Professional experience

Born in 1964, Nathalie Muracciole holds a degree in law from the Université de Créteil in France. Since 1 July 2022, she has been Group Head of Social Engagement. She is notably leading the worldwide *Well Being at Work* program.

She began her career in 1983 in the Total group as an executive assistant with CDF Chimie (which later became Orkem). She then became career manager for the Professional Markets division at Sigma Kalon. After several years as recruitment/employment and training/communication manager with Mapa Spontex, she joined Atofina in 2003. She was appointed corporate training manager with Arkema in 2004, served as human resources and employee relations manager for the headquarters between 2006 and 2012, was in charge of change management as part of the Ambition project between 2012 and 2017, head of job transformation and well-being at work within the Talent department between 2018 and 2022, and then head of social development within the Group Communication department.

Other offices currently held**

France
- None

International
- None

Other offices held in the past five years but now expired**

Expired in 2023
- None

Expired from 2019 to 2022
- None

** Listed company. ** Outside the Arkema Group.*

Nicolas Patalano

Director representing shareholder employees

Nationality: French

Date of first appointment:
19 May 2022

Date term expires:
AGM held to approve financial statements for 2025 financial year

Business address:
Arkema,
420, rue d'Estienne d'Orves,
92700 Colombes, France

Professional experience

Born in 1971, Nicolas Patalano holds a degree in process engineering from the Institut de Génie Chimique in Toulouse. He is currently Medium Term Project Technician in Arkema's High Performance Polymers Business Line.

Since joining the Group in 1998, Nicolas Patalano has held various positions within Arkema, including Process Technician, Industrial Hygiene Manager and Site Contract Manager in the HSE department, as well as Medium Term Correspondent in the Orgasol® manufacturing line.

In addition, he has held several positions within Group employee representative bodies for the CFE-CGC trade union, including Union Delegate, Central Union Representative and Group Coordinator.

He is Chairman of the regional union body Syndicat Régional Chimie Pyrénées Garonne.

Other offices currently held

France

Within the Group

- Member of the Supervisory Board, FCPE Arkema Actionnariat France

International

- None

Other offices held in the past five years but now expired**

Expired in 2023

- None

Expired from 2019 to 2022

- None

** Listed company. ** Outside the Arkema Group.*

Thierry Pilenko

Independent director and Chairman of the Nominating, Compensation and Corporate Governance Committee

Nationalities: French and American

Date of first appointment:
20 May 2021

Date term expires:
AGM held to approve financial statements for 2024 financial year

Number of shares held at 31 December 2023:
500

Business address:
Arkema,
420, rue d'Estienne d'Orves,
92700 Colombes, France

Professional experience

Born in 1957, Thierry Pilenko is a graduate of the École Nationale Supérieure de Géologie in Nancy, France, and of the Institut Français du Pétrole (IFPEN). He is a management consultant and holds several directorships in international energy companies.

Thierry Pilenko began his career in 1984 as a geological engineer with Schlumberger. During the 20 years he spent with this company, he held various management positions, including in Italy, Gabon, Nigeria, Dubai, Indonesia and the United States. In 2004, he was appointed Chief Executive Officer of Veritas DGC, a geophysical services company based in Houston in the United States (which subsequently became CGG Veritas), before becoming Chairman and CEO of Technip SA in 2007, and Executive Chairman of TechnipFMC plc between 2017 and 2019. He was a member of the Supervisory Board of Peugeot (PSA) between 2012 and 2014, a director of CGG between 2007 and 2010, of Hercules Offshore between 2006 and 2015, and of Valaris between 2017 and 2021. In 2023 he became a Board member of P6 Technologies and non-executive Chairman of Rely. He is a French and US national and resides in the United States.

Other offices currently held**

France

- Director, Tachtys

International

- Director, P6 Technologies
- Non-executive Chairman, Rely
- Director, Trident Energy

Other offices held in the past five years but now expired**

Expired in 2023

- None

Expired from 2019 to 2022

- Non-Executive Chairman, Ensign Natural Resources
- Member of the Board of Directors, Valaris plc*
- Executive Chairman, TechnipFMC plc*

** Listed company. ** Outside the Arkema Group.*

Susan Rimmer

Director representing employees and member of the Innovation and Sustainable Growth Committee

Nationalities: British and French

Date of first appointment:
3 July 2020

Date term expires:
Meeting of the European Group Works Council (performing the functions of the European Works Council) following the AGM held to approve financial statements for the year ending 31 December 2023

Business address:
Arkema,
420, rue d'Estienne d'Orves,
92700 Colombes, France

Professional experience

Born in 1975 of British and French nationality, Susan Rimmer holds an honors degree from the University of York in the United Kingdom and is a graduate of the École Centrale de Marseille in France. She started her career at Cray Valley Ltd in Wales as a Technical Service Chemist then became Demand Manager.

Expatriated to Cray Valley S.A. in 1999, first at the Villers-Saint-Paul site then at the Centre de Recherche de l'Oise R&D Centre, she held several positions in technical services, sales and product regulation. She joined Arkema in 2011.

In 2013, she became EMEA Product Stewardship and Sales Administration Manager for the Fluorochemicals Business Unit, before taking on the position of Global Product Stewardship Manager within Arkema Coating Resins in 2019.

Since April 2021, she has been the Product Stewardship Manager for Sartomer and Crayvallac activities within the Coating Solutions segment.

Other offices currently held**

France
- None

International
- None

Other offices held in the past five years but now expired**

Expired in 2023
- None

Expired from 2019 to 2022
- None

** Listed company. ** Outside the Arkema Group.*

Philippe Sauquet

Independent director and member of the Nominating, Compensation and Corporate Governance Committee

Nationality: French

Date of first appointment:
9 November 2021

Date of last renewal:
19 May 2022

Date term expires:
AGM held to approve financial statements for 2025 financial year

Number of shares held at 31 December 2023:
2,830

Business address:
14 bis rue Raynouard,
75016 Paris, France

Professional experience

Born in 1957, Philippe Sauquet is a graduate of France's École Polytechnique and École Nationale des Ponts et Chaussées and holds a Master's degree in Industrial Management from the University of California, Berkeley in the United States. He has served as President of KréVal since 2021.

Philippe Sauquet held a number of senior management positions within the TotalEnergies Group over more than 30 years, including member of the Executive Committee between 2014 and 2021, President of Gas, Renewables & Power and Executive Vice President of Strategy & Innovation between 2016 and 2021, as well as President of Refining & Chemicals between 2014 and 2016.

In the last decade, Philippe Sauquet was also a key figure in TotalEnergies' strategy to diversify into renewable energies and low-carbon solutions.

Other offices currently held**

France
- Member of the Board of Directors, Axens
- President, KréVal

International
- Member of the Board of Directors, Blue Elephant Energy

Other offices held in the past five years but now expired**

Expired in 2023
- None

Expired from 2019 to 2022
- President of Gas, Renewables & Power and Executive Vice President of Strategy & Innovation, TotalEnergies*
- Member of the Executive Committee, TotalEnergies*

** Listed company. ** Outside the Arkema Group.*

Bpifrance Investissement	**Director**
Date of first appointment: 20 May 2021 **Date term expires:** AGM held to approve financial statements for 2024 financial year **Number of shares held at 31 December 2023:** 5,379,000 **Business address:** 8 boulevard Haussmann, 75009 Paris, France	**Professional experience** Bpifrance assists businesses – at every stage of their development – providing loans, guarantees and equity. Bpifrance supports them in their innovation and international expansion projects. Bpifrance now also provides export insurance services with a wide range of products. In addition, consulting, academic, networking and acceleration programs for start-ups, SMEs and mid-caps are also part of its services to entrepreneurs. Thanks to Bpifrance and its 50 regional offices, entrepreneurs benefit from a local, single and efficient point of contact to help them meet their challenges effectively. Lac1 acquires long-term stakes in French listed multinationals and plays an active role in their governance. The Lac1 fund has an investment capacity of €4.2 billion after its first round of funding alongside Bpifrance, involving around 30 subscribers, amongst which French and international institutional investors, large corporations and family offices. Lac1 is managed by Bpifrance Investissement, and draws on Bpifrance's position within its ecosystem, its knowledge of technological and environmental transitions, as well as its expertise in the governance of listed companies. Bpifrance Investissement is Bpifrance's equity financing arm.
Represented by: **Sébastien Moynot**	**Permanent representative of Bpifrance Investissement and member of the Innovation and Sustainable Growth Committee** Nationality: French
Date appointed: 20 May 2021 **Business address:** Arkema, 420, rue d'Estienne d'Orves, 92700 Colombes, France	**Professional experience** Born in 1972, Sébastien Moynot is a former student of École Normale Supérieure de Paris, holds a Master of Advanced Studies in probability from Université Pierre et Marie Curie, and is a graduate of École Nationale de la Statistique et de l'Administration Économique with an *agrégation* in mathematics. He started his career in the economic forecasting department of the French Ministry of Finance. From 2000 to 2004, he was responsible for the strategy and then the debt issuance operations of Agence France Trésor, managing the French government's debt. He was then in charge of companies in the transportation sector on behalf of the French State Holdings Agency and, in this role, oversaw the IPO of several investees. He joined the Fonds Stratégique d'Investissement at its creation in 2009, and then Bpifrance where, since 2013, he has been a member of the management team of the Development Capital business, for which he has made a large number of equity investments in companies across all sectors. Over the last 15 years, Sébastien Moynot served on the Board of Directors of about 20 companies in particular in various industrial sectors or in the field of renewable energies.

Other offices currently held**

France
- Director, Beneteau SA*
- Chairman of the Board of Directors, Cosmeur SAS
- Member of the Supervisory Committee, Green Yellow SAS
- Observer of the Supervisory Board and member of the Audit committee, Vivescia Industries SCA*
- Observer of the Supervisory Board, Nexteam Group
- Director, Verallia*
- Director, Kyoto Topco SAS

International
- None

Other offices held in the past five years but now expired**

Expired in 2023
- None

Expired from 2019 to 2022
- Director, Farinia SA
- Director, AD Industries SAS
- Director, Albioma*
- Director, Altrad Investment Authority SAS

** Listed company. ** Outside the Arkema Group.*

Fonds Stratégique de Participations (FSP)	**Director**
Date of first appointment: 15 May 2014 **Date of last renewal:** 19 May 2022 **Date term expires:** AGM held to approve financial statements for 2025 financial year **Number of shares held at 31 December 2023:** 5,946,391 **Business address:** ISALT, 9, rue Duphot, 75001 Paris, France	**Professional experience** Fonds Stratégique de Participations (FSP) is a long-term investment vehicle aimed at supporting French businesses over the long term with their growth and transition projects. It acquires large stakes in companies and plays a role in their governance through membership on their Board of Directors or Supervisory Board. It is owned by seven French insurance companies, namely BNP Paribas Cardif, CNP Assurances, Crédit Agricole Assurances, Groupama, Natixis Assurances, Société Générale Assurances and Suravenir. FSP currently holds stakes in ten French companies, all of which are leaders in their respective fields: Seb, Arkema, Eutelsat Communications, Tikehau Capital, Elior, Neoen, Valéo, Believe, Soitec and Verkor. The fund is managed by ISALT, which is the French acronym for "Strategic Investments in Long-Term Equity".
Represented by: **Isabelle Boccon-Gibod**	**Permanent representative of the FSP, member of the Audit and Accounts Committee and the Innovation and Sustainable Growth Committee** Nationality: French
Date appointed: 15 May 2014 **Number of shares held at 31 December 2023:** 250 **Business address:** Arkema, 420, rue d'Estienne d'Orves, 92700 Colombes, France	**Professional experience** Born in 1968, Isabelle Boccon-Gibod is a graduate of the École Centrale de Paris in France and the University of Columbia in the United States. She is currently a director of Legrand, where she chairs the Audit Committee, of Constellium, and of glassmaker Arc, where she chairs the Board. She was previously a member of the National Investment Strategy Board *(Conseil national d'orientation)* at Bpifrance, Vice-President of the MEDEF Economic Commission and a director of the Paprec Group. Prior to this, she was Executive Vice-President of Arjowiggins group and an Executive Director of Sequana group. She also chaired Copacel, the French association of paper industries, until the end of 2013. Isabelle Boccon-Gibod is also a photographer and author.

Other offices currently held**	**Other offices held in the past five years but now expired****
France → Director, Legrand* → Director, CONSTELLIUM* → Director, Arc Holdings → Chairman, Observatoire Conseil → Chairman, DEMETER International → None	Expired in 2023 → Director, Paprec Expired from 2019 to 2022 → Director, SilMach → Director, Sequana* → Vice-President of the Economic Commission, MEDEF → Director, Centre Technique du Papier → Director, GTT*

** Listed company. ** Outside the Arkema Group.*

3.2.2 Executive management

3.2.2.1 Chairman and Chief Executive Officer

Governance structure and balance of powers

When Thierry Le Hénaff's term of office as director was renewed by the annual general meeting of 19 May 2020, the Board of Directors unanimously confirmed its decision not to separate the duties of Chairman of the Board of Directors and Chief Executive Officer in order to ensure the continuity of the simple, reactive and responsible decision-making process in place since 2006. It therefore reappointed Thierry Le Hénaff as Chairman and Chief Executive Officer at the close of this annual general meeting.

This choice of governance structure has been accompanied within Arkema by the set up of a large number of checks and balances, introduced at the time of the Group's creation in 2006 and steadily strengthened since, as follows:

- a large majority of Board members are independent (73% at the date of this document);
- a regular process for reappointing Board members, with around two thirds replaced between 2020 and 2023, with diversified and complementary skills, as well as recognized, independent and committed personalities, allowing for open, adversarial and constructive discussions within the Board of Directors;
- the presence of a large majority of independent members also on the three Board committees (80% of the Audit and Accounts Committee, 100% of the Nominating, Compensation and Corporate Governance Committee, and 50% of the Innovation and Sustainable Growth Committee), and the fact that the chairs of these three committees are also independent;

- a senior independent director (position created in 2016), whose duties were strengthened in 2020 and who joined the Nominating, Compensation and Governance Committee in 2021. The senior independent director has specific, effective powers and its main role is to oversee the efficient running of the Company's governance structure and assist the Chairman and Chief Executive Officer as needed, in particular in dealings with shareholders on governance issues. The senior independent director's role and responsibilities are described in detail in the Board of Directors' Internal Rules available on the Company's website, www.arkema.com, and are presented in section 3.3.3 of this chapter;
- an Innovation and Sustainable Growth Committee in charge of assessing the contribution of Arkema's strategy and innovation to environmental challenges and sustainable growth. Together with the Audit and Accounts Committee and the Nominating, Compensation and Corporate Governance Committee, it contributes to a full review of all Group's ESG and non-financial challenges. More details about this committee's duties are provided in section 3.3.4.3 of this chapter;
- limitations of the powers of the Chairman and Chief Executive Officer, who is notably required to submit the most significant operations to the Board of Directors for prior approval, such as any industrial investment for an amount greater than €80 million and any proposed acquisition or disposal with an enterprise value of more than €130 million. These limitations are described in detail in section 3.3.1 of this chapter;
- a Board of Directors that is deeply involved in defining and implementing the Group's strategy (particularly in consideration of the aforementioned limitations of powers) at each Board meeting and in particular during the dedicated annual strategy seminar and the annual on-site meeting in France or abroad;
- the holding of at least one executive session per year (and at any time it is deemed necessary), from which the executives and Board members representing employees and employee shareholders are excluded, once a year, following the Board of Directors' meeting approving the annual financial statements, during which the operating procedures of the Board and its committees are assessed;
- the appointment of a director representing employees to the Nominating, Compensation and Corporate Governance Committee for matters relating to compensation during meetings of this committee;
- Arkema's Board members' direct acquaintance with management teams thanks to the latter's many contributions to the Board's various meetings and events, in accordance with requests made by Board members during assessments; and
- a Chairman and Chief Executive Officer who is not a member of any of the Board's specialized committees and who does not attend any debate dealing with his reappointment, the assessment of his performance and the setting of his compensation.

All these checks and balances ensure that Arkema's governance structures operate fluidly and efficiently, strictly within their powers, in accordance with governance best practices.

Within the context of the expiration of the Chairman and Chief Executive Officer's term of office at the close of the annual general meeting of 15 May 2024, the Nominating, Compensation and Corporate Governance Committee carried out in-depth analysis of the Group's governance in 2023, taking account of:

- the quality of management execution and the strength of the Group's positioning as reflected by its very robust annual performances since 2020, under very different market conditions, including strong resilience in 2020 and 2023 and very high levels in 2021 and 2022, and management's effective consideration of societal and environmental challenges, in particular Arkema's commitment to decarbonisation with a climate plan aligned with an SBTi 1.5°C trajectory across its value chain, approved by the SBTi;
- the adoption at the September 2023 Capital Markets Day of a robust and ambitious strategic plan for 2028, which was very favorably received by the markets;
- the results of the assessment of the Board of Directors' and its committees' operating procedures, in particular the assessment carried out by an independent firm in 2022, the results of which are provided in section 3.3.2.4 of this chapter;
- the presence of an Executive Committee with the required experience and skills;
- the existence of a robust succession plan, which the Nominating, Compensation and Governance Committee and Board of Directors work on each year;
- the results of the perception survey of investors by an external service provider in 2023, with the vast majority highlighting the quality of Arkema's management as its primary strength, and the very positive feedback from the governance roadshows held each year in the presence, where appropriate, of the senior independent director, in particular those held in early 2024; and lastly,
- the relevance of this structure, validated during each assessment of the Board of Directors' operating procedures, and confirmed again during the assessment in early 2022 by Spencer Stuart. For further details concerning the assessment of the operating procedures of the Board and its committees in 2022, see section 3.3.2.4 of this chapter.

Based on these achievements over the period from 2020 to 2023, the Nominating, Compensation and Governance Committee recommended that the Board of Directors renew the term of office of Thierry Le Hénaff as director, who confirmed his commitment and motivation to implement the strategy defined at the Capital Markets Day on 27 September 2023, and, subject to shareholders voting in favor at the annual general meeting, that the Board reappoint him as Chairman and Chief Executive Officer.

At its meeting of 8 November 2023, the Board of Directors, on the recommendation of the Nominating, Compensation and Governance Committee, was therefore able to make an informed decision, in the interests of the Company and its stakeholders, on Thierry Le Hénaff's continuation as Chairman and Chief Executive Officer, having effectively noted once again that this choice of governance structure - with Thierry Le Hénaff as Chairman and Chief Executive Officer - continued to demonstrate during his current term of office, renewed for the fifth time in 2020, that it is fully compatible with the Company's operations, business and interests. Since 2020:

- Arkema has delivered a very robust financial performance in a particularly challenging and volatile macroeconomic environment, marked by a series of major events, in particular the Covid pandemic, which created severe tensions in supply chains and very high inflation in raw materials prices, as well as worsened geopolitical tensions, especially the war in Ukraine and the conflict in the Middle East;
- the Group's EBITDA averaged at €1.63 billion per year over the 2020-2023 period, up almost 20% on the previous four-year period, and the cash generation remained very high with an EBITDA to cash conversion rate over 40% each year. During this period, the Group also maintained a solid balance sheet and strict financial discipline, with net debt of less than two times EBITDA each year;
- the Group continued with its transformation into a Specialty Materials pure player, in line with the ambition unveiled at the 2020 CMD, and carried out structuring M&A operations, in particular the acquisition and successful integration of Ashland's performance adhesives, the acquisition of a majority stake in PI Advanced Materials and the sale of the PMMA business under very favorable terms;
- the Group also continued its new developments resulting from innovation, particularly in areas focusing on the major sustainability themes (new energies, advanced electronics, bio-based and recycled polymers, additives integrated into solutions that contribute to the energy transition, digital customer services, high performance adhesives and sealants, pressure sensitive adhesives, medical applications, fluorospecialties with very low GWP, bio-based surfactants and additives for the solar industry, etc.) in line with megatrends;
- Arkema has made significant progress in or implemented complex, high-potential industrial projects, including notably a series of increases in PVDF capacity in China and at Pierre Bénite in France, increased PEBAX capacity in France, the bio-based polymers plant in Singapore and the PA11 powders plant in China, the supply of hydrofluoric acid in partnership with Nutrien in the United States, the doubling of Sartomer's photocure resins production capacity in China, and progress made in future production capacity of next generation fluorospecialty 1233zd in the United States;
- moreover, Arkema reinforced its commitment to decarbonization through a new climate plan aligned with a 1.5°C SBT trajectory by 2030 across its entire value chain. This plan was validated by the SBTi in 2023, paving the way to Net Zero by 2050;
- Arkema continued to make significant progress with regard to CSR. In terms of sustainable supply, for example, the percentage of sales that contribute significantly to the Sustainable Development Goals was 51% in 2023, and the percentage of the portfolio covered by a life-cycle analysis has risen by 34 points since 2020 to 56%; in terms of social responsibility, the Group has made significant progress, particularly as regards gender balance, with an increase in the percentage of women in senior management positions to 29% at the end of 2023 (23% at the end of 2019), ahead of the 2030 roadmap, as well as in talent management, with enhanced internal monitoring processes; and lastly, since 2020, the progress of the Group's CSR performance is recognized by non-financial rating agencies, Arkema being notably rated among the best companies by CDP, EcoVadis, Sustainalytics, MSCI and ISS ESG.

In the light of this, the Board of Directors once again emphasized the decisive role played by Thierry Le Hénaff, Chairman and Chief Executive Officer of Arkema since it was founded in 2006, and recalled his role as "Arkema founder", as well as the need for his presence at the head of Arkema, in a same role, in order to implement the 2028 strategy announced at the CMD on 27 September 2023.

The Board of Directors considers that this simplified governance structure, with Thierry Le Hénaff at its head, has served and continues to serve the interests of Arkema and its shareholders perfectly, and that this is still the best governance structure for Arkema because:

- combining the positions ensures that the Board of Directors functions fluidly and with agility, and facilitates the strategic operation of the Company, thanks to rapid decision-making and better communication between the Board of Directors and the management teams;
- the structure is streamlined and responsive; and
- governance is clear, both internally and externally, with a company representative who speaks with a single voice with all the stakeholders.

In view of all these considerations, the Board of Directors unanimously decided to propose and submit to the shareholders at the annual general meeting on 15 May 2024 to renew the term of office of Thierry Le Hénaff, as director, for another four-year term, and announced its intention for him to remain as Chairman and Chief Executive Officer, subject to shareholders voting in favor under the fifth resolution.

Succession plan

The Board of Directors unanimously reasserted at its meeting of 28 February 2024 that the combination of the positions of Chairman of the Board of Directors and Chief Executive Officer is suited specifically to Thierry Le Hénaff taking account of his role as “Arkema founder”, his individual and collective performance and the way it has been implemented since 2006. It therefore unanimously decided that a separate governance structure with a Chairman of the Board of Directors and a Chief Executive Officer will be adopted, at the time of Thierry Le Hénaff’s succession, in accordance with the principles mentioned in 2020 when his term of office was last renewed. The Board also entrusted the Nominating, Compensation and Governance Committee with the task of identifying potential successors for Thierry Le Hénaff as Chief Executive Officer.

3.2.2.2 Executive Committee

The Chairman and Chief Executive Officer has put in place an Executive Committee.

The Executive Committee supervises the Group's operational management and coordinates and monitors the implementation of the Group's strategy. It is a decision-making body that focuses on strategic matters and performance monitoring, and reviews significant organizational matters and large projects. It also ensures the effective implementation of internal control. The Executive Committee meets twice a month.

COMPOSITION OF THE EXECUTIVE COMMITTEE AT 31 DECEMBER 2023

Name	Position	Area of responsibility
Thierry Le Hénaff	**Chairman and Chief Executive Officer**	Arkema
Operational Executive Vice-Presidents		
Vincent Legros	**Chairman and Chief Executive Officer, Bostik**	Adhesive Solutions
Marc Schuller and reporting to Marc Schuller:	**Chief Operating Officer**	Advanced Materials, Coating Solutions, Intermediates, North America, raw materials and energy procurement and commercial excellence
Laurent Tellier	**Senior Vice-President Performance Additives**	Performance Additives
Erwoan Pezron	**Senior Vice-President, High Performance Polymers**	High Performance Polymers
Richard Jenkins	**Senior Vice-President, Coating Solutions**	Coating Solutions
Functional Executive Vice-Presidents		
Luc Benoit-Cattin	**Executive Vice-President, Industry and CSR**	Industrial safety, environment and sustainable development, technique and construction, supply chain, quality and goods and services procurement, processes and operational excellence
Bernard Boyer	**Executive Vice-President, Strategy**	Planning, economic studies, acquisitions/divestitures, internal audit and internal control, insurance and risk management, and legal affairs
Marie-José Donsion	**Chief Financial Officer**	Accounting, financial control, treasury management, financing, taxation, investor relations, IT and digital transformation
Thierry Parmentier	**Executive Vice-President, Human Resources and Communication**	Human resources and communication

Laurent Tellier joined the Executive Committee on 16 February 2023 as Senior Vice-President Performance Additives, replacing Marie-Pierre Chevallier who retired.

The R&D department, placed under the responsibility of Armand Ajdari, reports directly to the Chairman and Chief Executive Officer given its strategic importance for the Group. For further details on this department, see section 1.1 of this document.

Biographies of the Executive Committee members can be found on the Company's website (www.arkema.com) in the Investors/CSR and Governance section.

3.2.2.3 The Group management committee

The Chairman and Chief Executive Officer has also put in place a management committee, whose duties notably entail the review of the Group's operating activity (HSE, business, finance and operations) and monitoring of the Group's major projects, priorities and challenges. This committee also discusses Arkema's medium- and long-term orientations. It meets several times a year.

At the date of this document, the Group management committee, which represents the governance body referred to in article L. 22-10-10 2° of the French Commercial Code, is made up of twenty-five members, including the ten Executive Committee members and certain heads of businesses, support functions, regions and countries. Five members, *i.e.:* 20%, were women.

The drive to increase the percentage of women on the Group management committee is part of the objectives and policies to enhance the gender balance within the Group's governance bodies presented in section 4.6.1.7 of this document. As such, the figure will continue to rise as the number of women senior managers in the company grows. Arkema aims to increase the percentage of women on the Group management committee to 30% in 2030.

3.2.3 Additional information concerning members of the Board of Directors and executive management

3.2.3.1 Absence of family ties

To the best of the Company's knowledge, and at the date of this document, there are no family ties (i) between the members of the Board of Directors, (ii) between the members of the Executive Committee, and (iii) between the members of the Board of Directors and those of the Executive Committee.

3.2.3.2 Absence of any conviction for fraud, involvement in a business failure, or public incrimination and/or sanction

To the best of the Company's knowledge, and at the date of this document, no member of the Board of Directors or the Executive Committee has been:

- convicted of fraud during the past five years;
- implicated in a bankruptcy, receivership, liquidation or administration as a member of an administrative, management or supervisory body during the past five years; or
- charged with any offense, accused, or had any official public sanction imposed on them by statutory or regulatory authorities (including designated professional bodies) during the past five years.

To the best of the Company's knowledge, during the past five years, no director has been prohibited by a court from serving as a member of the administrative, management or supervisory body of an issuer, or from participating in the management or governance of an issuer's business.

3.2.3.3 Absence of conflicts of interest

The Company has put in place measures to prevent potential conflicts of interest between the directors and the Company.

In accordance with corporate governance best practices and the recommendations of the AFEP-MEDEF Code in particular, the Board of Directors' Internal Rules provide that:

- each director undertakes to maintain under all circumstances their independence of analysis, judgment, decision-making and action and, to this end, must not seek or accept any advantages likely to be considered as compromising their independence from the Company or any associated company, either directly or indirectly. Each director undertakes to notify the Board of Directors of any agreement between them and the Company, entered into directly, indirectly or *via* an intermediary, prior to entering into such agreement. Furthermore, each director undertakes not to exercise any responsibilities in companies or business activities that are in competition with the Company without previously notifying the Board of Directors and the Chairman of the Nominating, Compensation and Corporate Governance Committee; and
- in the event of a conflict of interest, the director in question must abstain from voting on any resolution submitted to the Board and from participating in the discussion preceding the vote. The Chairman may ask such director not to attend while the topic is addressed.

Directors must confirm the absence of any conflicts of interest (even potential) when they take up office, each year when so requested for the preparation of the Universal Registration Document, and at any time, upon request by the Chairman and Chief Executive Officer.

To the best of the Company's knowledge, at the date of this document, there are no potential cases of conflicts of interest between the duties of members of the Board of Directors or of executive management vis-à-vis the Company and their private interests. To the best of the Company's knowledge, no arrangements or agreements resulting in the selection of a member of the Board of Directors or of executive management have been made with the Company's main shareholders, customers or suppliers.

To the best of the Company's knowledge, there are no restrictions accepted by the members of the Board of Directors or of executive management concerning the transfer of their holding in the Company's share capital, other than those set out in sections 3.4.2.1 and 3.4.3.1 of this chapter.

3.2.3.4 Information regarding service contracts

To the best of the Company's knowledge, there are no service contracts between the members of the Board of Directors or the Executive Committee and the Company or any of its subsidiaries providing for the granting of benefits under the terms of such a contract. The Executive Committee members are however all employees of the Company, apart from Thierry Le Hénaff, who is an executive director of the Company, and Richard Jenkins, who is an employee of Arkema Inc., a subsidiary of the Company.

3.2.3.5 Procedure for assessing agreements relating to ordinary operations entered into under normal conditions

In 2020, in accordance with article L. 22-10-12 of the French Commercial Code, the Board of Directors implemented a procedure for assessing agreements relating to ordinary operations entered into under normal conditions. The procedure includes an assessment committee comprising the head of Compliance, the Financing and Treasury Vice-President and the Internal Audit and Internal Control Vice-President, which meets twice a year in an ordinary session, and on an extraordinary basis if necessary, to ensure that the agreements relating to ordinary operations entered into by the Company under normal conditions comply with the criteria defined in the procedure.

Once a year, and more often if necessary, the committee for assessing agreements relating to ordinary operations draws up a report, which it submits to the Audit and Accounts Committee. In accordance with this report, the Board of Directors reassesses the procedure on an annual basis, with a view to updating it if necessary. The report submitted to the Audit and Accounts Committee in early 2024 confirmed the ordinary nature and normal conditions of the agreements entered into by the Company and described in this report.

3.3 Operating procedures of administrative and management bodies

The duties and operating rules of the Company's administrative and management bodies are defined by law, by the Company's Articles of Association and by the Board of Directors' Internal Rules. The latter documents can be found on the Company's website (www.arkema.com) in the Investors/CSR and Governance section.

3.3.1 Management and limitation of powers of the Chairman and Chief Executive Officer

3.3.1.1 Powers of the Chairman and Chief Executive Officer

The Chairman and Chief Executive Officer is vested with the most extensive powers to act in the Company's name in all circumstances. He exercises these powers within the limits of the Company's corporate purpose and subject to those powers expressly vested by law in shareholders' meetings and the Board of Directors. He represents the Company in its relations with third parties.

The powers of the Chairman and Chief Executive Officer were, however, restricted by the Board of Directors in 2006, when it introduced a right of prior approval or post review. The Chairman and Chief Executive Officer must therefore inform the Board of the most significant operations or submit them to the Board for prior approval, as follows:

Prior approval by the Board of Directors	Post review by the Board of Directors
• Overall capital expenditure budget • Any industrial investment in excess of €80 million • Any acquisition or divestment project with an enterprise value in excess of €130 million • Any annual capital expenditure budget overrun in excess of 10%	• Any industrial investment in excess of €30 million • Any acquisition or divestment project with an enterprise value in excess of €50 million

The general powers of the Chairman and Chief Executive Officer were confirmed by the Board of Directors when his term of office was renewed in 2020.

3.3.1.2 Deposits, commitments and guarantees

Every year, the Board of Directors authorizes the Chairman and Chief Executive Officer, or any person duly authorized to act on his behalf, to issue deposits, commitments and guarantees to third parties in the Company's name, for one year. At its meeting on 30 January 2023, the Board of Directors granted said authorization to issue new deposits, commitments and guarantees up to a limit of €90 million, and to continue the deposits, commitments and guarantees previously made.

In accordance with article L. 225-35 of the French Commercial Code, the Board of Directors also authorized the Chairman and Chief Executive Officer to guarantee, for one year and for unlimited amounts, the commitments made by the Company with respect to companies controlled by it, within the meaning of article L. 233-16, II of the French Commercial Code.

At its meeting of 22 January 2024, the Board of Directors renewed its authorization under the same conditions.

3.3.2 Duties and operating procedures of the Board of Directors

3.3.2.1 Duties

The Board of Directors is a collegiate body that takes decisions collectively. It is mandated by and accountable to all of the shareholders.

The Company's Board of Directors exercises the powers assigned by law in order to act in the Company's best interests in all circumstances. It decides the Company's overall business strategy and oversees its implementation. Subject to those powers expressly conferred upon it at shareholders' meetings and within the limits of the Company's corporate purpose, the Board of Directors considers any issue involving the proper operation of the Company and decides on any issue concerning the Company. Lastly, it strives to create value over the long term by factoring social and environmental challenges into the Group's business plans.

To this end, it must in particular oversee the Group's strategic developments, appoint the executive directors responsible for managing the Company in line with the corporate strategy, supervise the implementation of this strategy, take decisions regarding major operations, ensure the quality of information supplied to shareholders and the markets, particularly in the financial statements, and guarantee the quality of its operations. It analyzes opportunities and risks – especially financial, legal, operational, social and environmental risks – on a regular basis in line with the Group's strategy and the related measures taken.

The Board of Directors can decide to set up one or more specialized committees. It defines the composition and remit of these committees, which operate under the responsibility of the Board of Directors.

In accordance with the Internal Rules of the Board of Directors and each of its committees, some matters are therefore subject to prior review by the appropriate committee before being submitted to the Board of Directors for approval.

In accordance with the AFEP-MEDEF Code recommendations, the Board of Directors reviews the diversity objectives within the Group's governance bodies, how such objectives are implemented and the actions taken to achieve them, as presented to it by executive management twice a year as part of its overall human resources review and, more specifically, its review of the career management plan. Information on these objectives, the implementation thereof and the results achieved is provided in sections 3.2.2 and 4.6.1.7 of this document. Based upon a proposal by executive management, the Board also determines multi-annual CSR strategic guidelines. In terms of climate issues, it performs annual reviews of the results obtained and the opportunity, where appropriate, to adapt the action plan or change the objectives, particularly in light of changes in the company's strategy, technologies, shareholders' expectations and the economic capacity to implement them. This climate strategy and the results of its implementation are presented at the annual general meeting on a regular basis, and at least once every three years or if any significant changes are made to the strategy.

3.3.2.2 Operating procedures

The operating procedures of the Board of Directors are determined by current laws and regulations, the Company's Articles of Association and its own internal rules as updated most recently on 22 February 2023.

The Board of Directors meets at least four times a year and whenever the interests of the Company so require. Meetings are convened by its Chairman. The convening notice may be delivered by any means, even verbally, eight days before the date of the meeting and, in urgent cases, without notice. It specifies where the meeting will take place. The convening notice and meeting support documents are made available *via* a digital platform that enables the secure exchange of data. In principle, meetings take place at the Group's head office but may in certain cases be held by videoconference or conference call in accordance with the law, the Company's Articles of Association and the Board of Directors' Internal Rules.

The Board of Directors' meetings are chaired by the Chairman of the Board or, in his absence, by the oldest director in attendance.

The Board of Directors may legitimately deliberate even in the absence of a convening notice if all members are present or represented. In accordance with its internal rules, in all cases permitted by law and if specified in the convening notice, directors attending the meeting by means of videoconferencing or any other telecommunication method that meets the requisite technical specifications set by current laws and regulations, are deemed present for the purpose of quorum and majority requirements.

Decisions are taken by majority vote of the members present, deemed present or represented. In the case of a split vote, the Chairman has the casting vote.

In accordance with corporate governance best practices and the recommendations of the AFEP-MEDEF Code in particular, the Board of Directors' Internal Rules also set out the rights and obligations of the directors and notably impose that:

- before accepting their duties as director of the Company, the directors must ensure that they are familiar with the Company's Articles of Association, the Board of Directors' Internal Rules, and the legal and regulatory provisions governing the functions of a director of a French joint stock corporation *(société anonyme)*, and in particular the rules relating to the definition of the powers of the Board of Directors, multiple directorships, the agreements falling within the scope of article L. 225-38 of the French Commercial Code, the holding and use of insider information, the declarations of trading in the Company's shares and the blackout periods during which directors may not trade in those shares;
- the directors are elected by all the shareholders and must act in all circumstances in the Company's best interests, whilst also taking the social and environmental challenges of its business into consideration;
- the directors must devote the necessary time and attention to their duties. Consequently, the directors may not hold more than four other directorships in listed companies, including foreign companies, outside the Group. Accordingly, the directors undertake to inform the Chairman of the Nominating, Compensation and Corporate Governance Committee of any new non-executive or executive directorship that they might accept in a company outside the Group or outside the group of which they are a member, including their participation in the committees of these companies' Boards of Directors. Executive directors may not hold more than two other directorships in listed companies outside the Group and must seek the opinion of the Board of Directors prior to accepting any new directorship in a listed company;
- the directors must be committed and, where possible, take part in all meetings of the Board of Directors and of the committees to which they have been appointed, as well as shareholders' meetings;
- prior to each Board of Directors' meeting, except in the event of an emergency justified by exceptional circumstances, the agenda and information relating to this latter that require special analysis and prior consideration are sent to each director with the convening notice, with sufficient time, whenever this can be accomplished without any breach of confidentiality. The directors may also request from the Chairman and Chief Executive Officer any additional information they may consider necessary to properly fulfill their duties, particularly in the light of the meeting agenda;
- if they deem it necessary, the directors may also request additional training on the Group's specific features, businesses, and sector of activity, at the time of their appointment or during their term of office. This training is organized by the Company, which pays the related costs;
- all documents provided for Board of Directors' meetings and all information collected during or outside Board of Directors' meetings are confidential, without exception, whether or not the information collected is presented as being confidential. In this regard, the directors must consider themselves bound by strict professional confidentiality beyond the simple duty of discretion provided for by the law. Furthermore, the directors undertake not to express their individual views outside the Boardroom on matters discussed during Board of Directors' meetings, or on the opinions expressed by individual directors; and
- as required by law and regulations, the directors must refrain from trading in the Company's securities (including derivative financial instruments) insofar as, by virtue of their duties, they have access to insider information. They are therefore added, as soon as they take up their duties, to the list of people subject to the blackout periods implemented by the Company. Furthermore, the directors must disclose any transactions they have entered into in respect of the Company's securities.

The Board of Directors' Internal Rules also provide that, when the positions of Chairman and Chief Executive Officer are held by the same person, the Board of Directors shall appoint one of the independent directors to serve as senior independent director, based on the proposal of the Nominating, Compensation and Corporate Governance Committee. For further details, see section 3.3.3 of this chapter.

In accordance with the AFEP-MEDEF Code and with best governance practices, the Chairman and Chief Executive Officer does not take part in any discussions concerning his term of office and compensation. The Board members therefore discuss these topics without his presence. Following the report on the annual assessment of the Board of Directors' operating procedures, the senior independent director shall hold an executive session from which the executive director and directors who are employees of the Group are excluded.

3.3.2.3 Activities of the Board of Directors

The Board of Directors met seven times in 2023. There was a high attendance rate at these meetings of 93% (*versus* 91% in 2022). Regularly scheduled meetings lasted four hours and thirty minutes on average, and the length of more exceptional, context-related meetings (notably about M&A) varied depending on the topic at hand.

The following table summarizes the individual attendance rates of directors at the meetings of the Board of Directors and its committees in 2023.

	Board of Directors		Audit and Accounts Committee		Nominating, Compensation and Corporate Governance Committee		Innovation and Sustainable Growth Committee	
Director	Attendance rate	Number of meetings	Attendance rate	Number of meetings	Attendance rate	Number of meetings	Attendance rate	Number of meetings
Thierry Le Hénaff	100%	7/7	-	-	-	-	-	-
Bpifrance Investissement represented by Sébastien Moynot	100%	7/7	-	-	-	-	100%	3/3
Séverin Cabannes (1)	75%	3/4	100%	4/4	-	-	-	-
Marie-Ange Debon	71%	5/7	100%	6/6	-	-	-	-
Fonds Stratégique de Participations represented by Isabelle Boccon-Gibod	100%	7/7	100%	6/6	-	-	100%	3/3
Ilse Henne	86%	6/7	83%	5/6	-	-	-	-
Ian Hudson	100%	7/7	100%	6/6	-	-	100%	3/3
Florence Lambert (2)	100%	4/4	-	-	-	-	100%	2/2
Victoire de Margerie (3)	67%	2/3	-	-	-	-	100%	1/1
Laurent Mignon (3)	67%	2/3	-	-	-	-	-	-
Hélène Moreau-Leroy	100%	7/7	-	-	100%	4/4	-	-
Nathalie Muracciole	86%	6/7	-	-	67%	2/3 (4)	-	-
Nicolas Patalano	100%	7/7	-	-	-	-	-	-
Thierry Pilenko	100%	7/7	-	-	100%	4/4	-	-
Susan Rimmer	100%	7/7	-	-	-	-	100%	3/3
Philippe Sauquet	100%	7/7	-	-	100%	4/4	-	-
Average attendance rate	**93%**	**7**	**97%**	**6**	**94%**	**4**	**100%**	**3**

(1) *A director and member of the Audit and Accounts Committee since 11 May 2023.*
(2) *A director and member of the Innovation and Sustainable Growth Committee since 11 May 2023.*
(3) *Directorship expired on 11 May 2023.*
(4) *Nathalie Muracciole attends meetings of the Nominating, Compensation and Corporate Governance Committee when the meeting has an agenda item relating to compensation, which was the case for three out of the four meetings in 2023.*

The agendas of the Board of Directors' meetings included recurring annual topics as well as more specific topics, as follows:

Operations, strategy and risk management	**Recurring annual topics** • review and approval of the strategy and main operational priorities presented during the annual seminar • monitoring of the implementation of the bolt-on acquisitions and major capital expenditure programs • review and, where necessary, update of the risk map, including in connection with the duty of care plan • presentation and approval of the insurance program • changes in the competitive environment • review of the Group's strategy (actions and results) for cybersecurity • progress report on the Group digital transformation program • business presentation by the industrial division, including major projects • presentation and review of the business of each division
	Specific topics in 2023 • various strategic projects: monitoring of the partnership with Nutrien Ltd. for the supply of hydrofluoric acid, and the start up of the bio-based polyamides manufacturing plant in Singapore • detailed review of Arkema's operations in Asia • detailed review of the High Performance Polymers business, particularly in Asia • various M&A transactions, notably the closing of the acquisitions of Ashland's adhesive business and a majority stake in PI Advanced Materials, and other potential acquisitions • review of the risks and the situation relating to raw materials and energy in light of the tense geopolitical context resulting from Russia's invasion of certain regions of Ukraine and the conflict in the Middle East • review of the Group's insurance program for 2023 and the future • monitoring of changes in product-related regulations, particularly REACH and PFAS in Europe
Accounting and financial situation	**Recurring annual topics** • approval of the annual budget • approval of the annual consolidated and Company financial statements, proposed allocation of profit and distribution of the dividend • approval of the annual financial report, the management report and, more generally, the Universal Registration Document • preparation of the annual general meeting including approval of the draft resolutions • approval of management forecast documents • approval of the half-yearly financial statements and review of quarterly financial information • review of recommendations and reports resulting from the work of the Audit and Accounts Committee • approval of draft results press releases • review of the Company's needs in terms of financial resources and therefore of the Euro Medium Term Notes (EMTN) program and definition of the maximum issue number of bonds • feedback from roadshows
	Specific topics in 2023 • authorization to renew the Euro Medium Term Notes (EMTN) program for a maximum amount of €5 billion • authorization to refinance bond debt nearing maturity through new bond issues • monitoring of the tender process for the upcoming appointment/reappointment of the statutory auditors

Corporate governance and compensation	**Recurring annual topics** • assessment of the Board of Directors' operating procedures • assessment of the independence of Directors • review of Directors' terms of office and proposal of renewals/appointments • review of reports on the work carried out by the Nominating, Compensation and Corporate Governance Committee • review of related-party agreements and agreements entered into and authorized during previous years which were implemented during the year • policy on the non-executive directors' compensation • policy on the Chairman and Chief Executive Officer's compensation • compensation due or awarded to the Chairman and Chief Executive Officer for the prior year • compensation for Executive Committee members (fixed compensation, variable compensation for the prior year and criteria used to determine variable compensation) • definition of share-based compensation for Group employees (performance share plan, capital increase reserved for employees, etc.) • changes in the Executive Committee and its succession plan, including for the Chairman and Chief Executive Officer, as well as career management policy for executives • definition of the Chairman and Chief Executive Officer's powers to issue deposits, commitments and guarantees • activity report of the senior independent director • approval of the report on corporate governance
	Specific topics in 2023 • self-assessment of the operating procedures of the Board of Directors and its committees • appointments of Séverin Cabannes as a director and member of the Audit and Accounts Committee, and Florence Lambert as a director and member of the Innovation and Sustainable Growth Committee • reappointment of Hélène Moreau-Leroy as a director, senior independent director and member of the Nominating, Compensation and Corporate Governance Committee • reappointment of Ian Hudson as a director and member of the Audit and Accounts Committee, and appointment as Chairman of the Innovation and Sustainable Growth Committee • reappointment of Thierry Le Hénaff as a director, and continuation of his role as Chairman and Chief Executive Officer • acknowledgment of the achievement of the performance conditions applicable to the 2020 performance share plans and set up of the 2023 performance share plans
Corporate social responsibility	**Recurring annual topics** • Group's situation in terms of safety and the environment (particularly the climate) • Group human resources policy, especially its diversity and talent management policy • Group CSR approach and roadmap • non-financial information statement and duty of care
	Specific topics in 2023 • detailed review of CSR aspects within the scope of recent acquisitions and investments • review of Arkema's commitment to a 1.5°C carbon trajectory

In 2023, the Board of Directors also continued to be responsive and adaptable amid geopolitical tensions, the unprecedented rise in energy and raw material costs, and inflation.

At each meeting, the Chairman updates the Board on the operations concluded since the previous meeting and seeks the authorization of the Board of Directors for the main projects underway that are likely to be completed before the next Board meeting.

Once a year, the Board of Directors also dedicates a day to reviewing Arkema's strategy in the presence of the Executive Committee members and the head of R&D (CTO). During this meeting, the directors are given detailed presentations on key components of the Group's strategy, including R&D, with a demonstration of the recent innovations in various areas, the acquisition strategy, safety and sustainable development, the digital strategy, the competitive landscape, and specific operational risks. This is also an opportunity for the Board to analyze the main challenges of the coming years and changes in the Group's profile. At the end of the seminar, the directors typically meet with around twenty of the Group's senior executives and high potentials.

The Board of Directors oversees the Company's quest for gender balance within the Executive Committee and its senior executives, and among senior management in general. Each year, it reviews the policy established by executive management in this regard, including the objectives, actions implemented and results achieved. For further details on the human resources diversity policy, see section 4.6.1.7 of this document.

Lastly, the Board of Directors, based on the preparatory work of the Nominating, Compensation and Corporate Governance Committee, and in complete cooperation with the Chairman and Chief Executive Officer, reviews every year with careful attention the succession planning for the Chairman and Chief Executive Officer and the members of the Executive Committee, as well as the career management policy for Group executives. This work is used in particular to prepare for reappointments and replacements in view of the different term of office renewal dates and to handle long-term succession planning scenarios or for dealing with crisis situations. Within this context, it has set out the conditions for replacing the Chairman and Chief Executive Officer, notably in the event of an emergency (so-called "tramway" scenario), and the key principles for his future succession. For further details on this matter, see section 3.2.2.1 of this chapter.

Arkema's CSR strategy is also reviewed thoroughly, first by the Board's various committees, and in particular by the Innovation and Sustainable Growth Committee for the roadmap aspects of each of the Business Lines in this area and a review of the applicable regulations to identify the necessary modifications or adaptations, and by the Audit and Accounts Committee, notably for the risks (in particular in light of duty of care requirements), quantifiable targets, monitoring of quantitative indicators and aspects related to sustainable finance (in particular taxonomy). The Nominating, Compensation and Corporate Governance Committee reviews the employee-related aspects of this strategy, and in particular its objectives as regards greater representation of women and diversity in general, as well as the inclusion of non-financial criteria in the compensation policy. These committees report to the Board on these topics at each meeting and the Sustainable Development department presents a summary of the Group's overall roadmap to the Board of Directors once a year.

Since the beginning of 2024, the Board of Directors has met twice, with an attendance rate of 96.5%. Beyond the recurring topics such as the approval of the 2024 annual budget, the approval of the annual consolidated and Company financial statements for 2023, the proposed allocation of profit and, more generally, the preparation of the annual general meeting including approval of the proposed resolutions, these meetings focused in particular on:

- the review of achievements and direction in terms of human resources and talent management;
- an examination and review of the financial performance and achievements of Sartomer, with a visit to the Villers-Saint-Paul site, and of Bostik, particularly its durable goods business, with a visit to the Ribécourt site and the R&D center at Venette;
- the distribution of a dividend of €3.50 per share in respect of 2023 results;
- the Chairman and Chief Executive Officer's compensation policy for the period from 2024 to 2028 in view of his new term of office;
- the directors' compensation policy for the period from 2024 to 2028;
- directors' compensation in accordance with the compensation policy applicable in 2023, as well as the compensation paid or awarded to the Chairman and Chief Executive Officer in 2023;
- the Executive Committee members' compensation for 2023 and their compensation policy for 2024;
- the review of the risk map;
- the review of the Group's social and environmental challenges as part of the non-financial information statement pursuant to articles L. 225-102-1 and L. 22-10-36 of the French Commercial Code and the progress report on the *plan de vigilance* (duty of care plan) and taxonomy-related reporting; and
- the annual self-assessment of the operating procedures of the Board of Directors and its committees.

The Board of Directors' annual on-site meeting took place on 22 and 23 January 2024 near Chantilly in France. The directors visited the Villers-Saint-Paul site, which notably produces Sartomer photocure resins, as well as two major Bostik's sites – the Ribécourt plant and the Venette R&D center. During these visits the directors met with the local teams and were given a detailed presentation about the commercial and industrial activities of these sites and businesses concerned.

Lastly, an executive session was held at the end of the 28 February 2024 meeting, as provided for in the internal rules, conducted by senior independent director Hélène Moreau-Leroy. During the session, the directors were able to discuss matters in the absence of the executive director and directors bound to the Group by an employment contract.

3.3.2.4 Assessment of the operating procedures of the Board of Directors

In accordance with the AFEP-MEDEF Code and its internal rules, the Board of Directors conducts an annual assessment of its operating procedures by means of a self-assessment questionnaire. Every three years in principle, a formal assessment is conducted by an external consultant. The form and terms of the Board's assessment are discussed by the Nominating, Compensation and Corporate Governance Committee every year. The Chairman of the Nominating, Compensation and Corporate Governance Committee and the Secretary of the Board of Directors are involved in the full assessment process (drafting/updating the questionnaire, setting the schedule, reviewing the answers to the questionnaire, preparing the feedback, attending preparatory and feedback meetings with the consulting firm).

The most recent formal external annual assessment of the operating procedures of the Board of Directors and its committees was carried out for the year 2021, by the consulting firm Spencer Stuart in early 2022. In this context, individual interviews of each director were conducted based on a guide that was drawn up in advance and specifically tailored to Arkema and to the objectives set for the performance of this external assessment. The guide was approved by the Chairman of the Nominating, Compensation and Corporate Governance Committee and the Secretary of the Board of Directors. Prior to the interviews, each director was invited to complete an online questionnaire.

The findings from this assessment process were detailed in a report presented to the Nominating, Compensation and Corporate Governance Committee on 17 February 2022 and then to the Board of Directors on 23 February 2022. They showed that Arkema's corporate governance continues to be at best-practice level. On average, more than 90% of the directors said they considered the dynamics of the Board's operating procedures and its performance to be very satisfactory, despite the significant changes in its composition in recent years due to the expiry of the terms of office of several directors present since 2006. The directors unanimously agreed that they genuinely enjoyed working together in the professional and friendly atmosphere.

The assessment highlighted the following strengths:

- the leadership of the Chairman, who facilitates discussions and leaves room for debate and questions. The directors commended the way in which the Board is run and unanimously expressed their pleasure in contributing to and participating in this Board;
- the dynamics and commitment of the Board thanks to its high level of cohesiveness, collegiality and diversity and the deep respect that all members have for each other, allowing for lively discussions and the free expression of opinions. The Board of Directors was found to be very balanced, well-paced and highly constructive;
- strategic discussions with a good balance between governance matters and strategic issues, as well as transparency and consistency in strategic thinking. The Board found the management team working alongside the Chairman and Chief Executive Officer to be effective and committed in their dealings with the Board;
- the composition of the Board, with prompt induction of new directors and experienced, diversified and complementary director profiles that are well aligned with Arkema's needs;
- the role of the senior independent director, which was recognized as positive and well positioned, particularly in terms of dealings with external stakeholders and the good relationships developed with all directors and the Chairman and Chief Executive Officer;
- the role of the committees, whose work was unanimously praised as being well coordinated with that of the Board. The recent creation of the Innovation and Sustainable Growth Committee was deemed positive, and reporting by the committee chairmen met the expectations of directors;
- the quality of the Board's documents, which met directors' expectations in terms of both format, with very concise presentations of the subjects, and content, with a clear understanding of priorities; and
- the Board secretary, who was found to be professional and efficient, attentive to the needs of directors, and responsive and available.

Following this assessment, the Board identified the following subjects for further improvement:

- the Nominating, Compensation and Corporate Governance Committee's involvement in succession plans, especially that of the Chairman and Chief Executive Officer;
- formalization of the induction program for new directors;
- the possible addition of another, more international profile – without this being an imperative – in line with the desire to strengthen certain skills such as customer businesses and financial expertise; and
- systematic post-mortem analyses of Board decisions to assess their effects.

In addition to this thorough assessment performed every three years, once a year the directors – including the Chairman and Chief Executive Officer – conduct a self-assessment of the operating procedures of the Board and its committees based on questionnaires validated in advance by the Nominating, Compensation and Corporate Governance Committee. The self-assessment for 2023 was carried out in January and February 2024. These questionnaires asked them in particular to assess these bodies' composition (in terms of expertise, general diversity and independence), their collective performance during the year, the individual contribution of each director, the quality of information provided and the quality of discussions. The purpose of the self-assessment is to confirm each year that Arkema's corporate governance bodies are operating effectively, and to identify any significant points that may have arisen since the 2022 formal assessment and particularly points arising in 2023, compared with the very positive feedback from the assessments carried out in previous years.

The findings of this new self-assessment were discussed during the Nominating, Compensation and Corporate Governance Committee meeting of 26 January 2024 and decided at the Board meeting of 28 February 2024. The assessment showed that the directors remain very satisfied with the Board's operating procedures in general. A large majority of directors again agreed that 2023 had been a very good year with further progress. The Board noted that the main recommendations from the previous assessments, particularly those of 2022, had been addressed. In particular, the directors appreciated the clarifications provided concerning the role of the Innovation and Sustainable Growth Committee set up in 2021 in response to increasing regulatory reporting requirements. This committee is responsible for keeping up to date with the overall regulatory framework so its members can assess to what extent new regulations might require Arkema to change its strategy or innovation. The Audit and Accounts Committee is in charge of verifying the figures disclosed in the reporting. The Board of Directors' oversight powers are still considered by a very large majority to be highly satisfactory, and its involvement in decisions concerning the Group's major transactions and operations is also deemed to be very satisfactory. The Board considers it has a good understanding of the management team that works alongside the Chairman and Chief Executive Officer, and that the input given by the members of that team at Board meetings enables the directors to get to know them well, interact with them and gain insight into the Group's talent pool. A very large majority of directors considered the assessment method to be suitable, and for those directors who sit on other boards, all consider the Board to be superior in terms of the quality of its corporate governance practices.

3.3.3 Senior independent director

In accordance with best practices, the Board of Directors created the position of senior independent director in 2016. The primary role of the senior independent director is to oversee the efficient running of the Company's governance structures and the absence of conflicts of interest, and to ensure that shareholders' concerns on corporate governance matters are taken into consideration.

In accordance with the Board of Directors' Internal Rules, a senior independent director is appointed when the Chairman of the Board of Directors also serves as Chief Executive Officer. The senior independent director is selected from among the independent members of the Board, on the proposal of the Nominating, Compensation and Corporate Governance Committee, and is appointed for his or her term as a director. He or she may be reappointed.

The senior independent director performs the following duties and has the following prerogatives:

1) Operating procedures of the Board of Directors

- he or she may propose the inclusion of additional items on the agenda of Board meetings, if necessary;
- he or she asks the Chairman of the Board of Directors to call a Board meeting with a specific agenda in exceptional circumstances;
- he or she oversees the application of the internal rules for the preparation of Board meetings as well as during the meetings;
- following the annual assessment of the Board of Directors' operating procedures led by the Nominating, Compensation and Corporate Governance Committee, he or she chairs a meeting of non-executive directors, without the presence of executive directors, to discuss the operating procedures of the Company's governance structures. He or she reports the meeting's conclusions to the Chairman and Chief Executive Officer;
- he or she holds discussions with the Chairman of the Nominating, Compensation and Corporate Governance Committee on all matters connected with the Board of Directors' operating procedures;
- he or she may, on request, participate in committee meetings without the right to vote;
- in the event that a governance issue arises, he or she is the directors' main point of contact and holds discussions with the Chairman and Chief Executive Officer; and
- he or she reports on his or her activities to the Board of Directors at least once a year and at any time if he or she considers it necessary.

2) Conflicts of interest

He or she advises his or her fellow directors on the related risks. He or she reviews with the Chairman of the Board of Directors and the Nominating, Compensation and Corporate Governance Committee any potential conflicts of interest that he or she has identified or been informed of, and informs the Board of Directors of his or her thoughts on the matter as well as those of the Chairman.

3) Shareholder relations

He or she is informed of comments and suggestions received from significant shareholders not represented on the Board of Directors about corporate governance matters. He or she ensures that they receive answers to their questions and, after consulting the Chairman and Chief Executive Officer, makes himself or herself available to communicate with them if necessary. The Board of Directors is informed about these contacts.

Upon recommendation of the Nominating, Compensation and Corporate Governance Committee and by decision of the Board of Directors at its meeting of 24 February 2021, the senior independent director became a member of the Nominating, Compensation and Corporate Governance Committee at the close of the annual general meeting of 20 May 2021.

Activity report of the senior independent director for the year

Hélène Moreau-Leroy reported to the Board on her work, in particular on her meetings during the governance roadshows in early 2024 with the governance and CSR teams of shareholders who had requested the meetings, together representing approximately 30% of Arkema's share capital. These meetings helped foster already well-established dialog with these parties and enabled them to find out more about the workings of Arkema's governance bodies.

Among the topics under discussion were Thierry Le Hénaff's term of office renewal as a director and as Chairman and Chief Executive Officer for another four-year term, which received very favorable feedback, as well as other items related to Arkema's governance that will be submitted to the shareholders at the next annual general meeting, such as the compensation policy applicable to the Chairman and Chief Executive Officer during his new term of office. The Board of Directors was thus able to take into account the views and opinions of the shareholders concerned.

Hélène Moreau-Leroy also met regularly in 2023 with any directors wishing to do so, the Chairman and Chief Executive Officer and the Chairman of the Nominating, Compensation and Governance Committee.

As is the case each year, she led the annual executive session at the end of the Board meeting on 28 February 2024, which she had prepared in depth beforehand in order to identify the major issues requiring discussion. The directors were thus able to discuss matters outside the presence of the executive director or directors who have an employment contract with a Group entity. No specific governance issues requiring change or further discussion by the Board of Directors emerged from this executive session.

3.3.4 Committees of the Board of Directors

The Board of Directors has three permanent, specialized committees: the Audit and Accounts Committee, the Nominating, Compensation and Corporate Governance Committee, and the Innovation and Sustainable Growth Committee. The committees play a role in reviewing and preparing certain Board decisions and submit their opinions, proposals and recommendations to the Board. Each committee's role, organization and operating procedures are set out in their respective internal rules, as defined and approved by the Board of Directors. The internal rules of each committee state that:

- the term of office of committee members corresponds to their term of office as directors, although the Board of Directors may modify the composition of the committees at any time;
- at least two members must be present for a meeting of the committees to be valid;
- no committee member may be represented by another person; and
- each committee reports on its work to the Board of Directors and presents an annual assessment of its operating procedures drawn up on the basis of the requirements of its internal rules, as well as any suggestions for improving its operating procedures.

With the exception of the directors who are paid a salary for the duties they perform within the Company or one of its subsidiaries, the committee members may only receive compensation from the Company in respect of their term of office as directors and members of a committee.

3.3.4.1 The Audit and Accounts Committee

Composition and operating procedures

At 31 December 2023, the Audit and Accounts Committee was made up of five directors: Marie-Ange Debon (Chairman), Isabelle Boccon-Gibod (permanent representative of Fonds Stratégique de Participations – FSP), Ilse Henne, Ian Hudson and Séverin Cabannes.

All the members of this committee were qualified as independent by the Board of Directors except for Isabelle Boccon-Gibod (permanent representative of FSP), representing an independence rate of 80%.

In accordance with the AFEP-MEDEF Code, none of the members of the Audit and Accounts Committee holds an executive position within the Company. All of the members of the Audit and Accounts Committee have financial or accounting expertise and have also benefited from a presentation focusing on the Group's accounting, financial and operational specifics. For further details, see the biographies of the committee members in section 3.2.1.3 of this chapter.

The Audit and Accounts Committee generally meets six times a year, in particular to review the consolidated financial statements. Two of these meetings are focused mainly on internal control, and at least one meeting on non-financial disclosures, with a review of the CSR reporting information included in the management report (statement of non-financial performance, duty of care plan and taxonomy-related reporting). The committee meets at the request of its Chairman, two of its members, or the Chairman of the Board of Directors. The annual schedule of Audit and Accounts Committee meetings is set by its Chairman during the prior year.

The Chief Financial Officer and the head of the Accounting and Consolidation department attend all meetings. The statutory auditors are invited to every meeting and subsequently give their conclusions in the absence of the Company's representatives.

The committee also meets privately with the Internal Audit and Internal Control Vice-President after the meetings that he or she attends.

The Chairman and Chief Executive Officer does not take part in the meetings of the Audit and Accounts Committee.

Unless there is a reasoned decision to the contrary by the Board of Directors, no Audit and Accounts Committee member may be a member of the Audit and Accounts Committees of more than two other listed companies in France or abroad. The Board also ensures that it does not appoint to this committee a director from a company that has appointed one of the Company's directors to its own Audit and Accounts Committee.

Duties and activity of the Audit and Accounts Committee

In order to enable the Company's Board of Directors to ensure the quality of internal control and the reliability of information provided to shareholders and to the financial markets, the Audit and Accounts Committee exercises the prerogatives of a specialized committee as defined under article L. 821-67 of the French Commercial Code. Due to the order transposing the Corporate Sustainability Reporting Directive (CSRD) coming into force, the internal rules of the Audit and Accounts Committee were amended by the Board of Directors on 28 February 2024 to include the committee's duties in terms of sustainability, in particular oversight of the statutory audit and the process of preparing sustainability disclosures in accordance with the provisions of the aforementioned article.

The Audit and Accounts Committee met six times in 2023, with an attendance rate of 97%.

As part of the duties set out in its internal rules, the Audit and Accounts Committee was in charge of the following in 2023 in particular:

Duties	Activity of the Audit and Accounts Committee
Monitoring the financial and non-financial information preparation process	**Recurring topics** • review of the annual consolidated financial statements, the half-yearly and quarterly financial information and the annual Company financial statements and forecasts prior to their consideration by the Board of Directors • assessment of the suitability and consistency of accounting principles and policies • review of the options and assumptions used in the preparation of the financial statements • review of provisions • review of draft results press releases, particularly the accounting content • review of the Company's management forecast documents • review of the impact of major transactions planned by the Group • review of liabilities related to pensions and similar benefits, off-balance sheet commitments (particularly the most significant new contracts) and derivative instruments • preparation and submission of reports as set out in the Internal Rules of the Board of Directors, including the draft management report and draft Universal Registration Document • review of the non-financial information statement and the non-financial indicators contained therein, as part of certification by the independent third party • monitoring of key non-financial performance indicators, in particular GHG emissions and decarbonization projects • review of the Group's cash and debt positions • review of the Group's tax situation and tax strategy
	Specific topics in 2023 • review of the 2022 report of the agreements assessment committee • review of the financial impacts of the Ashland performance adhesives and Permoseal acquisitions • monitoring of the main claims and disputes • monitoring of inflation in raw materials and energy prices and its impacts • review and analysis of non-financial reporting priorities for the coming years, in particular from 2024 onwards in view of the CSRD directive coming into force • review of the Group's carbon reduction trajectory and the energy efficiency projects in progress • review and analysis of Arkema's situation with regard to the EU Taxonomy Regulation and its requirements for 2023 • integration of the AMF's comments related to the 2022 Universal Registration Document • monitoring of internal control procedures and the integration of new subsidiaries into the system
Overseeing the efficiency of internal control and risk management systems	**Recurring topics** • review of financial and non-financial risks, particularly social and environmental risks (and those identified as part of the Group's duty of care plan), and review of the risk map • review of internal control procedures • review of internal auditor work programs and their conclusions • assessment of the organization of delegations of authority • regular updates on developments of significant claims and disputes • preparation and submission of the section of the management report on internal control and risk management • review of the Group's compliance situation (particularly in terms of anti-trust, embargoes, anti-corruption and duty of care)
	Specific topics in 2023 • monitoring of internal control procedures and the integration of Ashland performance adhesives and Permoseal adhesives into the system • analysis and assessment of the Group's main information systems • monitoring of cybersecurity and IT systems access security projects
Monitoring relations with statutory auditors and their independence	**Recurring topics** • oversight of the audit of the annual consolidated and Company financial statements by the statutory auditors • review of external auditor work programs and their conclusions • submission of recommendations on the appointment of the statutory auditors and their fees, in compliance with independence requirements • review of compliance with all applicable laws and regulations when statutory auditors are commissioned to perform work other than auditing the financial statements • review of statutory auditors' fees and declaration of independence and approval of permitted non-audit services

In 2023, the Audit and Accounts Committee also followed the process for selecting the audit firms that will act as the Group's statutory auditors when the terms of office of the Group's current statutory auditors expire in 2024 and 2026. In accordance with Regulation (EU) no. 537/2014 on specific requirements regarding statutory audit of public-interest entities, the Group has put in place a selection process based on an invitation to tender, overseen by the Audit and Accounts Committee. Assisted by the relevant Group departments, the Audit and Accounts Committee therefore drew up a tender process that complies with the applicable legal requirements as well as with the recommendations and opinions notably issued by the *Haut Conseil du Commissariat aux Comptes* ("H3C" – France's High Council of Statutory Auditors, now called the *Haute autorité de l'audit*, "H2A") and the Committee of European Auditing Oversight Bodies. Following this selection process, the committee recommended among other things that the Board of Directors put forward Ernst & Young Audit for reappointment at the annual general meeting called to approve the financial statements for the year ended 31 December 2023.

Since the beginning of 2024, the Audit and Accounts Committee has met once with an attendance rate of 100%. In addition to recurring topics such as the review of the annual consolidated and Company financial statements for 2023, the meeting focused, among other things, on the review of the allocation of profit and distribution of dividends for 2023 as well as the statutory auditors' additional report to the Audit and Accounts Committee for the year ended 31 December 2023, the non-financial information statement, the taxonomy, and the progress report on the deployment of the *plan de vigilance* (duty of care plan). As part of its new sustainability duties, the Audit and Accounts Committee also recommended the appointment of joint auditors responsible for certifying sustainability disclosures, which will be submitted to the annual general meeting of 15 May 2024 as per article L. 821-40 of the French Commercial Code (for more details, see the 11th and 12th resolutions in section 7.2.2 of this document).

In accordance with the AFEP-MEDEF Code and its internal rules, the assessment of the Audit and Accounts Committee's work in 2023 was carried out using a self-assessment questionnaire. The 2023 assessment showed that the committee members were very satisfied with meeting preparation and proceedings. For further details concerning the assessment of the operating procedures of the Board of Directors and its committees in 2023, see section 3.3.2.4 of this chapter.

3.3.4.2 The Nominating, Compensation and Corporate Governance Committee

Composition and operating procedures

As at 31 December 2023, the Nominating, Compensation and Corporate Governance Committee is made up of four directors: Thierry Pilenko (Chairman), Hélène Moreau-Leroy, Philippe Sauquet and Nathalie Muracciole, a director representing employees who only participates in the committee for compensation matters.

In accordance with the AFEP-MEDEF Code, none of its members hold an executive position in the Company, and Nathalie Muracciole, a director representing employees, is not included when calculating the percentage of independent directors on the committee. All the other members of this committee were qualified as independent by the Board of Directors, representing an independence rate of 100%.

The Nominating, Compensation and Corporate Governance Committee generally meets three times a year. It meets at the request of its Chairman, two of its members, or the Chairman of the Board of Directors. The annual schedule of these meetings is set by the committee Chairman during the prior year.

The Chairman and Chief Executive Officer attends the committee's meetings and is closely involved in its discussions on appointments, governance issues and the compensation policy for Executive Committee members. He also actively participates in the preparation of succession plans, although this subject may be discussed in his absence at the executive session of the Board of Directors. He does not take part in the committee's discussions relating to him.

Duties and activity of the Nominating, Compensation and Corporate Governance Committee

The Nominating, Compensation and Corporate Governance Committee met four times in 2023 (with three of these meetings containing an agenda item related to compensation), and the overall attendance rate was 94%.

As part of its duties, the Nominating, Compensation and Corporate Governance Committee was in charge of the following in 2023 in particular:

Duties	Activity of the Nominating, Compensation and Corporate Governance Committee
Appointments	**Recurring topics** • submission to the Board of Directors of recommendations on the composition of the Board of Directors and its committees after an in-depth examination of all the factors to be taken into account to ensure a balanced composition of the Board • annual review and submission to the Board of Directors of the list of directors who can be considered independent • annual review of the appointment process and succession plan for Executive Committee members, including monitoring of talent management and the progress of the Group's managers within the management bodies and submission of recommendations in this regard. Preparation of the succession plan for the Chairman and Chief Executive Officer, notably in crisis situations • annual review of the Group's policy regarding diversity (of gender, nationality and skills) within the Board of Directors, management bodies and senior management, and validation of targets in this respect
	Specific topics in 2023 • review and support of the proposed appointments of Florence Lambert and Séverin Cabannes as directors, and their proposed appointments as members of the Innovation and Sustainable Growth Committee and the Audit and Accounts Committee respectively • review and support of the proposed reappointments of Hélène Moreau-Leroy and Ian Hudson as directors, and the proposed continuation of Hélène Moreau-Leroy's role as senior independent director and member of the Nominating, Compensation and Corporate Governance Committee, and the proposed appointment of Ian Hudson as Chairman of the Innovation and Sustainable Growth Committee • review and support of the proposed reappointment of Thierry Le Hénaff as a director, and the continuation of his role as Chairman and Chief Executive Officer during the new term of office
Compensation	**Recurring topics** • review of the compensation of the Company's Executive Committee members, including any executive directors, as well as their pension schemes, death/disability insurance and benefits in kind • recommendations and proposals to the Board of Directors on the Group's policies on compensation, pension schemes and death/disability insurance, benefits in kind, and allocations of performance shares • definition of the criteria, characteristics and beneficiaries of performance share plans, and acknowledgment of the fulfillment of criteria • review of the principles for allocating compensation among members of the Board of Directors and the rules governing their expense reimbursements • preparation and submission to the Board of Directors of the reports provided for in the internal rules and, more generally, any documents required under the applicable regulations
Corporate governance	**Recurring topics** • review and analysis of the main changes to corporate governance principles and review of best practices • preparation of the annual assessment of the work of the Board of Directors and its committees • review of any conflicts of interest • review of any corporate governance or ethical issues referred by the Board of Directors or its Chairman for review • review of the Business Conduct and Ethics Code and proposal of modifications when necessary • review of the draft Board of Directors' report on corporate governance • review of feedback from governance roadshows • analysis of the annual reports of the AMF and the *Haut Comité de Gouvernement d'Entreprise* and of any new laws and regulations relating to corporate governance • updating of the Board's Internal Rules to reflect changes in the AFEP-MEDEF Code
	Specific topics in 2023 • proposal to update the Internal Rules of the Board of Directors into compliance with the updated AFEP-MEDEF Code, published in December 2022

Since the beginning of 2024, the Nominating, Compensation and Corporate Governance Committee has met twice, with an attendance rate of 100%.

In addition to recurring topics such as the compensation of the Chairman and Chief Executive Officer, non-executive directors and the Executive Committee members, meetings also focused on:

- a review of and proposals for updating the internal rules of the Audit and Accounts Committee in order to take into account the entry into force of CSR regulations (notably the CSRD directive);
- the executive director's compensation policy for the period from 2024 to 2028 within the scope of his new term of office;
- the directors' compensation policy for the period from 2024 to 2028; and
- the succession plan for the Chairman and Chief Executive Officer.

In accordance with the AFEP-MEDEF Code and its internal rules, the Nominating, Compensation and Corporate Governance Committee conducts an annual self-assessment of its work or commissions an external consultant to perform this assessment, every three years as a rule. As consulting firm Spencer Stuart had assessed 2021 operating procedures in early 2022, the committee carried out another self-assessment for 2023 using a questionnaire. The self-assessment showed that the committee members were very satisfied with meeting preparation and proceedings. For further details concerning the assessment of the operating procedures of the Board of Directors and its committees in 2023, see section 3.3.2.4 of this chapter.

3.3.4.3 The Innovation and Sustainable Growth Committee

Composition and operating procedures

Since 11 May 2023, Florence Lambert joined the Innovation and Sustainable Growth Committee, and Ian Hudson took over as Chairman, replacing Victoire de Margerie whose directorship expired on that date.

At 31 December 2023, the Innovation and Sustainable Growth Committee, created in 2021, was therefore made up of five directors: Ian Hudson (Chairman), Isabelle Boccon-Gibod (permanent representative of Fonds Stratégique de Participations), Florence Lambert, Sébastien Moynot (permanent representative of Bpifrance Investissement) and Susan Rimmer, director representing employees.

In accordance with the AFEP-MEDEF Code, Susan Rimmer, director representing employees, is not included when calculating the percentage of independent directors on the committee, which therefore represented 50%.

When deciding on the composition of this committee, the Board of Directors took care to select its members from directors with considerable experience in innovation and sustainable development. Key information on members' experience in these areas can be found in section 3.2.1.2 of this chapter. Other information on members can be found in section 3.2.1.3 of this chapter.

The Innovation and Sustainable Growth Committee meets at least twice a year. It meets at the request of its Chairman, two of its members, or the Chairman of the Board of Directors. The annual schedule of these meetings is set by the committee Chairman during the prior year with one meeting in advance of the Board of Directors' meeting on innovation and the sustainable growth strategy, and another in the fourth quarter with a greater focus on environmental issues.

Its main points of contact in the Group are the head of R&D and the Sustainable Development Vice-President, as well as any manager within the Company who may have useful information or opinions. The Chairman and Chief Executive Officer may take part in the committee meetings as an invited member.

The Secretary of the committee is the Strategy Executive Vice-President.

Duties and activities of the Innovation and Sustainable Growth Committee

The Innovation and Sustainable Growth Committee met three times in 2023, with an attendance rate of 100%.

As part of its duties, the Innovation and Sustainable Growth Committee was in charge of the following in 2023 in particular:

Duties	Activity of the Innovation and Sustainable Growth Committee
Innovation	**Recurring topics** • review and assessment of the strategic policies and options implemented by the Group in terms of R&D, and product-, process- and service-related innovation and, as the case may be, acquisitions of additional technologies • review of the competition's positioning with respect to these matters and assessment of the Group's ability to meet the needs of customers and application markets • review of changes in the law, regulatory requirements and societal expectations liable to have an impact on the Group's business portfolio
	Specific topics in 2023 • presentation of a partner customer's sustainable development roadmap

Duties	Activity of the Innovation and Sustainable Growth Committee
Sustainable growth	**Recurring topics** • contribution to the full review of the Group's ESG and non-financial challenges, together with the Audit and Accounts Committee and the Nominating, Compensation and Corporate Governance Committee. As part of the review of the non-financial information statement, the Audit and Accounts Committee monitors the non financial reporting process and the Innovation and Sustainable Growth Committee examines the selection and consistency of the non-financial indicators • analysis of how proposed programs contribute to the Group's objectives in terms of environmental footprint reduction and climate action, participate in more efficient and responsible use of natural resources, and ease the circular economy • review of the Company's commitments and, more generally, the risks and opportunities connected with climate change
	Specific topics in 2023 • review and analysis of Arkema's sustainable development communications • review and analysis of the Oléris product range • review of the Group's CSR objectives and the contributions of its business lines • review and analysis of Sartomer's CSR roadmap • review and analysis of the CSR roadmap of the 3D printing solutions business • review and analysis of requirements resulting from the CSRD and arrangements in place to apply these measures

Once a year, the committee also performs an in-depth review of all the new quantitative and qualitative regulations that will come into force in the coming years, in order to prepare the non-financial reporting requirements that will result from them, and which are reviewed and analyzed by the Audit and Accounts Committee, as well as the future needs in terms of innovation. The committee also reviews the Group's CSR objectives and how the various businesses contribute to these.

In accordance with the AFEP-MEDEF Code and its internal rules, the Innovation and Sustainable Growth Committee conducts an annual self-assessment of its work or commissions an external consultant to perform this assessment, every three years as a rule. As consulting firm Spencer Stuart had assessed 2021 operating procedures in early 2022, the committee carried out a self-assessment for 2023 using a questionnaire. The self-assessment showed that the committee members were very satisfied with meeting preparation and proceedings. For further details concerning the assessment of the operating procedures of the Board of Directors and its committees in 2023, see section 3.3.2.4 of this chapter.

3.4 Compensation and benefits awarded to executives and directors

The following information is disclosed in application of articles L. 22-10-8 and L. 22-10-9 of the French Commercial Code, the recommendations of the AFEP-MEDEF Code, the recommendations of the *Haut Comité de Gouvernement d'Entreprise* in its activity report of 27 November 2023, and AMF recommendation no. 2012-02 on corporate governance and executive compensation in listed companies referring to the AFEP-MEDEF Code – consolidated presentation of the recommendations contained in the AMF annual reports, as published on 14 December 2023.

The compensation policy described in this section – for non-executive directors (*i.e.*, excluding the Chairman and Chief Executive Officer) in section 3.4.1, and for the executive director in section 3.4.2 – will be submitted to the shareholders' vote at the annual general meeting of 15 May 2024, under the 6th and 7th resolutions, respectively, in accordance with articles L. 225-98 and L. 22-10-32 of the French Commercial Code. For further details on the corresponding resolutions, see section 7.2.2 of this document. The policy will be published along with the results of the vote of the annual general meeting of 15 May 2024 on the Company's website at www.arkema.com.

Moreover, in accordance with the provisions of article L. 22-10-34, I and II of the French Commercial Code, the information disclosed in sections 3.4.1.2 and 3.4.2.2 together on one hand, and in section 3.4.2.2 of this chapter, on the other hand, will be submitted to the shareholders' vote at the annual general meeting of 15 May 2024, under the 8th and 9th resolutions respectively. For further details on the corresponding resolutions, see section 7.2.2 of this document.

The principles and rules for determining the compensation and benefits awarded to directors and the executive officers, whether they are directors or not, of the Company are set out by the Board of Directors based on recommendations of the Nominating, Compensation and Corporate Governance Committee.

As such, the compensation policy takes account of the social interests of the Company and its subsidiaries, the expectations of the shareholders, and the compensation and employment conditions of the employees of the Company and its subsidiaries. It contributes thus to the business strategy and sustainability of the Company and the Group.

3.4.1 Compensation policy for non-executive directors

3.4.1.1 Compensation principles

Compensation policy applicable in 2023

The compensation of non-executive directors is reviewed every four years, at the end of the Company's Chairman and Chief Executive Officer's term of office as a director. It was last reviewed and adopted at the annual general meeting of 19 May 2020. The annual general meeting of 19 May 2022 also set the maximum annual amount of compensation that the Board of Directors may allocate between its members and those of the specialized committees at €900,000.

In line with the policy voted at the annual general meeting on 19 May 2020, the amount and the conditions of the allocation of this compensation applicable since 1 January 2021 for a four-year period and consequently unchanged for 2023, were as follows:

- an annual fixed amount of €25,000 per director paid on a pro rata basis in the event of a change during the year; and
- a predominant variable amount based on directors' attendance, as follows:
  - €3,500 per director present at a Board of Directors' meeting, except for exceptional meetings held by conference call and of a shorter duration for which the variable amount is set at €1,750,
  - €2,500 per director present at a specialized committee meeting (excluding the chairman), except for exceptional meetings held by conference call and of a shorter duration for which the variable amount is set at €1,250, and
  - €5,000 per committee chairman present at a specialized committee meeting, except for exceptional meetings held by conference call and of a shorter duration for which the variable amount is set at €2,500.

The senior independent director received additional annual fixed compensation of €10,000.

If this exceeds the maximum amount awarded for the year, the Board of Directors will scale back the compensation to comply with the overall limit.

In accordance with the recommendations of the AFEP-MEDEF Code, these allocation rules take account of the directors' membership of the Board of Directors and/or its committees, and their effective participation in meetings, by making the variable portion of their compensation predominant. The amounts allocated are adapted to the level of liabilities entrusted to directors and the time they must devote to their duties. The compensation and employment conditions of the Company's employees are taken into account when analyzing the consistency of the compensation structure as part of the process of determining and revising the compensation policy. Compensation is also designed to comply with Group policy on preventing potential conflicts of interest between the directors and the Company.

Compensation policy as of 2024

At its meeting of 28 February 2024, based on a proposal of the Nominating, Compensation and Corporate Governance Committee, and in compliance with Group policy on preventing conflicts of interest between the directors and the Company, the Board of Directors decided to keep the maximum aggregate annual amount of directors' compensation at €900,000. Then, on the basis of comparative analysis of compensation paid to directors of SBF120 companies by an external firm specializing in compensation, the Board decided to maintain the above allocation rules, with the exception of the following changes from 2024 onwards:

- an increase in variable compensation for attending specialized committee meetings from €2,500 to €2,750 per meeting, and
- an increase in variable compensation for the Chairman attending specialized committee meetings from €5,000 to €5,500 per meeting.

When exceptional committee meetings are held by conference call and are of a shorter duration, the variable portion shall therefore be set at €1,375 per member in attendance and €2,750 for the Chairman.

In view of the enhanced role of the senior independent director, whose duties and contacts with investors' corporate governance teams have increased in recent years, the Board also decided to increase the additional annual fixed compensation she receives from €10,000 to €20,000.

These compensation arrangements for directors (apart from the Chairman and Chief Executive Officer) take into account the social interest of the Company, and contribute to its commercial strategy and sustainability and that of the Group, by allocating a predominant variable portion that is contingent on directors' attendance at meetings of the Board of Directors or its committees, to ensure that they are fully committed to their duties.

The Chairman and Chief Executive Officer and directors exercising executive functions within a Group company do not receive any compensation for their duties as directors or committee members.

3.4.1.2 Implementation of compensation policy for 2023

In accordance with the compensation policy applicable in 2023 and set out in section 3.4.1.1 above, compensation awarded to non-executive directors for 2023 amounted to €634,000 (compared with €650,250 for 2022), allocated as indicated in the following table based on the attendance rates provided in section 3.3.2.3 of this chapter.

COMPENSATION RECEIVED BY NON-EXECUTIVE DIRECTORS (TABLE 3 OF AMF RECOMMENDATIONS)

	2023		2022	
(In euros)	**Amounts awarded**	**Amounts paid** [1]	Amounts awarded	Amounts paid [1]
Jean-Marc Bertrand, director representing shareholder employees [2] [3]	-	-	None	None
Isabelle Boccon-Gibod, permanent representative of FSP, director	70,250	70,250	72,000	72,000
Séverin Cabannes [4], director	37,500	22,750	-	-
Marie-Ange Debon, director	70,750	70,750	79,500	74,500
Ilse Henne, director	56,750	62,750	66,250	66,250
Ian Hudson, director	75,250	72,750	69,500	69,500
Alexandre de Juniac, director [5]	-	-	-	12,250
Florence Lambert [4], director	36,000	23,750	-	-
Victoire de Margerie, director [6]	24,500	39,250	64,500	64,500
Laurent Mignon, director [6]	19,500	25,750	40,750	44,250
Hélène Moreau-Leroy, senior independent director	66,500	66,500	70,500	70,500
Sébastien Moynot, permanent representative of Bpifrance Investissement, director [10]	55,250	60,500	60,500	38,750 [11]
Nathalie Muracciole, director representing employees [3]	None	None	None	None
Nicolas Patalano, director representing shareholder employees [3] [7]	None	None	None	None
Thierry Pilenko, director [10]	65,250	68,000	68,000	41,250 [11]
Susan Rimmer, director representing employees [3]	None	None	None	None
Philippe Sauquet, director	56,500	56,500	58,750	56,250
TOTAL	**634,000**	**639,500** [8]	**650,250**	**610,000** [9] [11]

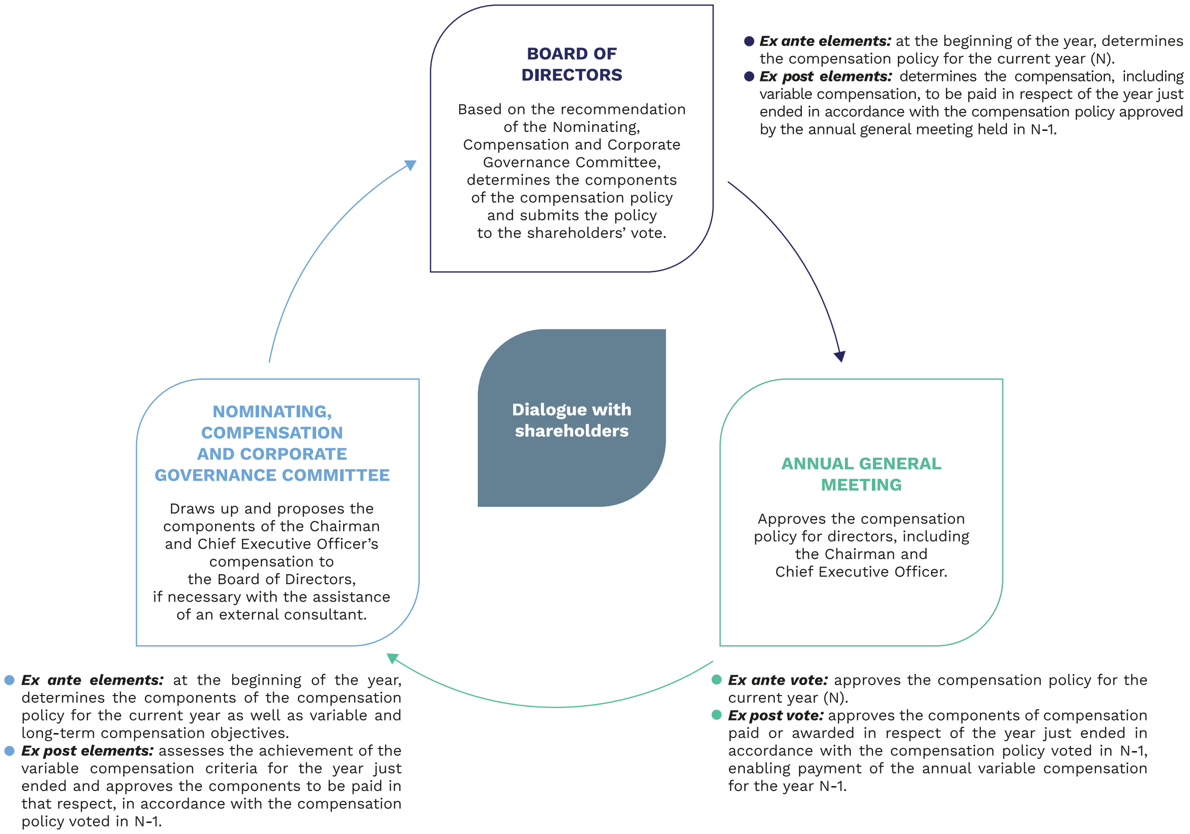
(1) Amounts paid in 2022 and 2023 based on the payment arrangements chosen by each of the directors.
(2) Jean-Marc Bertrand's term of office ended on 19 May 2022.
(3) Jean-Marc Bertrand, Nicolas Patalano, Nathalie Muracciole and Susan Rimmer do not receive any compensation in their capacity as directors.
(4) Florence Lambert and Séverin Cabannes have been directors of the Company since 11 May 2023.
(5) Alexandre de Juniac's term of office ended on 9 November 2021.
(6) The terms of office of Victoire de Margerie and Laurent Mignon expired on 11 May 2023.
(7) Nicolas Patalano has been a director of the Company since 19 May 2022.
(8) This amount includes compensation paid to directors whose terms of office expired in 2022.
(9) This amount includes compensation paid to directors whose terms of office expired in 2021.
(10) Bpifrance Investissement, represented by Sébastien Moynot, and Thierry Pilenko have been directors of the Company since 20 May 2021.
(11) Certain amounts of directors' compensation paid in 2022 have been corrected following a material error concerning the procedures for paying this compensation.

Nicolas Patalano, director representing employee shareholders, and Nathalie Muracciole and Susan Rimmer, directors representing employees, are paid a salary by Arkema France in their capacity as employees. Ian Hudson, director of Arkema International, also receives an expense allowance in respect of this term of office. The other members of the Board of Directors (non-executive directors) did not receive any other compensation or benefits from the Company or any other Group entity in 2023.

3.4.2 Compensation policy for executive directors

At the date of this document, the Chairman and Chief Executive Officer is the Company's sole executive director.

The following diagram illustrates the discussion and decision processes used in order to determine and approve the compensation policy for the executive director and its implementation.



3.4.2.1 Compensation principles

The policy and principles governing the compensation of the Chairman and Chief Executive Officer are globally defined by the Board of Directors at each renewal of his term of office, *i.e.*, every four years, for the duration of his term of office, on the recommendation of the Nominating, Compensation and Corporate Governance Committee, if necessary with the assistance of external consultants specialized in governance and/or compensation, whose objectivity has been verified. The Board of Directors conducts an overall assessment of the Chairman and Chief Executive Officer's compensation package, as well as a detailed review of its components, to ensure that the compensation package remains simple, easy to understand, balanced and consistent. In particular, it ensures that the compensation policy is attractive and aligned with the Group's medium- and long-term strategic priorities and that it reflects both the Group's financial performance and the Chairman and Chief Executive Officer's individual performance and responsibilities. It also takes account of the Chairman and Chief Executive Officer's role as founder of the Group.

The Chairman and Chief Executive Officer does not take part in the discussions of the Nominating, Compensation and Corporate Governance Committee or those of the Board of Directors concerning his compensation.

This compensation policy takes account of the social interests of the Company and its subsidiaries, and contributes to the set up of the strategy and the strengthening of the Group, in its various dimensions, and in particular commercial, industrial, R&D, financial and social aspects. It consequently provides for an annual variable compensation which enables to incentivize, reward and remunerate the achievement of annual financial targets, the contribution to the Group's new developments, the implementation of the strategy in particular through major investment projects and the operational management of the business which takes into account the Group's CSR challenges as well.

The compensation policy for the Chairman and Chief Executive Officer aims to provide incentives and to secure loyalty, in accordance with market practice for equivalent positions in similar French and international chemical companies and in French companies with similar market capitalizations, and in order for the compensation structure to be competitive and consistent with those of such companies. The Board of Directors also takes account of the compensation and employment conditions of the employees of the Group, and in particular the equity ratios and the Group's earnings over the same period, as disclosed in section 3.4.2.2 of this chapter. It also ensures that this compensation policy is consistent with the policy applicable to all executives of the Group.

The compensation policy for the Chairman and Chief Executive Officer, which was amended when Thierry Le Hénaff was reappointed as director in 2020 in accordance with the principles set out above, was approved by the annual general meeting of 19 May 2020 and confirmed without change every year since, and for the last time by the annual general meeting of 11 May 2023 under the 10th resolution (voted with 93.5%), in accordance with applicable legal requirements.

SUMMARY OF THE COMPENSATION PRINCIPLES FOR THE EXECUTIVE DIRECTOR

Components of compensation	Objective	Components excluded from compensation and limits
Annual fixed compensation	Recognize and reward the responsibilities inherent in the position of Chairman and Chief Executive Officer and in the performance of his duties, taking into account his experience and length of service within the Group, as well as the Group's scope and its operating environment. It is determined based on the Group's profile, trends in employee compensation and benchmarking against the compensation paid to corporate executive officers of comparable industrial companies and/or from the chemical sector.	
Annual variable compensation	Incentivize, recognize and reward the achievement of annual financial and non-financial objectives in accordance with the Group's strategy and results.	Ceilings (1): • Target bonus: 120% of annual fixed compensation. • Maximum bonus: 180% of annual fixed compensation. No deferral of the allocation of variable compensation in the form of shares. No claw-back clause.
Long-term compensation: performance shares	Incentivize and retain the executive director by aligning his interests to those of the Group and its shareholders.	Ceiling: 30,000 shares per year (up to 20% more in the event of outperformance).
Pension benefits	Enable the executive director to build up a supplementary pension, replacing the supplementary defined benefit pension plan that has been closed since 2016.	20% of total annual compensation (fixed and variable).
Severance payment	In the event of forced departure, grant a severance payment subject to performance conditions assessed over the three years preceding departure.	Capped at twice the annual fixed and variable compensation (2). Gradual reduction of the severance payment between 60 and 65 years old. No severance payment due after 65 years old or in the event of retirement at the same time as departure.
Non-compete benefit	In the event of departure, prevent the executive director from engaging in an activity that competes with Arkema's businesses, either on his own behalf or on behalf of another company, for a period of one year.	Monthly benefit for a maximum period of one year, corresponding to 100% of monthly compensation calculated by reference to fixed compensation in the year of departure and the average of the last two years of variable compensation paid prior to departure. If simultaneously applied with the severance payment, the cumulative amount may not exceed two years of fixed and variable compensation.
Other benefits • Company car • Executive officer unemployment insurance • Group personal risk and health insurance plan	Provide social protection.	

(1) Ceilings approved at the annual general meeting of 19 May 2020 for the executive director's term of office. Due to the Covid-19 pandemic, the effective date was deferred until 1 January 2021 by decision of the Board of Directors and the Chairman and Chief Executive Officer.
(2) Capped at twice the annual fixed and variable compensation if combined with the non-compete benefit.

In view of the expiration of the term of office of the Chairman and Chief Executive Officer at the close of the annual general meeting of 15 May 2024, the Board of Directors, at its meeting held on 28 February 2024 – having announced on 8 November 2023 its decision to propose the renewal of Thierry Le Hénaff as director for a term of four years and stated its intention to reappoint him as Chairman and Chief Executive Officer, subject to his reappointment as director – set the following new conditions for his compensation. In accordance with the provisions of articles L. 22-10-9 and L. 22-10-34 I of the French Commercial Code, these conditions will be applicable subject to shareholders approving the 7^{th} resolution at the annual general meeting of 15 May 2024. For further details on the corresponding resolution, see section 7.2.2 of this document.

On the recommendation of the Nominating, Compensation and Governance Committee, after analysis of comparative studies by firms specializing respectively in executive compensation for one, and governance for the other, and after taking account of the comments made by major shareholders at the annual general meeting of 11 May 2023, the perception survey conducted in the first half of 2023, as well as the governance roadshows held in preparation for the annual general meeting of 15 May 2024 with investors representing about 30% of the Company's share capital, and those of proxy advisors, the Board of Directors unanimously decided to maintain a compensation structure similar to that adopted during the previous term of office and unchanged since 19 May 2020. Accordingly, during the new term of office, compensation paid to the Chairman and Chief Executive Officer will continue to comprise the following three main components: an annual fixed compensation, an annual variable compensation linked to specific targets reflecting the Group's performance over the year, and a long-term compensation in the form of an annual allocation of shares under the Group's annual performance share plan, entirely subject to performance conditions assessed over a three-year period. These three components will continue to account for around 20%, 35% and 45% respectively of the total annual remuneration package. They are divided in a balanced manner between short- and long-term components, in line with the compensation of the Group’s other executives and managerial staff. Most of them are also subject to achieving precise, quantified and rigorous targets reflecting the Group's financial and non-financial performance, consistent and aligned with the targets set for 2028 at the Capital Markets Day on 27 September 2023.

The structure of the compensation of the Chairman and Chief Executive Officer therefore supports the Company’s development and long-term value creation, as well as ensuring that the interests of the executive officer are aligned with those of the shareholders and all stakeholders.

The component allowing for the build up of a supplementary pension, paid since the termination of the supplementary defined benefit pension scheme from which the Chairman and Chief Executive Officer benefited until 2016, the severance payment that may be granted in the event of forced departure and under the non-compete clause, as well as all other benefits (unemployment insurance, group health and welfare schemes and company car) included in the compensation policy applicable to the Chairman and Chief Executive Officer under his current term of office, will be maintained, as will the discretionary powers of the Board of Directors in the event of a new corporate officer being appointed or in exceptional circumstances, under the same terms as those currently in force. This compensation policy does not contain any claw-back clause.

After taking account of the performance of Arkema and its Chairman and Chief Executive Officer during the current term of office, in particular:

- the Group's value-creating transformation since 2020, in line with the strategy announced at the time, in particular
  - refocusing innovation and new business developments on sustainability megatrends,
  - acquisition or strengthening of a portfolio of cutting-edge technologies, providing a unique positioning in the market,
  - progress made in attractive investment projects in higher value-added product lines and the strengthening of the geographical balance in favor of the United States and Asia, and
  - major M&A transactions with the sale of PMMA and the acquisitions of Ashland performance adhesives and PIAM;
- improvement in the Group's financial performance, particularly over the 2018-2023 period (compared to the previous 2012-2017 period), with sales up 33%, EBITDA up 50% and EBITDA margin also up 12%;
- strengthened CSR performance, with global improvement of Climate & Environment (Energy, GHG Emissions, Air, Water) and Safety (accident and process incident rates) indicators; and
- strengthened view of the Group by customers, as an employer brand, and by rating agencies and investors;

on the recommendation of the Nominating, Compensation and Governance Committee, the Board of Directors also unanimously decided on the following changes:

- an increase in the annual gross fixed compensation paid to the Chairman and Chief Executive Officer, unchanged since 2020 with an effective date postponed until 1 January 2021 in the context of the Covid pandemic, from €1,000,000 to €1,150,000, corresponding to an average increase of 3.56% per year over four years;
- an increase in the proportion of quantifiable elements taken into account in the qualitative assessment of financial and operational management performance, with quantifiable elements now accounting for the majority of this criterion (compared with one third previously);
- an increase in the number of performance shares allocated annually to the Chairman and Chief Executive Officer as part of the Group's annual performance share plan, in conjunction with the aforementioned raise in the annual fixed compensation. This adjustment aims to maintain the balance of the overall compensation structure emphasizing both variable and long-term components. The new allocation will be 33,000 shares per year, up from the previous 30,000 shares, which remained unchanged since 2016. This represents an annual increase of 1% over the period; keeping a fixed number of shares each year notably helps mitigate the impact of share price volatility and support sustained value creation over time;

- an increase of the demanding character of the conditions applicable for calculating the severance payment in the event of forced departure, and the alignment of the objectives of these conditions with those defined during the 2023 Capital Markets Day as follows:
  - annual variable compensation: on average, the annual variable compensation paid during the three years preceding departure would have to be at least 80% of the target variable amount (compared to the previous 75%);
  - TRIR: average TRIR (total recordable injury rate) over the three years preceding the departure would have to be less than or equal to 1.1 accident per million hours worked (compared to the previous 1.4), positioning Arkema among the best in the industry; and
  - the operating cash flow conversion rate (defined as free cash flow before capital expenditure (intangible and tangible investments) divided by EBITDA) must be equal to or greater than 70%, in line with the Group's financial discipline. The operating cash flow conversion rate will be determined using the average conversion rate for the three years preceding the departure date.

  In addition, the weighting of each of these conditions will now be increased to 70% for the condition relating to annual variable compensation and 15% for each of the other two conditions.

These changes decided by the Board of Directors and presented above were developed with the help of international firms specializing in executive compensation and governance, ensuring that the compensation policy is aligned with the Group's strategic and operational priorities in the short and long-term, taking into account the economic, financial and non-financial performance of the Group, as well as the personal performance of the Chairman and CEO and his responsibilities, and aiming for it to contribute to the business strategy, as well as to the sustainability of the Company and the Group, thus ensuring respect for the social interest of the Company.

A comparison with the level of fixed and variable compensation of executives of companies included in the following two panels was carried out in this context:

- 15 French industrial companies listed on the CAC 40 and Next 20 indexes: Alstom, Bouygues, Bureau Veritas, Eiffage, Faurecia, Imerys, Legrand, Michelin, Rexel, Saint-Gobain, Solvay/Syensqo, Technip Energies, Thalès, Valeo and Veolia Environnement; this panel was defined taking into account the companies closest to Arkema in terms of market capitalization and turnover; and
- 8 international chemicals companies: AkzoNobel, Clariant, Covestro, Evonik, Lanxess, Solvay/Syensqo, Umicore and Wacker.

On the basis of these peer groups, the new compensation package for the Chairman and Chief Executive Officer has been positioned at a competitive level in the context of his reappointment for a further four years.

The above changes are described in greater detail in each of the components of the Chairman and Chief Executive Officer's compensation as shown below.

It is specified that the policy and principles set out in this section have been defined for the position of Chairman and Chief Executive Officer, as exercised at the date of this document and based on the current business scope of the Group and the conditions for holding this position. Were the Chairman and Chief Executive Officer to be replaced during the year, for any reason whatsoever, the components and general principles of this policy would continue to be applicable. They may, however, be adjusted, in accordance with legal requirements, to reflect the duties and responsibilities of the new executive officer, as well as the circumstances in which he/she took up office.

It should also be noted that the Chairman and Chief Executive Officer is appointed for four years, that he may be dismissed as director at any time by an ordinary general meeting, and that he may also be dismissed as Chairman and Chief Executive Officer at any time by the Board of Directors.

Should the compensation policy referred to in this section not be approved by the annual general meeting of 15 May 2024, the compensation policy approved by the annual general meeting of 11 May 2023 (10th resolution) will continue to apply to the Chairman and Chief Executive Officer. For further details on the corresponding items, see section 7.2.2 of the 2022 Universal Registration Document.

Annual fixed compensation

In accordance with the AFEP-MEDEF Code, the annual fixed compensation is reviewed each time the Chairman and Chief Executive Officer's term of office is renewed, *i.e.*, once every four years. It is set taking into account the Chairman and Chief Executive Officer's profile, experience, duties and responsibilities, as well as any changes in the Group's size and profile compared with during his previous term. In addition, it is benchmarked against the compensation level of chief executive officers of comparable French industrial companies and/or companies from the chemical sector.

This annual fixed compensation was last modified when the Chairman and Chief Executive Officer's term of office as director was renewed by the annual general meeting of 19 May 2020. It has amounted to one million euros (€1,000,000) per year since 1 January 2021, as the effective date of the increase in compensation was deferred in the context of the Covid-19 pandemic.

In connection with the renewal of the Chairman and Chief Executive Officer's term of office for a period of four years, as proposed by the Board of Directors at the annual general meeting of 15 May 2024, the Board of Directors has decided to increase his gross annual fixed compensation to €1,150,000 (one million one hundred and fifty thousand euros) per year, corresponding to an average increase of 3.56% per year over four years. This increase takes account of:

- cumulative annual salary increases (both general and individual increases) between 2020 and 2024 at Arkema France, which represents 79% of the Group's French workforce, corresponding to an increase of 15% during that period;
- achievements of the Group and the changes in its profile and profitability over the current term of office. The key figures in this regard are presented above and in section 3.2.2.1 of this chapter;
- the ambitious strategic plan announced at the Capital Markets Day on 27 September 2023; and
- the comparison with fixed compensation paid to senior executives of companies in the above two peer groups.

This increase, combined with the level of annual variable compensation paid to the Chairman and Chief Executive Officer – which may reach the maximum of 180% of fixed annual compensation – will place the Chairman and Chief Executive Officer's new compensation between the first quartile and the median of the international sector peer group, and between the median and the third quartile of the French peer group, for the duration of his new term of office.

The Board of Directors has also taken into account the evolution and complexity of the role of Chairman and Chief Executive Officer in the light of the company's transformation and the difficult economic, geopolitical and regulatory environment in which it operates, as well as the fact that his compensation is currently positioned at the lower end of the market for the specific sector peer group.

The generally very positive comments received from the main shareholders in the Rivel perception survey carried out in 2023 ahead of the Capital Markets Day, at governance roadshows and after annual general meetings each year, were also taken into account.

Annual variable compensation

Annual variable compensation is determined taking into account the achievement of specific, precise and demanding quantitative and qualitative targets aligned with the Group's strategy and priorities. These targets are set on an annual basis by the Board of Directors on a proposal of the Nominating, Compensation and Corporate Governance Committee. They are consistent with those defined for Executive Committee members and the Group's other executives. The amount of variable compensation is determined by the Board of Directors, on recommendations of the Nominating, Compensation and Corporate Governance Committee, after the closing of the year to which the compensation applies. For the quantitative targets, this assessment is based on pre-defined financial indicators and other figures at 31 December. Qualitative targets – which are also pre-defined – are assessed on the basis of the concrete financial and non-financial achievements of the Chairman and Chief Executive Officer. The achievement rate for these targets is communicated, criterion by criterion, at the end of the Board of Directors' meeting held to review the performance of the Chairman and Chief Executive Officer. Outperformance on one criterion may not compensate for underperformance on another.

In accordance with the compensation policy approved by the annual general meeting each year since the meeting of 19 May 2020, annual variable compensation may reach up to 180% of annual fixed compensation. The Board of Directors has decided to maintain this range for the Chairman and Chief Executive Officer's new term of office, which will be submitted to the annual general meeting of 15 May 2024.

The criteria used remain as follows:

- three quantitative criteria for an overall target weighting of 90% and up to a maximum of 135% of annual fixed compensation (representing 75% of the criteria used to determine the variable compensation):
  - EBITDA, for an overall target weighting of 30% and up to a maximum of 45% of annual fixed compensation, which aligns the compensation of the Chairman and Chief Executive Officer with the annual financial performance of the Group and in particular rewards the success of the actions undertaken, the ability to adapt to changing market conditions and, more generally, the good management of the Group by the Chairman and Chief Executive Officer,
  - recurring cash flow, for an overall target weighting of 30% and up to a maximum of 45% of annual fixed compensation, which rewards the Group's ability to generate the necessary cash flow to finance its strategic ambitions and in particular its capital expenditure plans, acquisition program and dividend policy while maintaining a solid balance sheet, and
  - contribution of new developments to the Group's results, for an overall target weighting of 30% and up to a maximum of 45% of annual fixed compensation, which promotes innovation, the development of new customers and the launch of new applications, as well as the completion of major investment projects in line with the Group's targeted growth strategy;

  It should be noted that although the targets to be met are set out in detail and quantified on an annual basis, the amounts involved are not disclosed for confidentiality purposes, in particular with regard to competitors. However, the Group does disclose the achievement rates for each criterion every year;

as well as,

- qualitative criteria for an overall target weighting of 30% and up to a maximum of 45% of annual fixed compensation (representing 25% of the criteria used to determine the variable compensation). These criteria, which are set precisely by the Board of Directors each year, are linked to the Group's priorities, including implementation of the Group's long-term strategy and its main priorities by the Chairman and Chief Executive Officer for one half and financial and operational management of the Group for the other half. For the latter half, since 2023, and as part of the new compensation policy for the Chairman and Chief Executive Officer submitted to the annual general meeting of 15 May 2024, the majority of the components are quantifiable, with precise targets set (compared with one third previously). These criteria include non-financial criteria, some of which are quantitative, in line with the Company's CSR roadmap and its 2030 targets, the monitoring of which is set out in detail in section 4.1.4 of this document.

The various financial indicators used to measure fulfillment of the performance criteria are based on the annual consolidated financial statements published by Arkema in accordance with the international financial reporting standards (IFRS) applicable at the date on which the Board of Directors approved and defined the performance criteria.

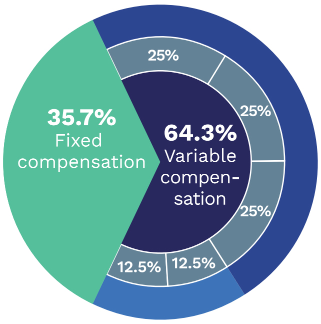
For 2024, concerning the qualitative criteria of the annual variable compensation, the Board of Directors will focus in particular on:

- in terms of long-term strategy: the continuation of the Group's profile transformation in accordance with the 2028 strategy published at the CMD in September 2023, focusing on innovation areas targeting major sustainable development themes (new energies, advanced electronics, bio-based and recycled polymers, additives integrated into solutions that contribute to the energy transition, high-performance adhesives and sealants, pressure sensitive adhesives, medical applications, low-carbon HF integration in the United States, etc.), with the consolidation of industrial start-ups or progress in Singapore, at Nutrien, in Calvert-City, Changshu and Beaumont, the progression of the One Arkema concept around accelerator markets and key technologies, the integration and development of PIAM, the continuation of synergies from Ashland's adhesives, the confirmation of the battery plan in the United States; and

- in terms of operational management of the company (with a majority of quantifiable elements): the consolidation of the safety and environmental performance in line with the various 2030 targets and the implementation of the SBTi-approved carbon trajectory, the monitoring and optimization of new business developments, the dynamic pricing management in a context of evolving raw materials, the implementation of new legal and regulatory provisions, particularly environmental ones, the continuation of talent management on a global scale and medium-term succession plans for key executives, as well as strict control of fixed and variable costs, capex and working capital within the allocated budgets.

In accordance with the provisions of article L. 22-10-8 of the French Commercial Code, the payment of this annual variable compensation is subject to the approval by the annual general meeting of the Chairman and Chief Executive Officer's compensation components in accordance with the conditions provided for under articles L. 225-100 and L. 22-10-34 of said code.

The proposed allocation of fixed and variable compensation (based on maximum annual variable compensation) for 2024 would be as follows, subject to approval by shareholders at the annual general meeting:



75%
Quantitative criteria
- 25% EBITDA
- 25% Recurring cash flow
- 25% Contribution of new developments

25%
Qualitative criteria related to the Group's priority areas
- 12.5% Long-term strategy
- 12.5% Financial and operational management of the company

Long-term compensation: performance shares

Like a number of Group employees, the Chairman and Chief Executive Officer receives an annual award of performance shares that directly links a significant portion of his compensation to the long-term performance of the Company and the Group and helps to align his interests with the best interests of the Company and its subsidiaries and the interests of shareholders.

The number of shares allocated each year is reviewed every time the Chairman and Chief Executive Officer's term of office is renewed, *i.e.*, once every four years, as part of the overall review of his compensation structure. The award comprises a fixed number of shares per performance share plan set for the duration of his term of office, taking into account, as for the annual fixed compensation, the grantee's duties and responsibilities and changes in the Group's size and profile and its proportion of the total compensation of the Chairman and Chief Executive Officer. Keeping a fixed number of shares each year helps mitigate the impact of share price volatility and support sustainable value creation over time.

Accordingly, with a view to the reappointment of the Chairman and Chief Executive Officer, the Board of Directors has decided to increase the number of shares awarded to him each year under the Group's annual performance share plan to 33,000 (compared with 30,000 previously and unchanged since 2016, i.e. two terms of office), corresponding to an increase of 1% per year over this period. This increase enables to maintain a balanced overall compensation structure for the Chairman and Chief Executive Officer, which favors the variable and long-term component. Based on the fair value of Arkema shares at the time of the 2023 share award, and a maximum share allocation of 120%, this new allotment corresponds to around 85% of the annual base salary (fixed compensation + maximum variable compensation), reflecting a long-term view still corresponding to around 45% of the overall package.

In accordance with the law, the AFEP-MEDEF Code and the rules applicable within the Group:

- performance shares awarded to the Chairman and Chief Executive Officer only vest subject to a condition of presence and to performance conditions assessed over a period of three years, which is followed by a two-year holding period, *i.e.*, a total vesting-holding period of five years;
- the shares awarded to the Chairman and Chief Executive Officer as part of annual performance share plans may not exceed 10% of all shares awarded in any one year under any annual performance share plan;
- the Chairman and Chief Executive Officer is required to retain a number of Arkema shares – either granted or otherwise acquired – equivalent to 250% of his gross annual fixed compensation. As of the date of this document, the Chairman and Chief Executive Officer holds 400,699 shares, well above the required percentage and allowing for full alignment of his interests with those of the Group and its shareholders;
- in the event of forced departure, and excluding cases of dismissal for serious or gross misconduct or resignation, the Chairman and Chief Executive Officer will continue to be entitled to the shares awarded at the date of termination of his duties and which have not vested on that date – in principle on a *pro rata* basis – based on a reasoned decision of the Board of Directors. The vesting rate will be subject to fulfillment of the performance conditions set out in the plans concerned. Under no circumstances may the Board decide to accelerate the vesting of the said shares; and
- in the event of retirement, like all beneficiaries of performance shares within the Group and in accordance with the rules for Arkema's share grant plans, the Chairman and Chief Executive Officer will remain entitled to all the unvested shares allocated to him at the date of his departure. The final allocation remains subject to the performance conditions set out in the plans concerned being met.

In line with the Group's long-term objectives for 2028, announced during the Capital Markets Days on 27 September 2023, and in accordance with the share-based compensation policy approved by the annual general meeting of 19 May 2022 as part of the renewal of the authorization granted to the Board of Directors to award performance shares, the Board of Directors decided that, for the 2023 plan, the performance conditions, assessed over a three-year period, will be as follows:

- EBITDA margin of the Group;
- operating cash conversion rate;
- the comparative Total Shareholder Return (TSR), which compares Arkema's share price performance with the average of the following three aggregates: the median TSR of a group of peers, the MSCI European Chemicals Index (including dividends) and the CAC 40 (including dividends). This criterion helps align even more closely the interests of beneficiaries with those of shareholders. The composition of the peer group is verified each year by the Board of Directors and may evolve to take account of changes in the competitive landscape;
- return on average capital employed of the Group, which helps assess the profitability of investments made within the Group and therefore the Group's discipline in selecting its investments and using its resources, as well as its ability to create value over the long term; and
- CSR performance, which confirms the importance given by the Group to its social commitments, particularly in terms of the climate, process safety, the circular economy and diversity.

The previous 25% weighting of the CSR criterion was increased in the 2023 plan in order to improve alignment with the Group's CSR commitments. The weighting of all these criteria is now as follows: CSR performance accounts for 30%, TSR and ROACE account for 15% each, and the other two criteria for 20% each.

The performance criteria for the vesting of the performance shares awarded to the Chairman and Chief Executive Officer are thus fully aligned with the Group's long-term objectives, including the Group's social and environmental strategy.

Taking into account all five criteria and the reward for outperformance if the Group significantly exceeds its targets, the overall vesting rate may represent up to a maximum of 120% of the initial award in order to reward outperformance more effectively. However, when the rate of achievement of two of the criteria is strictly below 50%, the award rate for each other criterion is capped at 100%.

The targets set for these criteria are fully consistent with the medium and long-term targets announced to the financial market and are similar to the internal targets, notably as regards the compensation of senior executives. Those determined for the 2023 performance share plan are presented by way of example in section 3.5.1 of this chapter.

In accordance with the recommendations of the AFEP-MEDEF Code, each year the Chairman and Chief Executive Officer formally undertakes not to use any financial instruments to hedge the risk of losses on the performance shares that he has been awarded by the Company during his term of office as Chairman and Chief Executive Officer and as long as he remains in office. Furthermore, in accordance with the law and the AFEP-MEDEF Code, the Chairman and Chief Executive Officer is subject to an additional requirement to retain the shares awarded.

Pension benefits

Since June 2016, when the supplementary defined benefit pension scheme governed by article L. 137-11 of the French Social Security Code (*Code de la sécurité sociale*), from which the Chairman and Chief Executive Officer had benefited, was terminated, Thierry Le Hénaff has received an additional monthly payment corresponding to 20% of his total fixed and variable compensation for the year concerned, to enable him to build up his supplementary retirement benefits year after year. The Board of Directors has therefore decided to maintain this payment during the new term of office. Thierry Le Hénaff has committed to invest this amount, net of any contributions and tax, in savings vehicles dedicated to financing his supplementary retirement benefits.

Severance payment

A severance payment will be due to the Chairman and Chief Executive Officer in the event of his forced departure, regardless of the form this departure takes and notably in the event of removal before the end of his term of office due to a change in control or strategy. It is not due in the event of non-renewal of his term of office, serious misconduct (*i.e.*, willful wrongdoing that prevents him from continuing as a corporate officer) or gross misconduct (*i.e.*, willful wrongdoing committed with intent to harm the Company) nor in the event of resignation. The severance payment shall not exceed twice his total annual gross fixed and variable compensation. The calculation base would correspond to the fixed annual compensation for the year in which he was forced to step down and the average of the last two years of variable compensation paid prior to his departure.

On the occasion of reappointment of the Chairman and Chief Executive Officer, the Board of Directors decided to change the method for calculating the amount of severance payment, which is subject to three conditions consistent with the targets set for 2028, by increasing the requirements of these conditions and adjusting the weighting of each condition for the duration of his term of office, as follows:

- annual variable compensation: on average, the annual variable compensation paid during the three years preceding departure would have to be at least 80% of the target variable amount; and
- TRIR: average TRIR (total recordable injury rate) over the three years preceding departure would have to be less than or equal to 1.1 accidents per million hours worked, positioning Arkema among the best of the industry; and
- the operating cash flow conversion rate, which corresponds to free cash flow before capex (tangible and intangible investments) divided by EBITDA, must be equal to or greater than 70%. The operating cash flow conversion rates will be determined using the average conversion rate for the three years preceding the departure date.

The weighting of each of these conditions will now be 70% for the annual variable portion and 15% for each of the other two conditions.

In accordance with the AFEP-MEDEF Code's recommendations concerning the accumulation of the severance payment and supplementary pension benefits, the severance payment that would be payable beyond the age of 60 will be reduced as follows:

- 18 months of total annual gross compensation (fixed and variable) in the event of departure beyond the age of 60; and
- 12 months of total annual gross compensation (fixed and variable) in the event of departure beyond the age of 62 years and 6 months.

No compensation would be paid in the event of departure beyond the age of 65.

Non-compete clause

In view of Thierry Le Hénaff's in-depth knowledge of the chemicals sector and the new challenges he faces relating to corporate social responsibility, the Board of Directors continues to believe that on the occasion of his reappointment, it is in the interests of Arkema and its shareholders that he be subject to a non-compete clause, in accordance with the legal provisions and recommendations of the AFEP-MEDEF Code. Under this clause, in the event of termination of his office as Chairman and Chief Executive Officer, for whatever reason, he will be bound by a non-compete obligation, limited to a period of one year from the effective date of termination.

The purpose of this non-compete clause, implemented in 2020 and approved by the annual general meeting each subsequent year, is to prohibit Thierry Le Hénaff, in consideration of an indemnity to be paid to him under the conditions set out below, for a period of one year from the effective date of termination of office, from engaging, directly or indirectly, in an activity that competes with Arkema's businesses, either on his own behalf or on behalf of another company. An activity that competes with Arkema's businesses means any specialty chemicals activity carried on in the same geographic regions and sectors as those of the Group when the term of office ends.

In consideration of the non-compete undertaking, and throughout the term of the agreement, Thierry Le Hénaff will receive a monthly indemnity equal to 100% of his monthly compensation calculated based on the sum of his fixed compensation for the year in which his term of office ended and the average of his annual variable compensation paid for the last two years prior to the effective termination date. A monthly payment will be made throughout the period of this non-compete agreement.

Any breach of this non-compete obligation will require Thierry Le Hénaff to repay the monthly indemnities he has already received and the Company will no longer be liable to pay the remaining indemnities through to the end of the one-year period.

The Board of Directors may decide to waive this non-compete clause up to the effective date of termination of Thierry Le Hénaff's office at the latest. In such an event, he would no longer be bound by the constraints of the non-compete clause referred to above and the Company would be released from any commitment to pay him a non-compete compensation.

It should be noted that Thierry Le Hénaff will only be entitled to this indemnity if his departure is not concomitant with his retirement. Moreover, Thierry Le Hénaff will not be entitled to the indemnity once he reaches the age of 65. In these two cases, Thierry Le Hénaff will be released from his obligations.

Lastly, in accordance with the recommendations of the AFEP-MEDEF Code, in the event of the simultaneous application of the severance payment and the non-compete compensation, the cumulative amount of these indemnities will not exceed two years of fixed and variable compensation (as defined above).

Other benefits

The Chairman and Chief Executive Officer has the use of a company car and is covered by corporate officer unemployment insurance.

He is also covered by the same Group personal risk and health insurance plan as all Company employees.

Exceptional compensation

Should a new executive director be appointed following an external recruitment process, the Board of Directors may, if necessary, in accordance with the provisions of the AFEP-MEDEF Code and on recommendations of the Nominating, Compensation and Corporate Governance Committee, decide to grant him/her exceptional compensation, mainly in the form of long-term compensation subject to performance conditions and arrangements that guarantee his/her attachment to the Company, in order to compensate him/her for any compensation lost as a result of accepting this new position. If this were to happen, the Company would disclose precise information concerning the amount and form of this compensation.

The Boards' discretionary powers in case of exceptional circumstances

On recommendation of the Nominating, Compensation and Corporate Governance Committee, since 2021, the Board of Directors has decided that it shall have the option of amending certain performance criteria related to the Chairman and Chief Executive Officer's annual variable compensation or to his long-term compensation in the form of performance shares, and/or of increasing or decreasing one or several of the parameters attached to these criteria (weighting, trigger thresholds, objectives, targets, etc.), half of the qualitative criteria must in any event be related to the implementation by the Chairman and Chief Executive Officer of the Group's long-term strategy and its main priorities, and the other half to the Group's operational management, the non-financial performance being included in these criteria.

This option may be used by the Board of Directors only in the event of exceptional circumstances outside of Arkema's control, not taken into account by the criteria or parameters initially set out in this policy for annual variable compensation or long-term compensation in the form of performance shares, that would have a significant impact on the company's performance, and which were unforeseeable at the time the Board approved this policy with a view to presenting it to the annual general meeting (including any new development in the Covid-19 crisis displaying these characteristics).

In any event, any such amendments or changes shall not result in the modification of the maximum weighting of the quantitative component of the annual variable compensation and the maximum weighting of its qualitative component, nor increase the maximum number of shares that could vest under the annual performance share plans.

These amendments or changes shall only be made for the purpose of reflecting more accurately the Chairman and Chief Executive Officer's effective performance in light of the circumstances that led to this option being exercised in applying the compensation policy. In this respect, the Board of Directors shall be especially careful to ensure that any such changes be fully correlated to the Group's performance in light of the circumstances, to the benefits accruing to shareholders and to the situation of all stakeholders.

The Board of Directors shall make its decision on the recommendation of the Nominating, Compensation and Corporate Governance Committee, and any use of this option must be justified in terms of the related circumstances and alignment with shareholders' interests. Any use of this discretionary option, which does not constitute a departure from the remuneration policy within the meaning of article L. 22-10-8 III paragraph 2 of the French Commercial Code, will be made public by the Board.

SUMMARY OF THE EXECUTIVE DIRECTOR'S COMPENSATION PROPOSED TO THE SHAREHOLDERS AT THE 2024 ANNUAL GENERAL MEETING

Components of compensation	Proposed new compensation package
Annual fixed compensation	€1,150,000
Annual variable compensation	• Target bonus: 120% of annual fixed compensation. • Maximum bonus: 180% of annual fixed compensation.
Deferred variable compensation	N/A
Exceptional compensation	N/A
Directors' compensation	N/A
Stock options	N/A
Long-term compensation: performance shares	Ceiling: 33,000 shares per year (up to 20% more in the event of outperformance).
Other long-term compensation	N/A
Pension	20% of total annual compensation (fixed and variable).
Benefits in kind	Company car
Severance payment	Capped at twice the annual fixed and variable compensation. Gradual reduction of the severance payment between 60 and 65 years old. No severance payment due after 65 years old or in the event of retirement at the same time as departure.
Non-compete clause	100% of the monthly compensation calculated on the basis of the sum of the fixed compensation for the year of departure and the average of the annual variable compensation paid for the two years prior to departure (for a maximum of one year).
Executive officer unemployment insurance	Yes

3.4.2.2 Implementation of the compensation policy for 2023

The Chairman and Chief Executive Officer's total compensation for 2023 was determined in accordance with the compensation policy approved at the annual general meeting of 19 May 2020. Its effective date was then deferred to 1 January 2021 and confirmed at the annual general meeting of 11 May 2023 (10th resolution). A significant portion of this compensation is subject to the achievement of quantitative, quantifiable and qualitative targets in line with the Company's strategy, thereby contributing to the Company's long-term performance. The achievement of these targets was duly noted by the Board of Directors at its meeting of 28 February 2024. The performance criteria are applied in accordance with the methodology described in section 3.4.2.1 of the 2022 Universal Registration Document.

The Chairman and Chief Executive Officer does not receive compensation from any company included in Arkema's scope of consolidation within the meaning of article L. 233-16 of the French Commercial Code.

Equity ratios between the compensation of the Chairman and Chief Executive Officer and the average and median compensation of the Company's employees

Equity ratios were calculated based on the compensation multiples guidelines updated by AFEP in February 2021, and based on the following elements:

- employees' compensation consists of the sum of gross compensation, employer's contributions, employee savings schemes (profit-sharing and matching contributions) and performance shares. It concerns all compensation paid or awarded during the year;
- the Chairman and Chief Executive Officer's compensation consists of the following items [1]: his fixed compensation, its variable compensation paid during the year (due in respect of the previous year), employer's contributions, all exceptional compensation, and any benefits in kind and performance shares. It includes all components of compensation paid or awarded during the year; and
- insofar as the Company does not have a significant number of employees, the scope of comparison used comprises the Company, Arkema France and Bostik SA, which together accounted for 93% of the Group's French workforce at end-2023 and for 2019 to 2023.

The following table presents the results of calculations for the scope of comparison, as well as for the Company, which in principle is the only Group entity covered by the legal requirement. These ratios cannot be monitored at global Group level due to structural pay differences between countries where the Group operates and has employees.

(1) *For further details about the various components of compensation paid or awarded and their amounts, see sections 3.4.2.2 of this document and the 2019, 2020, 2021 and 2022 Universal Registration Documents.*

TABLE OF RATIOS REQUIRED BY ARTICLE L. 22-10-9 OF THE FRENCH COMMERCIAL CODE

	2023	2022	2021	2020	2019
% change in the compensation of Thierry Le Hénaff, Chairman and Chief Executive Officer	0.5%	14%	17%	-9%	-3%
INFORMATION BASED ON THE SCOPE OF THE LISTED COMPANY					
% change in the **average compensation** of employees	2%	3%	4%	6%	-3%
Ratio compared with the average compensation of employees	4	4	3	3	4
% change in the ratio compared with previous year	0%	33%	0%	-25%	0%
Ratio compared with the **median compensation** of employees	4	4	3	3	3
% change in the ratio compared with previous year	0%	33%	0%	0%	0%
INFORMATION BASED ON THE ENLARGED SCOPE*					
% in the **average compensation** of employees	1.8%	1.5%	1.9%	1.9%	0.3%
Ratio compared with the average compensation of employees	62	63	56	49	54
% change in the ratio compared with previous year	-1%	13%	14%	-9%	-4%
Ratio compared with the **median compensation** of employees	74	75	67	58	64
% change in the ratio compared with previous year	-2%	12%	16%	-9%	-3%
PERFORMANCE OF THE COMPANY					
Free cash flow *(in €m)*	625	784	479	651	667
% change compared with previous year	-20.3%	63.7%	-26.4%	-2.4%	33.7%
Net income – Group share *(in €m)*	418	965	1,309	332	543
% change compared with previous year	-56.7%	-26.3%	294.3%	-38.9%	-23.2%
Net dividend per share paid in respect of year N *(in €)*	3.50**	3.40	3.00	2.50	2.20
% change compared with previous year	3.0%	13.3%	20.0%	13.6%	-12.0%

* *2023, 2022, 2021, 2020 and 2019: Arkema, Arkema France and Bostik SA.*

** *Dividend subject to approval at the annual general meeting of the Company's shareholders on 15 May 2024 (3rd resolution). For further details, see section 7.2.2 of this document.*

Performance shares – which only vest upon achievement of demanding performance criteria – have a material impact on the value of multiples. By way of illustration, excluding performance shares at "fair value" in accordance with IFRS 2 would result in multiples of 49 (median) and 43 (average) for 2023.

Between 2019 and 2023, the compensation of the Chairman and Chief Executive Officer, comprising the fixed portion, the variable portion and performance shares, increased by 4% a year on average.

Over the same period, at Arkema France – which represents 79% of the Group's French workforce – annual salary measures (both general and individual increases) corresponded to an increase of almost 15%.

In accordance with articles L. 22-10-34, II and L. 22-10-9, I of the French Commercial Code, the information provided in this section and in section 3.4.1.2 above is subject to the approval of the Company's shareholders at the annual general meeting of 15 May 2024 (8th resolution). For further details on the corresponding resolution, see section 7.2.2 of this document.

Components of the compensation due or awarded to the Chairman and Chief Executive Officer for 2023 submitted to a shareholder vote

In accordance with the provisions of article L. 22-10-34, II of the French Commercial Code, the components of compensation due or awarded to Thierry Le Hénaff, Chairman and Chief Executive Officer of the Company, for the year ended 31 December 2023, as stated below, is submitted to the shareholders' vote at the annual general meeting of 15 May 2024 (9th resolution).

In 2023, annual fixed compensation amounted to €1,000,000 and, as in 2022, the maximum achievable amount of annual variable compensation was 180% of annual fixed compensation, in compliance with the compensation policy approved by the annual general meeting of 19 May 2020 and confirmed by the annual general meeting of 11 May 2023.

Components of compensation submitted to a shareholder vote	Amounts paid during 2023	Amounts awarded for the 2023 financial year or accounting valuation	Presentation
Fixed compensation	€1,000,000	€1,000,000	In the context of the reappointment of Thierry Le Hénaff as director, approved at the annual general meeting of 19 May 2020, his annual fixed compensation was set at €1,000,000 per year as of 1 January 2021 for the duration of his term of office.
Annual variable compensation	€1,791,000	€1,481,800	The maximum achievable amount of variable compensation due in respect of 2023 was 180% of annual fixed compensation. The Board of Directors set the amount of variable compensation due in respect of 2023 based on the achievement of specific, precise and demanding quantitative and qualitative targets approved by the Board of Directors at its meeting on 22 February 2023, as follows: • **concerning the three quantitative criteria** related to the Group's financial performance, the achievement rates in relation to the maximum of each sub-criterion were as follows: • 50.11% for the EBITDA criterion, for which the average maximum weighting is 45%, and which reached €1,501 million in 2023, in line with the guidance of between €1.5 billion and €1.6 billion as communicated to the market in February 2023 upon publication of the 2022 annual results and tightened to around €1.5 billion upon publication of third-quarter results, in a complex and demanding operating environment marked by significant destocking and lower underlying demand. This good performance reflects once more the Group's ability to adjust rapidly to volatile environments, maintain margins in a context of lower raw materials and weak demand and to temporarily adjust its cost base; • 100% for the recurring cash flow criterion, for which the average maximum weighting represents 45%. Recurring cash flow in 2023 reached the high level of €761 million (free cash flow adjusted for exceptional capex and non-recurring items), leading to an EBITDA to cash conversion rate of 50.7%, well above the year's target of 40%. This achievement reflects the Group's operating performance and, in a context of low activity, the strict and dynamic management of working capital, which represented 13.1% of Group sales (excluding PIAM) at end-December 2023. Net debt, which includes the payment for the acquisition of a majority stake in PIAM on 1 December 2023, remained well controlled at €2,930 million (including hybrid bonds), representing 1.95 x 2023 EBITDA; • 85.84% for the new developments criterion, for which the average maximum weighting represents 45%. The Board of Directors took into account in its calculation, as it does every year, the commercial successes of the main innovation platforms, assessed using a tracking table by Business Unit and segment, the evolution of the margin on variable costs of various products, applications or markets, the great majority of which being pre-defined, the development of new customers also targeted, and the growth in emerging geographies. For 2023, the Board noted in particular the following examples of more significant developments: high-performance sealants and adhesives, structural adhesives for industry, new ranges of adhesives for professionals and DIY stores, development in PSA (Pressure Sensitive Adhesives) and synergies with Ashland, the development of non-emissive fluorospecialties such as 1233zd and 1234yf, the development of DMDS for bio-refineries and its marketing through differentiating digital-focused service offerings, and additives for the solar industry. The variable compensation due in respect of the quantitative criteria thus amounts to 106.18% of the annual fixed compensation; and

Components of compensation submitted to a shareholder vote	Amounts paid during 2023	Amounts awarded for the 2023 financial year or accounting valuation	Presentation
			• **concerning the qualitative criteria**, with a maximum average weighting of 45%, half of which was linked to the implementation of the Group's strategy and main operational priorities, and the other half to elements of operational management, the following achievements were noted: • with regard to the implementation of the Group's strategy and main operational priorities: 2023 was marked by the continuation of the transformation of the Group's profile in line with the strategy announced at the 2020 CMD, focusing on medium-term innovation areas, in particular linked to sustainable development. Significant developments were thus achieved in recycled polymers, additives for biofuels, digital services for customers, bio-based surfactants, additives for the solar industry, very low GWP fluorospecialties, high performance sealants, engineering adhesives and the implementation of technical and commercial synergies resulting from the acquisition of Ashland's adhesives. Key industrial projects for the Group's long-term positioning have started or progressed, such as Pebax in France, PA11 in Singapore, hydrofluoric acid with Nutrien in the United States, and PVDF expansions in France and China, as well as photocure resins also in China to support growth in electronics and new energies. M&A operations continued with the acquisition of a 54% stake in South Korean company PI Advanced Materials, which enables to strengthen the Group's presence in Asia and in the battery and advanced electronics markets, as well as the acquisitions of Polytec PT and Arc Building Products in adhesives. The presentation of the 2028 strategic plan at the CMD on 27 September 2023 was well received by investors and marked a new step in the strategic thinking towards high performance materials. At the end of 2023, the Specialty Materials platform continued to progress and reached 92% of Group's sales, • regarding the operational management components: the Board recognized the consolidation of workstation safety performance with a very good TRIR level of 0.9 accident per million hours worked, as well as the process safety performance with a PSER of 2.8 accidents per million hours worked, and in cybersecurity, with no notable incidents. The Board also took into account the progress of the large majority of environmental indicators, in particular the validatio of the new climate plan aligned with a 1.5°C SBT trajectory by the SBTi, thus paving the way to Net Zero by 2050, the further reduction in the Group's GHG emissions in 2023 compared with 2022, by 7% for Scopes 1 and 2 and by 9% for Scope 3, in line with medium-term objectives, the share of sales covered by life-cycle assessment now amounting to 56% in 2023, Arkema's continued inclusion in the DJSI and the CAC40 ESG index, and lastly the implementation of the new One Arkema strategy announced at the CMD. The Group's strict management to adapt to the challenging economic context led to a working capital level in line with the objective, very strong cash generation, as well as capex and fixed costs that came in below budget. On the social front, the Board also noted the Group's progress with regards to diversity, with an increase in the proportion of women in senior management positions to 29% at the end of 2023, ahead of the 2030 roadmap, as well as the continued strengthening in talent management internal processes. In light of all of these achievements and also the manner in which the Group was able to adapt to the demanding and challenging operating environment of 2023, marked by macroeconomic and geopolitical tensions, the Board of Directors has set the achievement rate for these criteria at 93.33%. As a result, the amount of the variable compensation due in respect of qualitative criteria has been set at 42% of the fixed annual compensation. In total, the 2023 variable compensation amounts to €1,481,800, *i.e.*, 82.32% of the maximum. It represents 148.18% of 2023 annual fixed compensation (compared with 179.1% in 2022). The payment of this annual variable compensation is subject to shareholders' approval at the annual general meeting of 15 May 2024 of the components of the Chairman and Chief Executive Officer's compensation in accordance with the conditions provided for under article L. 22-10-34, II of the French Commercial Code (9th resolution). The compensation shall only be paid after this date.
Deferred variable compensation	N/A	N/A	Thierry Le Hénaff receives no deferred variable compensation.
Exceptional compensation	N/A	N/A	Thierry Le Hénaff receives no exceptional compensation.

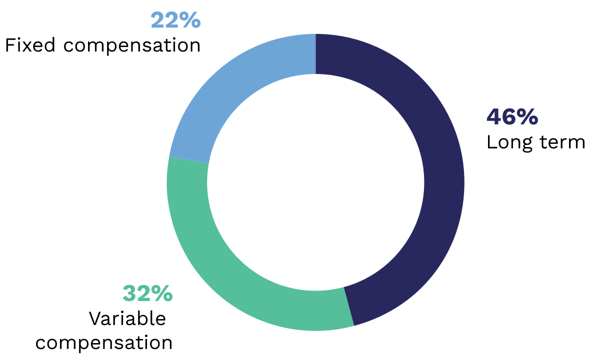
Components of compensation submitted to a shareholder vote	Amounts paid during 2023	Amounts awarded for the 2023 financial year or accounting valuation	Presentation
Compensation for serving as a director	N/A	N/A	Thierry Le Hénaff receives no compensation from Arkema for serving as a director.
Stock options	N/A	N/A	Thierry Le Hénaff does not receive any stock options.
Performance shares	N/A	€2,083,500	Making use of the authorization granted by the annual general meeting of 19 May 2022 (24th resolution), at its meeting of 8 November 2023, the Board of Directors awarded 30,000 performance shares (representing 0.04% of share capital) to Thierry Le Hénaff (out of a total of 374,660 shares granted to 1,703 grantees, representing less than 10% of the performance share grant taking into account the eventual outperformance). The shares will vest at the end of a three-year period subject to a presence condition and the achievement of five performance targets based on the following: EBITDA margin of the Group, the operating cash conversion rate, comparative Total Shareholder Return, return on average capital employed (ROACE) of the Group and Arkema's CSR performance (comprising four indicators: the climate (50%) and the process safety event rate (PSER), the circular economy and the percentage of women in senior management and executive positions (50%)). Under the 2023 performance share plan authorization, the weighting of the CSR criterion was once again increased and that of the other criteria was revised accordingly. The CSR performance criterion now accounts for 30% of the total award, the TSR and the ROACE criteria both account for 15% each, and the other three criteria for 20% each. The vesting period is followed by a two-year mandatory holding period. Further details on the criteria may be found in section 3.5.1 of this chapter. In the event of outperformance, and pursuant to the aforementioned performance conditions set out in section 3.5.1 of this chapter, this award could rise to 36,000 shares, or 120% of the maximum awarded.
Pension	€558,200	€496,360	Since 7 June 2016, when the supplementary defined benefit pension scheme (governed by article L. 137-11 of the French Social Security Code) from which he benefited was terminated, Thierry Le Hénaff benefits from an additional annual payment corresponding to 20% of his total fixed and variable compensation for the year concerned, to enable him to build up his supplementary retirement benefits, year after year. Thierry Le Hénaff has committed to invest this entire amount, net of any contributions and tax, in savings vehicles dedicated to financing his supplementary retirement benefits.
Benefits in kind	N/A	€6,720	Thierry Le Hénaff has the use of a company car and is covered by corporate officer unemployment insurance.
Components of compensation paid or awarded for 2023 already approved by the annual general meeting			
Severance payment	*No payment* [(1)]		*Thierry Le Hénaff is entitled to severance payment in the event of his forced departure. The amount is calculated by reference to the achievement of three demanding conditions set by the Board of Directors and approved by the annual general meeting (TRIR – total recordable injury rate, annual variable compensation, and EBITDA to cash conversion rate) and cannot exceed twice his total annual gross fixed and variable compensation. The calculation base is the fixed annual compensation for the year in which the forced departure occurs and the average of the last two years of variable compensation paid prior to departure.* *The amount of the payment is calculated based on three demanding conditions, each accounting for one-third of the total:* • *TRIR: average TRIR (total recordable injury rate) for the three years preceding departure would have to be less than or equal to 1.4, making Arkema a leader for the industry as a whole;* • *annual variable compensation: on average, the annual variable compensation paid during the three years preceding departure would have to be at least 75% of the target variable amount; and* • *EBITDA to cash conversion rate (defined as free cash flow excluding exceptional capital expenditure divided by EBITDA): the EBITDA to cash conversion rate must be greater than or equal to 35%. The achievement rate will be determined using the average conversion rate for the three years preceding departure.* *In addition, the Board of Directors has decided to gradually reduce the maximum termination indemnity that would be payable to 18 months of total annual gross compensation (fixed and variable) in case of a departure beyond 60 years of age, and 12 months of total annual gross compensation (fixed and variable) beyond 62 years and six months of age. No compensation would be paid in the event of departure beyond the age of 65.*

Components of compensation submitted to a shareholder vote	Amounts paid during 2023	Amounts awarded for the 2023 financial year or accounting valuation	Presentation
Non-compete compensation	*N/A*		*Thierry Le Hénaff is subject to a non-compete clause, in accordance with the legal provisions and recommendations of the AFEP-MEDEF Code, whereby, in the event of termination of his office as Chairman and Chief Executive Officer, for whatever reason, he will be bound by a non-compete obligation, limited to a period of one year from the effective date of termination.* *The purpose of this non-compete clause is to prohibit Thierry Le Hénaff, in consideration of an indemnity to be paid to him under the conditions set out below, for a period of one year from the effective date of termination of office, from engaging, directly or indirectly, in an activity that competes with Arkema's businesses, either on his own behalf or on behalf of another company. An activity that competes with Arkema's businesses means any specialty chemicals activity carried on in the same geographic regions and sectors as those of the Arkema Group when the term of office ends.* *In consideration of the non-compete undertaking, and throughout the term of the agreement, Thierry Le Hénaff will receive a monthly indemnity equal to 100% of his monthly compensation calculated based on the sum of his fixed compensation for the year in which his term of office ended and the average of his annual variable compensation paid for the last two years prior to the effective termination date. A monthly payment will be made throughout the period of this non-compete agreement.* *Any breach of this non-compete obligation will require Thierry Le Hénaff to repay the monthly indemnities he has already received and the Company will no longer be liable to pay the remaining indemnities through to the end of the one-year period.* *The Board of Directors may decide to waive this non-compete clause up to the effective date of termination of Thierry Le Hénaff's office at the latest. In such an event, he would no longer be bound by the constraints of the non-compete clause referred to above and the Company would be released from any commitment to pay him a non-compete compensation.* *It should be noted that Thierry Le Hénaff will only be entitled to this indemnity if his departure is not concomitant with his retirement. Moreover, Thierry Le Hénaff will not be entitled to the indemnity once he reaches the age of 65. In these two cases, Thierry Le Hénaff will be released from his obligations.* *Lastly, in accordance with the recommendations of the AFEP-MEDEF Code, in the event of the simultaneous application of the severance payment and the non-compete compensation, the cumulative amount of these indemnities will not exceed two years of fixed and variable compensation (as defined above).*

(1) Estimate of the maximum amounts payable at 31 December 2023, in a theoretical case of forced departure and the fulfillment of three conditions, in accordance with the provisions of article L. 22-10-9, I, 4° of the French Commercial Code: 4,193,250 euros.

Thierry Le Hénaff's total annual gross compensation for 2023 therefore comprises €1,000,000 in fixed compensation and €1,481,800 in variable compensation, *i.e.,* a total amount of €2,481,800, down 11.15% compared with 2022.

By way of illustration and subject to approval at the annual general meeting of 15 May 2024 (9th resolution), the Chairman and Chief Executive Officer's fixed, variable and long-term compensation for the year ended 31 December 2023 would break down as follows:



3.4.2.3 Summary tables

SUMMARY OF COMPENSATION, STOCK OPTIONS AND SHARES AWARDED TO THE CHAIRMAN AND CHIEF EXECUTIVE OFFICER EXCLUDING COMPENSATION INDEMNITIES (TABLES 1 AND 2 OF AMF RECOMMENDATIONS AND AFEP-MEDEF CODE)

	2023		2022	
(Gross amounts in euros)	**Amounts awarded**	**Paid during the year**	Amounts awarded	Paid during the year
Fixed compensation	1,000,000	1,000,000	1,000,000	1,000,000
Annual variable compensation (1)	1,481,800	1,791,000	1,791,000	1,800,000
Exceptional compensation	None	None	None	None
Compensation for serving as director	None	None	None	None
TOTAL	**2,481,800**	**2,791,000**	**2,791,000**	**2,800,000**
Pension (2)	496,360	558,200	558,200	560,000
Benefits in kind – car	6,720	6,720	6,720	6,720
Executive officer unemployment insurance		19,276		18,025
Stock options	None	None	None	None
Performance shares (3)	2,083,500	N/A	2,047,800	N/A
Other long-term compensation	None	None	None	None
TOTAL	**5,068,380**	**3,375,196**	**5,403,720**	**3,384,745**

(1) *Variable compensation is paid in the year following the period for which it is calculated based on the criteria set out in section 3.4.2.2 of this chapter and subject to shareholder approval of the components of compensation paid or awarded for the year, in accordance with the provisions of articles L. 225-100 and L. 22-10-34 of the French Commercial Code.*

(2) *20% of the annual compensation (fixed and variable).*

(3) *Value of performance shares awarded during the year calculated according to the method used in the consolidated financial statements, detailed in note 7.4 to the consolidated financial statements at 31 December 2023 in section 5.3.3 of this document.*

PERFORMANCE SHARES GRANTED TO THE CHAIRMAN AND CHIEF EXECUTIVE OFFICER IN 2023

	No. and date of plan	Number of shares granted in 2023	Vesting date/End of holding period	Value of shares according to the method used in the consolidated financial statements
Thierry Le Hénaff	2023 plan of 08/11/2023 (3-year vesting period + 2-year holding period)	30,000 (1) (2)	09/11/2026 and 09/11/2028	€2,083,500

(1) *Representing 0.04% of share capital.*

(2) *36,000 in the event of outperformance. For further details, see section 3.5.1 of this chapter.*

SUMMARY OF SHARES AWARDED TO THE CHAIRMAN AND CHIEF EXECUTIVE OFFICER NOT YET VESTED OR SUBJECT TO A HOLDING PERIOD DURING THE YEAR (INCLUDING TABLE 6 OF AMF RECOMMENDATIONS AND AFEP-MEDEF CODE)

						Information based on the year just ended					
Key characteristics of the free share plans						At 1 January	During the year		At 31 December		
	Plan number	Vesting period	Grant date	Vesting date	End of holding period	Shares awarded at 1 January	Shares awarded	Shares vested	Shares subject to performance conditions	Shares awarded not yet vested	Shares subject to a holding period
Thierry Le Hénaff	2023 plan	08/11/2023-09/11/2026	08/11/2023	09/11/2026	09/11/2028	N/A	30,000 (1) Value of shares according to the method used in the consolidated financial statements €2,083,500	N/A	30,000 (1)	30,000 (1)	N/A
	2022 plan	09/11/2022-10/11/2025	09/11/2022	10/11/2025	10/11/2027	30,000 (2)	N/A	N/A	30,000 (2)	30,000 (2)	N/A
	2021 plan	09/11/2021-08/11/2024	09/11/2021	12/11/2024	12/11/2026	30,000 (3)	N/A	N/A	30,000 (3)	30,000 (3)	N/A
	2020 plan	04/11/2020-05/11/2023	04/11/2020	06/11/2023	06/11/2025	N/A	N/A	31,800 Market value: €2,858,820	N/A	N/A	31,800
	2019 plan	29/10/2019-30/10/2022	29/10/2019	31/10/2022	31/10/2024	N/A	N/A	31,320 Market value: €2,513,117	N/A	N/A	31,320
						Total 60,000 (4)	**Total 30,000 (1)**	**Total 63,120**	**Total 90,000 (5)**	**Total 90,000 (5)**	**Total 63,120**

(1) 36,000 in the event of outperformance. For further details, see section 3.5.1 of this chapter.
(2) 36,000 in the event of outperformance. For further details, see section 3.5.1 of this chapter of the 2022 Universal Registration Document.
(3) 36,000 in the event of outperformance. For further details, see section 3.5.1 of the 2021 Universal Registration Document.
(4) 72,000 in the event of outperformance.
(5) 108,000 in the event of outperformance.

PERFORMANCE SHARES AWARDED TO THE CHAIRMAN AND CHIEF EXECUTIVE OFFICER FOR WHICH THE HOLDING PERIOD EXPIRED IN 2023 (TABLE 7 OF THE AMF RECOMMENDATIONS AND AFEP-MEDEF CODE)

	No. and date of plan	Number of shares for which the holding period expired in 2023	Vesting conditions
Thierry Le Hénaff	2018 plan (05/11/2018)	23,214	Presence and performance conditions: REBIT margin over the period from 2018 to 2020 (25%), EBITDA to cash conversion rate over the period from 2018 to 2020 (25%), comparative TSR over the period from 2018 to 2020 (25%), return on average capital employed over the period from 2018 to 2020 (25%)

SUMMARY OF EMPLOYMENT CONTRACT, PENSION BENEFITS AND OTHER BENEFITS IN 2023 (TABLE 11 OF THE AMF RECOMMENDATIONS AND AFEP-MEDEF CODE)

	Employment contract		Supplementary pension benefits		Compensation or benefits due or potentially due upon termination or change of position		Indemnities relating to a non-compete agreement	
	Yes	No	Yes	No	Yes	No	Yes	No
Thierry Le Hénaff		X		X	X		X	

FINANCIAL CONDITIONS APPLICABLE TO THE CHAIRMAN AND CHIEF EXECUTIVE OFFICER FOR TERMINATION OF OFFICE, IN ACCORDANCE WITH THE CIRCUMSTANCES OF TERMINATION

	Dismissal for serious or gross misconduct	Resignation	Forced departure	Retirement
Severance payment	None	None	Compensation entirely contingent on fulfillment of three performance criteria (1): • before 60 years of age: maximum of 24 months of total annual gross compensation (fixed and variable) (2); • after 60 years of age: maximum of 18 months of total annual gross compensation (fixed and variable) (2); • after 62 years and 6 months of age: maximum of 12 months of total annual gross compensation (fixed and variable) (2); • after 65 years of age: none. The cumulative amount of the severance payment and non-compete benefit may not exceed twice the annual fixed and variable compensation.	None
Non-compete compensation	Monthly benefit equal to 100% of Thierry Le Hénaff's monthly fixed and variable (2) compensation until expiration of the non-compete clause. The Board of Directors may decide to waive this non-compete clause at any time until the effective date of termination of Thierry Le Hénaff's office, in which case the non-compete benefit will not be payable. The cumulative amount of the severance payment and non-compete benefit may not exceed twice the annual fixed and variable compensation.			None
Supplementary defined benefit pension scheme	None			
Unvested performance shares	Null and void	Null and void	Entitlement to unvested shares subject to a reasoned decision of the Board of Directors, in principle on a pro rata basis, and subject to fulfillment of the performance conditions set out in the plans. No accelerated vesting of shares.	Rights maintained (3)

(1) Annual variable compensation (70%), TRIR (frequency rate of reported accidents per million hours worked (15%) and operating cash flow conversion rate (15%).

(2) Fixed compensation corresponds to the fixed compensation for the year in which the Chairman and Chief Executive Officer is forced to step down. Variable compensation corresponds to the average of the last two years of variable compensation paid prior to departure.

(3) Rule applicable within the Group to all beneficiaries of performance shares, in accordance with regulations on annual plans.

3.4.3 Compensation of executive management members other than the Chairman and Chief Executive Officer

3.4.3.1 Compensation principles

Every year, the Nominating, Compensation and Corporate Governance Committee reviews the fixed and variable compensation structure proposed by the Chairman and Chief Executive Officer for Executive Committee members. This compensation comprises:

(i) two short-term components:

- annual fixed compensation based on the scope of the respective duties and responsibilities of each Executive Committee member,
- annual variable compensation, representing a percentage of the annual fixed compensation and based on general quantifiable targets identical to those set for the Chairman and Chief Executive Officer, and closely aligned with the Group's financial performance and the implementation of its strategy, and quantitative and qualitative targets (including CSR targets) designed to reward the individual performance of each Executive Committee member within their respective area of responsibility; and

(ii) a long-term incentive through the award of performance shares fully subject to performance conditions.

Executive Committee members are required to retain at least 20% of their vested shares in registered form for as long as they remain employed in this capacity. These obligations are suspended once the total value of the Arkema shares held, whatever their origin, is equivalent to 150% of their gross annual fixed compensation. The Chairman and Chief Executive Officer is subject to specific individual holding requirements (see section 3.4.2.1 of this chapter).

Each year Executive Committee members certify that they have not used any financial instruments to hedge the risk of losses on the stock options or performance share rights that have been, or will be, awarded to them by the Company.

The amount and structure of Executive Committee members' compensation packages are regularly compared to the market practices for equivalent positions in companies operating in the same industry with similar market capitalizations.

Executive Committee members do not receive any compensation for acting as directors of Group companies.

3.4.3.2 Annual compensation of Executive Committee members other than the Chairman and Chief Executive Officer

The total gross fixed compensation awarded by the Company to Executive Committee members for 2023 amounted to €3,607,675.

Moreover, the total variable compensation paid by the Company to Executive Committee members in 2023 in respect of 2022 amounted to €2,715,633.

Based on the targets approved by the Board of Directors at its meeting of 22 February 2023, namely (i) general quantifiable targets identical to those that apply to the Chairman and Chief Executive Officer and relating to growth in EBITDA, recurring cash flow, and margin on variable costs of new developments, and (ii) individual quantifiable and qualitative targets for each member, the Board of Directors, at its meeting of 28 February 2024, based on a proposal of the Nominating, Compensation and Corporate Governance Committee, approved the Executive Committee members' variable compensation for 2023. The total annual variable compensation awarded to Executive Committee members for 2023 amounts at €2,373,800.

In addition, based on a proposal of the Nominating, Compensation and Corporate Governance Committee, the Board of Directors set the compensation for 2024 for members of the Executive Committee – as constituted at the date of the Board of Directors' meeting – as follows:

- total gross fixed compensation will amount to €3,838,413, in line with market practices and with the changes to the Group's compensation policy for the 2024 financial year; and
- variable compensation will continue to be based on general quantifiable quantitative criteria related to the Group's financial performance as measured by targets for EBITDA, recurring cash flow and margin on variable costs of new developments, as well as on quantifiable and qualitative criteria specific to each member.

Consequently, compensation due and paid to Executive Committee members, excluding the Chairman and Chief Executive Officer, for 2023 and 2022 was as follows:

(Gross amounts in euros)	2023 Due for the year	2023 Paid during the year (1)	2022 Due for the year	2022 Paid during the year (2)
Fixed compensation	3,604,606 (2)	3,607,875	3,403,065 (3)	3,453,567
Variable compensation	2,373,800 (1)	2,715,633	2,715,633 (2)	2,618,920
TOTAL	**5,978,406**	**6,323,508**	**6,118,698**	**6,072,487**

(1) Based on the average exchange rate in 2023.
(2) Based on the average exchange rate in 2022.
(3) Based on the average exchange rate in 2021.

3.4.3.3 Benefit schemes

Executive Committee members are covered by the same benefit schemes (death/disability and health insurance) as employees of Arkema France. They also benefit from a defined contribution pension scheme based on the part of their compensation that exceeds eight times the annual ceiling for social security contributions and is excluded from the contribution base for compulsory pension schemes. No Executive Committee member benefits from a supplementary defined benefit pension scheme.

3.5 Share-based compensation

Arkema wished to put in place share-based compensation instruments in order to secure the loyalty of executives and certain employees, and involve them more closely in the Group's future growth, as well as its stock market performance. Accordingly, the Board of Directors put in place stock option and performance share plans.

No stock option plans have been set up anymore since 2012.

The accounting treatment of these share-based compensation instruments is described in note 7.4 to the consolidated financial statements at 31 December 2023 in section 5.3.3 of this document.

Share-based compensation principles

The share-based compensation policy by way of performance share grants adopted by the Board of Directors on the proposal of the Nominating, Compensation and Corporate Governance Committee, is as follows:

- closely involving executives, senior managers and certain employees who have performed exceptionally well or whom the Group wants to retain, in the Group's future growth and stock market performance in the medium term. In 2023, there were 1,703 beneficiaries;
- setting a vesting period of three years for performance shares awarded to the Chairman and Chief Executive Officer and the members of the Executive Committee, followed by a holding period of two years, *i.e.*, a total vesting-holding period of five years;
- submitting the vesting of performance shares to demanding performance criteria, which have included a criterion concerning Arkema's CSR performance since 2019. At the date of this document and since 2017, awards without performance conditions have been limited to awards representing no more than 70 shares;
- rewarding outperformance if targets are significantly exceeded. The maximum achievement rate for each criterion has been set at 120% and the maximum overall award capped at 120%; however when the achievement rate of two criteria is strictly below 50%, the vesting rate of each of the other criteria is capped at 100%;
- limiting the rights awarded to the Chairman and Chief Executive Officer in respect of annual performance share plans to a maximum of 10% of all rights awarded in any annual plan;
- awarding existing shares acquired under the share buyback program, or to be issued (since 2019); and
- in accordance with the AFEP-MEDEF Code, awarding performance share plans at the same period every year, *i.e.*, in November since 2013.

In addition, in accordance with the law and the AFEP-MEDEF Code, the Board of Directors sets a fixed number of vested shares that must be retained by the Chairman and Chief Executive Officer and by each Executive Committee member (see sections 3.4.2.1 and 3.4.3.1 of this chapter).

Performance criteria

Since 2020, Arkema's performance share plans have been subject to five demanding performance criteria (four financial and one related to CSR performance) that are aligned with the Group's long-term ambitions and strategic priorities. These criteria – which were confirmed at the annual general meeting on 19 May 2022 when the shareholders renewed the authorization to grant performance shares – are based on:

- EBITDA margin for the Specialty Materials platform;
- EBITDA to cash conversion rate;
- comparative Total Shareholder Return;
- return on average capital employed (ROACE) for the Specialty Materials platform; and
- CSR performance measured in several areas.

Since 2022 the relative weighting of these criteria in the overall award has been as follows:

- 25% for CSR performance;
- 15% for comparative TSR; and
- 20% for each of the other three criteria.

In addition, the CSR performance criterion was structured as follows:

- a climate indicator, whose weighting has been increased from 20% to 50% of the CSR criterion, *i.e.*, 12.5% of the overall award (compared with 4% in previous plans), and which reflects the Group's carbon trajectory (change in greenhouse gas emissions); and
- a composite indicator for the remaining 50% of the CSR criterion, addressing, for a relative weighting of one-third each, the following areas:
  - diversity: measured in terms of the percentage of women in senior management positions (job level NP15 and above) in line with the Group's global target of women representing 30% of this category by 2030,
  - the process safety event rate (PSER): this measures the safety of processes and aims to reduce industrial risks and their social or their environmental impacts, and
  - the circular economy: measured through a quantified composite indicator consisting of the following items:
    1) life-cycle assessment of Arkema products (for a relative weighting of 40%),
    2) waste treated without recovery (for a relative weighting of 30%), and
    3) efforts to reduce the Group's energy consumption with the Energy EFPI (also for a relative weighting of 30%).

In line with the 2028 long-term objectives of the Group, as announced on the Capital Markets Day (CMD) held on 27 September 2023, the Board of Directors, on the recommendation of the Nominating, Compensation and Corporate Governance Committee, decided, for the 2023 plan, to adapt the performance criteria, as follows:

- the weighting of the CSR criteria has been increased from 25% to 30% of the global allocation, while keeping unchanged the weighting of each of its indicators, in order to take into account the reinforcement of Arkema's CSR initiatives;
- the weighting of the financial criteria consequently represents 70% of the global allocation, with the weighing of the ROACE criterion lowered to 15% (similar to TSR) and the weighting of the two other financial criteria remaining unchanged at 20% each of the global allocation;
- EBITDA margin and ROACE criteria are, as from this plan, calculated at the Group level, as the transformation towards Specialty Materials is at a very advanced stage and the 2028 targets for sales and EBITDA growth have been set for the whole Group; and
- the EBITDA to cash conversion rate criterion is replaced by the operating cash conversion rate, in line with the elements presented at the CMD.

The other criteria for the granting of performance shares as set out above remain unchanged.

The achievement rates for the last three plans that vested (either in full or partially) are as follows:

Date of plan	Vesting year	Vesting rate
2018	2021	77.38%
2019	2022	104.4%
2020	2023	106.0%

Blackout periods

In compliance with regulation (EU) no. 596/2014 of 16 April 2014 on market abuse (known as the Market Abuse Regulation or MAR), the AMF general regulations and the AFEP-MEDEF Code, and in order to prevent insider trading, Arkema has introduced black-out periods. During these periods, any person who has regular or one-time access to undisclosed accounting or financial information relating to Arkema and its subsidiaries is prohibited from trading in Arkema shares:

- 30 calendar days before the publication of the annual and half-yearly financial statements, including the day of publication; and
- 15 calendar days before the publication of quarterly financial information, including the day of publication.

These black-out periods notably apply to Executive Committee and Group management committee members.

In addition, pursuant to legal provisions as amended by the Pacte law, free shares may not be sold at the end of the vesting-holding period stipulated in the plan:

- 30 calendar days before the publication of the annual and half-yearly financial statements. These provisions apply to all persons, irrespective of their status and whether or not they are a party to inside information; and
- by members of the Board of Directors, the Chief Executive Officer or by employees with access to inside information that has not been made public.

3.5.1 Performance share plans

2023 performance share plans

In accordance with the share-based compensation policy in force within the Group and making use of the authorization given by the annual general meeting of 19 May 2022, the Board of Directors decided, at its meeting of 8 November 2023, to award a total of 374,660 performance shares to 1,703 beneficiaries (34.4% of whom were women), including the Chairman and Chief Executive Officer and the Executive Committee members.

For employees in France, the vesting period is three years, followed by a two-year holding period. For employees outside France, the vesting period is four years, with no holding period, so that the vesting of the shares may correspond to the chargeability of the related taxes. In accordance with the law and the AFEP-MEDEF Code, the Chairman and Chief Executive Officer and the members of the Executive Committee are subject to an additional requirement to retain the shares they have been awarded.

The vesting of the shares is, for all beneficiaries, subject to their continued presence within the Group. In addition, for awards of more than 70 shares, vesting is entirely subject to the achievement of five demanding financial and non-financial performance criteria.

In view of the Group's long-term objectives for 2028, as announced at the Capital Markets Day held on 27 September 2023, and in accordance with the share-based compensation policy as approved by the annual general meeting of 19 May 2022 in the context of the authorization mentioned above, the Board of Directors thus decided that, for the 2023 plan, the performance criteria, which are assessed over a 3-year period, shall be as follows:

- EBITDA margin of the Group;
- operating cash conversion rate;
- comparative TSR;
- return on average capital employed of the Group; and
- CSR performance assessed in the areas of climate, process safety, circular economy and diversity.

The thresholds and definitions of the financial criteria have been adapted and aligned with the elements presented at the CMD.

For each criterion, the vesting scale goes from 0% to 120%, the rate of 120% being awarded if the target values are exceeded, and the overall award rate is capped at 120%. Moreover, if the achievement rate of two of the criteria is strictly below 50%, the maximum award rate for each of the other criteria is capped at 100%. Hence, the maximum number of shares which may theoretically be awarded amounts to 441,816, *i.e.,* 29.5% of the total authorization granted by the annual general meeting of 19 May 2022.

For the 2023 plan, the five performance criteria (four financial criteria and one criterion linked to CSR performance) are as follows:

EBITDA margin (for up to 20% of the global allocation)

EBITDA margin is defined as follows: Group EBITDA as a percentage of Group sales.

The indicator is calculated using the average of EBITDA margins over 2023, 2024 and 2025.

The vesting rates, based on the value of the indicator, are as follows:

Value of the indicator	Vesting rate
Indicator ≤ 14%	0%
14% ≤ indicator ≤ 15.5%	Linear scale between 0% and 50%
Indicator = 15.5%	50%
15.5% ≤ indicator ≤ 16.5%	Linear scale between 50% and 100%
Indicator = 16.5%	100%
16.5% ≤ indicator ≤ 17.25%	Linear scale between 100% and 120%
Indicator ≥ 17.25%	120%

Operating cash conversion rate (for up to 20% of the global allocation)

The operating cash conversion rate is defined as free cash flow before capital expenditure (tangible and intangible investments) as a percentage of EBITDA.

The indicator is calculated using the average conversion rates for 2023, 2024 and 2025.

Free cash flow is adjusted for the impact of non-recurring items to ensure year-on-year comparability and to eliminate in particular significant non-recurring flows which may impact the criterion, notably when they are positive.

The vesting rates, based on the value of the indicator, are as follows:

Value of the indicator	Vesting rate
Indicator ≤ 62%	0%
62% ≤ indicator ≤ 70%	Linear scale between 0% and 100%
70% ≤ indicator ≤ 73%	Linear scale between 100% and 120%
Indicator ≥ 73%	120%

In the context of the Group's financial discipline, as defined during the 2023 CMD, the operating cash conversion rate has been fixed at around 70%. As a result, this target has been defined for the 100% achievement of this criterion.

Comparative Total Shareholder Return (TSR) (for up to 15% of the global allocation)

Arkema's TSR is compared with the average of the three following aggregates:

- the median of its competitors' TSR: BASF, Solvay/Syensqo, Evonik, HB Fuller, Dupont and Celanese;
- the MSCI European Chemicals Index (including dividends); and
- the CAC40 (including dividends).

The indicator corresponds to the percentage of this average that Arkema has achieved over the 2023–2025 period.

The vesting rates, based on the value of the indicator, are as follows:

Value of the indicator	Vesting rate
Indicator < 100%	0%
Indicator = 100%	50%
100% ≤ indicator ≤ 110%	Linear scale between 50% and 100%
110% ≤ indicator ≤ 120%	Linear scale between 100% and 120%
Indicator ≥ 120%	120%

The TSR is calculated as follows: (share price at the end of the period - share price at the beginning of the period + sum of the dividends per share paid out during the period)/share price at the beginning of the period.

The average of the share prices during the third quarter of 2023 and the average of the share prices during the third quarter of 2026 will be used to determine the prices at the beginning and at the end of the period respectively.

Return on average capital employed (ROACE) (for up to 15% of the global allocation)

ROACE, which corresponds to Group REBIT of year N as a percentage of the average of total capital employed at the end of years N and N-1, allows the measurement of profitability of investments over time.

REBIT and capital employed are adjusted for:

1) the impact of major acquisitions, the year of acquisition and the two following years; and
2) the impact of ongoing exceptional capital expenditure up to the year of the start-up and the two following years.

The indicator corresponds to the average of the ROACE for 2023, 2024 and 2025.

The vesting rates, based on the value of the indicator, are as follows:

Value of the indicator	Vesting rate
Indicator ≤ 8%	0%
8% ≤ indicator ≤ 10%	Linear scale between 0% and 100%
10% ≤ indicator ≤ 10.5%	Linear scale between 100% and 120%
Indicator ≥ 10.5%	120%

Arkema's CSR performance (for up to 30% of the global allocation)

The CSR criterion is structured as follows:

CSR	50%		Carbon trajectory - Scopes 1 and 2
	50%	1/3	Diversity
		1/3	Process safety event rate (PSER)
		1/3	Circular economy

Carbon trajectory: GHG

GHG (Scopes 1 and 2) in kt CO_2e in 2025	Vesting rate
Indicator ≥ 2,800	0%
2,800 ≥ indicator ≥ 2,500	Linear scale between 0% and 100%
2,500 ≥ indicator ≥ 2,400	Linear scale between 100% and 120%
Indicator ≤ 2,400	120%

The value of 2,500 kt CO_2e (100%) corresponds to a linear decrease of an updated trajectory based on the real 2022 value, more ambitious than the SBTi (Science Based Target initiative) 1.5°C trajectory.

Diversity: percentage of women holding senior management and executive positions

Percentage of women holding senior management and executive positions in 2025	Vesting rate
Indicator ≤ 25%	0%
25% ≤ indicator ≤ 28%	Linear scale between 0% and 100%
28% ≤ indicator ≤ 29%	Linear scale between 100% and 120%
Indicator ≥ 29%	120%

Compared to the 2022 plan, values of the 2023 plan are much more ambitious with a faster progression curve.

Process safety event rate (PSER)

PSER 2025	Vesting rate
Indicator ≥ 3.0	0%
3.0 ≥ indicator ≥ 2.5	Linear scale between 0% and 100%
2.5 ≥ indicator ≥ 2.4	Linear scale between 100% and 120%
Indicator ≤ 2.4	120%

The minimum value of 3.0 is more demanding than the 2021 performance, a year during which the Group showed significant progress compared to 2020.

Circular economy

The circular economy is measured through an indicator composed of the following elements:

1) Life Cycle Assessment of Arkema's products (relative weighting = 40%);
2) Non-recovered waste (relative weighting = 30%); and
3) Arkema's energy consumption decrease efforts with Energy EFPI (relative weighting = 30%).

The performance of these three indicators is monitored within the Group and reflects its commitment to developing the circular economy, in terms of products, waste recovery and energy consumption.

1. Life Cycle Assessments (LCA) of Arkema's products

Percentage of sales covered by LCA in 2025	Vesting rate
Indicator ≤ 50%	0%
50% ≤ indicator ≤ 60%	Linear scale between 0% and 100%
60% ≤ indicator ≤ 65%	Linear scale between 100% and 120%
Indicator ≥ 65%	120%

The values are consistent with the 2024 target of 50% and the 2030 target of 90%.

The value of 60% corresponds to a linear growth of an updated trajectory based on the 2022 real value.

The minimum value of 50%, is consistent with the 2024 target and reflects the Group's ambition to accelerate the implementation of LCA of its products to meet its customers' demand.

2. Non-recovered waste

Non-recovered waste for the period 2023–2025	Vesting rate
Indicator ≥ 48.5 kg/t	0%
48.5 kg/t ≥ indicator ≥ 47.0 kg/t	Linear scale between 0% and 100%
47.0 kg/t ≥ indicator ≥ 46.7 kg/t	Linear scale between 100% and 120%
Indicator ≤ 46.7 kg/t	120%

The indicator used is the average of non-recovered waste for 2023, 2024 and 2025 in kg per ton of production.

The plan defined applies a reduction of 2% compared to the reference and the targets of the 2022 performance share plan.

3. EFPI Energy

EFPI Energy worldwide in 2025	Vesting rate
Indicator ≥ 0.91	0%
0.91 ≥ indicator ≥ 0.84	Linear scale between 0% and 100%
0.84 ≥ indicator ≥ 0.82	Linear scale between 100% and 120%
Indicator ≤ 0.82	120%

In July 2022, the target for this EFPI was revised when Arkema published its new climate plan and is now fixed at 0.75 in 2030 (*i.e.*, a 25% decrease compared with 2012).

The targets of the 2022 performance share plan have been extended to the 2023 performance share plan and remain consistent with the 2030 targets.

Should the business portfolio evolve and lead to a significant impact on the value of one or more of the indicators, the Board of Directors, upon recommendation by the Nominating, Compensation and Corporate Governance Committee, may modify the target values.

SUMMARY OF 2023 PERFORMANCE SHARE PLAN

	Plan for employees in France	Plan for employees outside France
Date of annual general meeting	19 May 2022	
Authorized performance share awards as a % of the Company's share capital	2.02%	
Date of the Board of Directors' meeting	8 November 2023	
Number of rights awarded	247,665	126,995
of which to the Chairman and CEO	30,000	-
Total by authorization	922,596 shares, *i.e.*, 1.23% of the share capital at the date of the annual general meeting (1)	
Origin of shares to be awarded when the rights vest	-	-
Number of canceled rights (2)	4,200	315
Number of vested shares (3)	-	-
Number of rights still to vest at 31 December 2023	243,465	126,680
Vesting period	3 years	4 years
Holding period	2 years	None
Performance conditions	EBITDA margin over the period from 2023 to 2025 (20%) Operating cash conversion rate for the period from 2023 to 2025 (20%) Comparative TSR over the period from 2023 to 2025 (15%) Return on average capital employed over the period from 2023 to 2025 (15%) Arkema's CSR performance by 2025 (30%)	
Vesting rate	-	

(1) Maximum number of shares that may be awarded, taking into account the potential award of up to 120% of the share rights subject to performance conditions.
(2) Performance share rights canceled because the holders left the Group.
(3) Shares awarded to the grantees (including shares awarded before the end of the vesting period, in the event of death for example).

Previous performance share plans

The plans implemented from 2006 to 2018 have all expired.

2021 AND 2022 PERFORMANCE SHARE PLANS

	2021		2022	
	Plan for employees in France	Plan for employees outside France	Plan for employees in France	Plan for employees outside France
Date of annual general meeting	21 May 2019		19 May 2022	
Authorized performance share awards as a % of the Company's share capital	1.96%		2.02%	
Date of the Board of Directors' meeting	9 November 2021		9 November 2022	
Number of rights awarded	239,575	124,713	234,715	128,540
of which to the Chairman and CEO	30,000	-	30,000	-
Total by authorization	1,310,756 shares, *i.e.*, 1.71% of the share capital at the date of the annual general meeting (1)		480,780 shares, *i.e.*, 0.64% of the share capital at the date of the annual general meeting (1)	
Origin of shares to be awarded when the rights vest	-	-	-	-
Number of canceled rights (2)	7,500	8,510	6,960	3,625
Number of vested shares (3)	-	50	-	-
Number of rights still to vest at 31 December 2023	232,075	116,153	227,755	124,915
Vesting period	3 years	4 years	3 years	4 years
Holding period	2 years	None	2 years	None
Performance conditions	EBITDA margin for the Specialty Materials platform over the period from 2021 to 2023 (20%) EBITDA to cash conversion rate over the period from 2021 to 2023 (20%) Comparative TSR over the period from 2021 to 2023 (20%) Return on average capital employed for the Specialty Materials platform over the period from 2021 to 2023 (20%) Arkema's CSR performance in 2023 (20%)		EBITDA margin for the Specialty Materials platform over the period from 2022 to 2024 (20%) EBITDA to cash conversion rate over the period from 2022 to 2024 (20%) Comparative TSR over the period from 2022 to 2024 (15%) Return on average capital employed for the Specialty Materials platform over the period from 2022 to 2024 (20%) Arkema's CSR performance by 2024 (25%)	
Vesting rate	-		-	

(1) 2021 and 2022 plans. Maximum number of shares that may be awarded, taking into account the potential award of up to 120% of the share rights subject to performance conditions.
(2) Performance share rights canceled because the holders left the Group.
(3) Shares awarded to the grantees (including shares awarded before the end of the vesting period, in the event of death for example).

2019 AND 2020 PERFORMANCE SHARE PLANS

	2019		2020	
	Plan for employees in France	Plan for employees outside France	Plan for employees in France	Plan for employees outside France
Date of annual general meeting	21 May 2019		21 May 2019	
Authorized performance share awards as a % of the Company's share capital	1.96%		1.96%	
Date of the Board of Directors' meeting	29 October 2019		4 November 2020	
Number of rights awarded	237,945	131,035	238,550	128,245
of which to the Chairman and CEO	30,000	-	30,000	-
Total by authorization	436,531 shares, *i.e.*, 0.57% of the share capital at the date of the annual general meeting (2)		870,798 shares, *i.e.*, 1.14% of the share capital at the date of the annual general meeting (1)	
Origin of shares to be awarded when the rights vest	-		-	
Number of canceled rights (3)	5,535	14,825	9,855	11,970
Number of vested shares (4)	242,140	120,832	241,584	-
Number of rights still to vest at 31 December 2023	-	-	-	116,275
Vesting period	3 years	4 years	3 years	4 years
Holding period	2 years	None	2 years	None
Performance conditions	REBIT margin over the period from 2019 to 2021 (20%) EBITDA to cash conversion rate over the period from 2019 to 2021 (20%) Comparative TSR over the period from 2019 to 2021 (20%) Return on average capital employed over the period from 2019 to 2021 (20%) CSR performance in 2021 (20%)		EBITDA margin for the Specialty Materials platform over the period from 2020 to 2022 (20%) EBITDA to cash conversion rate over the period from 2020 to 2022 (20%) Comparative TSR over the period from 2020 to 2022 (20%) Return on average capital employed for the Specialty Materials platform in 2022 (20%) Arkema's CSR performance in 2022 (20%)	
Vesting rate	REBIT margin (2019 to 2021): 62% EBITDA to cash conversion rate (2019 to 2021): 120% Comparative TSR (2019 to 2021): 100% Return on average capital employed (2019 to 2021): 120% Arkema's CSR performance in 2021: 120% Overall rate: 104.4%		EBITDA margin for the Specialty Materials platform for the period (2020 to 2022): 120% EBITDA to cash conversion rate (2020 to 2022): 120% Comparative TSR (2020 to 2022): 50% Return on average capital employed for the Specialty Materials platform in 2022: 120% Arkema's CSR performance in 2022: 120% Overall rate: 106%	

(1) *2020 plan. Maximum number of shares that may be awarded, taking into account the potential award of up to 110% of the share rights subject to performance conditions.*
(2) *2019 plan. Maximum number of shares that may be awarded, taking into account the potential award of up to 120% of the share rights subject to performance conditions.*
(3) *Performance share rights canceled because the holders left the Group.*
(4) *Shares awarded to the grantees (including shares awarded before the end of the vesting period, in the event of death for example), including shares delivered for any outperformance.*

3.5.2 Stock option plans

In accordance with the share-based compensation policy, no stock option plan has been granted since 2012 anymore. The final plan, granted in 2011, expired on 4 May 2019.

4 CORPORATE SOCIAL RESPONSABILITY

The different parts constituting the annual financial report are identified in the table of contents by the pictogram **|AFR|**

4.1 Arkema's corporate social responsibility (CSR) approach

4.1.1 CSR policy

Arkema aims to generate sustainable and responsible growth for its businesses and to meet societal challenges by providing its customers with sustainable and innovative solutions that contribute to the Sustainable Development Goals defined by the United Nations.

The Group's CSR policy is developed in compliance with the main international texts and standards in force and more particularly with the International Bill of Human Rights, the International Labour Organization's (ILO) Declaration on Fundamental Principles and Rights at Work, the OECD Guidelines for Multinational Enterprises, the ten principles of the United Nations Global Compact, to which Arkema committed in 2014, and the Responsible Care® program, of which the Group has been a member since 2006.

Arkema uses the Global reporting Initiative (GRI) standards as its CSR reporting framework. In accordance with the European Commission's 2019 guidelines, the Group also refers to the Task Force on Climate-Related Financial Disclosures (TCFD) framework for its climate reporting.

In 2023, the Group's new greenhouse gas emission reduction targets for 2030, aligned with a 1.5°C trajectory, were validated by the Science Based Targets initiative (SBTi), an independent global body.

To facilitate the understanding of its CSR approach among all stakeholders, Arkema published a Social Commitment Charter and implemented it across the organization to ensure support for its sustainable development culture. Approved by the Executive Committee, the charter was updated following the latest materiality assessment conducted in 2022. It is based on factors that have long been fundamental to Arkema, including a culture of safety, respect for the environment, innovation, employee issues and a culture of close dialogue. It sets out the three key commitments that structure the Group's CSR policy:

- offer sustainable solutions driven by innovation;
- act as a responsible manufacturer; and
- cultivate a position as employer of choice and seek an open dialogue with stakeholders.

Offer sustainable solutions driven by innovation

- Responsible product stewardship
- Solutions that address societal, climate and circular economy challenges
- Innovation at the heart of the activities

Act as a responsible manufacturer

- Health and safety
- Process safety
- Environmental footprint reduction
- Resources management
- Climate
- Biodiversity

Cultivate a position as an employer of choice and seek an open dialogue with stakeholders

- Ethics
- Human rights
- Diversity and inclusion
- Employee development
- Quality of life at work
- Responsible value chain
- Corporate citizenship

Charters and policies

The Social Commitment Charter is broken down into different policies that support the Group's three commitments: an Innovation Policy, a Health, Safety, Security, Environment and Quality (HSSEQ) Policy, a Human Rights Policy, a Business Conduct and Ethics Code, a Supplier Code of Conduct, an Anti-Corruption Policy, a policy on conflict minerals and a policy on the use of Group products for medical device applications.

These charters, policies and codes are applied across the Group and all of its subsidiaries and are all available in the Sustainable Development section on the Company's website (www.arkema.com).

4.1.2 CSR governance

Arkema's CSR governance is integrated into the Group's corporate governance. Arkema's CSR ambition, the main challenges, risks and opportunities, the related potential initiatives and their monitoring, the performance indicators and the sustainable development targets are defined and validated by the Executive Committee and presented once a year by the Director of Sustainable Development to the Audit and Accounts Committee and the Innovation and Sustainable Growth Committee as part of their respective roles, then to the Board of Directors, 54% of whose members have CSR expertise.

The scope of the non-financial data audit and the findings of the independent third-party auditor responsible for this audit are presented every year to the Audit and Accounts Committee. These findings appear in the auditor's opinion issued to the annual general meeting along with the Board of Directors' management report, which also includes a variety of social and environmental information.

Since 2021, the Board of Directors' Innovation and Sustainable Growth Committee has been tasked with assessing the contribution of Arkema's innovation and strategy to environmental challenges and sustainable growth, thereby reinforcing the review mechanism of CSR issues by complementing the duties of the aforementioned Audit and Accounts Committee, as well as those of the Nominating, Compensation and Corporate Governance Committee relating for example to diversity.

The distribution of CSR work between the Board of Directors and its committees is described in sections 3.3.2.3 and 3.3.4.3 of this document.

To ensure that the social, environmental and business aspects of Arkema's operations are managed consistently and in the interests of all stakeholders, the Group's CSR commitment is led by the Chairman and Chief Executive Officer of the Company and the Group Executive Committee. The Group's commitment to the United Nations Global Compact is renewed each year, and its adherence to the ten principles is clearly set out in its Communication On Progress. This commitment has been GC Advanced level since 2019. Internally, environmental, social and ethics policies are validated by the Executive Committee members, who are responsible for their dissemination and application across the Group. The operational entities are responsible for the effective implementation of these policies.

To fulfill its ambitious CSR approach, the Group has created a Sustainable Development department that includes the Product Safety and Environment department and the life-cycle assessment expert team. It reports directly to the Industry and CSR Executive Vice-President, who is a member of the Executive Committee.

In addition, three steering committees, one for each of the three commitments set out in the Group's CSR policy, guide and support the Group's progress in the area of CSR. The three committees are chaired by the Industry and CSR Executive Vice-President. The Product Stewardship Steering Committee is made up of members of the Executive Committee in charge of the Business Lines as well as the R&D and Sustainable Development Vice-Presidents. The Industrial Ecology Steering Committee is made up of members of the Executive Committee in charge of the Business Lines as well as the Industrial, Safety and Environment, Process, Procurement and Sustainable Development Vice-Presidents. The CSR/Stakeholder Dialogue Steering Committee is made up of the Human Resources and Communication Executive Vice-President and a number of corporate Vice-Presidents who are actively involved in the CSR process. The three steering committees meet twice a year. Every year, the Sustainable Development Vice-President presents the Executive Committee with an overview.

A formal network of CSR leaders was created in 2019. It comprises approximately fifty members, including representatives from each of the businesses that make up the Group's segments, corporate department and the main countries in which the Group operates. These leaders work with the Sustainable Development department, which coordinates the network, to implement the CSR policy within their organization.

Integration of CSR into the Group's organic and external growth projects

CSR considerations are factored into the evaluation phases prior to acquisitions, in particular employee-related and labor law issues, product portfolio reviews, environmental impacts of sites including the climate impact, sustainable procurement and business ethics practices, and relations with local communities.

In the case of business disposals or reorganizations, special attention is paid to employee-related issues. Thus, prior to implementing such projects, the Executive Committee carefully examines the employee-related impacts and factors them into its decision-making process. Where necessary, the purchaser is required to make certain commitments.

As regards organic growth projects, industrial expenditure is subject to a CSR assessment based on the Group's commitments and objectives. For projects in excess of €2 million, this assessment is an integral part of the approval process as of the feasibility phase. It can also apply for projects exceeding €600,000 at the request of the Business Line or country.

For projects requiring the Board of Directors' prior approval, and more generally for any growth transaction or investment project requiring its opinion, the Board also ensures that all social issues and environmental impacts have been fully considered in the assessment process in accordance with the strategy described above.

4.1.3 Stakeholders and materiality assessment |DCP|

The Group's CSR approach, which includes an open dialogue, aims to establish a responsible and value-creative value chain shared by Arkema and its stakeholders, as presented in the "Profile, ambition and strategy" section of this document.

Open dialogue

Consultation and open dialogue with internal and external stakeholders are prerequisites for understanding their expectations, building relationships based on trust and cooperation, reducing social risks and creating value for all.

The following table summarizes the Group's dialogue with stakeholders in its ecosystem.

Stakeholders	Context and purpose of dialogue	Key stakeholder expectations in the area of CSR	Form of dialogue
Customers	Business relationship and collaboration aimed at meeting the current and future needs of customers and end users	Innovation towards sustainability Sustainable solutions Circular economy Climate, energy and GHG management	Arkema establishes ongoing dialogue with its customers at various levels of the organization. To increase the value added created, the Group capitalizes in particular on: • dedicated management of global key accounts as part of a commercial excellence program; • joint innovation programs with customers, particularly with regard to climate issues and resource management, including life-cycle assessment if required; • development of new digital solutions that increase value added for customers and partners; and • a global, online survey to assess overall satisfaction. For further details, see the section "Our customers at the heart of our actions" in the "Profile, ambition and strategy" section of this document.
Suppliers	Business relationship and collaboration aimed at meeting the current and future needs of the Group and its customers	Climate, energy and GHG management Sustainable solutions	Arkema favors suppliers that have a global presence (Europe, Americas and Asia), are competitive and innovative (including in digital technology), and actively deploy a CSR policy. Arkema maintains open dialogue with its suppliers at various levels of the organization so that they support the Group in its developments over the short and long term, particularly with regard to climate issues and resource management. Arkema encourages its suppliers to commit to a corporate social responsibility program by conducting CSR performance assessments and encourages those suppliers that contribute the most to the emissions from its raw material purchases to take part in climate action and disclose their commitments. For further details, see sections 4.6.4 and 4.4.3.3 of this chapter.
Research partners	Technology partnerships aimed at strengthening the Group's innovation performance by providing access to additional skills and discoveries that can drive breakthrough innovations	Innovation towards sustainability Sustainable solutions Climate, energy and GHG management Governance, business ethics and transparency	Arkema develops a diverse range of partnerships in various forms, including with academic institutions and industrial companies or as part of national or international cooperation efforts. Partnerships such as those involving the Group's cross-functional R&D programs contribute to fulfilling the Sustainable Development Goals (SDGs), particularly SDG 12, which relates to resource management, and SDG 13 on climate action. For further details, see sections 1.1.2 and 1.1.5 of this document.

Stakeholders	Context and purpose of dialogue	Key stakeholder expectations in the area of CSR	Form of dialogue
Financial community, shareholders and SRI rating agencies	Inform the market of the Group's results and main operations Improve understanding of the Group's activities, strategy and outlook among investors, analysts and individual shareholders through transparent information	Climate, energy and GHG management Governance, business ethics and transparency Innovation towards sustainability	• results presentations; • meetings with and days dedicated to institutional investors and analysts; • discussions with financial rating agencies; • completing questionnaires and discussions with SRI rating agencies; and • annual general meeting. For further details, see section 6.4 of this document.
Employees and employee representative bodies	Dialogue with employee representative bodies and direct dialogue with employees	Health, safety and well-being Climate, energy and GHG management Innovation towards sustainability	• continuous social dialogue with employee representative bodies that goes beyond legal requirements and provides numerous opportunities for discussion and negotiation with a view to driving social progress; and • consultation and dialogue with employees, notably in the form of internal surveys. For further details, see sections 4.6.1.5 and 4.6.1.8 of this chapter.
Neighboring communities	Neighbors and communities that interact locally with Group sites	Water and waste management Process safety and emissions management Innovation towards sustainability	The Common Ground® initiative described in section 4.6.6.2 of this chapter promotes local dialogue at each of the Group's sites.
Civil society and NGOs	Proactive and reactive dialogue		• collaboration with NGOs on specific projects; • discussions in relation to the materiality assessment; • periodic meetings with the media; and • responsible and transparent communication in the event of a crisis. For further details, see section 4.6.6 of this chapter.
Public authorities	Regular and occasional contact aimed at ensuring the responsible development of the Group's activities	Climate, energy and GHG management Innovation towards sustainability Process safety and emissions management	• responses to periodic surveys; • participation in various consultation and working groups; and • occasional contact at various levels (departments and cabinets) on specific topics. For further details, see section 4.6.5 of this chapter.
Professional associations	Continuous contribution to defending the industry's interests *vis-à-vis* the public authorities and participation in identifying and disseminating best practices across the industry		Arkema participates actively in segment- or topic-specific working groups, commissions and statutory bodies within relevant associations and in the external initiatives carried out by such associations. For further details, see section 4.6.5 of this chapter.

Materiality assessment

Context

Arkema performs its materiality assessment every three years to update and prioritize the Group's most material CSR issues. This serves as a basis for the Group to update its CSR strategy, governance, action plans and key performance indicators (KPIs). After 2016 and 2019, Arkema completed its new materiality assessment in early 2022.

The materiality assessment was undertaken by engaging key internal and external stakeholders, and applying the double materiality principle, in order to take a forward-looking perspective. This means that companies report on how sustainability issues affect their business and on their own impact on people and the environment.

The Group's most material issues were defined as such following three dimensions:

- importance of the CSR topics for the Group's stakeholders;
- outside-in/business impacts (*i.e.*, impact of the topics on the Company); and
- inside-out/societal and environmental impacts (*i.e.*, impact of the Company on the topics).

The materiality assessment was conducted in collaboration with Arkema's stakeholders through several means of consultations, including interviews, a global employee survey, workshops and additional desk research. Stakeholders, including employees, customers, public organizations, investors, local communities, suppliers and research partners throughout the regions and markets in which Arkema operates were consulted in the process.

The materiality assessment was undertaken on the basis of a six-month project. Under the responsibility of the Sustainable Development department, an internal project team representing various functions and regions was set up to guide the project and engage with stakeholders. The project team was supported by a third-party consultant specialized in Sustainable Development. The whole process was overseen by a Steering Committee set up exclusively for the materiality assessment, and composed of the Industry and CSR Executive Vice-President and the Human Resources and Communication Executive Vice-President – both Executive Committee members – as well as heads of Business Lines, regions, and support functions across Arkema. The Steering Committee's objectives were to approve the process of the materiality assessment, to approve the list of priority issues and external stakeholders to engage with, and to validate the results of the materiality assessment. Lastly, the Executive Committee approved the update of the CSR policy, in particular the formalization of priorities and the evolution of associated indicators and targets.

Process

The materiality assessment was carried out through different stages.

Stage 1: priority issue selection

The key material topics were assessed through interviews with 11 heads of Business Lines, regions and support functions and one member of the Board of Directors. This research was complemented with desk research on CSR reporting frameworks for a selection of Arkema's peers, ESG ratings questionnaires, standards and trend reports, as well as Arkema's current initiatives, to ensure all potentially material topics were covered. This resulted in a list of 17 material topics, which were validated by the Steering Committee.

Stage 2: consultation of stakeholders for prioritization of material topics and impact assessment

The material topics' significance was assessed by the Group's stakeholders through:

- 30 interviews with a selection of Arkema's external stakeholders (customers, public organizations, investors, local communities, suppliers and research partners);
- a question in the Arkema Cares global engagement survey to assess the perspective of employees, for which 13,770 responses were collected; and
- additional desk research on 26 of Arkema's external stakeholders (customers, public organizations, investors and suppliers).

The material topics' impacts were assessed through three regional workshops (to capture the regional impacts related to Arkema's activities in the Americas, Asia and Europe), and a global workshop. During each of these workshops, the outside-in and inside-out impacts related to the material topics were discussed and then ranked, to ensure the materiality assessment was conducted in line with the double materiality perspective.

Stage 3: visualization and categorization of material topics

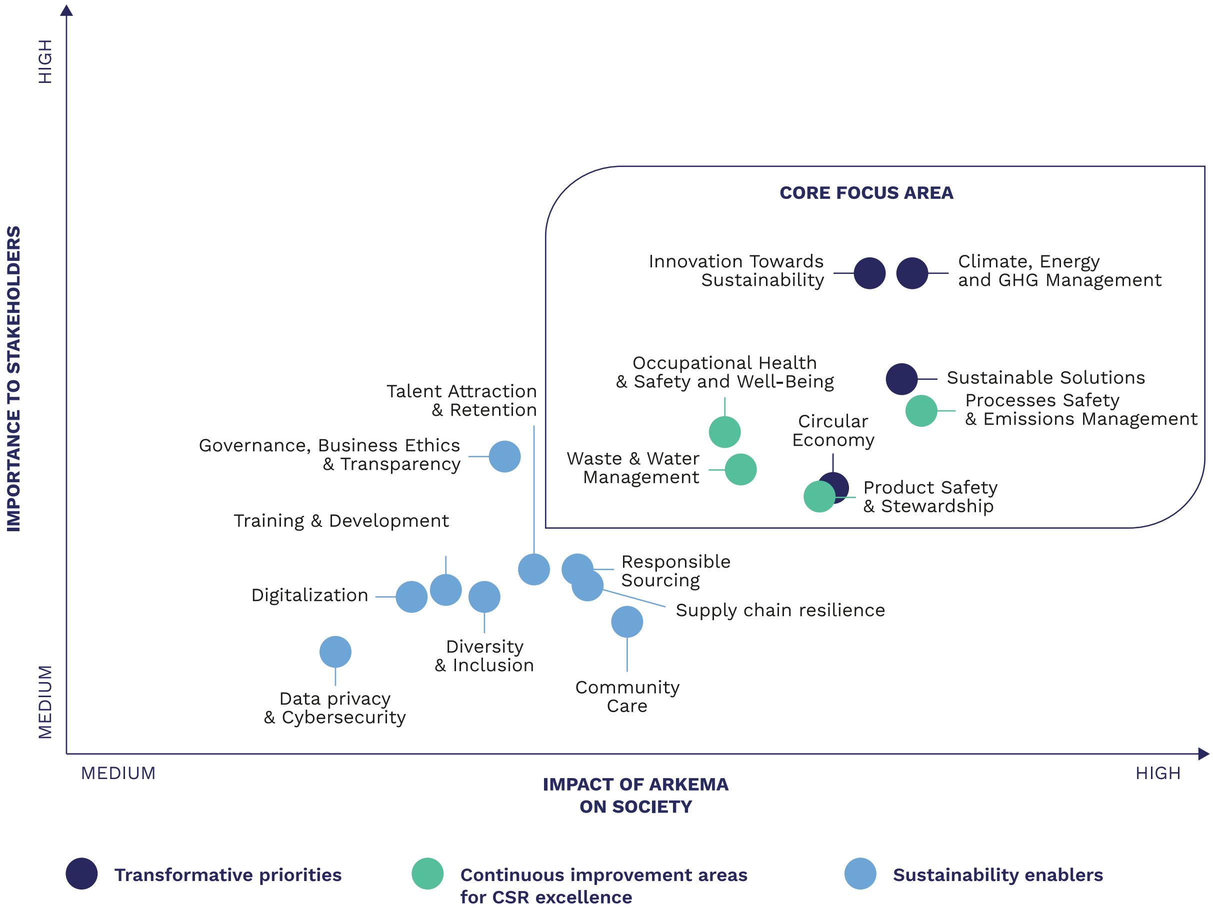
The material topics were mapped into Arkema's new materiality matrix, and labeled according to different categories for focused and effective management. The topics were plotted in the matrix according to stakeholder interest and the inside-out impacts, in line with GRI Standards.

Stage 4: CSR policy update approval by the Executive Committee, in particular the formalization of priorities and the evolution of associated indicators and targets.

Results

As a result of this renewed materiality assessment, Arkema identified 17 key material issues. These had a high score in terms of stakeholder relevance, outside-in/business impacts and inside-out/societal impacts. They were classified into three categories for focused and effective management:

- **transformative priorities:** material topics which are at the heart of Arkema's activities and enable the Company to build long-term value and maintain a competitive edge in line with global megatrends;
- **continuous improvement areas for CSR excellence:** material topics on which efforts should be maintained for continuous improvement of CSR excellence; and
- **sustainability enablers:** material topics that put the Company in the right position to address its priority issues.



Key issues: eight priority issues have been identified based on their relevance to the Group's stakeholders and the Group's impact on people and the environment. Priority was established by assessing the impact of sustainability issues on the company in the case of six of these issues (climate, energy and GHG management, circular economy, sustainable solutions, innovation towards sustainability, processes safety and emissions management, and product safety and stewardship).

In addition, the materiality assessment was well received by the external stakeholders who were invited for interviews. They provided good feedback on the relevance of the material topics for Arkema and on potential improvement points and showed renewed interest for further collaboration towards sustainability.

Consequences

The outcomes of the updated materiality assessment were closely aligned with Arkema's CSR commitments at the time. Still, to better integrate the material topics identified with Arkema's CSR priorities, the commitment "Cultivate an open dialogue and close relations with our stakeholders" evolved to be renamed "Cultivate a position as employer of choice and seek an open dialogue with our stakeholders".

CSR COMMITMENTS	2022 MATERIAL TOPICS
DELIVER SUSTAINABLE SOLUTIONS DRIVEN BY INNOVATION	Innovation Towards Sustainable Solutions Circular Economy (including Waste & Water Management) Product Safety & Stewardship
MANAGE OUR ACTIVITY AS A RESPONSIBLE MANUFACTURER	Climate, Energy and GHG Management OHS (and Well-Being) Processes Safety & Emissions Management
CULTIVATE A POSITION AS AN EMPLOYER OF CHOICE AND SEEK AN OPEN DIALOGUE WITH OUR STAKEHOLDERS	**Employer of choice** Diversity & Inclusion (OHS and) Well-Being Talent Attraction & Retention Training & Development
	Close relations with stakeholders Governance, Business Ethics & Transparency Community Care Data Privacy & Cybersecurity Digitalization Responsible sourcing Supply Chain Resilience

- Transformative priorities
- Continuous improvement areas for CSR excellence
- Sustainability enablers

Arkema will accelerate its efforts on its "transformative priorities", which drive the evolution of the Group's business model.

- For "innovation towards sustainability [(1)]" the priority is to "develop and promote a range of solutions enabling sustainability".
- For "circular economy", the priority is to "further implement and enable circularity on our sites and along our value chain".

For these first two priorities, the Group will rely in particular on its innovation strategy described in section 1.1.2.2 of this document and on its Archimedes program, which consists in assessing its solutions portfolio *vis-à-vis* their contribution to the UN Sustainable Development Goals, and will continue its actions in order to achieve its 2030 target of 65% of ImpACT+ solutions.

- For the "climate, energy and GHG management" priority, the Group has strengthened its commitments and aligned its objectives with the 1.5°C trajectory of the Paris Agreement.

On "continuous improvement areas for CSR excellence", Arkema will maintain its efforts on occupational health, safety and well-being, on prevention and management of industrial risks and on product safety and stewardship.

(1) *Includes "Innovation towards Sustainability" and "Sustainable Solutions".*

4.1.4 CSR challenges, commitments and outcomes

To identify the key impacts, risks and opportunities, the Group has implemented governance described in section 4.1.2 of this chapter and relies on its risk management system (presented in section 2.2 of this document), stakeholder expectations, which are analyzed in three-yearly materiality assessments (see section 4.1.3) and global megatrends (see the "Profile, ambition and strategy" section of this document). It also refers to its duty of care plan (see section 4.1.6) and its non-financial information statement (see section 4.1.5). The impacts, risks and opportunities are considered across the entire value chain and in relation with its business partners.

The risk identification and review process is carried out using a collaborative approach involving the Sustainable Development, Human Resources, Safety and Environment, Legal Affairs, Procurement, and Internal Audit and Internal Control departments. The main non-financial risks are included in the Group's overall risk map. They are reviewed by the Risk Review Committee, in line with the risk management procedure described in section 2.2 of this document.

The materiality assessment carried out in 2022, based on the principle of dual materiality (taking into account both (i) the materiality of the impact on environmental, social and governance challenges and (ii) financial materiality) made it possible to prioritize sustainability challenges according to their importance to the Group's stakeholders, their impact on the Group's operations and the Group's impact on people and the environment (the 2022 materiality assessment is presented in section 4.1.3).

Since its creation, Arkema has been engaged in a continuous process of reducing the main risks associated with its activities, particularly those relating to safety and the environment. At the same time, thanks to its capacity for innovation and its expertise, Arkema develops new products and solutions that provide a wide range of opportunities to contribute to meeting the challenges of sustainable development, particularly those relating to the climate and the circular economy (for further details, see section 1.1.2 of this document).

The material issues form the basis of structured programs at Group level, with progress tracked *via* indicators as presented in the table below. These programs are presented in detail in the various sections of this chapter.

COMMITMENTS, KEY CHALLENGES AND ASSOCIATED OBJECTIVES

Arkema's CSR commitments	Key challenges	Objectives	Sustainable Development Goals
Offer sustainable solutions driven by innovation	• Innovation towards sustainability (see section 1.1 of this document) • Sustainable solutions • Product safety and stewardship • Circular economy (including water and waste management)	By 2030, 65% of ImpACT+ sales (Archimedes program). By 2030, 25% reduction in water withdrawals compared with 2019 (*i.e.*, a target of 82 million cu.m by 2030). Objective of reducing the quantity of waste treated without recovery as a percentage of production: 48 kg/t on average over the 2022-2024 period (*i.e.*, an annual reduction objective of 1.5% on the 2021 baseline of 49.5 kg/t). By 2030, 90% of sales covered by a full life-cycle assessment.	
See details in sections 4.2 "Sustainable solutions" and 4.3 "Circular economy".			
Act as a responsible manufacturer	• Climate, energy and greenhouse gas (GHG) management • Process safety and emissions management • Occupational health and safety	By 2030, 48.5% reduction in Scopes 1 and 2 greenhouse gas emissions in absolute terms compared with 2019. By 2030, 54% reduction in Scope 3 greenhouse gas emissions in absolute terms compared with 2019. By 2030, 25% reduction in net energy purchases (in EFPI terms compared with 2012). By 2030, 65% reduction in chemical oxygen demand (COD) emissions (in EFPI terms compared with 2012). By 2030, 65% reduction in volatile organic compound (VOC) emissions (in EFPI terms compared with 2012). By 2030, reduction in the process safety event rate (PSER) to 2.0. By 2030, reduction in the total recordable injury rate (TRIR) to 0.8. In 2025, 100% of AIMS-audited sites.	
See details in sections 4.4 "Climate" and 4.5 "Safety and environment".			
Cultivate a position as employer of choice and seek an open dialogue with stakeholders	• Diversity and inclusion • Occupational well-being • Talent attraction and retention • Training and development • Governance, business ethics and transparency • Community care • Data privacy and cybersecurity • Digitalization • Responsible sourcing • Supply chain resilience	By 2030, 30% of senior management and executive positions to be held by women. By 2030, 50% of senior management and executive positions to be held by non-French nationals. By 2030, achieve an employee engagement score of at least 80%. By 2025, 80% of purchasing spend with relevant suppliers covered by a Together for Sustainability assessment.	
See details in section 4.6 "Labor and stakeholder relations".			

The indicators associated with the above objectives are reviewed annually by the Executive Committee, which is responsible for setting them and, where necessary, updating them.

In 2023, Arkema strengthened its commitment to the climate and revised its greenhouse gas emissions reduction targets on Scopes 1 + 2 and Scope 3 emissions across its value chain. The new 2030 targets, aligned with the 1.5°C trajectory, have been validated by the independent global body Science-Based Targets Initiative (SBTi). For further details, see section 4.4 of this document.

Arkema has also set a new, more ambitious target for 2030 to reduce its chemical oxygen demand, and is stepping up action on water consumption by setting a new target for water withdrawals.

Lastly, the Group is raising its target of sales covered by a life-cycle assessment.

Tracking and analyzing these KPIs enables the Group to validate, year after year, the performance of its CSR approach and upgrade it as required. See the various sections of this chapter for further details.

MONITORING OF GROUP TARGETS AND RESULTS

	Target year	Target	**2023**	2022	2021
Offer sustainable solutions driven by innovation					
Percentage of ImpACT+ sales [(1)]	2030	65%	51%	53%	51%
Percentage of sales from products made from renewable or recycled raw materials [(2)]			11%	10%	10%
Water withdrawals (in millions of cu.m)	2030	82	86	91	97
Waste treated without recovery *(per kg/t of production)* [(3)]	2024	48	47.4	51.8	49.5
Percentage of sales covered by a life-cycle assessment	2030	90%	56%	41%	27%
Act as a responsible manufacturer					
Percentage of AIMS-audited sites	2025	100%	94%	91%	86%
Safety					
Total recordable injury rate (TRIR) [(4)]	2030	0.8	0.9	0.9	1.0
Process safety event rate (PSER) [(5)]	2030	2.0	2.8	2.8	3.1
Environmental footprint					
Reduction in Scope 1 and 2 greenhouse gas emissions *(in absolute terms compared with 2019)*	2030	48.5%	39%	34%	23%
Reduction in Scope 3 greenhouse gas emissions *(in absolute terms compared with 2019)*	2030	54%	53%	49%	38%
Volatile organic compound (VOC) emissions *(in EFPI terms compared with 2012)*	2030	0.35	0.49	0.53	0.50
Chemical oxygen demand (COD) *(in EFPI terms compared with 2012)*	2030	0.35	0.38	0.42	0.45
Net energy purchases *(in EFPI terms compared with 2012)*	2030	0.75	0.91	0.87	0.85
Cultivate a position as employer of choice and seek an open dialogue with stakeholders					
Employee development and diversity					
Percentage of women in senior management and executive positions	2030	30%	29%	26%	24%
Percentage of non-French nationals in senior management and executive positions	2030	50%	40%	40%	40%
Responsible procurement					
Percentage of purchasing spend with relevant suppliers covered by a TfS assessment [(6)]	2025	80%	76.5%	75%	73%

(1) The percentage of sales contributing significantly to the United Nations SDGs (ImpACT+) was calculated on the basis of an assessment of 84% of the Group's third-party sales in 2023.
(2) The percentage of sales from products made from renewable or recycled raw materials covers products with a renewable or recycled raw material content of at least 25%.
(3) The target is 48 kg/t on average over the 2022-2024 period, i.e., an annual reduction of 1.5% compared with 2021 (49.5 kg/t).
(4) The TRIR includes injuries to both Group and subcontractor employees.
(5) The PSER is calculated in accordance with the criteria set out by the International Council of Chemical Associations (ICCA) and the European Chemical Industry Council (CEFIC).
(6) Relevant suppliers are those accounting for at least 80% of the Group's recurring purchasing spend.

Improvement process and recognition

For several years now, Arkema has been strongly engaged in a process to improve its CSR performance. The Group's approach is regularly assessed by external stakeholders, particularly non-financial rating agencies and customers, providing the Group with areas for improvement that will enable it to rank among the best performing companies in the industry. As requested by Group customers, site audits may also be performed by independent auditing firms to supplement this assessment.

In September 2023, Arkema was ranked among the best in the chemicals sector by rating agency Moody's ESG Solutions, kept its place in the French CAC 40 ESG® index, created in 2021, and joined the new CAC® SBT 1.5° index, created in 2023. It continues to be included in the Dow Jones Sustainability Index Europe, and improved its CDP Climate Change score from B to A-. These recognitions are a vindication of the Group's CSR approach.

A rating since 2017

A- rating was obtained
for Climate Change
B for Water Security

18.4 score
Low risk *category*

Inclusion in the Europe 120 and
Eurozone 120 indices since 2015
Included in CAC40® ESG since 2021

Arkema ranks among
the top 4%
of companies in the sector

C+ rating. Arkema is
in the top worldwide decile

4.1.5 Consolidated non-financial information statement

In compliance with articles L. 225-102-1 and L. 22-10-36 of the French Commercial Code *(Code de commerce)*, Arkema takes into account the social and environmental consequences of its activities (those of the Company and of all its subsidiaries included in the consolidation scope), as well as their impact in terms of human rights and the fight against corruption and tax evasion.

The Group's business model is described in the "Profile, ambition and strategy" section of this document.

The identification and review of the main risks associated with its activities are based on a number of sources: the general risks listed in the international reference documents cited in section 4.1.1 of this chapter; the risks targeted by the Responsible Care® program, which are specific to the chemicals industry; feedback from the Group's own experience; incidents that have occurred at companies with similar activities or scope; the material topics expressed by stakeholders during the materiality assessment presented in section 4.1.3 of this chapter; and the Group's duty of care plan. The risk identification and review process is carried out using a collaborative approach involving the Sustainable Development, Human Resources, Health, Safety and Environment, Legal Affairs, Procurement, and Internal Audit and Internal Control departments. The main non-financial risks are included in the Group's risk map. They are presented in chapter 2 of this document and are reviewed by the Risk Review Committee, in line with the risk management procedure described in section 2.2 of this document.

The main non-financial risks identified by the Group in the areas mentioned above are presented in this chapter, along with the due diligence procedures and policies implemented to prevent, identify and mitigate those risks and the outcomes of those policies in the form of performance indicators.

The main risks are:

- the risk of industrial accidents liable to have social or environmental consequences;
- the risk of exposure to chemicals, whether involving Group or subcontractor employees, customers, end users or local residents;
- the risk of pollution and the risks related to climate change (physical and transition risks), whether through Arkema's own activities or those of its upstream value chain or through the use of its products; and
- the risk of losing the skills and expertise necessary to continuously meet business, technological, social and environmental expectations in a proactive manner.

In addition to the risks mentioned above, the Group monitors the following risks, which are also presented in this chapter: ethics and compliance risks, including those relating to the fight against corruption, the risk of human rights violations, the risk of poor social and environmental performances by suppliers or subcontractors, and the risk of scarcity of non-renewable resources.

The Group's governance of CSR issues is described in section 4.1.2 of this chapter.

The non-financial information statement for the year ended 31 December 2023, which includes all the CSR performance indicators mentioned in this chapter, was reviewed by the independent third-party auditor, as indicated in its limited assurance statement. The report is presented in section 4.7.9 of this chapter.

In compliance with article R. 225-105-1 III of the French Commercial Code, reported non-financial information is published on the Group's website at the following address: https://www.arkema.com/global/en/social-responsibility/.

CROSS-REFERENCE TABLE FOR THE NON-FINANCIAL INFORMATION STATEMENT

Articles L. 225-102-1, L. 22-10-36 and R. 225-105 of the French Commercial Code *(Code de commerce)*	Sections in this document
Company business model	Profile, ambition and strategy
Description of the main risks involved in the way the Company takes into account the social and environmental consequences of its activities as regards human rights, and avoidance of corruption and tax evasion	2.1 (non-financial risks are tagged "CSR")
Social impact of the Company's activities	4.6.1
Environmental impact of the Company's activities	4.3.3 and 4.5.3
Impact of the Company's activities on human rights	4.1.6 and 4.6.3
Impact of the Company's activities on avoidance of corruption and tax evasion	4.6.2
Impact of the Company's activities and of the use of goods it produces and services it provides on climate change	4.1.6, 4.4, 4.4.3.3 and 4.6.4.6
Social commitments to sustainability, allowance made for social and environmental challenges in supplier and subcontractor relations, and measures taken regarding consumer health and safety	4.1, 4.2.4 and 4.6.4
Social commitments to the circular economy	4.3
Social commitments to combat food waste	Topic assessed as non-material for the Group
Social commitments to combat food insecurity	Topic assessed as non-material for the Group
Social commitments to animal welfare	4.2.4.4
Social commitments to fair, responsible and sustainable food	Topic assessed as non-material for the Group
Collective bargaining agreements signed within the Company and their impacts on its economic performance and on employee working conditions	4.6.1.8
Actions to counter discrimination and promote diversity	4.6.1.7
Actions to promote the nation-army bond and support engagement in reserves	Topic assessed as non-material for the Group
Actions to promote sports and other physical activity	4.6.6.2.2
Measures to promote the recruitment of people with disabilities	4.6.1.7

Since 2023, Arkema has been preparing for future sustainability reporting obligations pursuant to Directive (EU) 2022/2464, the Corporate Sustainability Reporting Directive (CSRD), applicable from 1 January 2025 for the 2024 financial year.

Taxonomy regulation reporting

About the Taxonomy regulation

The European Taxonomy regulation 2020/852 (the Taxonomy regulation) establishes a classification system that identifies economic activities that can be considered sustainable with reference to six environmental objectives, with a view to orienting capital flows towards environmentally sustainable investments.

These six environmental objectives are:

- climate change mitigation;
- climate change adaptation;
- sustainable use and protection of water and marine resources;
- transition to a circular economy;
- pollution prevention and control; and
- protection and restoration of biodiversity and ecosystems.

In 2023, this regulation and the delegated acts on the two climate change mitigation and adaptation objectives, and the content and presentation of environmental information were supplemented and modified by new delegated acts defining the eligibility conditions of economic activities for the four other environmental objectives.

Pursuant to article 8 of the regulation, Arkema has implemented a process to generate the eligibility and alignment information required for this second reporting year. Since 1 January 2022, companies subject to an obligation to publish a non-financial performance statement – a transposition into French law of directive 2014/95 on the disclosure of non-financial information – are required to report their sensitivity to the European green taxonomy. The reporting for 2023 covers the six environmental objectives set by the European Union. For the second consecutive year, regarding the two climate change mitigation and adaptation objectives, Arkema is disclosing the proportion of Taxonomy-eligible, non-eligible and aligned economic activities in its total turnover, capital expenditure and operating expenditure as well as the qualitative information relevant for this disclosure. For the first time, in 2023, Arkema is also disclosing the same indicators on the proportion of Taxonomy-eligible and non-eligible economic activities in relation to the four other objectives.

To carry out this reporting, a specific organizational structure with dedicated governance was set up in 2022, involving the appointment of a person in charge of coordinating the implementation of the taxonomy within the Group, and the creation of a Taxonomy Steering Committee. This committee comprises the Sustainable Development Vice-President, the head of Group Accounting and Consolidation, the Investor Relations Vice-President, the Corporate Legal Director, the Adhesives and Chemicals Scientific Director, and the Adhesives R&D Vice-President. It reviews the progress of the different projects on a quarterly basis and, where necessary, submits certain decisions for validation by the Industry and CSR Executive Vice-President and the Chief Financial Officer, both of whom are members of the Executive Committee. The Sustainable Development Vice-President presents an annual summary to the Audit and Accounts Committee.

Group activities eligible to Taxonomy objectives

Based on the activities described in the Taxonomy regulation, Arkema's activities falling within the relevant scope were identified and analyzed jointly by representatives of the Research and Development, Sustainable Development and Finance departments, as well as representatives of the Business Lines. In 2022, a closer examination of the legislation led Arkema to consider that some of its activities should be included in the scope of eligibility as enabling activities. In 2023, a new analysis of the scope of eligibility was carried out to take into account the changes ushered in by the new delegated acts. The scope of analysis corresponds to the activities included in the scope of consolidation (for more details, see note 3 to the consolidated financial statements at 31 December 2023 in section 5.3.3 of this document).

The delegated act 2023/2485, amending the list of eligible activities that can contribute to the two climate objectives, and the new delegated act 2023/2486, defining the activities eligible for the other four environmental objectives, do not allow the Group to expand the scope of eligible activities in 2023. The Group's activities are upstream of several of the listed activities. They do not appear as components in the descriptions provided, and therefore cannot be reported as eligible, or even aligned, even though they contribute substantially to the production of downstream activities, which are themselves taxonomy-eligible and -aligned. Examples include high performance materials used by automotive equipment manufacturers, and acrylics products used in water treatment. Analyzing the Group's businesses for Taxonomy eligibility is a recurring process which is improved year-on-year. Owing to the development of the Group's portfolio of increasingly sustainable solutions, new eligible activities are expected to be identified over time.

In 2023, as in 2022, the Group's activities eligible to climate change mitigation and adaptation objectives therefore corresponded to the manufacture of plastics in primary form, as described in section 3.17 of Annexes I and II of the Delegated regulation of 4 June 2021, an activity that may fall into the category of transitional activities for climate change mitigation - note that the definition of plastics in primary form in the current text is open to uncertainties in interpretation. They also included the manufacture of batteries and energy efficiency equipment for buildings, as well as the manufacture of renewable energy technologies, activities that may be enabling for climate change mitigation, described respectively in sections 3.4, 3.5 and 3.1 of Annexes I and II of the same Delegated regulation.

Some of the Group's activities reported in category 3.17 of plastics in primary form may also meet the definition of category 3.6 activities for the manufacture of other low-carbon technologies. Precise analyses could not be carried out or documented; accordingly, these activities were once again reported in category 3.17 in 2023. However, this situation may be revised for future reporting periods.

Some Group activities, such as polymer membranes in batteries, are eligible as both transitional and enabling activities. The total eligible activities have been restated to avoid counting an eligible activity twice.

The manufacture of plastics in primary form accounts for the majority of the Group's eligible activities, and concerns the Group's three growth segments, chiefly involving the High Performance Polymers, Coating Resins and Adhesive Solutions Industrial Assembly Business Lines.

The manufacture of batteries is primarily associated with the High Performance Polymers Business Line, while the activities involved in the manufacture of energy efficiency equipment for buildings are mainly included in the Adhesive Solutions segment.

Group activities non-eligible to Taxonomy objectives

The Group's non-eligible activities correspond mainly to technologies that cannot be classified as plastics in primary form. Acrylic monomers and fluorogases are therefore not reported as eligible activities. Materials are often manufactured substantially upstream of the value chains of activities which may themselves meet the definition of eligible or even aligned activities. This explains the discrepancy between the assessment of activities in terms of Group sales corresponding to ImpACT+ solutions and the ratio of Taxonomy-aligned sales.

Group activities aligned with Taxonomy objectives

A Taxonomy-aligned economic activity is one that meets the following requirements, as set out in article 3 of the Taxonomy regulation: it contributes substantially to the objective under consideration according to the technical screening criteria defined for that activity, it does not significantly harm any of the other environmental objectives according to another set of technical screening criteria, and it is carried out in compliance with the minimum safeguards laid down in article 18 of the Taxonomy regulation, relating in particular to human rights, including fundamental principles and rights at work, anti-corruption, taxation and fair competition.

The analysis performed focused on Taxonomy eligibility and alignment with the climate change mitigation objective, which is the most relevant objective for Group activities that are eligible for both the climate change mitigation and adaptation objectives. Due to the complexity and detailed work required at each site, the eligibility and alignment analysis of the climate change adaptation objective could not be carried out in 2023. Arkema has therefore reported 0% eligibility and alignment rates for eligible activities with regard to this objective.

For the climate change mitigation objective:

(i) Regarding the analysis of the "substantial contribution" alignment criterion for the climate change mitigation objective:

- manufacture of plastics in primary form complies with this criterion if said materials are:
  - fully manufactured by mechanical recycling, or
  - fully manufactured by chemical recycling where mechanical recycling is not technically feasible or economically viable and if the life-cycle GHG emissions, as verified by an independent third party, are lower than the life-cycle GHG emissions of the equivalent plastics in primary form manufactured from fossil fuel feedstock, or
  - derived wholly or partially from renewable feedstock and their life-cycle GHG emissions, as verified by an independent third party, are lower than the life-cycle GHG emissions of the equivalent plastics in primary form manufactured from fossil fuel feedstock. For this criterion, in line with the indicator for sales from products made from renewable or recycled raw materials (see section 4.3.2 of this chapter), in 2023 as in 2022, Arkema has included products containing at least 25% renewable raw materials, this proportion may evolve over time. This highly demanding criterion relating to the recycled or bio-based content of plastics in primary form accounts for the low rate of alignment reported by Arkema for such plastics;
- activities related to the manufacture of batteries and of renewable energy technologies make a substantial contribution if they are qualified as eligible; and
- activities related to the manufacture of energy efficiency equipment for buildings meet this criterion when they meet various insulation performance coefficients, including windows with a U-value lower than or equal to 1.0 W/m^2K, roofing systems with a U-value lower than or equal to 0.3 W/m^2K, and insulating products with a lambda value lower than or equal to 0.06 W/mK.

(ii) Regarding the analysis of the "do no significant harm" alignment criteria for each environmental objective, Arkema relies on its Environmental Safety and Product Safety departments, which work with all sites to ensure compliance with applicable regulations, manage a network of HSE correspondents, coordinate compliance audit programs, and promote awareness and prevention initiatives.

For the generic "do no significant harm" criterion:

- regarding the climate change adaptation objective, in 2022, Arkema commissioned a firm with recognized expertise in the field to conduct an analysis of physical climate risks covering all of the Group's activities, incorporating forward-looking criteria and using the highest resolution available for each of the relevant climate hazards. For further details, see section 4.4.4 of this chapter. This study ranked Group sites by order of estimated risk, based on the level of exposure and criticality of the site. Vulnerability of sites corresponding to eligible activities and compliant with Taxonomy "substantial contribution" criteria, was assessed in terms of the alignment of the eligible activities operated at these sites. In 2023, the Group has adopted the methodology for assessing a site's vulnerability to climate change; however, while the 2022 study included critical logistics hubs, the specific task of analyzing the vulnerability of logistics providers and other upstream players (suppliers of raw materials or energy) has yet to be carried out;
- regarding the objective of the sustainable use and protection of water and marine resource, assessments of the use of water resources and impacts are conducted as part of the Optim'O project, resulting in a detailed mapping of water withdrawals and uses and effluent emissions, reviewed on an annual basis (see sections 4.3.3.2 and 4.5.3.3 of this chapter). Impact assessments and the related management plans are conducted in accordance with European directives 2000/60/EU and 2011/92/EU for all sites operating in Europe. For sites outside Europe, Arkema complies with local regulations and it is this compliance that is noted in the statement of validation of alignment with the use and protection of water resources criterion;

- with respect to the transition to a circular economy target, the Group's activities reporting eligible activities subject to this criterion have assessed the availability of, or have adopted, techniques that support the principles of reuse and recycling from the design phase of manufactured products;
- regarding the prevention and reduction of pollution related to the use and presence of chemicals, checks are performed on the absence of hazardous substances in the production process and in the manufactured products within the eligible activities and complying with Taxonomy's "substantial contribution" criteria. The Group Product Safety department has formally documented a list of substances, which are updated every year, based on Appendix C of Annex I of the Delegated Act on climate change mitigation and adaptation, revised in June 2023. The Product Safety department, in liaison with Product Stewardship managers for the businesses concerned, has performed or overseen product analyses based on Environmental, Health and Safety specifications for each product manufactured. These specifications detail the composition of the products and form the basis for the Product Safety Data Sheets;
- regarding the protection and restoration of biodiversity and ecosystems, the impact assessments for the different Group sites are also performed in compliance with European directive no. 2011/92/EU or applicable local regulations. Moreover, an audit of the geographic location of industrial sites was performed in 2022 by a specialized firm of consultants to identify, from among the 33 sites performing a material activity in terms of potential alignment, those sites located within or near sensitive areas from a biodiversity perspective, based on the definition of sensitive areas provided under the criterion. Initial findings recommend an in-depth audit of 16 sites. This audit, which used the Integrated Biodiversity Assessment Tool (IBAT) to aggregate various databases to identify biodiversity issues, is part of a broader study launched in 2022 and finalized in 2023, highlighting the most significant biodiversity issues in terms of risks, dependencies and impacts for the Group's entire value chain (see section 4.5.3.1 of this chapter). This mapping forms the basis of Arkema's new roadmap.

It is important to note that Arkema's systematic assessment of the environmental and social impacts of major investment projects covers climate change mitigation and adaptation, water resources, circularity, pollution and diversity (see section 4.1.2 of this chapter).

(iii) Regarding the analysis of the "minimum safeguards" alignment criterion, Arkema is committed to respecting the human rights and principles set out in the International Bill of Human Rights, the International Labour Organization's fundamental conventions, the United Nations Guiding Principles on Business and Human Rights and the OECD Guidelines for Multinational Enterprises, everywhere the Group operates.

- The key verification items required by the Taxonomy regulation are covered:
  - regarding human rights, Arkema – which is subject to the law on duty of care – has deployed due diligence procedures and systems to map, assess, prevent and mitigate all human rights risks and to track the effectiveness of these systems. The various components of the duty of care plan and the measures deployed as part of the Group's Human Rights Policy, covering the Group's entire reporting scope, are detailed in section 4.6.3 of this chapter. The specific measures used to monitor assessment systems, actions and results relating to suppliers are described in section 4.6.4 of this chapter,
  - regarding anti-corruption, Arkema – which is subject to the French Sapin II Law – has deployed due diligence procedures and systems to combat influence peddling and corruption and a specific corruption risk map is maintained and kept up to date (see section 2.1.2 of this document),
  - the Group's business compliance and ethics program for fair competition and the fight against corruption (see section 4.6.2 of this chapter) defines and describes rules and procedures as well as the risk and sanctions oversight process. Its application across the Group is overseen by a Compliance Committee.

  The Group has a whistleblowing system to report wrongdoing in all areas covered by the Code of Conduct, in particular social impacts and corruption. This system is part of a procedure described on the Group's website (see section 4.6.2.5 of this chapter).

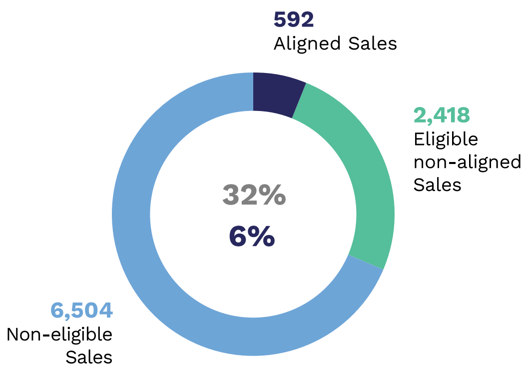
  An annual compliance and business ethics bulletin is now emailed to all Group employees, who are each requested to reaffirm their commitment to the principles and rules on ethics and compliance. E-learning modules based around the Code of Conduct have also been developed and incorporated into learning programs designed primarily for those employees most exposed to this type of risk (see sections 4.6.2.1 and 4.6.2.2 of this chapter), and

  - lastly, regarding tax compliance, in addition to compliance with the tax laws and regulations of the countries in which the Group operates, the Group's tax policy provides it with long-term legal certainty. Arkema condemns and seeks to prevent all forms of tax evasion. Tax risks are included in the overall risk management process (see section 4.6.2.6 of this chapter).

Based on compliance checks performed on the different criteria covering Taxonomy-eligible activities, and with the uncertainty linked to the interpretation of points of the regulation, particularly regarding the description of certain activities such as plastics in primary form in the Climate Delegated regulation, Key Performance Indicators (KPI) covering aligned activities for 2023 are outlined below. Tables detailing the indicators in the format required by the Taxonomy regulation are presented in paragraph 4.7.6 of this chapter.

Turnover Key Performance Indicators (KPIs)

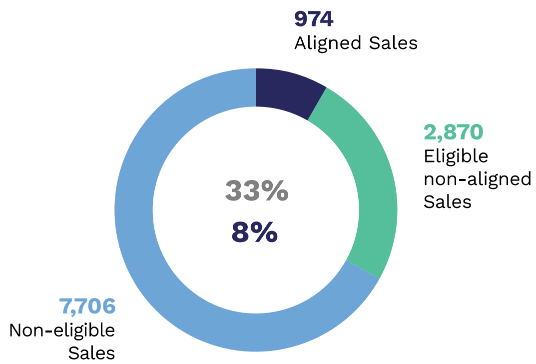
TURNOVER KPI 2023 (€m)



- Taxonomy-eligible proportion of turnover
- Taxonomy-aligned proportion of turnover

Total sales €9.5bn

TURNOVER KPI 2022 (€m)



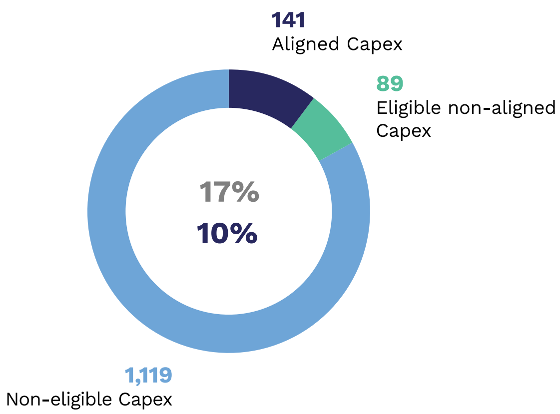
- Taxonomy-eligible proportion of turnover
- Taxonomy-aligned proportion of turnover

Total sales €11.5bn

The ratios of eligible and aligned turnover between 2022 and 2023 varied from 33% to 32% and from 8% to 6% respectively. This change is attributable to the decline in sales in the batteries business in 2023. Aligned turnover represented 20% of eligible turnover in 2023, compared to 25% in 2022. This variation can be explained by the high alignment rate of the batteries business, whose relative contribution decreased in 2023.

Capex Key Performance Indicator (KPI)

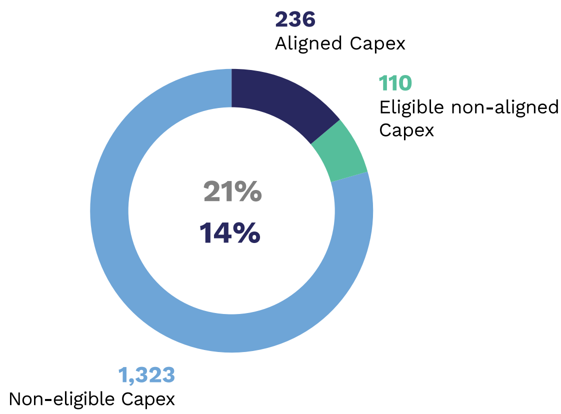
CAPEX KPI 2023 (€m)



- Taxonomy-eligible proportion of Capex
- Taxonomy-aligned proportion of Capex

Total Capex €1,349m of which :
- €611m assets from acquisitions
- €104m IFRS16 assets

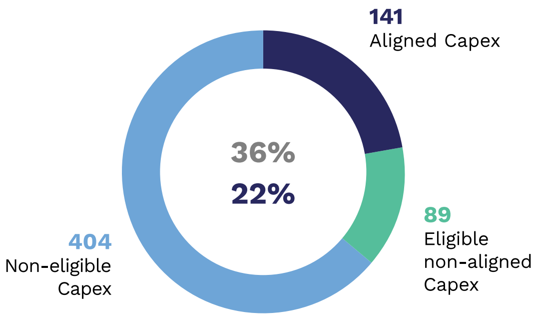
CAPEX KPI 2022 (€m)



- Taxonomy-eligible proportion of Capex
- Taxonomy-aligned proportion of Capex

Total Capex €1,669m of which :
- €859m assets from acquisitions
- €103m IFRS16 assets

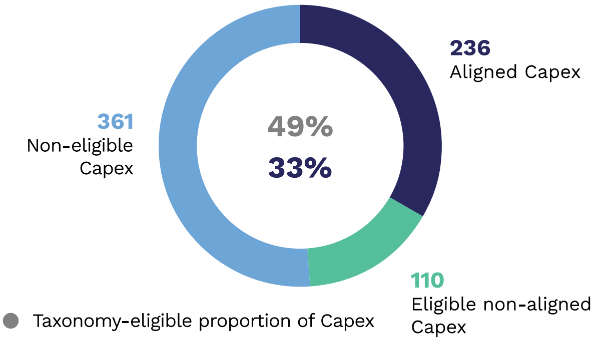
INVESTMENTS 2023 (€m)



- Taxonomy-eligible proportion of Capex
- Taxonomy-aligned proportion of Capex

Total investments : €634m

INVESTMENTS 2022 (€m)



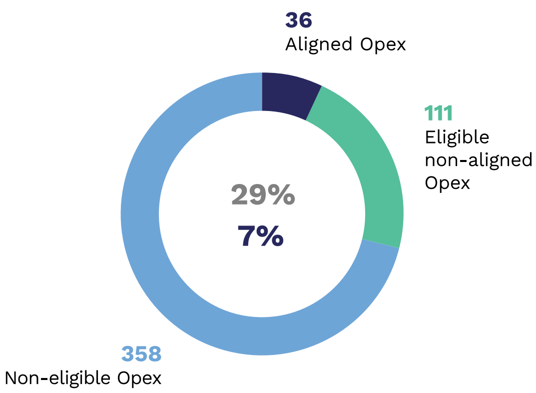
- Taxonomy-eligible proportion of Capex
- Taxonomy-aligned proportion of Capex

Total investments : €707m

Ratios of eligible and aligned Capex between 2022 and 2023 varied from 21% to 17% and from 14% to 10% respectively. This change is mainly attributable to lower capital expenditure on the project to develop monomer and bio-sourced polymers production capacity in Asia, which was in its final phase in 2023. In 2023, taxonomy-aligned investments represented more than 60% of taxonomy-eligible investments. The €611 million of assets acquired correspond mainly to the acquisition of PI Advanced Materials, which was completed in December 2023. This acquisition could not be assessed under the Taxonomy Regulation, and 100% of the values were declared non-eligible.

Opex Key Performance Indicator (KPI)

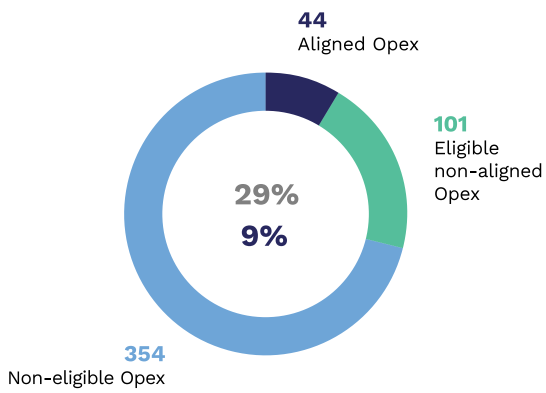
OPEX KPI 2023 (€m)



- Taxonomy-eligible proportion of Opex
- Taxonomy-aligned proportion of Opex

Total Opex : €505m

OPEX KPI 2022 (€m)



- Taxonomy-eligible proportion of Opex
- Taxonomy-aligned proportion of Opex

Total Opex : €499m

R&D expenditure accounts for half of eligible Opex expenditure and for two-thirds of aligned Opex expenditure. In 2023, Taxonomy-aligned Opex represented nearly one-quarter of the amount of Taxonomy-eligible Opex.

These indicators were generated using existing reporting systems to carve out the required financial aggregates, based on the Group's literal understanding.

The denominators and numerators of these ratios were determined on the basis of the analytical structure used for presenting financial data for the Group's activities. In addition, financial information from the Group's information systems was analyzed and checked for consistency with Turnover, Opex and Capex in 2023. For Capex and Opex, where this structure did not allow direct generation of the required data, assumptions were made or allocation keys applied.

Calculations and explanations of indicators

The following sections set out the methods used and contextual data for the three indicators that meet the criteria for eligible or aligned activities specified in Annex I of Delegated regulation 2021/2178. The methodology applied in 2023 is consistent with that applied in 2022:

Turnover Key Performance Indicator (KPI)

This KPI corresponds to the ratio between third-party Turnover for Taxonomy-eligible or aligned activities and overall Group Turnover as reported in the consolidated financial statements at 31 December 2023 (see section 5.3.2 of this document).

In some cases, the third-party turnover of certain eligible activities corresponds to entire units of the Group's financial reporting structure and can therefore be included in the consolidation system. In other cases, the third-party turnover of the various eligible or aligned activities is derived from the Group's business intelligence or similar information systems, which focus on the technologies or applications associated with the eligible or aligned activities concerned.

Capex Key Performance Indicator (KPI)

This KPI corresponds to the ratio between Capex for activities identified as eligible to or aligned with the Taxonomy and overall Group Capex.

The denominator therefore corresponds to the total of property, plant and equipment and intangible assets as published in the Alternative Performance Indicators in note 4 to the consolidated financial statements, right-of-use assets (ROU, IFRS 16) for the period, as given by the specific reporting tool used for application of IFRS 16 (see note 9.3 to the consolidated financial statements), and property, plant and equipment and intangible assets resulting from business acquisitions, excluding goodwill, whose values are shown as additions to the consolidated balance sheet of the Group entities concerned (see section 3.2.2 of note 3 to the financial statements for items relating to assets associated with the acquisition of a majority stake in PI Advanced Materials).

The numerator corresponds to the items in the three above categories that the Group was able to associate with the eligible or aligned activities identified.

Where eligible or aligned activities can be assimilated to whole units in the investment reporting structure, the data was obtained from the Group consolidation system. In other cases, data was calculated by assigning investment amounts to the production sites for eligible activities, basically in proportion to the fixed production costs for these activities at these sites. Unless specific investment projects were identified, investments in aligned activities were calculated in proportion to the Turnover of the aligned activity in relation to the eligible activity.

In 2023, as in 2022, the total amount of new right-of-use assets was declared non-eligible. The allocation of values by eligible activity required a considerable amount of work that was deemed disproportionate in terms of the low expected value by activity.

Similarly, in 2023, assets acquired as part of portfolio management operations were deemed non-eligible: these correspond essentially to the acquisition of PI Advanced Materials' High temperature materials business integrated into the Advanced Materials segment, completed late in the year and which could not be analyzed in order to enable classification as an eligible activity.

Capital expenditure corresponding to investment programs to develop taxonomy-aligned activities or individual measures enabling the targeted activities to reduce greenhouse gas emissions were identified and used.

In 2022 and 2021, Capex charged to eligible or aligned activities was significantly impacted by the project to develop bio-based monomer and polymers production capacity in Asia (for further details on this project, see the "Profile, ambition and strategy" section of this document). This is no longer the case in 2023, as the project is nearing completion.

Opex Key Performance Indicator (KPI)

Because of the complexity of carving out Opex as specified in the texts of the Taxonomy regulation and its delegated regulations, the analysis of eligibility or alignment for Opex focused on R&D-related expenses along with maintenance and repair costs, which include building maintenance costs.

For the denominator, R&D expenses are identified in the consolidation system, while other maintenance, repair and short-term lease expenses are taken from the information systems of certain entities by applying, where necessary, assumptions on the average percentage of such expenses with respect to total fixed production costs for the activities concerned.

For the eligible Opex numerator, when eligible activities do not correspond to management units reported in the information or consolidation systems, and the amounts associated with these activities cannot therefore be identified due to insufficient granularity, the eligible turnover indicator has been used as key allocation.

Similarly, for the aligned Opex numerator, the aligned turnover to eligible turnover indicator has been used as key allocation to calculate the amount of aligned Opex based on eligible Opex for the activity concerned.

Additional indicators

Alignment rates are calculated for the scope of eligible activities to measure changes in alignment on the scope covered by the Taxonomy regulation, for each of the three indicators, Turnover, Capex and Opex.

RATIO OF ALIGNED SHARE TO ELIGIBLE SHARE

Ratio of aligned share to eligible share	2023	2022
Turnover	20%	25%
Investments	61%	68%
Taxonomy Opex	24%	30%

The Group will continue to adjust its methodology in 2024, as well as its analysis of Taxonomy eligibility and alignment in pace with changes in texts and activities.

A significant part of the Group's activities contributes to the development of customers' eligible activities such as the manufacture of low-carbon technologies for transport; and construction, extension and operation of water collection, treatment and supply systems. As the Taxonomy regulation focuses on clean technology manufacturing and excludes components not specifically mentioned in descriptions of eligible activities, these activities were not reported as eligible in this document.

4.1.6 Duty of care plan

Pursuant to the provisions of article L. 225-102-4 of the French Commercial Code, the Group has established and implemented a duty of care plan covering the activities of the Company and all the subsidiaries it controls (see section 6.1.2 of this document). More specifically, Arkema has conducted an in-depth review of the consequences of its activities, and of those carried out by its suppliers and subcontractors that relate to their business relationship with Arkema, in order to identify any serious risk of violations of human rights and fundamental freedoms, as well as any serious health, safety and environmental risks, so that, as part of a continuous improvement approach, the Group can introduce or supplement the reasonable care measures necessary to prevent such risks or mitigate their impact.

Management of the duty of care plan

The duty of care plan is reviewed – overall and with respect to its implementation and the effectiveness of measures undertaken. The review is led by the Sustainable Development department, with input from the Human Resources, Safety and Environment, Legal Affairs, Procurement, and Internal Audit and Internal Control departments. The progress made and proposals for action are presented at least once a year to the Risk Review Committee, which validates the duty of care plan before submission to the Executive Committee then to the Board of Directors.

In 2023, to step up its action in favor of climate change mitigation, Arkema set new targets through to 2030 that were validated by the SBTi (48.5% reduction in emissions for Scopes 1 & 2 and 54% reduction for Scope 3 compared with 2019). It also announced its Net-Zero ambition for 2050. To achieve its Scopes 1 & 2 emissions reduction target, Arkema is pursuing its efforts in three areas: energy efficiency, optimization of the most emissions-intensive processes, and low-carbon purchases of electricity and steam. Major investments were therefore approved in 2023, in particular €130 million for the Carling site in France to improve its operating efficiency and reduce its CO_2 emissions by 20%. To reduce its Scope 3 emissions, the Group is increasing the proportion of its raw materials that are renewable or recycled, selecting those with a lower carbon footprint, reducing its most emissions-intensive activities and developing polymer recycling channels.

The Group has also stepped up its action on water, revising its water policy in 2023. Arkema is aiming to cut its water use by 82 million cu.m. by 2030, a 25% reduction compared to 2019. In order to achieve this objective, the Group's Optim'O program includes measures to reduce water consumption by optimizing processes, and to recycle wastewater in order to reuse some or all of its effluents. With regard to water emissions, the Group has revised its wastewater chemical oxygen demand (EFPI COD) target, and increased its reduction target from 60% to 65% by 2030 (with a base year of 2012).

As part of the monitoring of the implementation of the duty of care plan and the assessment of its effectiveness, the internal audit and control system may be modified, if necessary, to take into account any additional items identified. For further details on the risk management and internal control system, see section 2.2.3 of this document.

Paragraphs concerning the duty of care plan are identified by the DCP icon.

Mapping of serious risks and assessment procedure

The identification and review of these serious risks are based on generic risks set out in the international standards and guidelines that Arkema uses to draw up its CSR policy (see section 4.1.1 of this chapter), and the potential negative impacts that the Group's activities could cause to people and the environment. To identify these potential negative impacts, the Group uses preliminary analyses, internal feedback and cases observed in companies operating in similar businesses or fields. Stakeholder expectations (see section 4.1.3 of this chapter) are also taken into account. Risks are reviewed in light of a combination of factors that includes their impact and likelihood of occurrence and the level of control provided by existing prevention and management measures.

Risk assessments are updated regularly to take into account lessons learned, advances in preventing risks and mitigating their impact, and any emerging risks deemed relevant.

This mapping complements and is linked to the Group's risk management process described in section 2.2 of this document, as some of the risks identified as potentially having a significant negative impact on people or the environment are also material risks for the Group itself.

The identification and review of risks were carried out using a collaborative approach involving the Sustainable Development, Human Resources, Safety and Environment, Legal Affairs, Procurement, and Internal Audit and Internal Control departments. This process resulted in a risk map that was presented to the Risk Review Committee. The procedures used to regularly assess the situation of the Group's activities and subsidiaries with regard to the risk map are described in more detail in section 2.2.4 of this document.

The risks identified in application of the duty of care are summarized in the table below, presented in the subsequent sections and, where applicable, supplemented in sections 2.1 and 4.6.3 of this document.

Appropriate actions to mitigate risks or prevent serious violations, and to monitor the effectiveness of the measures implemented, are presented below.

Risk mapping for the duty of care plan		Sections in this document
Risks related to the Group's activities		
Human rights	Serious violation of human rights and fundamental freedoms, labor and business relations	4.6.3 – Human rights
Health and safety	The social and environmental consequences arising from industrial accidents or acts of malice	2.1.1 – Accidents at sites, external storage or warehouse facilities or during transportation
	Exposure to substances that are toxic or hazardous to human health, whether involving Group or subcontractor employees, customers or people living near Group facilities	2.1.1 – Exposure to chemicals
Environment	Global warming – Greenhouse gas emissions	2.1.3 – Climate
	Air, water and soil pollution	2.1.1 – Pollution at sites, warehouse facilities or during transportation
Risks relating to the activities of suppliers and subcontractors with which Arkema has established business relationships		
Serious violation of human rights and fundamental freedoms, human health and safety, and the environment		4.6.4 – Responsible procurement

Risks related to the Group's activities: appropriate actions to mitigate risks or prevent serious violations, and system for monitoring the measures implemented and evaluating their effectiveness

1. Human rights and fundamental freedoms

Respect for human rights is of the utmost importance to Arkema. The Group therefore makes every effort to prevent human rights violations against its employees, partners and other stakeholders and to remedy any violations that do occur.

After reviewing internal feedback and the general risks presented in the International Labour Organization's Declaration on Fundamental Principles and Rights at Work and the International Bill of Human Rights, and assessing the impact, likelihood of occurrence and level of control that Arkema has over these issues, no risks of serious violations of human rights or fundamental freedoms were identified, or risks relating to labor and business relations. However, Arkema is attentive to these issues and is rolling out measures to mitigate risks and prevent serious violations, together with monitoring initiatives, as described in sections 4.6.1 and 4.6.3 of this chapter.

Arkema published its Human Rights Policy in order to make its commitments and management of the risks in this area clearer and more visible for all stakeholders. The policy is available both internally and externally. In 2023, the Group used the available internal audit data to identify and analyze any potential human rights violations related to its activities. The results confirmed the absence of any serious violations. For further details, see section 4.6.3 of this chapter.

2. Health and safety

As a responsible manufacturer, Arkema places personal health and safety among its top priorities. This commitment is clearly expressed in its Health, Safety, Security, Environment and Quality Policy. A harmonized approach, based on risk prevention, an integrated management system and the dissemination of a health and safety culture, has existed within the Group for many years and is managed centrally.

The main risks of serious harm to personal health and safety are:

- the social and environmental consequences arising from industrial accidents or acts of malice. Accident risks are described in section 2.1.1 of this document. The management system for these risks is described in detail in sections 4.5.1 and 4.5.2 of this chapter, and includes risk mitigation and serious violation prevention measures, as well as measures for mitigating impacts in the event of an incident or accident.

  The effectiveness of the measures undertaken is monitored using a certain number of indicators, including the total recordable injury rate per million hours worked (TRIR) and the process safety event rate per million hours worked (PSER). As part of its continuous improvement policy, the Group has set a TRIR target of 0.8 and a PSER target of 2.0 for 2030. Including accidents involving Group employees and subcontractor employees, the TRIR was 0.9 in 2023, stable versus 2022. This good performance is the result of action plans put in place over the past few years to raise awareness of Arkema's safety requirements among Group personnel and contractors. In fact, Arkema's performance in terms of its TRIR is one of the best in the chemicals industry. The PSER was 2.8 in 2023, the same level as in 2022, and this consolidation of the Group's performance was supported by the initiatives put in place. These include the reinforcement of Process Safety culture thanks to the 10 Process Safety Must-Haves, the step-up in its program for inspecting the mechanical integrity of equipment and circuits, and the monthly monitoring of incidents by the Executive Committee;
- exposure to substances that are toxic or hazardous to human health, whether involving Group or subcontractor employees, customers or people living near Group facilities, as described in section 2.1.1 of this document. The health and safety risk management system, which is described in detail in sections 4.5.1 and 4.5.2 of this chapter, includes risk mitigation and serious violation prevention measures, as well as measures for mitigating impacts in the event of an incident or accident. In addition, responsible product stewardship, including the transparency and availability of product information, is presented in section 4.2.4 of this chapter; and
- the number of occupational illnesses related to exposure to chemicals is one of the indicators for monitoring the effectiveness of prevention measures over the long term. In 2023, 36 cases of occupational illness were reported in the Group in France. The frequency rate of 3.3 per million hours worked is higher than in the previous two years, and at the same level as in 2019-2020. Details on occupational illnesses are given in section 4.5.2.2.4 of this chapter.

3. Climate change and environmental protection

As a responsible manufacturer, Arkema places the fight against climate change, environmental risk management and responsible resource management among its top priorities. This commitment is clearly expressed in its Health, Safety, Security, Environment and Quality Policy.

A harmonized approach, based on the vision set out in this policy, has existed within the Group for many years and is managed centrally.

3.1 Climate change

Greenhouse gas emissions associated with the Group's activities, and acute and chronic weather events associated with climate change, may affect the environment and people. An increase in the frequency and intensity of certain events (in particular floods, droughts or storms), which could lead to incidents or accidents at some of the Group's production sites, could endanger employees and subcontractors working there, as well as local residents, and could cause pollution (as described in sections 2.1.3 and 4.4.4 of this document).

To respond to this climate challenge and reduce the associated risks, Arkema continuously improves its climate change response policy and steps up its actions year after year.

The climate policy described in section 4.4 of this chapter includes risk mitigation and serious violation prevention measures. In 2023, Arkema took its ambition further by setting two ambitious new targets: a 48.5% reduction in its absolute Scopes 1 & 2 emissions and a 54% reduction in its Scope 3 emissions by 2030 compared with 2019. These two short-term objectives have been validated by the Science Based Targets initiative, an independent body (see section 4.4.1 of this chapter). In 2023, the Group's Scopes 1 & 2 emissions fell by 39% and its Scope 3 emissions by 53% compared with 2019. A third indicator measures net energy purchases (Energy EFPI compared with 2012), the intensity of which reflects the consumption of energy whose production generates greenhouse gas emissions. To optimize its energy consumption, Arkema has set itself the goal of reducing its net energy purchases by 25% by 2030 (for further details, see section 4.4.3.2 of this chapter). In 2023, the Energy EFPI was 0.91, an increase on 2022 due to lower overall production volumes. Studies are carried out on optimizing operating conditions when facilities are not operating at their nominal capacity. These concern the most energy-intensive plants. The Group remains confident of achieving its 2030 target of 0.75, thanks to ongoing investments in energy efficiency as part of the Arkema Energy program.

3.2 Environment

As regards environmental protection, the main risk of serious damage to the environment is the pollution of air, water and soil, which is described in section 2.1.1 of this document. The management system for environmental risks is described in detail in sections 4.5.1 and 4.5.3 of this chapter. It includes risk mitigation and serious violation prevention measures, as well as measures for mitigating impacts in the event of an incident or accident, or in the event of legacy pollution. The effectiveness of the measures undertaken is monitored *via* numerous indicators, including two strategic intensive Environmental Footprint Performance Indicators (EFPIs compared with 2012) for which targets have been set for 2030.

The first indicator relates to the amount of volatile organic compounds (VOCs) released into the air (VOC EFPI), with a reduction target of 65%; the second indicator relates to chemical oxygen demand (COD) in wastewater (COD EFPI), for which the reduction target was increased from 60% to 65% in 2023. In 2023, the VOC EFPI was 0.49, down on 2022 and therefore back on track to meet the 2030 target, thanks to continued action on filtration performance and process efficiency. In 2023, the COD EFPI was 0.38, in line with the new target set for 2030. For further details, see section 4.5.3 of this chapter. The results confirm the validity of the Group's programs and initiatives on reducing pollution risks.

In addition, to strengthen its commitment to promoting responsible resource management, in 2023, Arkema set a new target for water withdrawals. The aim is now to achieve a reduction of 25% compared with the baseline year 2019, *i.e.*, a target of 82 million cu.m by 2030. In 2023, the indicator was 86 million cu.m., down 5 million cu.m. on 2022, thanks to successful efforts to reduce water at the Group's industrial sites. For further details, see section 4.3.3.2 of this chapter.

Risks related to the activities of suppliers and subcontractors with which Arkema has an established business relationship: appropriate actions to mitigate risks or prevent serious violations, and system for monitoring the measures implemented and evaluating their effectiveness

Arkema's suppliers carry out various activities related to the supply of raw materials, energy, goods and services, and transportation. These activities have the potential to cause serious violations of human rights and fundamental freedoms, human health and safety, and the environment.

To mitigate risks and prevent serious violations by its suppliers, Arkema systematically communicates its CSR requirements *via* its Supplier Code of Conduct and includes specific CSR clauses in its general purchasing conditions, particularly in relation to ethics and compliance (respect for human rights, combating trafficking in conflict minerals, combating forced labor, environmental protection) and measures to combat concealed employment.

Arkema also implements a supplier selection and assessment process based notably on the following two programs (see section 4.6.4 of this chapter for further details):

- the roll-out of the Together for Sustainability (TfS) program, with a 2025 target of covering with a TfS assessment 80% of the Group's purchasing spend with relevant suppliers (see details in section 4.6.4.5 of this chapter); and
- the Pragati program for responsible castor farming (see section 4.6.4.6 of this chapter for details).

The effectiveness of the measures undertaken is monitored in terms of the number of TfS suppliers assessed and the scores obtained. At end-2023, over 2,000 suppliers had been assessed, and CSR scores had risen for 58% of suppliers whose assessments had been updated. The percentage of purchasing spend from relevant suppliers is 77%.

Some of the Group's products use plant-based raw materials. If raw material producers are farmers, the assessment system outlined above is not always applicable. For supplies of castor oil, the main bio-based raw material used by the Group, an initiative is in progress under the Pragati program, launched in 2016, on environmentally friendly and socially responsible sourcing. This initiative is described in section 4.6.4.6 of this chapter.

With regard to its purchases of bio-based raw materials, Arkema is working with its suppliers to ensure that its supply chain complies with the European Deforestation Regulation (EUDR), set to come into force on 30 December 2024.

Remediation process

In the event of a major accident involving health, safety or the environment, a crisis unit is set up in accordance with the Group procedure described in section 4.5.2.4 of this chapter.

For non-accidental incidents liable to affect human rights and fundamental freedoms, human health and safety and the environment, the remediation process is organized on a case-by-case basis with representatives from the departments involved and a management team adapted to the specific situation.

Report on the implementation of the duty of care plan

For risks related to the Group's activities, the following conclusions were drawn from the implementation of the duty of care plan:

- significant change is not necessary for the health, safety and environment management system (described in detail in sections 4.2.4 and 4.5.1 of this chapter), which is considered to meet duty of care requirements;
- judging from the main indicators, continuous progress initiatives (described in sections 4.2.4, 4.4 and 4.5 of this chapter) appear to be effective, and should be continued in order to at least achieve the strategic goals the Group has set for 2030:
  - in terms of total recordable injury rate (TRIR of 0.8) and process safety event rate (PSER of 2.0), and
  - in terms of environmental impact: two climate indicators (Scope *1 & 2* GHG -48.5%, Scope *3* GHG -54% in absolute terms compared with 2019) and three intensive emission indicators (VOC EFPI -65%, COD EFPI -65% and Energy EFPI -25% compared with 2012);

- no risks of serious violations to human rights or fundamental freedoms were identified, or risks related to labor and business relations. However, Arkema is attentive to these issues and is rolling out prevention and monitoring initiatives, as described in sections 4.6.1 and 4.6.3 of this chapter.

Concerning risks relating to the activities of suppliers and subcontractors, the programs under way meet duty of care expectations, including:

- the roll-out of the Together for Sustainability (TfS) program, with a 2025 target of covering with a TfS assessment 80% of the Group's purchasing spend with relevant suppliers (see details in section 4.6.4.5 of this chapter); and
- the Pragati program for responsible castor farming (see section 4.6.4.6 of this chapter for details).

Whistleblowing system and reports

The Group has a whistleblowing system that complies with both the requirements of the law on duty of care and the French Sapin II Law.

The system was accordingly presented to the employee representative bodies for inclusion in the internal regulations of the Group's various French sites. It is open to employees and other stakeholders of the Group, such as former employees and people applying for employment within a Group entity; shareholders, associates and holders of voting rights at the general meeting of a Group entity; members of the administrative, management or supervisory body of a Group entity; external and casual Group employees; as well as co-contractors of a Group entity and their subcontractors.

The whistleblowing system was widely distributed, both internally and externally, in a manner appropriate to each potential whistleblower, notably through:

- the electronic distribution of the compliance program, including the whistleblowing system, to all Group employees once each year;
- a presentation of the system in various training materials as well as e-learning compliance courses offered to Group employees;
- publication on the Group's intranet and internet sites. A specific insert is also available on the home page of Intranet sites for easier access to information.

For further details, see section 4.6.2.5 of this chapter.

CROSS-REFERENCE TABLE FOR THE DUTY OF CARE PLAN

Duty of care plan	Sections in this document
Mapping of serious risks and assessment procedure	2.2, 2.1.1, 4.1.3
Risks related to the Group's activities: appropriate actions to mitigate risks or prevent serious violations	
• Human rights and fundamental freedoms	4.6.3
• Health and safety • Industrial accidents • Exposure to chemicals • Occupational illness	2.1.1
• Climate change and environmental protection	2.1.1, 2.1.3, 4.4.4
Risks related to the activities of suppliers and subcontractors with which Arkema has an established business relationship: appropriate actions to mitigate risks or prevent serious violations	**2.1.3, 4.6.4**
System for monitoring the measures implemented and evaluating their effectiveness	
• Human rights and fundamental freedoms	4.6.1, 4.6.3
• Health and safety	
• Industrial accidents	4.5.1, 4.5.2
• Exposure to chemicals	4.2.4, 4.5.1, 4.5.2
• Occupational illness	4.5.2.2.4
• Climate change and environmental protection	4.4, 4.5.1, 4.5.3
• Activities of suppliers and subcontractors	4.6.4
Remediation process: crisis management	4.5.2.4
Report on the implementation of the duty of care plan	4.2.4, 4.5, 4.4, 4.6.1, 4.6.3, 4.6.4
Whistleblowing system and reports	4.6.2.5

4.2 Sustainable solutions

→ **DEVELOP INNOVATIVE SOLUTIONS ADAPTED TO THE GROUP'S CUSTOMERS' MAIN CHALLENGES AND SUPPORT THEM IN THEIR QUEST FOR SUSTAINABLE PERFORMANCE**

4.2.1 Management of sustainable solutions

In a world faced with a multitude of economic, environmental and social challenges, Arkema aims to provide its customers with sustainable and innovative solutions that contribute to the Sustainable Development Goals (SDGs) defined by the United Nations. As indicated in section 4.1.3 of this chapter, responsible product stewardship and the provision of sustainable and innovative solutions have been clearly confirmed as priorities in the materiality assessment.

Solutions that contribute to sustainable development are therefore central to Arkema's innovation policy and to the development of its product range. This opens up a vast array of opportunities, both for the Group and its partners.

Through its commercial excellence program, Arkema listens to its customers, enhancing its understanding of their needs with a view to developing innovative solutions adapted to their challenges and supporting them in their quest for sustainable performance.

Through its choice of research areas, its continuous development of employees' skills and its innovation structure and processes, Arkema endeavors to develop solutions with its partners that address the societal challenges of today and tomorrow.

Through responsible product stewardship, Arkema also takes care to ensure that its products do not harm people's health or safety or damage the environment. These aspects are taken into account right from the product design stage.

In addition to complying with the regulations, which forms the foundation of its commitment, Arkema implements an approach aimed at continuously improving scientific knowledge so that it can adapt its range of solutions accordingly and provide its customers and end users with the information necessary for the appropriate use of its products.

The Product Stewardship Steering Committee reviews progress and decides on priorities and action plans for the responsible stewardship of the range of solutions. Its composition and organization are presented in section 4.1.2 of this chapter.

To supplement its innovation and responsible product stewardship processes, Arkema has implemented a program to systematically assess its portfolio of solutions by Business Line in light of sustainability criteria. The program is presented in section 4.2.3 of this chapter. Each Business Line develops a short- and medium-term Sustainable Solutions roadmap, which is reviewed every six months by the Business Line and Sustainable Development management teams.

In addition, the Group launched a responsible communication training program for its employees in 2022 to ensure fair, factual communications about its portfolio of solutions and their sustainability credentials.

Circular economy

Arkema has made the circular economy a priority area with the overall goal of reducing the environmental impact of its activities throughout the life cycle. Arkema's approach to the circular economy is presented in section 4.3 of this chapter.

4.2.2 Innovation

Innovation is a strategic pillar in Arkema's targeted growth strategy and a key component in its contribution to sustainable development. Innovation in manufacturing technologies, products and applications is a driving force behind the development of sustainable solutions consistent with the Group's social responsibility commitment.

Arkema's innovation strategy is outlined in section 1.1 of this document.

In 2023, the number of sustainability-related patents filed continued to increase, reflecting the Group's dynamic in this field.

	2023	2022	2021
Number of patent applications filed during the year relating to sustainable development	204	188	200
Percentage of patent applications filed during the year relating to sustainable development	94%	92%	90%

Solution sustainability assessments have been part of the steering processes of all Business Line innovation projects through a set of sustainability criteria during the various validation phases.

4.2.3 Management of the solutions portfolio

Archimedes program: assessment of the solutions portfolio

To shift its product range more assertively towards sustainable solutions, in 2023 Arkema continued the program it started in 2018 to systematically assess its portfolio of solutions in light of sustainability criteria.

The approach used is consistent with the Chemical Industry Methodology for Portfolio Sustainability Assessments (PSA) established by the World Business Council for Sustainable Development (WBCSD). It takes into account all of the social, environmental and economic impacts.

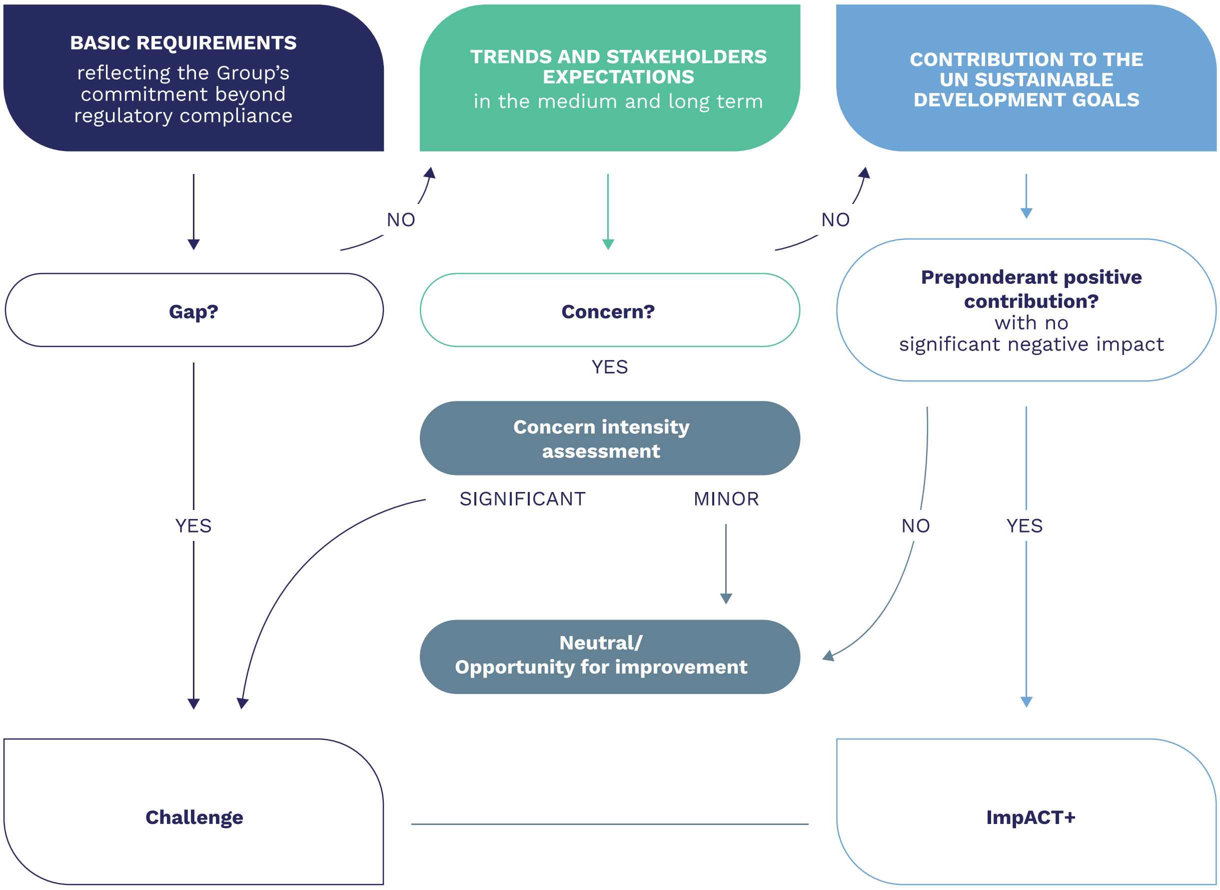
Implemented right from the initial design phases, the approach considers products in the context of their applications and of the regions in which they are sold.

To the extent permitted by the information available, the assessment takes into account the entire value chain, including manufacturing processes, from raw materials to the product's end of life. It is carried out using three sets of criteria:

- basic requirements, which reflect (i) the Group's commitments relating to product responsibility in the area of health, safety and the environment, going beyond regulatory compliance, (ii) the principles of ethics and respect for human rights, and (iii) long-term profitability factors;
- medium- and long-term trends in the regulatory framework and market expectations in terms of sustainable solutions, for which an impact criticality assessment is performed; and
- contribution to the UN Sustainable Development Goals (SDGs), using the market's standard solutions as a reference. The ten SDGs most relevant to Group activities were selected.

The assessment considers all known, presumed or suspected hazardous substances present in finished products as well as in raw materials and processes. Particular attention is paid, in terms of both products and the raw materials used, to the presence of substances identified in the regulations as being substances of very high concern (SVHCs) or which nonetheless meet SVHC criteria, after Arkema's analysis.

ARCHIMEDES PROGRAM: ASSESSMENT FLOWCHART



In this way, solutions are classified into different levels of contribution, making it easier to more effectively target actions that favor a sustainable sales portfolio.

ImpACT+ solutions

Solutions in the ImpACT+ category include those that, on the basis of a decision tree reflecting the three sets of criteria mentioned above, simultaneously (i) meet the basic requirements, (ii) are aligned with regulatory trends and market expectations, (iii) have a positive impact compared with the market standard on at least one of the SDGs, and (iv) do not generate a significant negative impact on the other SDGs.

Neutral and Challenge solutions

Other solutions can have a neutral impact or present a certain degree of risk in view of evaluation criteria. Based on the impact criticality assessment, they are classified as either "Neutral/Opportunity for improvement" or "Challenge".

Appropriate action and improvement plans have already been drawn up for more than 85% of "Challenge" solutions, including substitution plans for substances of very high concern (SVHC) and roadmaps for the elimination of the most serious SVHCs for the Group's raw materials and products alike.

At end-2023, the assessment covered 84% of the Group's third-party sales.

The percentage of sales generated by ImpACT+ solutions stood at 51% in 2023 with a target of 65% by 2030. Despite ongoing efforts by the Business Lines to improve their portfolios of solutions, the percentage of ImpACT+ sales fell in 2023 due to the combined effect of significant variations in sales prices and in volumes in the solutions mix.

To achieve this strategic objective, the Group implements voluntary actions to support three key drivers, which are continuous improvement of solutions, sustainable innovation for products and applications, and active promotion of ImpACT+ solutions.

In 2023, the Archimedes program was equipped with a dedicated digital tool to facilitate the evaluation of solutions, particularly in terms of regulatory compliance. The tool provides the Group's Business Lines with simplified access to source data and analyses, as well as scenario simulation capabilities. The aim is to facilitate their decision-making and help them manage their roadmaps.

2030 TARGET

To strengthen its commitment in terms of sustainable offer, the Group has set a strategic target: 65% of ImpACT+ sales in 2030.

	2023	2022	2021
Percentage of ImpACT+ sales (1)	51%	53%	51%

(1) The percentage of sales substantially contributing to the United Nations SDGs (ImpACT+) was calculated on the basis of an assessment of 84% of the Group's third-party sales.

ImpACT+ solutions which, through their design and their use and end-of-life phases, contribute to the efficient use of resources and a reduction in the carbon footprint (Sustainable Development Goals No. 12 "Responsible consumption and production" and No. 13 "Climate action"), accounted for 41% [2] of the Group's sales in 2023.

A powerful disinfectant that turns into water and oxygen

Among the many applications of hydrogen peroxide (H_2O_2), the disinfection of surfaces (floors, walls, pipes, etc.) is where the unique properties of this product are clearly demonstrated. Effective with short contact times, hydrogen peroxide differs from other disinfectants (chlorinated products, quaternary ammonium, etc.) in the absence of toxic by-products, as it breaks down into water and oxygen. Hydrogen peroxide is an effective, fast and environmentally-friendly disinfection solution, approved as a biocidal active substance by European regulations (EU 528/2012) and marketed under the Albone®, Valsterane® and Peroxal® brands.

Contributing to the development of biofuels

As aircraft manufacturers and public authorities seek to reduce the carbon footprint of air transport, the use of biofuels derived from biomass is booming. Demand for these renewable fuels is expected to double by 2040, and their development is essential to the decarbonization of transport.

Their production requires new refining processes in which DMDS (dimethyl disulfide), a sulfur-based additive, in which Arkema is the world leader, plays a key role.

Refineries converted to produce these biofuels must use catalysts to deoxygenate the vegetable oils from which the biofuel is derived. Arkema's DMDS, injected into the reactors at the appropriate time, is essential for activating the surface of these catalysts. The Carelflex® service offering, which ensures the safe and optimized injection of DMDS by a team of Arkema experts on site at refineries around the world, is successfully supporting leading biofuel producers.

(2) *The percentage of sales contributing significantly to the United Nations SDGs (ImpACT+) was calculated on the basis of an assessment of 84% of the Group's third-party sales.*

4.2.4 Responsible product stewardship |DCP|

4.2.4.1 Responsible product stewardship policy

Arkema integrates health, safety and environmental protection into every product's design and throughout its life cycle.

This product stewardship process, which in certain aspects exceeds regulatory requirements, engages stakeholders across the product chain, from raw material suppliers to end-customers.

The Group expresses its commitment to responsible product stewardship in its Social Commitment Charter and its Health, Safety, Security, Environment and Quality Policy and by endorsing the International Council of Chemical Associations' (ICCA) Responsible Care® initiative.

Concrete actions to reflect this commitment include:

- active contribution to advancing scientific knowledge to better take into account the hazards and risks relating to products and their use;
- product design aiming to reduce health, safety and environmental risks. Particular care is taken with products designed for consumers and professionals and with products likely to end up in recycling loops;
- risk management in existing product ranges that could lead to substitution, taking into account the entire value chain so that all aspects are considered, from raw materials to the product's end of life, including waste treatment and the circular economy; and
- communication and clear information for product users, based on fair advertising and marketing practices.

Leveraging its organization and the scientific and regulatory expertise acquired over many years, Arkema ensures that product-specific HSE roadmaps are defined by country and are adapted to local conditions, thus helping to drive continuous improvement and deepen its knowledge of each product's features and conditions of use. In addition, the Group uses the Arkema Integrated Management System (AIMS) described in section 4.5.1.2 of this chapter to manage HSE risks related to product modifications, particularly changes to product composition and manufacturing processes.

A training module on responsible product stewardship has also been introduced internally and added to the training program for various business and Supply Chain teams.

4.2.4.2 Regulatory product management

Regulatory compliance plays a key role in product safety for customers, the entire value chain and stakeholders.

In recent years, Arkema has notably deployed the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) and implemented the European Union's Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) regulations, which came into effect in 2007 to make the production and use of chemicals safer throughout the European chemicals industry.

Deployment of GHS

GHS is a major United Nations initiative designed to replace the various chemical classification and labeling standards used in different countries with a global system based on consistent criteria. The Group has deployed it in every participating country, in line with its implementation in local legislation.

In Europe, the GHS has been transposed into the Classification, Labelling and Packaging (CLP) regulation governing chemical products and mixtures. Arkema reassessed and classified all the substances contained in its product portfolio within the regulation's deadline and updated the related Safety Data Sheets and labels. The Group tracks the GHS updates published twice a year and aligns its Safety Data Sheets accordingly in the countries and regions that transpose them.

As part of the Chemicals Strategy for Sustainability, the European Commission has begun revising the CLP regulation by adding new hazard classes for human health and the environment (endocrine disruptors; persistent, bioaccumulative and toxic; and persistent, mobile and toxic). Arkema is preparing for these future challenges by adapting its policies and resources accordingly.

REACH implementation in Europe

REACH is a European regulation that aims to make in-depth changes in the way chemical substances are managed by improving the level of knowledge of these substances, analyzing their environmental and health risks and defining measures to manage the risks arising from their use or manufacture.

An advocate of the regulation's objectives since its inception, Arkema mobilized a team of more than 30 experts in toxicology, ecotoxicology and regulatory compliance – working both centrally within the Product Safety and Environment department as well as within the Group's businesses and corporate departments – to successfully complete the final phase of registration. At end-2023, following the various acquisitions and divestments and changes in the product portfolios, the Group had 444 registered active substances. Compliance with these regulations represented an overall cost of around €65 million for the registration of substances by the first three deadlines. An additional envelope of more than €40 million has been earmarked to cover the maintenance, improvement and development of the portfolio during 2019-2024.

When the registration stages have been completed, research on chemical substances will continue in line with the REACH regulation to further improve knowledge of their properties and applications. The regulation represents a significant source of progress in the areas of risk management and the protection of the health and safety of people and the environment.

The quality of REACH registration dossiers has been of great public interest since the end of the last REACH deadline.

In June 2019, the European Commission and the European Chemicals Agency (ECHA) issued a joint action plan with a set of measures to address that need for improvement.

In parallel, the European chemical industry, *via* the European Chemical Industry Council (CEFIC), has defined and launched an action plan to review and improve registration dossiers. This multi-annual plan provides REACH registrants with a framework to progressively reassess safety data.

Arkema joined around 200 companies from the chemical industry in signing up to the action plan. It fits perfectly with the Group's responsible product stewardship strategy, which has gone beyond the ECHA's demands by proactively updating its dossiers to take into account new data and changes to ECHA guidelines.

With the launch of the European Union's Chemicals Strategy for Sustainability, Europe is opening a new regulatory chapter for the assessment and management of chemical risks. Arkema is already preparing by analyzing both the impact of the strategy on its business and the opportunities it could generate. In particular, Arkema actively participated in the economic impact analysis conducted by CEFIC to provide input for the European Commission's impact study. The findings of this analysis should lead to the development of new legislation or the revision of existing regulations such as REACH, expected in the first half of 2025. These legislative measures should be accompanied by a Transition Pathway to ease the burden and impacts for the industry. Arkema will adapt its own roadmap and associated resources to respond to these regulatory changes.

Management of REACH-defined substances of very high concern (SVHC)

The European Union introduced its Community Rolling Action Plan (CoRAP) right from the first phase of registration, in order to be able to identify the substances of most concern by 2027. Since 2012, 392 substances have been or will be evaluated under the plan. 28 of the Group's substances have been listed in CoRAP and their state of advancement is as follows:

CoRAP	2012-2025	Evaluation completed	Additional information provided: awaiting conclusion	Additional data being constituted	Upcoming evaluation
Number of substances	28	22	1	1	4

Following evaluation, additional information may be requested to determine if the risks are effectively managed. This could eventually lead to proposed pan-European risk management measures, such as restrictions, the identification of substances of very high concern or other initiatives outside the REACH remit.

Arkema has put in place a dedicated process to track the REACH-defined SVHCs that are used in its productions or placed on the market. It was designed in response to the REACH substance authorization process, which has two phases:

- the first consists in identifying substances that could have potential negative impacts on human health or the environment. Once so designated, these "substances of very high concern" are added to a list of substances that may be subject to prior authorization for their specific use (Annex XIV); and
- the second phase aims to ensure that the risks from the use of these SVHCs are adequately managed and that the substances themselves are being gradually replaced by appropriate alternatives. These substances may not be placed on the market or used after a designated date unless an authorization is granted (or waived) for their specific use.

As soon as the authorities propose that a substance be listed as an SVHC, Arkema responds to the public hearings organized by the ECHA for substances whose use(s) may be subject to authorization.

In cases where these substances finally qualify as SVHCs and are included in the candidate list, a review is conducted to determine the most appropriate response, such as assessing alternative substances for the intended uses, applying for authorization when the substance is listed in Annex XIV, or converting the production unit and phasing out production.

ANALYSIS OF THE GROUP'S SVHCs

Substances of Very High Concern	SVHCs contained in products placed on the market	Of which SVHCs contained in raw materials
SVHCs subject to REACH authorization	11	10
SVHCs on the REACH candidate list	49	43

Outside Europe, the table above covers all the Group's businesses except for recent acquisitions by Bostik and the High Performance Polymers Business Line. Products containing these substances, whether subject to authorization or on the candidate list, accounted for 3.1% of sales in 2023, compared to 2.9% in 2022. This increase is due in particular to a change in the sales mix. The Group is continuing its efforts to reduce the number of SVHCs in its products through substance reformulation and replacement. The Archimedes portfolio evaluation program outlined in section 4.2.3 of this chapter is capable of identifying products in a "challenge" category, for priority action-plan rollout.

In November 2015, Arkema filed an application with the ECHA for the authorization of sodium dichromate, used as a processing aid at the Jarrie plant in France, while waiting for an alternative solution to be found. The request was accepted by the European Commission on 29 January 2018 for a period of 12 years.

At the end of 2023, the industry candidate list contained 235 substances, including (i) hydrazine produced at the plant in Lannemezan (France), (ii) 2-imidazolidinethione (ETU) produced by MLPC International (France), (iii) nonylphenol ethoxylates (NPE) produced by the Specialty Surfactants business, and (iv) three photoinitiators (2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one, 2-benzyl-2-dimethylamino-4'-morpholinobutyrophenone and diphenyl (2,4,6-trimethylbenzoyl)phosphine oxide) produced by the Coating Additives Business Line.

REACH's third component is the restriction procedure, which is intended to restrict or prohibit a substance's production, marketing or use. A restriction on C9-C14 perfluorocarboxylic acid derivatives, including perfluorononanoic acid (PFNA) among others, came into effect on 4 August 2021. However, the Group has not been affected by said restriction, because it voluntarily replaced these substances in its fluoropolymer production process in January 2016. In Europe and in the United States, regulation projects or proposals aimed at regulating per- and polyfluoroalkyl substances (PFAS) that could have an impact on certain Group polymer chemical and fluorogases activities. In Europe, a proposal was made by five member states of the European Chemicals Agency (ECHA) in January 2023 to ultimately ban or restrict the production, marketing (including imports) and use of approximately 10,000 PFAS. This is the first step in a long process with several stages that will last until 2025. The last major step was a six-month public consultation that was completed in September 2023. Over 6,000 comments are now being reviewed by the Risk Assessment Committee (RAC) and Socio Economic Analysis Committee (SEAC).

Previously recommended for authorization, cobalt chloride is now recommended for restriction, after an analysis of the most effective risk management option. The proposal prepared by the ECHA was published in October 2018. It was finalized in September 2020 when the committees for Risk Assessment (RAC) and for Socio-Economic Assessment (SEAC), overseen by the ECHA, issued their final opinions to the European Commission in anticipation of a regulatory proposal. In the end, the European Commission abandoned the restriction proposal in favor of a request to the ECHA in July 2021 for an occupational exposure limit (OEL). After a public consultation in the second quarter of 2022, the Risk Assessment Committee (RAC) findings were sent to the Commission for inclusion in the Carcinogens and Mutagens Directive (CMD). The Group, which uses the substance as a processing aid at the Jarrie plant in France, is analyzing the impact and exploring various solutions, including replacement.

With regard to microplastics, the French law of 10 February 2020 relating to the fight against waste and to the circular economy ("the Agec Law") introduced restrictions in the country on the use of microplastics intentionally added to products. It will have a limited impact on the Group's activities in 2027 for some of its products used in cosmetic applications. In parallel, the proposal to restrict the use of microplastics in certain applications was adopted and came into force on 17 October 2023. This proposal is less restrictive than the Agec Law. In particular, it contains no provisions to phase out the use of microplastics in some cosmetic applications (makeup, lip and nail products) until 2035. A bill aligning effective dates for bans in France and Europe has been approved by the French Senate and is due to be reviewed by Parliament.

Compliance with other legislation

Outside Europe, Arkema markets its chemicals in accordance with national and regional regulations, as applicable. Due to its history and global presence, some of these products are already notified in many inventories. Should a need arise for a new product notification, applications can be filed in a timely manner thanks to the extensive database Arkema maintains on the characteristics of its products.

In particular, since 2015, this process has made it possible to respond to the three new REACH-like regulations that have been introduced in South Korea, Taiwan and Turkey. For example, Arkema has completed phase I registration of substances in Taiwan and has been submitting annual reports to the Korean authorities since 2016.

Arkema has also joined consortia formed to jointly register substances brought to market in South Korea, in accordance with article 15 of the Act on the Registration and Evaluation of Chemical Substances (ARECS), and registered nine substances before the first deadline of June 2018. The Group completed the pre-registration of all substances brought to market in South Korea in June 2019, in accordance with the amendment issued in March 2018, and registered the substances covered by the first deadline (31 December 2021). Arkema continues to prepare for the registration of substances according to schedule.

The Group is now preparing for the upcoming registration deadline in Turkey and has already completed the necessary pre-registrations. Arkema has positioned itself as the lead registrant for around 50 applications and had already submitted 27 applications by the end of 2023. For the remaining substances to be registered, the major challenge will be to ensure that lead registrants register early enough to allow co-registrants to submit their information in line with the new timeline adopted by the Turkish authorities in late 2023.

In the wake of Brexit, the Group began compliance work on the basis of the regulatory information available, in particular with the grandfathering of registrations held by Arkema UK Ltd and substance notification at 27 October 2021 to benefit from transition periods for registration. The registration phase has not yet started. The United Kingdom has postponed the deadlines to give itself time to review the registration process and make it less complex and more tailored to local use of the substances.

Following the publication of rules aimed at reforming the Toxic Substances Control Act (TSCA) Chemical Substance Inventory in the United States, the Group notified the US authorities of active substances in its portfolio in February 2018.

On a more specific note, the Group does not manufacture any persistent organic pollutants (POPs).

The Group complies with regulations on genetically modified organisms (GMOs) in different countries and regions. The vast majority of plant-based raw materials used by Arkema is guaranteed GMO-free, and this can be traced if customers so require.

Lastly, the Group has a policy of restricting the use of its products in medical applications solely to temporary implants (less than 30 days). To assist the Group's businesses in their choices, Arkema has set up medical applications assessment committees in order to assess the compliance of the intended products with prevailing laws and regulations.

4.2.4.3 Product information

Arkema relies on an in-house team of expert toxicologists and ecotoxicologists which conducts product hazard studies and works closely with regulatory experts to assess risks in normal conditions of use. The findings are shared across the Group and externally in various forms, such as Safety Data Sheets and labeling.

Safety Data Sheets (SDSs)

In many countries, Arkema describes its product characteristics and conditions of use in Safety Data Sheets (SDSs), which are required to market chemicals classified as hazardous to human health or the environment. They are prepared in some forty languages based on a global database comprising the composition of every product and its toxicological, ecotoxicological and physicochemical data, thereby ensuring consistent information in every market. Arkema issues SDSs in accordance with regulatory requirements and posts them on the Group website or the online QuickFDS platform. As part of the responsible product stewardship process, Arkema exceeds regulatory obligations by issuing SDSs even for products that are not classified as hazardous and by providing users with an emergency hotline available 24/7.

In Europe, the Group's organization and IT infrastructure have made it possible to issue extended SDSs, the latest REACH-compliant format which improve risk management by including exposure scenarios for each identified use, and to update its entire European SDS portfolio to comply with the new format, which came into force on 1 January 2023.

Labeling

Arkema has also developed systems to print labels with a consistent classification, regardless of the country in which the product is manufactured or marketed.

In addition, efficient IT systems enable Arkema to prepare compliance documents and align them as needed with the latest formats and data, notably when the GHS standardized classification and labeling system is introduced in a new country.

Poison control centers

The CLP regulation makes alignment with the GHS a legal obligation throughout the European Union. In addition, under the regulation, companies that put hazardous mixtures on the market must provide information about those mixtures to the bodies appointed by their country. The appointed bodies make the information available to poison control centers so that they can provide medical advice rapidly in an emergency situation.

Under the new provisions of the CLP regulation, which came into effect in March 2017, these companies will be required over time to:

- use a harmonized format for the transmission of information *via* a portal hosted by the European Chemicals Agency (ECHA). This EU-wide format will gradually replace national requirements for the transmission of information; and
- generate a unique formula identifier (UFI) for each formula, which must be included on the product label. This establishes an unambiguous link between the product placed on the market and the information relating to the mixture, enabling accurate and rapid identification of the product's formula. Accurate identification is essential in order to provide the appropriate medical advice in an emergency.

Thanks to its teams and IT infrastructure, the Group notified the European Chemicals Agency of the required information within the deadlines set by the CLP regulation, and made the unique formula identifier available to its customers *via* labels or Safety Data Sheets.

4.2.4.4 Animal welfare

Given its business portfolio, Arkema neither conducts triage trials on substances derived from its research nor participates in toxicology research projects that could involve the use of laboratory animals.

The Group always conducts in-depth analyses of data in existing literature, thanks to constant tracking of information on Group substances, in order to use all of the available public information.

The Group does not conduct toxicology studies on vertebrate animals other than those required by the authorities and only after an in-depth analysis and application of up-to-date existing public information on the substances in question. The necessary studies are contracted to outside laboratories which are subject to oversight by the relevant ethics committees.

As required by REACH, the Group applies, whenever possible, the rules for waiving standard testing when such tests are not justified (due to the absence of exposure) or when alternative methods can be used. In addition, Arkema participates in the work of FRANCOPA, a French platform dedicated to the development, validation and dissemination of alternative animal testing methods, using the 3Rs (replacement, reduction, refinement), to which the Group adheres. It applies the 3R approach in all the studies it conducts.

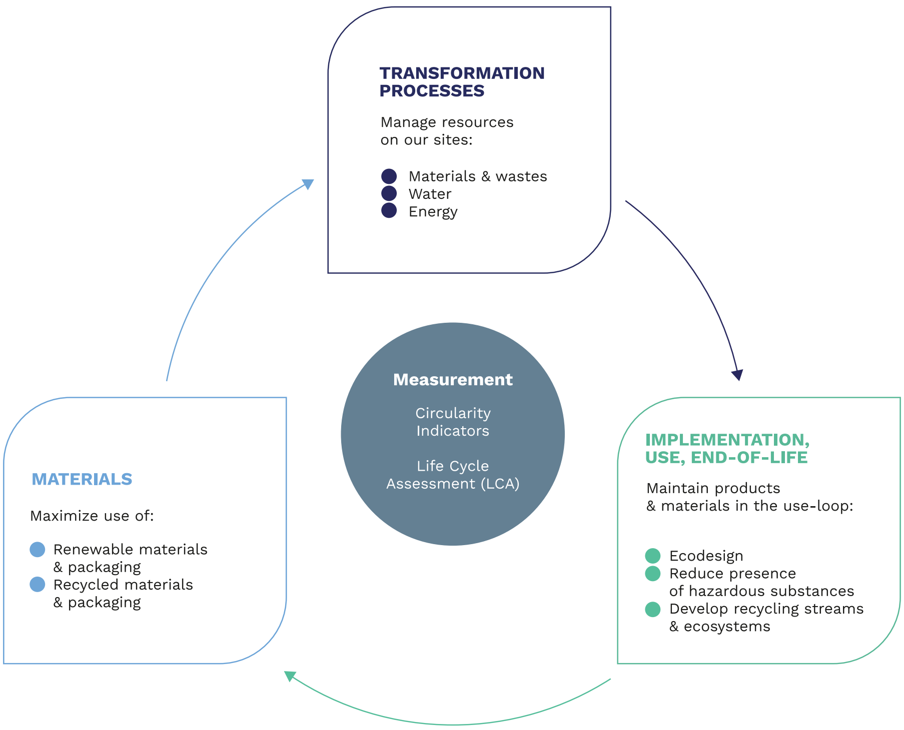
4.3 Circular economy

→ DESIGN PRODUCTS AND SERVICES THAT MINIMIZE WASTE AND POLLUTION, OPTIMIZE THE USE OF RESOURCES, AND KEEP PRODUCTS AND MATERIALS IN USE

4.3.1 Circular economy approach

To respond to the scarcity of natural resources and the increasing environmental impact of human activities, Arkema develops the circular economy by acting to protect resources, promoting responsible consumption and reducing the environmental impact of activities throughout the life cycle. The Group remains set on its choice of the circular economy as a priority area, in line with the findings of its last materiality assessment, presented in section 4.1.3 of this chapter. The circular economy challenge and the changes it requires apply to both the Group's solutions and its industrial operations, and Arkema is speeding up and strengthening its actions in this area.

Arkema's approach to the circular economy and responsible resource management covers the entire value chain and is based on four main drivers:



The circular economy program is managed by the Circular Economy Coordination Committee, which meets at least twice a year. It is made up of the Research & Development, Sustainable Development, Processes and Environment Vice-Presidents and the Renewables and Recycling Scientific Director. It oversees programs relating to the circular economy and the progress made in this area.

The main advances are shared with the Industrial Ecology Steering Committee for aspects related to transformation processes and with the Product Stewardship Steering Committee for all other aspects of the circular economy. These two steering committees, which include members of the Executive Committee, approve guidelines and decide on priorities and action plans.

4.3.2 Material selection

A pioneer in the use of raw materials made from biomass, as illustrated by the use of castor oil to produce Rilsan® high performance polyamides, Arkema makes every effort to maximize the use of circular materials in its products and packaging, including recycled or non-virgin materials and materials from renewable sources. The Group's innovation strategy, presented in section 1.1.2.1 of this document, and in particular the "Bio-based or biosynthesized materials" program, fully supports this dynamic.

The new facility in Singapore produces 100% bio-based amino 11 monomer and Rilsan® polyamide 11 expands Arkema's offering of performance materials made from renewable sources. The Group issued its first green bond in 2020 fully dedicated to the financing of this industrial project (see section 5.5 of this document).

The Group works extensively with its suppliers to measure the percentage of renewable and recycled materials in purchased products and packaging, to encourage the development of circular solutions, in particular *via* partnerships, and to secure the supply of strategic materials.

In addition, the Group's activities are encouraged to apply eco-design principles, and more particularly the use of circular materials and packaging, right from their solutions' initial phases of development.

This ongoing commitment was again demonstrated in 2023 by the fact that products at least 25% made from renewable or recycled raw materials accounted for around 11% of Group sales. This indicator is up on previous years, demonstrating the interest shown by the Group's markets in solutions derived from renewable and recycled materials. Renewable raw materials include bio-based materials (*i.e.*, from biomass, plant or animal), and materials certified renewable by a mass balance approach. Recycled raw materials may also include materials certified using the mass balance approach. To date, nine sites in Europe have received International Sustainability & Carbon Certification-PLUS (ISCC+), which guarantees the traceability of bio-based and recycled raw materials according to the mass balance approach. This certification enables the Group to promote a new circular product range to its customers.

In line with this indicator, the 25% rate has been used as the baseline for the "substantial contribution" criteria for Arkema's Taxonomy-eligible activities in the Plastics in primary form category (see section 4.1.5 of this chapter).

New ranges of mass balance-certified materials

In 2023, Arkema further expanded its range of solutions with new ranges of bio-attributed products, certified using the mass balance method under the International Sustainability & Carbon Certification-PLUS (ISCC+) framework. Thanks to the ISCC+ certification of the Ribécourt (France), Antwerp (Belgium) and Châteauroux (France) sites, the Group is launching new bio-attributed adhesive solutions, including the Kizen® and aQ® ranges for the packaging and hygiene markets, as well as bio-attributed specialty surfactants, with the alkoxylates Surfaline®, Sensio™ and Neoliens™.

These new solutions complement Arkema's range of bio-attributed products, including acrylic monomers, Rheotech™ and Ecodis™ specialty acrylic additives, Encor® coating resins and Kynar® CTO PVDF. Arkema is accordingly accelerating innovation in renewable materials for its customers and partners.

Bio-based instant glue

Thanks to its patented "Crackless" synthesis process, Arkema has developed an industrial route for a new bio-based cyanoacrylic monomer. It is derived from a bio-alcohol from the Oleris® range, produced entirely from castor beans from India, where Arkema has implemented several initiatives related to the responsible cultivation of castor beans, including the Pragati program. This new range of instant adhesives, developed by Bostik, will be marketed in the Industrial Assembly and Consumer markets. As well as being the first 60% bio-based instant adhesive, it has better water and high-temperature resistance than other solutions currently on the market.

4.3.3 The circular economy in transformation processes

The Group's initiatives to reduce the environmental impact of its industrial sites are underpinned by its resource management policy and notably consist in optimizing their use of raw materials, energy and natural resources like water. New manufacturing units are designed to incorporate environmental footprint considerations into the choice of processes and equipment. Special attention is also paid to operating conditions, and maintenance and development investments are regularly undertaken to optimize the use of water, energy and raw materials at Group plants.

4.3.3.1 Energy use

Arkema has developed a climate policy, which is presented in section 4.4 of this chapter. This policy mainly includes ambitious objectives and concrete actions to improve the Group's energy intensity and energy mix. For further details, see section 4.4.3.2 of this chapter.

4.3.3.2 Water withdrawals |DCP|

Water is used in the Group's industrial operations to provide a reaction medium for certain production processes, cool production installations, clean products and equipment and generate steam.

The Group also operates hydraulic barriers to contain groundwater contaminated by legacy pollution on historical sites. Water withdrawn in this way may be either used or discharged after any necessary treatment.

Convinced of the importance of responsible water management in protecting the environment and biodiversity, Arkema presents its commitments in its Health, Safety, Security, Environment and Quality Policy and in its Water Policy. The Group strives to optimize its consumption of fresh water, whether withdrawn from surface or groundwater. Arkema is upgrading production practices by installing water-saving systems and by developing closed loops. These initiatives can cover a wide range of solutions, such as tracking usage more effectively, installing flow meters, deploying leak detection programs, changing technologies, upgrading fire-fighting systems, recovering rainwater and recycling water from scrubbing or vapor condensates.

In 2016, as part of the operational excellence program, the Group launched the Optim'O project to optimize its production units' water management. The project's steering committee is chaired by the Industry and CSR Executive Vice-President, a member of the Executive Committee.

The analyses carried out as part of this project found that:

- 90% of water withdrawn from the natural environment is returned as surface water; and
- 90% of the Group's water withdrawals are attributable to just 15 industrial sites, two of which are classified as high or very high priority for water management, due to (i) their location in an area that will face climate-change-induced water stress and (ii) the high level of water use at these sites.

Drawing on these observations, the Optim'O project gives rise to numerous initiatives, particularly at the sites that account for most of the Group's water use and/or generate the most wastewater.

Since 2020, the approach to risks from water stress and other natural hazards resulting from climate change has been developed based on projections to 2030 and beyond made using the World Resources Institute's Aqueduct tool. This analysis was rounded out by data from the study into the exposure of all Group sites to climate hazards, launched in 2022 (for further details, see section 4.4.4.1 of this chapter).

Based on the update of Aqueduct data for 2023, the Group has identified 28 sites, representing 12% of water withdrawals and 15% of production volume, that warrant high or very-high priority for water management by 2030. The analysis of the impact of water stress on the Group's activities began in 2021 with a pilot study on a globally established Business Line, enabling resilience scenarios to possible episodes of restrictions to be defined. The approach has continued since then, notably with the integration of the French sites most at risk following the droughts of 2022 and 2023.

The Optim'O project is one part of the assessment of the "do no significant harm" criterion regarding the objective of the sustainable use and protection of water and marine resources for Arkema's taxonomy-eligible activities (see section 4.1.5 of this chapter).

Reducing water use

The Hengshui plant (China), located in an area of high water stress, is now reusing its wastewater. In 2023, 63% of wastewater was reused. In addition, 52% of its water supply comes from the recycling of wastewater from the industrial zone. Since 2017, the site has thus reduced its water withdrawals from the natural environment by 85%.

The table below presents consolidated water withdrawals in 2023, 2022 and 2021, calculated according to the methodology described in section 4.7 of this chapter.

Water use	2023	2022	2021
Water withdrawals *(in millions of cu.m)*	86	91	97

Water withdrawal decreased by 5 million cu.m in 2023, reflecting the conservation efforts made.

To step up action on protecting water resources, in 2023, the Group set a new target for reducing water withdrawals:

2030 TARGET

25% reduction in water withdrawals with respect to 2019, *i.e.*, a target of 82 million cu.m by 2030.

4.3.3.3 Raw materials use

Arkema wants to contribute to optimizing the consumption of non-renewable raw materials used in its manufacturing process with the primary goal of reducing their use by deploying process control initiatives and developing best operating practices.

In addition, to optimize its own and its customers' raw materials use, the Group undertakes, independently or in partnership with suppliers, such programs as recycling the reaction solvents used in its production processes. It promotes the purchase of recycled packaging and encourages its suppliers to develop this practice. It also offers customers other recycling solutions and deploys circular economy initiatives that are described in sections 4.3.2 and 4.3.4 of this chapter.

Lastly, the Group also uses circular, renewable and recycled raw materials in its production processes, as described in section 4.3.2 of this chapter.

4.3.3.4 Circular economy and industrial operations

Through its Health, Safety, Security, Environment and Quality (HSSEQ) policy the Group strives to limit both hazardous and non-hazardous waste, and recovers co-products generated by its industrial processes. For hazardous waste, external treatment is carried out by specialized companies approved by the Group following a case-by-case assessment based on the characteristics of each type of waste. Moreover, cross-border movements are the exception rather than the rule, and are carried out in strict compliance with national and international regulations.

The Group's industrial-scope circular economy program has been strengthened since 2020 and involves:

- reducing consumption of raw materials;
- reducing the use of packaging (upstream and downstream);
- reducing waste production;
- carefully sorting and preparing waste to ensure the best possible treatment process;
- securing the sale of co-products and by-products and preventing their reclassification as waste;
- improving internal and external waste treatment processes; and
- processing third-party waste in cases where it is possible to improve disposal methods.

As part of this program, an awareness campaign has been launched for all industrial sites and a review of all waste flows has been initiated in order to improve circularity.

Recycling packaging materials

For many years, the Group has been using recycling and recovery channels provided by packaging suppliers and encourages its customers to also use these systems.

Recycled packaging is used whenever possible, depending on the compatibility between containers and contents. Out of their total packaging consumption, some industrial sites already use up to 70% recycled packaging.

More direct channels have also been set up, such as at the ArrMaz plant in Kunming (China), which returns intermediate bulk containers (IBCs) to its suppliers, and which itself set up a take-back system for empty drums and IBCs from several of its customers in 2021.

The Group also stresses the importance of using new packaging designed with an optimized percentage of recycled materials, as cardboard and plastic container recycling operators now offer a wide selection.

The marketing teams from the Group's various businesses work to integrate into their product lines packaging made from the Post Consumer Recycled (PCR) stream, as the offer of these materials continues to grow. The Group's technical approach to packaging places priority on single-material packaging and high recyclability options. For example, the small bags used for Bostik's tile adhesives and mortars have always been made out of kraft paper, a material with a recycling rate of 80% to 85%. A firm advocate of using recycled packaging, Arkema urges its suppliers to design and develop standards that will contribute to rapidly expanding recycled packaging solutions throughout the chemical industry.

Since 2020, manufacturers of plastic cartridges (an essential packaging component for the sealants and adhesives produced by the Group) have entered into a technical testing phase designed to ensure that a significant portion of recycled plastic is integrated into their production processes in the near future.

Reusing co-products

Arkema markets co-products from the production of its main products by finding suitable commercial applications linked to their inherent properties.

Co-products from the conversion of castor oil into undecanoic amino acid at the Marseille (France) plant are examples of reuse through the Oleris® range, whose bio-based origin is in increasing demand in recovery channels.

At the Hengshui site in China, similar co-products, along with crystallized sodium sulfate converted from a sulfuric acid waste flow, accounted for a total of 33,700 tonnes sold in 2023.

Waste recovery in Jarrie (France)

In 2022, a waste alumina recovery process came into operation: after purification by a subcontractor, the product is sold to steel producers. Its success was confirmed in 2023 with the recovery of 500 tonnes, i.e., 88% of the production of this waste, which was previously sent to landfill.

Waste

Recovery

In addition, Arkema is seeking solutions to transform certain types of industrial waste, which otherwise would be discarded, into products that can be used in other industries. The Group formed a transdisciplinary working group – representing Business Lines, procurement, processes, HSEQ, R&D and sustainable development – to step up these efforts and increase coordination with partners.

In 2023, 23% of waste produced worldwide by the Group was recycled on- or off-site to recover useful materials.

For several years, the Mont facility in France has marketed the sodium-water produced as part of a monomer purification process to the paper industry for use in the kraft paper and cardboard production process. The basic, organic material-rich water helps to minimize sulfur loss in the process regeneration loops.

At the Lacq site (France), desulfogypsum from the sulfur residue treatment facility is a non-hazardous waste that is re-used as a material for the manufacture of plasterboard. In 2023, 15,700 tonnes of desulfogypsum were recycled in this way, thereby avoiding their being sent to landfill.

At the Jarrie site (France), used secondary filters from the hydrogen peroxide production unit were previously sent straight to disposal systems. Thanks to a new waste recovery system, the palladium present in these filters is now recycled and reused in the production of one of the catalysts used by the site. This precious metal is on the European Union's list of critical raw materials.

Emissions

While inherent to its industrial operations, the Group ensures that its waste production is managed at every stage of its business activity and that resource recovery and recycling solutions are found whenever possible.

This commitment is reflected in a number of areas:

- reducing waste at source, by designing products and processes that generate as little waste as possible;
- recycling waste in the product value chain, in compliance with the REACH regulation; and
- recovering the energy potential of by-products and waste, wherever possible, by burning them as fuel.

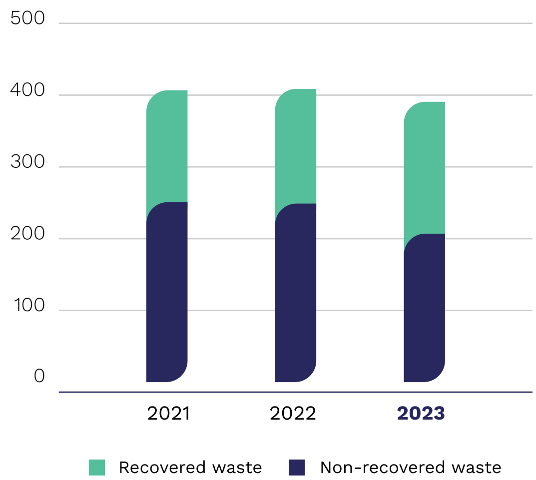
In recent years, the Group has in particular:

- explored new ways to recover and reuse certain types of by-products, for example, to replace conventional fuels in boilers, notably at the La Chambre, Carling and Marseille sites in France;
- recycled cleaning solvents and optimized cleaning cycles; and
- installed filters to reduce sludge volumes.

The following chart shows the amounts of recovered and non-recovered waste generated by the Group's operations in 2023, 2022 and 2021, calculated according to the methodology described in section 4.7 of this chapter.

RECOVERED AND NON-RECOVERED WASTE

(in kt per year)



The Group's objective is not only to reduce overall waste production, but also to recycle waste or recover its energy potential by burning it as fuel.

The following tables show the amounts of hazardous and non-hazardous waste that were either recycled or burned as fuel in 2023, 2022 and 2021 calculated according to the methodology described in section 4.7 of this chapter.

Hazardous waste *(in kt per year)*	**2023**	2022	2021
Hazardous waste recycled into materials	27	27	27
Hazardous waste burned as fuel	84	58	63
Non-recovered hazardous waste	68	113	107
• Of which landfilled	2.7	5.2	3.8
TOTAL HAZARDOUS WASTE	**178**	**198**	**197**

Non-hazardous waste *(in kt per year)*	**2023**	2022	2021
Non-hazardous waste recycled into materials	63	67	58
Non-hazardous waste burned as fuel	11	8	8
Non-recovered non-hazardous waste	140	136	144
• Of which landfilled	22	27	25
TOTAL NON-HAZARDOUS WASTE	**213**	**211**	**210**

In 2023, the overall waste volume fell by 17 kt, mainly due to the wider decline in production.

The Group continued its waste recovery efforts in 2023: 23% of waste produced by the Group worldwide was recycled at the production site or off-site to recover useful materials and 24% was burned as fuel (compared with 16% in 2022).

To step up action on protecting resources, the Group set in 2022 a new goal for waste treated without recovery as a percentage of production. The target is 48 kg/t on average over the 2022-2024 period, *i.e.*, an annual reduction of 1.5% compared with 2021 (49.5 kg/t).

4.3.4 Development, use and end-of-life management

Arkema works with its partners across the value chain to design and develop solutions that help keep products and materials in the use loop.

Eco-design

In cooperation with its customers and suppliers, Arkema works for each of its applications and technology platforms to identify the most relevant circularity drivers, such as optimization of the quantity of materials used, extension of product lifespan, separability of materials and components, recycling and degradability.

Various training initiatives have been carried out with the teams involved in innovation within the Group's businesses to ensure that these issues are taken into account from the earliest phases of the design process.

Making even better use of returnable bottles

Drawing on its extensive experience in coating glass containers, Arkema has developed a range of solutions to extend the life of returnable bottles. The Kercoat® 500 protective coating, applied by manufacturers at the end of the production line, helps to prolong the life of glass bottles by effectively delaying the damage they can suffer during bottling, such as scratches and embrittlement, thereby doubling or even tripling their useful lives. This coating not only helps to improve the aesthetics and marketability of the treated bottles, while reducing the costs associated with their replacement, but also helps to reduce their carbon footprint.

The Opticoat® range, used by bottlers as a coating to hide micro-scratches and white marks that can appear when bottles are reused, allows bottles to be used for up to 50 cycles, compared with the standard 20. With the launch of a 92% bio-based version with Opticoat® 340 in 2024, Arkema has reaffirmed its commitment to developing solutions that are increasingly aligned with its environmental concerns and those of its customers.

Washable adhesive solutions for labels to facilitate packaging recycling

The Bostik TLH 9200 E&LT and Bostik Flexcryl™ ClearCycle adhesive solutions, which use hot melt and water-based acrylic technologies respectively, facilitate recycling. The combination of these adhesives with specific paper or film labels is designed to separate them from the main packaging material (bottle or tray, polymer or glass) in mechanical recycling and washing systems, without adhesive residue or ink contamination. As a result, they facilitate closed loops, *i.e.*, the reuse of recycled material for the same applications.

The implementation of these technologies has led to numerous partnerships across all relevant packaging value chains (including label manufacturers, industrial machinery manufacturers, recyclers and even the brands themselves), in a large number of countries. For example, Bostik joined the Nextloopp project in 2023. Nextloopp comprises 50 companies (including Danone, L'Oréal, Unilever, P&G, CCL and MCC) with the aim of creating an optimized recycling flow for polypropylene food trays in order to put its technologies at the service of fully recyclable packaging.

Reducing the presence of hazardous materials in the Group's products

The presence of certain substances in our products can affect their recyclability. Arkema is committed to implementing a responsible product stewardship approach that takes this issue into account, thereby providing its customers with safer solutions. The Group's policy is described in section 4.2.4 of this chapter.

Extending the lifespan of the Group's customers' products

Arkema aims to constantly improve the lifespan of both its own and its customers' products.

Kynar® PVDF, for example, is a long-lasting coating solution. In the Kynar Aquatec® range, used for reflective roofs that reduce buildings' energy consumption, it preserves the white finish for an especially long time without maintenance.

Durastrength® acrylic impact modifiers extend the lifespan and enhance the performance of rigid and flexible PVC in applications such as siding, fences, decks, rails, pipes and injection-molded parts.

Recycling the Group's customers' products

Arkema is developing a number of solutions that make it easier for customers to recycle their products.

For example, Elium® liquid thermoplastic resins are produced using the same equipment and processes as thermoset composites. Their properties make parts made from Elium® easy to recycle, unlike parts made from thermoset resins such as epoxy.

The Group has also developed technologies to protect glass bottles (Kercoat®) and hide scratches (Opticoat®), which significantly improve the appearance and useful lives of bottles by tripling the number of times returnable bottles can be reused.

The specialty surfactants activity has developed a solution that increases the recycling rate of roadwork scrap. Using Cecabase RT® additives in asphalt mix increases the aggregate recycling rate by 10% to 15% compared with conventional techniques. These additives also reduce the asphalt mix's workable heating temperature.

The circular economy is based on interaction between the various participants in an ecosystem and therefore requires the development of partnerships and consortiums to set up recycling systems.

For example, since 2019, Arkema has been offering the Virtucycle® recycling program *via* its subsidiary Agiplast (acquired in 2021), a company specializing in the regeneration of high performance polymers.

A virtuous circle for the supply and recycling of high performance polymers

The Virtucycle® program places Arkema at the center of a virtuous circle to source and recycle high performance polymers. In addition to being specialized in specialty polymers recycling, Arkema connects its customers' needs while supporting them in eco-designing their finished product produced from the recycled material.

Since September 2023, Arkema has offered a range of recycled grades certified by SCS [1] that meet demanding performance standards and offer a traceable supply chain, marketed under the Rilsan®, Rilsamid® and Pebax® brands. The grades are produced by Agiplast, which has become Arkema's mechanical recycling center for high performance polymers. Also, this center, located in Italy, only uses renewable energy.

(1) *SCS is a world-leading third-party environmental and sustainability certification body.* https://www.scsglobalservices.com/about/company

4.3.5 Resource management measurement and life-cycle assessment

Measuring performance is an integral part of the plan for transitioning to a circular economy approach. Arkema has therefore introduced a number of indicators relating to products and industrial processes, as presented below.

To accelerate its approach, the Group has defined medium- or long-term targets for three of these indicators:

	Target year	Target	2023	2022	2021
Percentage of sales from products made from renewable or recycled raw materials (1)			11%	10%	10%
Water withdrawals *(in millions of cu.m)*	2030	82	86	91	97
Waste treated without recovery *(kg/t of production)* (2)	2024	48	47.4	51.8	49.5
Percentage of sales covered by a life-cycle assessment	2030	90%	56%	41%	27%

(1) The percentage of sales from products made from renewable or recycled raw materials covers products with a renewable or recycled raw material content of at least 25%.

(2) The target is 48 kg/t on average over the 2022-2024 period, i.e., an annual reduction of 1.5% compared with 2021 (49.5 kg/t).

Product life-cycle assessments

To assess the environmental performance of its products, Arkema uses life-cycle assessments (LCAs) to convert the entire inventory of a product's process material and energy inputs and environmental emissions into environmental impacts.

The Group has developed dedicated LCA expertise at its Rhône-Alpes research center in France. It has also set up the global Arkema Life Cycle Assessment Network, which is instilling this LCA culture across the organization, in particular through periodic employee training courses, and endurably embedding it into the Group's CSR process. The Group supplies LCA data at the request of customers to enable them to assess the environmental footprint of a given product all along its value chain.

In 2023, 56% of sales were covered by a life-cycle assessment. This figure, which is significantly higher than in 2022, is notably due to efforts to optimize the processes and tools deployed by the Group to meet growing customer demand for life-cycle analysis data and in particular data on carbon footprints. Depending on the type of product, internal experts assess the impacts in such areas as climate (greenhouse gas emissions), ozone depletion potential, contribution to acidification, and energy, water and land use. Their scope is generally limited to a cradle-to-gate analysis, *i.e.*, to production operations and upstream factors. In certain cases, this expertise may be shared with customers to help them implement their own eco-design process, by providing them with the impact data and discussing the most relevant indicators and the best practices associated with their assessment. LCAs are performed in accordance with the recommendations of the International Reference Life Cycle Data System (ILCD) Handbook and the international ISO 14040 and ISO 14044 standards describing the principles and framework for LCAs.

The Group intends to continue its efforts, and increased its target in 2023:

2030 TARGET

90% of sales covered by a life-cycle assessment.

4.4 Climate |DCP|

→ REDUCING THE CARBON FOOTPRINT OF THE GROUP'S ENTIRE VALUE CHAIN

4.4.1 Climate approach and commitment |DCP|

The IPCC's sixth assessment report, published in 2021, clearly shows the impact of greenhouse gas (GHG) emissions from human activities on climate change. The report specifically states that limiting the impact of climate change is contingent on limiting the increase in temperature to 1.5 °C by 2100, which will require a major and rapid reduction in greenhouse gas (GHG) emissions and the achievement of carbon neutrality by 2050. In 2022, Arkema strengthened its commitment from well below 2 °C to 1.5 °C; thanks to the significant progress made in 2022. The Group took its ambition even further in 2023. The new 2030 targets, aligned with the 1.5 °C trajectory, have been approved by the Science Based Targets initiative (SBTi), an independent global body.

SCIENCE BASED TARGETS
DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

The Group's climate plan, aligned with the Paris Agreement, includes mitigation measures across its entire value chain, as well as an adaptation strategy.

The SBTi's validation of the Group's ambitious targets, aligned with a 1.5 °C trajectory, paves the way to the achievement of Net-Zero emissions by 2050 [3].

2030 TARGET

48.5% reduction [1] in Scopes 1 + 2 Kyoto Protocol greenhouse gas emissions compared with 2019.

54% reduction [1] in Scope 3 Kyoto Protocol greenhouse gas emissions compared with 2019.

(1) Absolute emissions contraction approach.

2030 Target

25% reduction in net energy purchases in EFPI terms compared with 2012.

The climate plan is also supported by an increase in investments contributing to the Group's decarbonization, which could reach a cumulative amount of €400 million over the 2022-2030 period and will be included in the Group's recurring capital expenditure envelope.

Moreover, the Group continuously innovates and improves its production processes, implements an ambitious energy efficiency improvement strategy, notably through its Arkema Energy program, and pursues its efforts to purchase energy from low-carbon sources.

In line with the Group's 2030 objectives, each of Arkema's Business Lines has drawn up its own decarbonization plan and trajectory, identifying the necessary industrial projects, improvements or disruptions, as well as low-carbon energy requirements.

In addition, climate issues are taken into account in industrial investment decisions, energy and raw materials supply contracts, as well as the evaluation of acquisition projects.

Arkema also encourages its suppliers of the most emissions-intensive raw materials to commit to SBTs to reduce their emissions by participating in the CDP supply chain initiative. The Group is determined to enhance its product range, notably by developing solutions that help reduce greenhouse gas emissions. The innovation strategy described in section 1.1 of this document, together with the development of fluorogas-based solutions, contribute to this objective.

In addition to the mitigation measures outlined above, and detailed in section 4.4.3, the Group is developing a climate change adaptation strategy, presented in section 4.4.4 of this chapter.

Governance

Climate governance is supported at the highest level of the Group, by the Board of Directors, as indicated in sections 3.3.2.1 and 3.3.2.3 of this document, which describe its role and activities.

The Board relies on its various committees to review the climate change mitigation and adaptation strategy, and in particular the Innovation and Sustainable Growth Committee and the Audit and Accounts Committee, whose roles and activities are described in sections 3.3.4.1 and 3.3.4.3 of this document.

The climate plan, performance indicators and targets, including those filed with the SBTi, are defined by the Executive Committee and presented at least once a year to the Board of Directors by the Sustainable Development Vice-President. The Executive Committee is informed of changes in GHG emissions on a quarterly basis. In 2023, the climate plan, the objectives validated by the SBTi and the main levers for action were presented to the annual general meeting held on May 11 in Paris.

(3) SBTi Net-Zero criterion: 90% reduction on Scopes 1 + 2 and Scope 3 compared with the baseline year.

In addition, the process is overseen by the Industrial Ecology Committee, which is chaired by the Industry and CSR Executive Vice-President, a member of the Executive Committee, and an integral part of the CSR governance described in section 4.1.2 of this chapter.

Lastly, the climate plan is managed by the Climate Steering Committee, which meets on a quarterly basis. This committee is coordinated by the Sustainable Development department and comprises the Group Process and Energy Procurement Vice-Presidents, industrial Business Line Vice-Presidents and regional HSE Vice-Presidents. It leads programs to decarbonize the Group's industrial activities, and monitors progress.

Collective initiatives

Since 2021, Arkema has been a part of the French Association of Private Enterprises (AFEP)'s Ambition 4 Climate initiative. The initiative illustrates, through concrete projects, the mobilization of AFEP member companies to significantly reduce their GHG emissions throughout their value chains. In 2023, the Group unveiled its Arkema Energy program.

Collective knowledge

In 2023, Arkema launched its Go for the Planet program, which aims to strengthen the climate and environmental culture of all Arkema employees. The two-year program consists of three phases: awareness, training and empowerment. The first phase, awareness, is based on the organization of *Fresque du Climat* (Climate Fresco) workshops for all employees worldwide and the provision of e-learning modules within the Climate School.

Raising climate awareness

La Fresque du Climat, a French non-profit founded in 2018, offers collaborative workshops aimed at raising public awareness about climate change. Through a team game, participants work together to create a fresco summarizing the mechanisms of climate change as explained in the Intergovernmental Panel on Climate Change (IPCC) reports. Since its inception, the workshop has raised the awareness of more than one million people around the world.

In 2023, as part of its Go for the Planet program designed to increase knowledge about the climate and the environment, Arkema began rolling out *Fresque du Climat* workshops to all employees. By the end of 2023, more than 2,700 employees had participated in workshops organized by more than 120 in-house facilitators in 14 countries on all continents.

4.4.2 Alignment with the TCFD recommendations

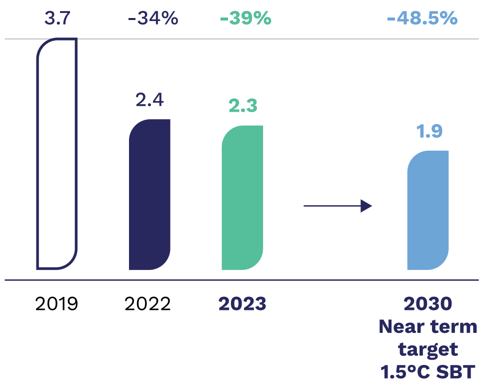
As part of its commitment to climate action, Arkema supports the recommendations issued by the Task Force on Climate-Related Financial Disclosures (TCFD). These recommendations are designed to provide a framework for business communication on climate change by organizing information into four key areas: governance, strategy, risk management, metrics and targets. More detailed information can be found in this document and in the CDP climate change questionnaire to which Arkema responds every year and which is aligned with the TCFD recommendations.

	Reference in this document	Reference to 2023 CDP questions
Governance		
a) Board of Directors' supervision	3.3.2.1, 3.3.2.3	C1.1, C1.1a, C1.1b
b) Management roles	4.4.1	C1.2
Strategy		
a) Identification of risks and opportunities	2.1.2 (societal expectations), 2.1.3 (climate risk), 2.2, 4.4.4, 1.2, 1.1	C2.1a, C2.3, C2.3a, C2.4, C2.4a
b) Impacts of risks and opportunities	2.1.2 (societal expectations), 2.1.3 (climate risk), 2.2, 4.4.4, 1.2, 1.1	C2.3a, C2.4a, C3.1, C3.2a, C3.2b, C3.3, C3.4
c) Resilience of the organization's strategy	1.2, 1.1, 4.4.3.4, 4.4.4	C3.2, C3.2a, C3.2b
Risk management		
a) Risk identification and assessment process	2.2, 2.1.2, 2.1.3, 4.4.4	C2.1, C2.2, C2.2a
b) Risk management process	2.2, 2.1.2, 2.1.3, 4.4.4	C2.1, C2.2, C2.3a
c) Integration into the overall risk management process	2.2, 2.1.2, 2.1.3	C2.1, C2.2, C2.3a
Metrics and targets		
a) Indicators used for assessing risks and opportunities	4.4.3, 4.2.3, 4.3.2, 4.3.5	C4.2, C4.2a, C4.2b, C9.1
b) Indicators on greenhouse gas emissions	4.4.3	C6.1, C6.3, C6.5, C6.5a
c) Objectives	4.4.1, 4.4.3	C4.1, C4.1a, C4.1b C4.2, C4.2a, C4.2b

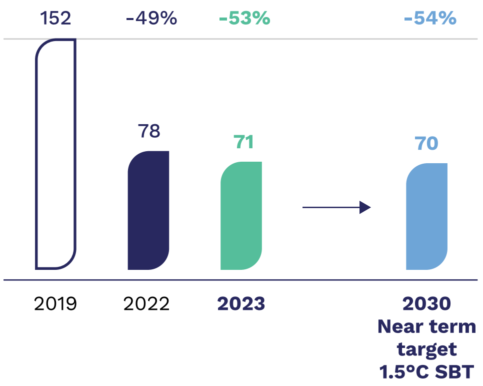
4.4.3 Climate change mitigation

Arkema is committed to mitigating climate change, with near-term science-based targets aligned with a 1.5 °C trajectory validated by the SBTi, and paving the way for Net-Zero by 2050.

MONITORING OF 1.5 °C SBT TARGETS FOR SCOPES 1 + 2 GHG EMISSIONS REDUCTION (Mt CO_2e)



MONITORING OF 1.5 °C SBT TARGETS FOR SCOPE 3 GHG EMISSIONS REDUCTION (Mt CO_2e) (1)



(1) *The 2019 to 2022 Scope 3 values were revised in 2023 to correct Category 11 by factoring in only direct use-phase emissions, and to include Category 15.*

The reduction in the Group's absolute GHG emissions for Scopes 1 + 2 in 2023 compared with 2019 was 39%, in line with its 2030 emissions reduction target of 48.5%. This decrease is due to the Group's proactive initiatives as part of its climate plan and is accentuated by the temporary decrease in production volumes.

In 2023, the Group's Scope 3 GHG emissions at constant scope were 9% lower than in 2022 and 53% lower than in the 2019 baseline year. This reduction is mainly due to the gradual decrease of the most emissive activities.

Other direct emissions covered by the Montreal Protocol (ODS – Ozone Depletion Substances)

The Group also emits GHGs involved in producing HCFCs, substances that deplete the ozone layer, covered by the Montreal Protocol but not the Kyoto Protocol. These emissions are not included in Scope 1.

Montreal Protocol	2023	2022	2021
GHG emissions *(in kt CO_2e)*	172	188	234

The decrease is notably attributable to continued improvements at fluorogas production facilities.

4.4.3.1 Emissions of Scopes 1 and 2 greenhouse gas emissions covered by the Kyoto Protocol

Arkema aims to reduce its Scopes 1 + 2 greenhouse gas emissions by 48.5% by 2030 compared with 2019. The levers to achieve this target, validated by the SBTi, have been identified in four main areas. Between 30% and 35% of emissions reductions will come from optimizing and modifying production processes, between 15% and 20% from improving the energy efficiency of the Group's sites, between 30% and 35% from using low-carbon electricity and between 15% and 20% from using low-carbon heat.

Scope 1 direct emissions

The Group's direct atmospheric greenhouse gas emissions (Scope 1), as defined by the GHG Protocol, are attributable to:

- burning of fuel and gas in production operations;
- emissions from processes that generate CO_2, N_2O or CH_4 as a product, by-product, co-product, waste or gas discharges, such as thermal oxidation, which is used to convert VOCs into CO_2;
- hydrofluorocarbon (HFC) emissions from its fluorogas production units; and
- fugitive emissions from cooling circuits using GHGs.

To reduce its impact on climate change, the Group has implemented an action plan to minimize direct GHG emissions, which includes:

- energy efficiency improvements to processes under the Arkema Energy program, particularly reducing the fossil fuel consumption of its boilers (see section 4.4.3.2 on energy);
- optimization of processes and operating conditions of reactions to limit GHG emissions produced or emitted directly during the combustion of by-products, co-products or waste; and
- systematic leak detection programs and the installation of emissions scrubbers at fluorogas production facilities.

Capex and Opex on this climate change mitigation action plan on eligible and aligned activities are covered in the Taxonomy reporting, as outlined in section 4.1.5 of this chapter.

Decarbonization of acrylics production at the Carling site (France)

By 2026, Arkema plans to implement a new patented purification technology at its Carling site (France), one of the largest acrylic monomer facilities in Europe.

This €130 million investment, partly funded by the French government under the France 2030 program, managed by ADEME and financed by the European Union (NextGenerationEU), will improve the site's operational efficiency and reduce its CO_2 emissions by 20%, in line with the best standards.

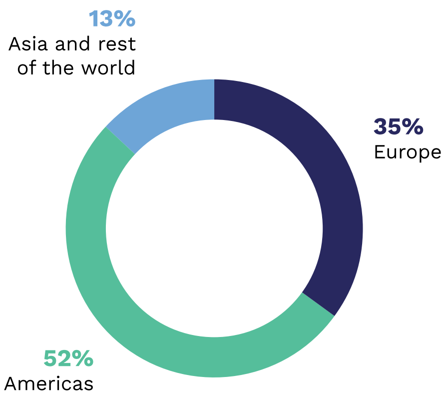
The table hereafter details direct greenhouse gas emissions (in kt CO_2e) from the Group's operations in 2023, 2022 and 2021, calculated according to the methodology described in section 4.7 of this chapter.

Scope 1 GHG emissions *(kt CO_2e)*	2023	2022	2021
TOTAL	**1,330**	**1,527**	**1,756**
Of which CO_2	1,180	1,294	1,370
Of which HFC	125	198	349
Of which others	25	35	37

In 2023, the marked decrease in emissions is notably attributable to continued improvements at fluorogas production facilities and lower production volumes.

The reduction associated with the purchase of biomethane in France has not been included in the Scope 1 calculation. The GHG Protocol is currently reviewing all of its standards, notably to define how market instruments, including biomethane certificates, can be included in scope estimates.

SCOPE 1 DIRECT GHG EMISSIONS BY REGION



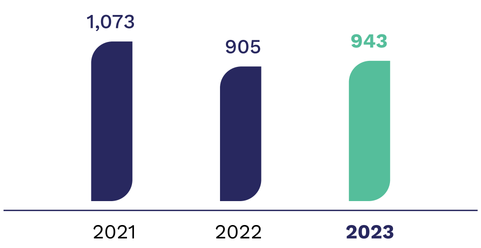
Scope 2 indirect emissions

Indirect atmospheric emissions, known as Scope 2 emissions, as defined in the GHG Protocol, correspond to emissions from the production by suppliers of the electricity and steam purchased and consumed by the Group.

To reduce its indirect Scope 2 emissions, the Group takes steps to scale back its energy consumption and source low-carbon electricity and steam, as described in section 4.4.3.2 on energy.

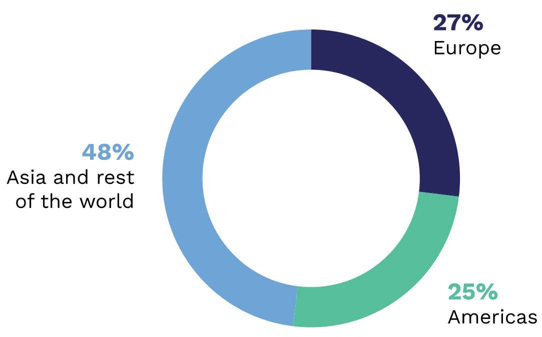
The chart hereafter presents the Scope 2 emissions from the Group's operations in 2023, 2022 and 2021, as defined above and calculated according to the methodology described in section 4.7 of this chapter.

INDIRECT SCOPE 2 GHG EMISSIONS *(in kt CO_2e)*



As in 2022, purchases in 2023 of Guarantee of Origin certificates for electricity were factored into Scope 2 calculations as said certificates are now of material value and represent a genuine decarbonization driver. The Group has signed renewable electricity contracts with a positive effect on Scope 2 CO_2 emissions. Despite these positive elements, the level of emissions increased in 2023 due to the emission factors of the French power generation fleet, which was affected by the poor performance of nuclear power in 2022.

SCOPE 2 INDIRECT GHG EMISSIONS BY REGION



Internal carbon price

To enhance its long-term approach, the Group set an internal price for Scope 1 and Scope 2 GHG emissions, expressed in terms of CO_2 equivalent, known as "internal carbon price". It is used to analyze strategic industrial investments and to steer investment decisions under the operational excellence program towards the lowest carbon solutions. The internal carbon price is applied to compare scenarios using different processes to determine their impact on product cost. Using the internal carbon price also serves to enhance employee awareness, drive behavioral changes, promote energy efficiency, and encourage teams to identify and seize low-carbon opportunities.

The Executive Committee reviews the use of the internal carbon price, checks its relevance and, if necessary, adjusts the value. The price is currently set at €100 per tonne of CO_2.

4.4.3.2 Energy |DCP|

The Group's energy policy includes two decarbonization levers: first, improving the energy efficiency of its processes to reduce energy consumption; and second, shifting its purchases to a less carbon-intensive energy mix.

Energy use

The Group purchases and consumes energy from a variety of sources, including fuels, electricity and steam, mainly for its industrial operations. To optimize energy consumption, the Group set the following target:

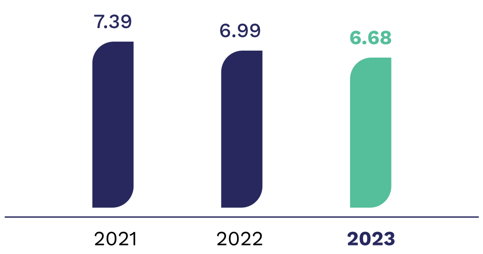
2030 TARGET

25% reduction in net energy purchases in EFPI terms compared with 2012.

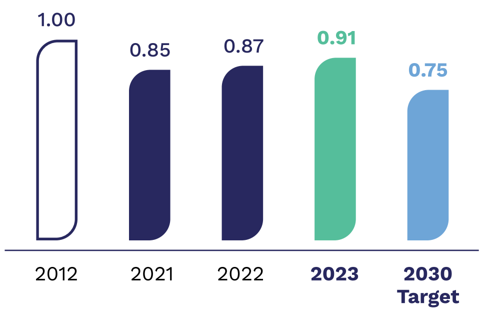
Monitoring of net energy purchase indicators

The charts below show the 2023, 2022 and 2021 values of the indicators relating to the Group's net energy purchases, in TWh and intensive EFPI, according to the methodology described in section 4.7 of this chapter. The facilities used to calculate the EFPI account for more than 85% of the Group's net energy purchases (in TWh).

NET ENERGY PURCHASES *(in TWh)*



NET ENERGY PURCHASES EFPI



The Group's Arkema Energy program and its operational excellence strategy will help it achieve its 2030 objective of a 25% reduction in EFPI net energy purchases compared with 2012 (for further details, see the "Profile, ambition and strategy" section of this document). The Arkema Energy program has been rolled out in all of the Group's subsidiaries through a global network of Energy Leaders in the Business Lines, facilities and relevant Procurement and Technical departments. It focuses on optimizing the energies used in the Group's production facilities and processes. Moreover, Arkema Energy is structured to meet the following priorities:

- continuously optimize energy use and cost, from equipment design and procurement to day-to-day on-site operations;
- deploy an energy management system to systematically integrate best operational practices, define site-specific targets and periodically review them; and
- ensure compliance with energy efficiency legislation, regulations and other applicable standards.

As well as improving energy efficiency, the program is also contributing to reinforcing the production plants' competitiveness.

Based on energy efficiency audits worldwide, focusing on the plants that account for more than 85% of the Group's energy consumption, the Arkema Energy approach covers the following main points:

- implementing the ISO 50001 energy management system. To date, a total of 31 sites are ISO 50001-certified, which corresponds to approximately 54% of Arkema's total energy use;
- allocating a dedicated annual capital expenditure budget specifically for Arkema Energy initiatives. In 2023, 71 capital projects were funded out of the budget, including 44 in Europe, 9 in the Americas and 18 in Asia; and
- since 2018, automating processes in order to continuously optimize the use of energy and raw materials.

In 2022, the decline in demand forced many production sites to slow output, or alternate between normal production rates and shutdowns. As a result, the Group's energy performance deteriorated by 2%. This situation has highlighted the need to optimize the operating conditions of sites when they are not operating at nominal capacity. Plants with the highest energy consumption have launched studies to this end.

The Group's deployment of digital technologies helps to optimize energy consumption through the introduction of data collection and analysis systems. For example, advanced control ensures comprehensive, consistent, and optimized management of facility operating parameters, reducing energy consumption while maintaining product quality and operational stability.

Arkema has rolled out a management system worldwide for all its steam traps. Any failure of the trap system can cause significant energy losses. The aim of this program is to reduce the steam trap failure rate through changes to their installation and regular inspections. As a result, the failure rate fell from 23% in 2020 to 12% in 2023. The new digital solution enables the Group to visualize the condition of its steam traps, as well as the progress made on repairs and compliance work, and to consolidate the results at Group level.

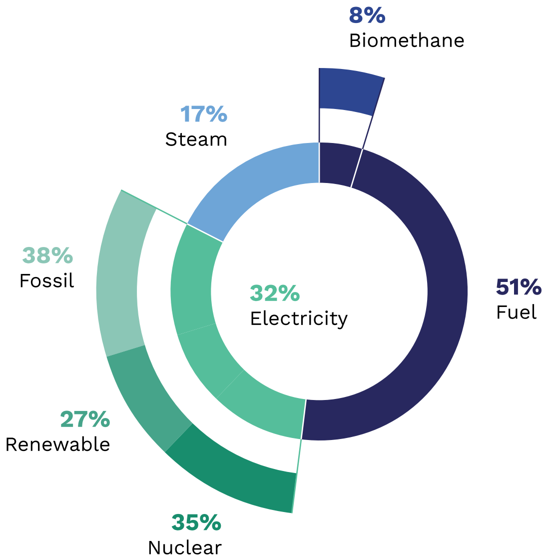
Actions are also implemented at several plants to maintain insulation at its optimal level in order to avoid any loss of energy, along with solutions to recover alternative energy.

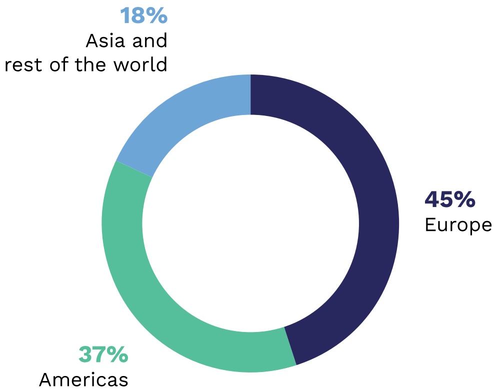
In 2023, energy performance deteriorated by 4% due to the reduction in overall production volumes, which particularly affected the steam consumption equilibrium of the acrylic monomers activity sites.

Energy mix

As part of its mobilization in favor of the climate and its strategic objective of reducing greenhouse gas emissions, Arkema is shifting its energy mix in favor of low-carbon energy sources.

The breakdown of net energy purchases and changes in the Group's energy mix are as follows. The change in the proportion of nuclear power reflects the specific situation of French nuclear facilities in 2022, which affected the emissions factor of electricity consumption in France in 2023.





CHANGE IN THE PROPORTION OF RENEWABLE ENERGY AND LOW-CARBON ENERGY

	2023	2022	2021
% of low-carbon energy	24%	23% (1)	21% (1)
% of renewable energy	13%	8%	6%
Renewable electricity as a percentage of total electricity	27%	24% (1)	19% (1)
Low-carbon electricity as a percentage of total electricity	62%	68%	63%

(1) The figures for 2021 and 2022 were adjusted to include agreements on renewable electricity.

In 2023, 24% of the energy purchased by the Group was derived from low-carbon sources following notably the signature of renewable electricity agreements and the supply of biomethane.

Arkema signs a major biomethane supply contract with ENGIE

Together with ongoing energy efficiency projects, this long-term contract, signed in 2023, for the supply of 300 GWh per year of renewable biomethane in France will guarantee a further significant reduction in the carbon footprint of the high performance bio-based Rilsan® polyamide 11 and the Pebax® Rnew® elastomer ranges. This is one of the largest private biomethane contracts signed in Europe to date.

Produced through the fermentation of organic matter, biomethane is a renewable alternative to natural gas, with a smaller carbon footprint. Biomethane feedstock is particularly environmentally friendly in France, as more than 95% comes from the fermentation of agricultural residues and organic waste, and does not compete with food.

4.4.3.3 Scope 3 greenhouse gas emissions covered by the Kyoto Protocol

Following an initial inventory of its indirect Scope 3 emissions in 2016, the Group estimates the Scope 3 emissions arising from its upstream and downstream value chain each year, in accordance with the GHG Protocol calculation guidance issued by the World Business Council for Sustainable Development (WBCSD). The guidance also supports compliance with French legislation and standards, including the provisions of French Law no. 2015-992 of 17 August 2015 concerning the energy transition to drive green growth.

According to the WBCSD, drawing on the GHG Protocol, Scope 3 emissions arise from 15 categories of activities across the corporate value chain. Arkema has identified nine material categories (1-5 and 9-12), four non-material categories (6-8 and 15) and two categories that are not relevant (13 and 14). Estimated emissions in 2023 are presented in the table below. The calculation methods, validated by the SBTi in 2023, are described in the methodology presented in section 4.7.3.4 of this chapter.

Category number	Category name	Emissions (kt CO_2e)	Comments
1	Purchased goods and services	6,143	Significant. As is often the case in the chemicals industry, this category is material for Arkema. Greenhouse gas emissions reported for this category decreased in 2023, chiefly as a result of lower volumes of activity.
2	Capital goods	337	Significant. Emissions in this category declined by 17%.
3	Fuel- and energy-related activities not included in Scopes 1 or 2	553	Significant. Down, in line with the decrease in activity.
4	Upstream transportation and distribution	295	Significant. The year-on-year increase is due to better coverage of raw materials.
5	Waste generated in operations	878	Significant. Down sharply by 15% compared with 2022.
6	Business travel	22	Non-significant.
7	Employee commuting	34	Non-significant.
8	Upstream leased assets	8	Non-significant.
9	Downstream transportation and distribution	295	Significant. The year-on-year increase reflects the automation of data collection, enabling much of the data to be obtained in real time.
10	Processing of sold products	2,634	Significant. The change is linked to the mix of products sold.
11	Use of sold products	26,981	Significant. In 2022, the Group developed a methodology for estimating emissions in this category for all its products, including fluorogases, which are the most significant contributors. Following recommendations issued by the SBTi, an adjustment was made in 2023 to limit the review to direct use-phase emissions only.
12	End-of-life treatment of sold products	32,842	Significant. The decrease in 2023 is mainly due to changes in the most emissive activities.
13	Downstream leased assets	—	Not relevant. The Group does not lease any assets downstream of its value chain.
14	Franchises	—	Not relevant. The Group does not have any franchises.
15	Investments	35	Non-significant. This category was included in 2023 following the recommendations of the SBTi.
TOTAL		**71,057**	

In 2023, indirect Scope 3 GHG emissions, which were estimated for 13 categories, represented 71,057 kt CO_2e. The decrease is mainly due to an adjustment made to category 11 to consider only direct use-phase emissions (further to recommendations issued by the SBTi). It also reflects the decline in activity and the gradual reduction in high-emission fluorogases.

Since 2021, Arkema has asked its most emissions-intensive raw materials suppliers in terms of Scope 3, category 1 emissions to complete the CDP Climate Change questionnaire *via* the CDP Supply Chain program. In 2023, Arkema surveyed more than 190 suppliers. Suppliers already committed to SBTs, or planning such commitment in the next two years, accounted for 49% of the Group's Scope 3, category 1 emissions for 2023.

The Group is also working on the use of bio-based or recycled raw materials, as set out in section 4.3.2 of this chapter, with the aim of helping reduce category 1 emissions.

Lastly, a reporting system for CO_2 emissions linked to transportation has been provided to the Business Lines so that they can measure their impact and the results of actions taken to reduce their Scope 3, category 9 carbon footprint. For further details, see section 4.6.4.6 of this chapter.

4.4.4 Climate change adaptation |DCP|

For Arkema, adapting to climate change aims to reduce the vulnerability of its assets and operations to the current and expected effects of climate change, and to increase its resilience as described in section 2.2 of this document. Adaptation strategies supplement the mitigation measures presented in the previous section.

4.4.4.1 Physical and transition risk analyses

In developing its adaptation strategy, the Group conducts physical and transition risk analyses.

Physical climate risks

Exposure of the Group's industrial sites

In order to prevent and limit the potential impact of natural disasters and climate change at the exposed sites, insofar as this is possible, the Group uses scenario-based analyses that take into account the evolution and consequences of climate change, and the increased frequency and intensity of certain weather events, such as storms, flooding and drought.

As such, in addition to the regular assessment using Swiss Re's CatNet® tool (mentioned in section 2.1.3 of this document), in 2022, Arkema launched a study on the exposure of its 165 industrial sites to relevant climate hazards by calculating eight climate indicators: extreme rainfall (intensity and frequency), cyclones, storms, water stress, coastal flooding, river flooding, heat waves and heat stress.

The climate risk associated with each site is assessed by combining exposure and vulnerability. Vulnerability is estimated by taking into account the criticality of the sites, as analyzed by Arkema using EBITDA datas and production uniqueness, as well as by assessing adaptation measures.

The study was conducted by an external company specialized in this field and based on the IPCC's RCP 2.6 and RCP 8.5 scenarios for 2021-2050. These scenarios were developed by the IPCC and are used to model the future climate based on different assumptions about the amount of greenhouse gases emitted by 2100. The first considers the application of stringent GHG mitigation measures to limit global warming to 2 °C, while the second assumes that no significant efforts are made to limit GHG emissions, which would result in a global warming of more than 4 °C.

For most of the sites, there are alternative production arrangements within the Group to absorb all or part of the production and thus ensure continuity of customer service. Some, however, are the only production sites for the products in question.

Risk and hazard analysis procedures are reinforced by a periodic assessment of the potential impact of natural disasters and extreme weather events at its sites. The Group has also developed an extreme weather planning and response toolbox to ensure that critical safeguards, such as backup power, function as intended during extreme weather events, including hurricanes or floods. This tool is currently being rolled out to all sites in the United States.

This study of physical climate risks was used to analyze the compliance of Arkema's taxonomy-eligible activities with the generic criterion "do no significant harm" regarding the objective of climate change adaptation (see section 4.1.5 of this chapter).

Capex concerning action plans on adaptation to the consequences of climate change on eligible and aligned activities is included in the Taxonomy reporting outlined in section 4.1.5 of this chapter.

The exposure of sites to water stress and the management of related risks are the subject of specific monitoring as part of the Optim'O program, and are presented in section 4.3.3.2 of this chapter.

Exposure of the Group's value chain

Climate change could impact Arkema's supply chain if, for example, a major supplier or subcontractor could not supply one or more Group facilities, thereby impacting the Group's operating and financial performance and its ability to deliver to its clients. However, suppliers with a strong CSR policy that are taking climate action, through adaptation and mitigation measures, will reduce their risks, increase their reliability and also be better partners for sustainable innovation. This is why Arkema has integrated these aspects into its purchasing process and endeavors to build sustainable and balanced, long-term, trust-based relationships with our suppliers and subcontractors. The Together for Sustainability (TfS) initiative plays a central role in the process of assessing risks and opportunities, including those related to the climate. For further details on the responsible procurement policy, see section 4.6.4 of this chapter.

Taking further steps, the Group initiated a program in 2021 to raise the awareness of its raw material suppliers by requesting their participation in the CDP Supply Chain questionnaire. This program urges them to engage in reducing their greenhouse gas emissions and to assess their exposure to climate change in order to define their own adaptation strategy. For further details, see section 4.4.3.3 of this chapter.

The study conducted in 2022 of industrial sites also included the Group's main critical logistics hubs (19 ports and railway hubs) through the calculation of six climate indicators (extreme rainfall – intensity and frequency, cyclones, storms, water stress, coastal flooding, river flooding) and assessed their exposure to physical climatic risks.

Climate transition risks

Climate transition risks are described in section 2.1.3 of this document.

In 2023, Arkema was assisted by an expert firm in conducting a pilot analysis of one of the Group's activities in order to map transition risks and opportunities with a view to conducting a scenario-based analysis. This study was based in particular on the Net Zero by 2050 scenario of the International Energy Agency (IEA), which defines the conditions that the energy sector will have to meet to achieve the objective of carbon neutrality by 2050 at the global level (regulatory developments, reduction in energy consumption, change in the energy mix in favor of renewable energies, etc.).

The key risks identified are those related to rising energy costs, carbon pricing, regulatory developments, supply, market and reputational risks. Mapping has enabled them to be prioritized according to the exposure and vulnerability of the activity.

This analysis also served to identify market opportunities, as well as value chain, logistics chain and operational opportunities.

This study will be complemented by a scenario-based analysis of the most critical risks to strengthen the associated adaptation plans and will be extended to other Group activities.

4.4.4.2 Low-carbon solutions

Continuous dialogue with customers and the 2022 materiality assessment show that climate change is a key concern for Group customers. For example, they want low-carbon products and solutions that help them reduce their GHG emissions and energy consumption.

Arkema's innovation strategy is a key component in its contribution to sustainable development. This strategy is detailed in section 1.1 of this document. Arkema is determined to enhance its product range, by developing solutions that help reduce greenhouse gas emissions. This strategy, combined with changes in the portfolio of fluorogases, contributes to this objective.

In 2023, solutions which, through their design and their use and end-of-life phases, contribute to the efficient use of resources and a reduction in the carbon footprint (Sustainable Development Goals 12 "Responsible consumption and production" and 13 "Climate action") accounted for 41% of Group sales. For further details, see section 4.2.3 of this chapter.

4.5 Safety and environment

→ BEING A TOP QUARTILE PERFORMER IN THE CHEMICAL INDUSTRY IN TERMS OF SAFETY AND REDUCING THE ENVIRONMENTAL FOOTPRINT OF THE GROUP'S OPERATIONS

As part of its commitment to societal issues described in section 4.1 of this chapter, Arkema operates as a responsible manufacturer and resolutely observes a policy of continuous improvement and operational excellence. The Group's ambition is to rank among the leading chemical producers in terms of safety performance and it is determined to reduce the environmental footprint of its activities.

4.5.1 Health, safety, security and environmental management |DCP|

Health, safety and environmental protection are core priorities in the management of Arkema's business and manufacturing operations, and a major focus of its CSR policy. This focus is shown by the Group's involvement in the Responsible Care® program, a voluntary initiative undertaken by the chemical industry to responsibly manage its operations and products, based on a continuous improvement process.

The Health, Safety, Security, Environment and Quality Policy confirms the responsible manufacturer commitment expressed in the Group' Social Commitment Charter described in section 4.1.1 of this chapter.

The Group's health, safety, security and environment approach is structured around three principles: prevention of industrial risks, an integrated management system, and a culture of safety and the environment. It reflects prevailing legislation and the Group's own requirements formally defined in its Health, Safety, Security, Environment and Quality (HSSEQ) Policy and in a global standard, the Health, Safety, Security, Environment and Quality (HSSEQ) manual. The policy and manual form the basis of the Group's integrated HSSEQ/En management systems, and also cover energy.

The materiality assessment performed in 2022 once again confirmed that occupational health and safety and prevention of industrial risks are among the Group's priority issues and have been properly integrated as such into its CSR approach.

The Arkema Integrated Management System (AIMS) for this policy is integrated globally by the Group Safety and Environment department (DSEG) and its experts in industrial hygiene, safety and the environment. The department head reports to the Industry and CSR Executive Vice-President, who is a member of Arkema's Executive Committee, and makes a monthly presentation to the Executive Committee to keep it informed of the key HSSEQ indicators, progress made in its programs, and any significant events. In addition, the HSSEQ policy and key indicators are presented each year to the Board of Directors as part of the industry overview presented by the Industry and CSR Executive Vice-President. Lastly, a review of the environmental risks is presented annually to the Board's Audit and Accounts Committee.

Implementation of the HSSEQ Policy is handled by the operating teams in each region and business.

The Group has set an ambitious target to implement and audit the Arkema Integrated Management System (AIMS) at all its sites, as described in section 4.5.1.2 of this chapter.

2025 TARGET

100% of Group sites [(1)] audited in accordance with the Arkema Integrated Management System (AIMS).

(1) For newly acquired companies' sites, the roll-out of this system takes place over a period of around three years.

Consideration for safety and environmental issues in acquisition and investment decisions

When looking into potential acquisition deals, a team of internal Group experts analyzes the HSSEQ/En documents and information provided by the seller based on a list of questions and pre-defined criteria. On-site surveys are also conducted. Taking these steps enables the Group to identify potentially critical environmental situations, estimate the cost of resolving them, and measure the efforts that may be required to bring these sites up to Group safety and environmental standards.

Similarly, safety and environmental issues are taken into account in the early stages of investment plans, and their compliance with Group objectives is verified.

4.5.1.1 Risk prevention

Whether in the area of health, safety, security or the environment, risk prevention is everyone's responsibility. Arkema believes that all incidents are preventable and that everyone has their own role and responsibility in ensuring occupational health and safety and protecting the environment and neighborhoods where we operate.

In the area of process safety, Arkema is continuously improving its risk prevention and management practices.

These measures are presented in detail in sections 4.5.2.2 and 4.5.2.3 of this chapter.

4.5.1.2 Management system and audits

The effective implementation of the Group's HSEQ/S/En policies – which cover health, safety, environment and quality, as well as security and energy – is regularly audited, with a focus on measuring progress and harmonizing practices. These audits are an important management practice.

To ensure a highly efficient inspection and control process, all of the Group-led HSEQ/S/En audits have been consolidated into a single audit, known as the Arkema Integrated Management System (AIMS). It is based on all of the Group's standards, both proprietary and endorsed, such as ISO 9001, ISO 14001, ISO 45001 and ISO 50001. This "all-in-one" approach has the dual benefit of being aligned with the Group's corporate culture and ensuring consistency across all its HSEQ/S/En management initiatives. For the largest sites (40% of all Group sites), Full AIMS audits are conducted every three years by teams comprising Arkema employees and representatives from an independent third-party auditor. Follow-up audits are then performed every year by the independent third-party auditor. For smaller sites and depending on their specific risks, Simplified or Light AIMS audits, as defined in section 4.7 of this chapter, are conducted at least every five years by Arkema staff.

	2023	2022	2021
% of AIMS-audited sites	94	91	86

The steady increase in the percentage of AIMS-audited facilities illustrates the continued deployment of this program, including at sites coming from acquisitions.

As part of an AIMS audit, field audits are carried out to ensure that site-led initiatives are implemented effectively and comply with requirements, notably the field initiatives described in section 4.5.1.3 of this chapter. These concern everyone working on the site, including Group and subcontractor employees, and apply to every aspect of the site's operations, including production, logistics, maintenance, offices, construction or processing sites, and production unit shutdowns. During this AIMS audit, sites may be audited based on different international standards in order to secure or renew external certifications, depending on the particular characteristics of the site concerned.

The number of sites certified in this way over the last three years is presented in the following table.

Number of sites certified according to each standard	**2023**	2022	2021
ISO 45001 (health and safety)	87	85	85
ISO 14001 (environment)	88	84	84
ISO 50001 (energy)	31	31	31
ISO 9001 (quality)	152	152	146

Some 58% of Group facilities (industrial sites and R&D centers) have been certified to ISO 45001 standard in Europe, 43% in the Americas and 69% in Asia. This certification relating to health and safety represents 48% of Arkema employees.

ISO 14001 certification requires each production facility or R&D center to identify its environmental impact in terms of water, air (including greenhouse gas emissions), waste, noise, odors, soil, use of resources and logistics flows, and then to define an action plan with priority areas for improvement. Periodic environmental assessments enable the facilities to measure progress and determine new improvement targets. The fall in the percentage of ISO 14001-certified sites results from the acquisition of non-certified sites.

	2023	2022	2021
% of ISO 14001-certified sites	55	58	58

Depending on local conditions, certain facilities have been certified to other standards, such as the Responsible Care® Management System (RCMS) in the United States. RCMS is an integrated health, safety, security and environmental management system based on the principles of the Responsible Care® program.

In addition, the Group performs non-AIMS internal audits every year, including:

- operational safety audits: construction site inspections, pre-start-up reviews, and operational safety audits in areas such as mechanical integrity and explosive atmospheres;
- regulatory hazardous materials transportation audits;
- supplier and logistics audits: transportation companies and warehouses are inspected and assessed. These audits are performed in addition to third-party audits, such as the Safety & Quality Assessment System for overland transportation, the Chemical Distribution Institute for maritime shipping, and the European Barge Inspection Scheme for river shipping. A certain amount of packaging is also inspected;
- security audits; and
- environmental audits.

The results of these audits are taken into account during AIMS audits.

In addition to audits, teams from the Group Safety and Environment department (DSEG) lead support initiatives at facilities whose performance needs improving or which have reported a specific issue. This support includes an analysis of the situation and continues with the development and monitoring of action plans. In addition, the DSEG has provided specific support to plants during their turnarounds and stepped up its participation in events organized by the Group's various businesses, plants (annual meetings with partner companies) and corporate departments (maintenance, R&D, etc.).

Another important tool in managing the deployment of the Group's HSEQ/S/En process is feedback on material incidents. It consists in sharing experiences on relevant incidents so that ways can be found to avoid recurrence. Feedback takes place across the global organization through various geographic, professional and technological networks. In the event of a material incident, the network issues an HSEQ/S/En alert that enables other Group facilities that may encounter a similar incident to take corrective measures. The feedback process helps improve the Group's HSEQ/S/En expertise and ensure the effectiveness of the deployed measures.

To harmonize the identification, assessment and analysis of environmental risks beyond its ISO 14001-certified sites, the Group is rolling out a methodology for application worldwide. A dedicated IT system known as STARMAP was implemented in Europe, the United States and Asia, as explained in section 4.5.2.2.2 of this chapter. In 2023, 85% of the Group's industrial sites had installed the system, and around 60% of these sites had used it to update their environmental assessment. At end-2023, 74% of the Group's sites had carried out an environmental assessment, whether integrated into STARMAP or not.

4.5.1.3 Safety and environmental culture

Instilling a culture of safety through employee training and development of hazard awareness

Behavior plays a critical role in managing and preventing risks. That is why a core aspect of the Group's safety process is the development of a common safety culture that raises everyone's awareness of their responsibility and the importance of his or her personal behavior. To develop a shared safety culture across the organization, the Group uses a variety of programs and initiatives, including:

- general training in HSEQ for new hires;
- the "Safety Always in Mind" and "Essentials" programs;
- field initiatives, such as peer observations, flash audits, scheduled general inspections, safety tours, field safety audits, internal or process audits, general operating condition tours and construction site audits; and
- dedicated training courses, such as "SafeStart®", "Managing Safely", "Transporting Hazardous Substances" and "Crisis Management".

Several years ago, the Group also integrated the lessons learned from neuroscience to improve accident prevention. These programs and initiatives are detailed in this chapter.

In 2023, safety training (excluding e-learning) totaled 163,212 hours (*i.e.*, 13 hours per year per employee trained), and the number of employees who attended at least one safety training session totaled 12,564 (59% of the Group headcount) [4].

In addition, 13,444 people (64% of the Group headcount) took e-learning courses on safety in 2023 [4].

(4) *In entities at least 50%-owned and employing more than 60 people.*

Instilling an environmental culture through employee training and development of hazard awareness

Group employees are trained and made aware of the main characteristics of their plant, the real-world consequences of their actions, the operational management of all types of releases and emissions, the environmental impact of turnaround or start-up operations, and waste sorting.

A dedicated environmental training program is offered at industrial sites after an environmental risk analysis has been performed in each workshop. At an increasing number of facilities, feedback on environmental incidents is being tracked in a common system for reporting incidents and following up corrective actions. The training program is regularly repeated to maintain employee awareness of the importance of critical parameters.

Arkema organizes internal communication campaigns and other events to get employees involved in its new long-term objectives and to foster a culture of environmental awareness throughout the Group.

Details on employee training and the new-hire induction process may be found in sections 4.6.1.4.1 and 4.6.1.3 of this chapter. Environmental training totaled 11,766 hours in 2023 [5], or an average of three hours per employee per year. 4,645 employees attended at least one environment-related course during the year (excluding e-learning). This means that 23% of the Group's employees [5] attended environment-related training in 2023 (excluding e-learning).

In addition, 11,657 people (55% of the Group headcount) [5] took environment-related e-learning courses in 2023.

4.5.2 Health and safety information |DCP|

4.5.2.1 Safety management

As part of its societal engagement, the Group places the management of personal and environmental risks among its top priorities. Its approach to industrial safety takes into account the potential risks at the Company level but also for the environment and other stakeholders, such as local residents.

The main risks associated with the Group's activities relate to personal safety, exposure to chemicals and process safety. For more information on these risks, see section 2.1 of this document.

The due diligence procedures and policies implemented to prevent, identify and mitigate these risks and the outcomes of such policies in the form of performance indicators are described in detail hereafter.

The Group's commitment to safety has been materialized in two targets for 2030, which reflect the Group's willingness to continuously improve its performance in this area.

2030 Target

Reduce the total recordable injury rate (TRIR) to 0.8.

Reduce the process safety event rate (PSER) to 2.0.

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To contribute to achieving these goals, Arkema has also set a goal of extending the peer observation program to all of its facilities [6] by 2025.

By setting these strategic TRIR and PSER targets for 2030, Arkema is contributing to UN Sustainable Development Goals 3 "Good health and well-being" and 8 "Decent work and economic growth".

4.5.2.2 Employee health and safety

Arkema considers protecting the health and safety of its own employees and those of its subcontractors as a core value and believes that every occupational accident is preventable.

As part of a prevention and continuous improvement process, the Group is committed to ensuring a good working environment for everyone, in particular by analyzing workstation health and safety risks and studying accident typologies.

Regarding safety, the Group has the same level of expectation for subcontractors working on its industrial sites as for its employees. In particular, all of them systematically take part in awareness initiatives designed to develop a safety culture and in the Group's safety processes and programs. In addition, the injury rates for both employees and subcontractors are tracked as part of the safety performance management system.

Since the analysis of accident data shows the importance of human factors, Arkema has launched a series of programs designed to foster commitment to health and safety among all Group employees and subcontractors working on Group sites.

Another priority concerns the prevention of arduous working conditions, with the deployment of a dedicated program comprising workstation ergonomics and other remedial actions. Workplace well-being and the quality of work life are also important factors in protecting employee health (for further details, see section 4.6.1.5 of this chapter).

(5) *In entities at least 50%-owned and employing more than 60 people.*
(6) *For newly acquired companies' sites, the roll-out of this program takes place over a period of around three years.*

4.5.2.2.1 Personal safety

The "Safety Always in Mind" and "Essentials" programs

The "Safety Always in Mind" and "Essentials" programs, which concern both Group employees and subcontractors working on Group sites, are deployed worldwide. "Safety Always in Mind" is designed to promote and deepen everyone's safety culture, while the "Essentials" program defines a set of rules that must be applied without compromise in every situation.

Peer observation

Peer observation is aimed at raising risk awareness in ways that help to reduce the number of occupational accidents. It capitalizes on positive experiences and a joint search for solutions to improve practices. Using a structured observation process, each site implements the method, taking into account its own specific features (risks, operations). Peer observations are made by all Group employees while carrying out their duties.

The 2025 target is to reach 100% of Arkema sites. In 2023, 96% of all Group sites had put in place peer observation practices to improve safety.

As an adjunct to peer observation, Arkema has put in place special programs, such as Smart Zone for rectifying shortfalls versus best practices, and SafeStart®, which involves observing oneself and others to identify the critical states that lead to more than 80% of all accidents (rushing, frustration, fatigue and complacency).

Progressively integrating the lessons learned from neuroscience to improve accident prevention

Since 2017, the Group has worked with a neuroscientist to study the mechanisms associated with human error, particularly among experts (which most of the Group's employees are in their respective roles).

The program is being rolled out gradually across the Group, furthering an understanding of behavioral approaches, and facilitating the adoption of safety tools and equipment by highlighting their relevance.

Using digital technologies to improve safety

Arkema's investigation initiated in 2018 into how new technologies can contribute to health, safety and security continued this year, in line with its intention to make this pursuit a long-term effort. Digital technology contributes to three main areas: training using virtual reality, digitalization of security processes and the use of connected tools.

Following trial stages, Arkema rolled out these technologies in 2022, marking a new phase in the digitalization of its security. Today, connected tools cover a wide range of uses, such as the use of smart personal protective equipment to prevent risks on site, augmented reality to support remote diagnostics, and virtual reality to train and educate employees in an immersive environment that replicates real-life conditions. Arkema is also gradually implementing other technologies, including a digital interface for field audit processes, tablets for safety inspections, and drones for both maintenance and safety inspections.

The Group's objective is to integrate security as a prerequisite, with digital technologies contributing to this.

Getting stakeholders involved in safety

In France, many sites organize Safety Days once or twice a year with their subcontractors, which are attended by local HSE employees, the Group contract manager and the contractor's sales manager. During these days, the Group is represented by local executives, business executives and, as applicable, representatives from the Group Procurement and Safety and Environment departments. These events provide an opportunity to share best occupational health and safety practices. Already well established in Europe, this approach is being rolled out across the Group.

In addition, a World Safety Day is organized in order to obtain employee feedback and measure their effective engagement in the area of safety.

Following the accident analysis carried out in 2022, the Group decided to focus on fire risk in the working environment at its World Day for Safety in 2023.

For local residents, the Common Ground® initiative allows for open dialogue with local communities, notably addressing industrial risks stemming from the site's activity. This program is discussed in greater detail in section 4.6.6 of this chapter.

Injury rates

The Group's safety performance ranks among the best in the global chemical industry, confirming the clear improvement dynamic underway for several years, driven largely by the active involvement of all employees.

2030 Target

In light of the performance achieved in 2021, the Group has set a more ambitious target of achieving a total recordable injury rate per million hours worked (TRIR) of 0.8.

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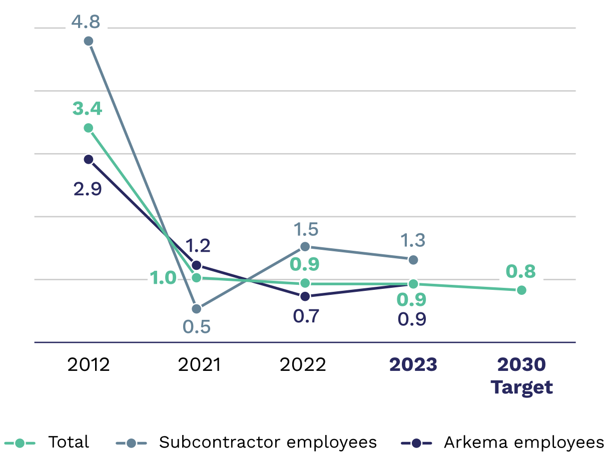
2023 confirmed the improvement in the Group's results on previous years with a TRIR of 0.9. This is the result of action plans over several years to raise awareness of Arkema's safety requirements among Group personnel and contractors and to develop a behavioral approach to safety.

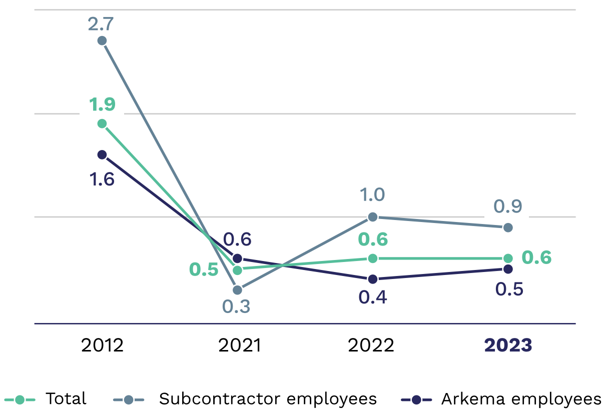
The lost-time incident rate (LTIR) remained at 0.6 in 2023. An average of 47 days were lost per injury in 2023 across all Group and subcontractor employees. In 2023, no fatal accidents were recorded for all Group and subcontractor employees.

The following charts show consolidated injury rates for the 2021 to 2023 period, in number of injuries per million hours worked, calculated according to the methodology described in section 4.7.3.4 of this chapter. They also show data for 2012, the baseline year used to set the strategic safety target in the Group's CSR policy.

TOTAL RECORDABLE INJURY RATE (TRIR) (7)



LOST-TIME INJURY RATE (LTIR) (8)



In 2023, a total of 32 Group employees were victims of reported injuries recorded in the TRIR for the year, of which 20 resulted in lost time, out of a total worldwide workforce of 21,125 people. The rate also reflected the 11 incidents involving subcontractor employees reported during the year, of which eight were lost-time injuries. With 12 accidents in 2023, the rate of potentially serious accidents improved in the year, at 0.28, compared with an average of 0.30 over the last three years. The Group remains set on further reducing this number in the coming years by means of a program addressing the identification and analysis of potentially serious accidents, allowing it to focus primarily on these types of accidents so as to increase the efficiency of prevention.

4.5.2.2.2 Health at work

Arkema regularly undertakes continuous improvement initiatives to prevent health risks and enhance employee wellbeing.

Protecting health at the workplace

To consolidate all of the workplace health and safety initiatives, the Group is deploying a workplace risk assessment application, named STARMAP, to prevent these risks by capitalizing on globally managed data libraries and best practices. The application is being rolled out worldwide, supporting the gradual harmonization of existing methodologies. At 31 December 2023, 67% of the Group's sites had carried out a workplace risk assessment in accordance with the general basic principles defined by Arkema (versus 63% in 2022), and 35% had entered the assessment data into the STARMAP tool based on Arkema's methodology (versus 30% in 2022).

Integrating ergonomics and preventing arduous working conditions

Over the past decade, the Group has undertaken a process to integrate ergonomics and prevent arduous working conditions.

In France, an agreement on the prevention of arduous working conditions and the further development of the ergonomics program was signed with the labor representatives. Numerous initiatives have been undertaken to improve ergonomics in various work situations, including load handling, packaging, unloading, equipment control, facility maintenance, as well as laboratory and office work. Before implementing improvement initiatives, the Group organizes awareness sessions to improve understanding of ergonomics. On top of that, a network of ergonomics correspondents was set up to develop internal expertise, and workstation ergonomics has been integrated into industrial projects as of the design phase and into their respective HSE reviews.

In the United States, a workstation ergonomics program, based on a set of e-learning modules, has been in place for several years. In addition, several sites run a program called Ergonomics & Human Performance, under which a set of audits is carried out and guidance provided over several months in implementing the related action plans.

In China, targeted studies are being conducted to improve load handling.

(7) *A "total recordable injury" refers to any injury causing bodily harm or psychological trauma to an employee in the course of their duties, whether or not it results in a day or longer off work.*
(8) *A "lost-time injury" refers to any injury causing bodily harm or psychological trauma to an employee in the course of their duties, and resulting in time off work.*

Preventing stress and improving quality of work life

Arkema France has been conducting a physician-supported psychosocial risk prevention program for individual employees for almost 15 years. Stress levels are determined by taking a standardized stress and well-being test (OMSAD) during employees' annual check-up with the occupational physician. The Group has undertaken a company-wide psychosocial risk prevention initiative to improve any working environment identified as being at risk, based on such proven indicators as an abnormally high percentage of employees diagnosed as being over-stressed.

This initiative was supported by a "health and work" agreement covering stress prevention, ergonomics, disability and taking breaks. The agreement aims to:

- ensure the relevance of the various measures taken in these areas by strengthening cohesion between the various parties involved and between the working groups set up under existing agreements;
- preserve and enhance the actions undertaken;
- anticipate changes to occupational health issues by gathering and sharing intelligence on these topics;
- strengthen the role of employee representatives by creating a Steering Committee; and
- protect health in the workplace.

4.5.2.2.3 Medical care

In 2023, 94% of employees benefited from regular medical check-ups.

4.5.2.2.4 Occupational illnesses |DCP|

Toxic or hazardous substances have been and continue to be used in the manufacture of Arkema's products. Despite the safety and monitoring procedures in place Group-wide and in each production facility, employees may have been exposed to such substances and may develop illnesses arising from such exposure.

In this respect, like most manufacturers, Arkema has used a variety of asbestos-based insulating or heat-proofing materials at its production facilities in the past. Consequently, certain employees may have been exposed to such materials before they were gradually removed and replaced. Claims for occupational illnesses related to past asbestos exposure have been filed against the Group, mostly for periods before 1980.

The risk of exposure to chemicals is described in section 2.1.1 of this document.

With respect to industrial hygiene, beyond the use of:

- enclosed industrial processes limiting emissions as much as possible;
- protective systems such as source capture of residual emissions and general improvement works designed to minimize exposure; and
- the use of appropriate personal protective equipment at each workstation.

The Group requires risk exposure to be assessed at each workstation and that employees' residual exposure to hazardous chemicals be regularly measured in order to prevent the risk of occupational illness in the future. Measurement data are stored in conditions that guarantee their long-term integrity.

In addition, each HSSEQ review relating to a new industrial project lists the products used, identifies those that may present a health risk and implements the measures necessary to prevent or limit employee exposure (finding an alternative, limiting quantities, setting up protection systems, etc.).

In 2023, in France, 36 occupational illnesses were reported, of which 17 were related to exposure to asbestos and six to exposure to chemicals. These figures, which include diseases not listed to date in the tables of occupational illnesses, increased significantly compared with previous years.

The OIFR refers to the number of occupational illnesses reported per million hours worked for Group employees. It is calculated based on the reporting scope for France, which represents 34% of the Group's workforce.

Occupational illness frequency rate (OIFR)	2023	2022	2021
Number of occupational illnesses reported per million hours worked (reporting scope for France)	3.3	1.9	2.4

In France, the Group deploys traceability programs to track potential exposure to arduous working conditions in its facilities (including chemicals exposure), as part of its global risk assessment report. At the global level, the Group is working on digitalizing its risk assessment data using the dedicated STARMAP tool described in section 4.5.2.2.2, which guarantees internal traceability.

Agreements on early retirement for employees in asbestos-contaminated facilities

In France, four Group sites have been included by ministerial decree on a list of sites whose current employees would be entitled to the early retirement provisions for asbestos workers. The Group cannot exclude that other Group sites may be added to the list in the future.

In this context, on 30 June 2003, Arkema France signed an agreement with all of the representative trade unions that improved the terms of retirement for employees qualifying for this provision, and adjusted their retirement dates to facilitate the transfer of their skills and knowledge within the organization. These measures were extended to all Group companies in France by an agreement signed on 1 September 2007 with all of the unions. For more information, please refer to note 6.3 to the consolidated financial statements at 31 December 2023 in section 5.3.3 of this document.

4.5.2.3 Process safety

The Group carefully analyzes the industrial risks associated with all of its production, transportation, loading/offloading and storage processes and pays particular attention to both internal and external feedback concerning incidents, accidents and best industrial risk management practices.

The aim of the risk analysis is to identify and manage potential risks that may cause harm to people, goods or the environment. This enables the Group to seek out processes that are inherently safer and to implement risk management measures that focus on prevention. To prevent water and soil pollution, facilities are installed on sealed floor surfaces or containment areas designed to collect any accidental spills. They are monitored and maintained to ensure their reliability and integrity.

The analysis is carried out in compliance with applicable legislation, using systematic studies based on recognized methods, which are chosen in accordance with the type of process involved, the complexity of the operations and the size of the facility. The aspects taken into account include (i) the risks associated with the properties of the chemical products used, (ii) the risks associated with operating conditions, equipment characteristics and potential technical and human errors, (iii) the risks associated with the location of units on a site and their potential interaction, and (iv) natural risks.

The risks identified in this way are prioritized using a semi-quantitative process developed and led by a network of experts across all of the geographical regions in which the Group operates. The experts are also responsible for preparing the directives, procedures and guidelines required for effective risk management.

The risk analysis process and the corresponding measures are carried out prior to the implementation of new processes, of new facilities, of operations that require the use of new chemical products, and of extensions or modifications to existing facilities. The resulting risk analyses are updated periodically.

As a result, the Group regularly makes improvements to its existing production units. In 2023, Group capital expenditure allocated to safety, the environment and maintaining the production facilities to standard amounted to €316 million, versus €314 million in 2022.

At the same time, the Group is investing heavily to reinforce a culture of process safety among its employees. This involves not only technical training in process safety systems and methods, but also seminars in the different continents for plant employees and managers, conducted by experts from the Center for Chemical Process Safety of the American Institute of Chemical Engineers, companies specializing in process safety, or the Group. The DSEG has also published a booklet entitled “Process safety fundamentals” for plant employees and managers to inform, train and share information with them on process safety values.

In France, Technological Risk Prevention Plans (*plans de prévention des risques technologiques* – PPRT) put in place in accordance with environmental legislation help manage urban development around the Group’s upper-tier Seveso facilities. As of year-end 2023, 14 facilities operated by the Group in France are subject to a PPRT, for which the Group is required to part-finance related measures. Furthermore, in compliance with the French regulation requiring that the probability of occurrence, kinetics, impact intensity and severity of potential accidents be assessed and addressed in the hazardous impact studies performed for classified installations subject to authorization, also entails the introduction of risk management measures at all of the sites classified as such.

In Europe, at the date of this document, 33 of the Group’s production facilities are subject to reinforced monitoring in accordance with the provisions of the Seveso III directive (directive 2012/18/EU of 4 July 2012) concerning major accidents involving hazardous substances. This directive requires, in particular, the deployment of safety management systems and the regular update of hazard studies.

In the United States, the management of industrial safety risks is primarily regulated by the Occupational Safety and Health Administration (OSHA) and its Process Safety Management of Highly Hazardous Chemicals standard and by the Environmental Protection Agency (EPA) and its Risk Management Plan (RMP) Rule, implementing section 112(r) of the Clean Air Act. In particular, these texts require companies to inform authorities if they use or store a quantity of a hazardous substance above a defined threshold and, if such a substance is stored, to implement specific risk management programs that include a heightened equipment inspection process, operator training and emergency plans. Other regulations at the federal, state or local level are applicable to the storage of chemicals, the safety of operators when handling stored products and the storage of highly hazardous substances.

For sites exposed to natural risks such as extreme weather events or earthquakes, risk scenarios are defined and regularly updated, together with the measures designed to mitigate their impact. For further details, see the risk of accidents at sites in section 2.1.1 of this document.

Process safety events (PSEs)

The Group is intent on minimizing the number of process safety events. Since 2017, Arkema has been tracking its PSER (number of PSEs per million hours worked), an indicator defined according to ICCA and CEFIC criteria.

2030 Target

In light of the performance achieved in 2021, the Group set a more ambitious PSER target of 2.0.

The PSER (calculated according to ICCA international criteria) in 2023 is 2.8, which is identical to the 2022 result. The consolidation of the Group's performance relies on concrete and targeted actions implemented following an analysis of process events by type and research into root causes. Certain initiatives have culminated in the reinforcement of production line and circuit inspections (mechanical integrity program), or further improvements to maintenance operations designed to reduce the risk of leaks at production facilities. Measures have also been deployed to enhance operational discipline, such as stricter processes to check equipment safety before work is carried out and circuit positions before they are put back into service.

Based on the 10 Process Safety Must-Haves defined in 2021, the Group continues to strengthen its Process Safety culture, as promoted by the Executive Committee.

Significant process safety events (major PSEs) are reported as soon as possible to Executive Committee members and to the neighboring community in the event of nuisances, applying the procedures specified for managing such events. They are subject to a detailed analysis and – for the most significant events – the establishment of a commission of inquiry headed up by a corporate expert.

The number of PSEs is reviewed monthly by the Executive Committee.

Transportation-related events

Transportation-related events are events that occur during the transportation or handling of hazardous and non-hazardous goods at loading/offloading areas on Group and customer sites. The Group uses six criteria to distinguish between major and minor events, primarily based on the regulations in effect for the transportation of hazardous goods.

A third category for the least critical events was defined to collect as much information as possible to analyze the potential impacts and deploy corrective measures to avoid a recurrence of such events.

Major events and accident trends are presented to the Executive Committee on a monthly basis. Corrective actions taken in response to major events must be completed within the target period of four months.

The causes of minor and major events are identified and action plans are implemented. Actions undertaken in 2022 were continued in 2023: improvement of impermeability checks on tanks, loading plans for outgoing vehicles and the use of forklifts to load packages.

In 2023, the overall transportation-related event rate (number of transportation-related events divided by number of shipments) was 0.36‰, down 25% on 2022, thereby confirming the effectiveness of the measures put in place.

As well as analyzing transportation-related events, Arkema offers and monitors dedicated “Transporting Hazardous Substances” training courses for its employees. Several levels of expertise exist, depending on the functions and tasks entrusted to personnel.

In addition, regular internal audits are carried out to ensure compliance with local regulations and the implementation of best practices defined by the Group.

Lastly, transport safety is overseen by a network of correspondents at the industrial sites and in countries or regions throughout the world that presents the Group's results and objectives, and shares best practices and feedback.

4.5.2.4 Crisis management |DCP|

The in-plant crisis management procedures are broadly based on the Group Crisis Management directive, which covers the management of potentially critical situations in the areas of health, safety, security, cybersecurity and the environment on Group sites and during transportation. Crisis situations may be caused by internal or external events, including natural occurrences such as flooding, earthquakes, etc.

A year-round on-call system enables the Group to manage crises by setting up a dedicated crisis management team. The Group regularly offers courses in “Crisis management and communication” and “Media training”, and conducts simulations of crises and set-up of crisis management teams, especially at the highest risk Seveso sites in Europe. Some of these exercises may involve Group staff, as well as external stakeholders such as government employees, elected officials, the fire department and local residents.

The crisis management process also applies to events caused by Group products located at customer sites. An emergency number is indicated on shipping documents and Safety Data Sheets for Arkema, or is available *via* the country subsidiary for Bostik. Within this product line, a product recall exercise is organized every year for the “food contact” segment with products designed for the general public.

4.5.2.5 Security

In the area of security, Arkema provides training and makes every effort to use the best technologies available in order to protect people and the facilities. The Group's action plans are notably based on recommendations by public authorities and on targeted audits.

To prevent and reduce the impact of possible malicious acts, Arkema has decided to strengthen its security policy in several key areas:

- **physical security:** guidelines defining the level of protection to be implemented in the event of an intrusion, depending on the site's criticality and the prevailing social conditions (particularly crime levels);
- **transportation:** C-TPAT certification in the United States and AEO certification in France, Brazil, Benelux, Germany and other countries, leading to additional measures being taken to enhance transportation security;
- **intellectual property:** heightened security measures at research centers, for example by introducing standards designed specifically to protect information on cybersecurity measures; and
- **travel:** increased employee protection during business travel.

4.5.2.6 Cybersecurity

In the area of cybersecurity, the Group has adopted a policy for protecting data and corporate and industrial information systems worldwide, as described in section 2.1.3 of this document.

Implementation of the policy is overseen by the Group Chief Cybersecurity Officer, who reports to the Group's Chief Information Officer. The CIO comes directly under the responsibility of the Chief Financial Officer, who is a member of the Executive Committee. Cybersecurity guidelines are approved by the Board of Directors, which also monitors their effectiveness. Operationally, they are implemented by a global committee made up of Executive Committee members and Vice-Presidents of Business Lines and corporate departments, which meets three times a year. Since 2021, Arkema has appointed four information systems security managers responsible for adapting Arkema's cybersecurity policy to the local context in Europe, the Americas, China and Asia (excluding China), plus another information systems security manager dedicated to the cybersecurity of industrial sites. A network of cybersecurity officers is also in place at the Group's industrial sites to ensure that cybersecurity issues are taken into account at the local level.

Arkema's cybersecurity strategy is based on the international framework defined by the National Institute of Standards and Technology (NIST) to identify threats and Arkema's assets, protect those assets, detect and respond to security incidents, and develop business continuity capabilities and incident recovery plans. Guidance issued by internationally recognized cybersecurity standards (*e.g.,* ISO 27001, SWIFT, OWASP) is also incorporated into its strategy. Arkema ensures compliance with cybersecurity laws and regulations in all countries where the Group operates. The cybersecurity policy is formally set out in various documents, including the Group's IT use policy, which describes the rules to follow for anyone with access to the Group's IT resources. Failure to comply with these rules, which aim to protect Arkema's information and operations, may result in sanctions.

To roll out this safety policy to all employees, the Group-wide iSafe awareness program, launched in 2018, is based on the communication of best cybersecurity practices. Actions are led to raise awareness through various channels such as a compulsory annual cybersecurity e-learning, such as webinars, messages on the corporate intranet or the enterprise social networking tool Viva Engage, on-site posters, awareness videos, and monthly phishing tests for everyone who uses the Group's IT systems.

The Group's Cybersecurity Operation Center works continuously to detect and respond to security incidents. Security audits by specialized external firms, along with reviews to detect vulnerabilities in IT systems and infrastructures, are performed periodically. Their findings are developed into improvement plans, which are monitored by the cybersecurity team.

To ensure business continuity in the event of a major incident that would permanently disable Arkema's information systems, a business continuity plan and procedures for degraded mode operations were defined and approved. The plan is currently being rolled out at Arkema's production sites, starting with the Group's most critical facilities. Regular training and testing in cyber crisis management is provided to support this plan.

Since 2021, Arkema has strengthened its supplier cyber maturity assessment process through a Vendor Risk Assessment (VRA) based on the analysis of independent audit reports using the Service Organization Control (SOC) framework and the services of Cybervadis. Thanks to this process, the Group can ensure that its suppliers allocate adequate resources to protecting their operations and their customers' information against cyber threats.

In the summer of 2021, Arkema became a shareholder in Cyber Campus, a project launched by the French President. The Cyber Campus is the benchmark in French cybersecurity, bringing together national and international cybersecurity leaders. This demonstrates Arkema's strong involvement in the cybersecurity community and its commitment to developing the maturity of cybersecurity models throughout its ecosystem.

4.5.3 Environment and biodiversity |DCP|

4.5.3.1 Environmental and biodiversity management

Reducing our environmental footprint is part of Arkema's responsible manufacturer commitment, and is reiterated in its Health, Safety, Security, Environment and Quality (HSSEQ) policy. To achieve it, the Group is upgrading its manufacturing practices, especially through dedicated investments and operating expenses, to reduce emissions and to optimize the use of energy, water and raw materials. The Group's industrial sites, as well as rigorously monitoring their emissions to water and to air, periodically carry out environmental analyses to identify their impact on the environment and biodiversity and for the Group's stakeholders, so as to define the priority areas of their action plans and to measure the progress achieved. In addition, right from the design phase of new production units, the Group integrates an analysis of the impact on the environment and biodiversity in the choice of sites, processes and equipment.

The main environmental risks associated with the Group's activities relate to air, water and soil pollution, climate change and the use of resources. The due diligence procedures and policies implemented to prevent, identify and mitigate these risks and the outcomes of such policies in the form of performance indicators are organized around the topics of climate change (see section 4.4), resource management (see section 4.3) and impact on biodiversity (presented in the following sections).

In addition to the goals of reducing its greenhouse gas emissions and energy consumption, presented in section 4.4 of this chapter, the Group has defined three environmental objectives for 2030 that aim to reduce emissions to air (volatile organic compounds) and to water (chemical oxygen demand) as well as water withdrawal.

Beyond the evolution of these three strategic indicators, the Group reports absolute figures for every parameter used to track the Group's environmental footprint.

To meet its targets, the Group has undertaken initiatives at two levels:

- continuous improvement programs, based on employee training and an action plan deployed in every unit; and
- a certification process, completed by internal audits, to assess the performance of each plant's environmental management system.

The Group's actions focus on optimizing the consumption of raw materials, energy and natural resources. Improvements to production units (process modifications, installation of effluent treatment units) accordingly enable:

- a reduction in chemical oxygen demand (COD) in the effluent discharged into rivers, thereby preserving the dissolved oxygen that is essential for all aquatic animals;
- a reduction in the amount of volatile organic compounds (VOCs) released into the air, thereby limiting the formation of ground-level ozone, a superoxidant harmful to human health and flora and fauna;
- a reduction in SO_2 emissions, thereby helping to prevent the formation of acid rain which, in addition to its direct impact on plant life, can also alter soil and surface water characteristics;
- a reduction in NO_x emissions;
- a reduction in particle (or dust) emissions;
- a reduction in odor and noise emissions;
- a reduction in the amount of waste generated and increase the percentage of recycled waste; and
- continued soil remediation projects to protect species that depend on the land, preserve the quality of local groundwater and control the effects of legacy pollution.

Arkema's general approach helps comply with the "do no significant harm" criterion related to the objective of protecting and restoring biodiversity and ecosystems for Arkema's taxonomy-eligible activities (see section 4.1.5 of this chapter).

Dependencies and impacts on biodiversity

Arkema has long been committed to reducing the environmental footprint of its production, and firmly believes that respect for biodiversity is an important and urgent issue. It signed Act4nature international's ten common commitments charter in 2021 and also defined seven individual commitments. Act4nature is a French scheme run by EpE (*Entreprise pour l'Environnement*), which the Group joined in 2023.

In 2023, Arkema carried out a biodiversity materiality analysis with BL Evolution, an expert firm in the field, using the most up-to-date biodiversity reference frameworks. These include the 2019 IPBES report, the Science-Based Targets for Nature methodology, France's NF X32-001 standard on biodiversity approaches for organizations, the French Biodiversity Agency's (OFB) Guide on Businesses Committed to Nature, and the recommendations of the Taskforce on Nature-related Financial Disclosures (TNFD). This analysis covered the Group's entire value chain and identified the main risks, dependencies and impacts related to the five pressures on biodiversity identified by IPBES.

The main impacts and dependencies of the Group's activities are concentrated in the upstream value chain. They relate to water consumption, pollution and changes in land use associated with the production of the raw materials purchased by Arkema.

In the Group's industrial operations, water consumption, pollution and greenhouse gas emissions are major challenges that are addressed by its environmental policy.

Lastly, particular attention must be paid to the pollution associated with the end of life of the products sold by the Group and their packaging.

Based on this analysis, the Group has redefined its biodiversity strategy around five key areas:

- limit the contribution of its direct operations to climate and pollution stressors, notably by reducing greenhouse gas emissions, water (COD) and air (VOC) emissions, and water withdrawals;
- understand and act on its contribution to the stressors affecting the upstream value chain, in particular by analyzing its raw materials with regard to their impact and dependence on biodiversity;
- reduce its contribution to stressors in the downstream value chain, by increasing the share of Group ImpACT+ sales and by studying methods for assessing the biodiversity footprint of Arkema's products;
- understand and act on the direct impacts of its sites, by mapping their proximity to key biodiversity areas and protected areas, and by studying methods for assessing the biodiversity footprint of a number of pilot sites;
- raise awareness of biodiversity issues among all its employees, through information and training initiatives to be deployed throughout the Group.

Investments and operating expenses allocated to the environment

In addition to the overall consideration given to reducing its environmental footprint and impact on biodiversity when making industrial investments, each year Arkema makes specific investments to prevent, reduce or control incidents or accidents that could impact the environment. In 2023, these specific investments totaled €70 million.

Environmental protection also requires operating expenses, which include the cost of external waste and water treatment, as well as personnel costs for HSE functions. In 2023, these operating expenses totaled €127 million.

Actions that have contributed to improving the Group's environmental performance are identified annually. A total of 183 initiatives were undertaken in 2023. They covered the full range of environment-related topics, including water withdrawals, the reduction in water effluent releases, GHG and VOC emissions to air, noise, soil contamination and waste production.

Regulatory and compliance monitoring

The Group ensures that its HSE network properly understands the applicable EU regulations, such as the European Union Emissions Trading System (EU ETS), the Industrial Emissions directive (IED), the reviewed Best Available Techniques Reference (BREF) documents, as well as the latest environmental data reporting rules which concern it. A regulatory monitoring and compliance audit system is in place in each region. A regulatory compliance review is carried out annually by the HSE network and compiled at Group level.

In 2023, the Group was served two notices for environmental violations with fines totaling over USD 10,000. One of these was in Mexico and one in China.

Governance

The Industrial Ecology Steering Committee (see section 4.1.2 of this chapter for its composition and organization) directs and supports the Group's progress towards meeting its environmental and climate goals.

Also, each quarter, the Group Safety and Environment Vice-President provides the Executive Committee with overviews of the Group's environmental performance and the progress made in the key indicators towards the long-term targets.

The following documents are available to keep governance bodies informed about the results of environmental footprint reduction programs:

- each business' entire environmental footprint, including its energy footprint, reviewed annually in individual meetings with the business Managing Director and industrial Vice-President(s) and the Group Safety & Environment and Sustainable Development Vice-Presidents. During this process, the managers concerned are assigned an environmental target for the following year. This target is a criterion for their annual performance review and compensation; and
- an annual environmental and energy report presenting the results of the past year and of previous years. It is accessible to all departments concerned, *via* the Group's intranet.

4.5.3.2 Emissions to air

The Group's objective is to minimize its environmental emissions, particularly greenhouse gases (GHG), as described in section 4.4, volatile organic compounds (VOCs), acidifying substances (nitrogen oxides and sulfur dioxide) and dust.

Volatile organic compound (VOC) emissions

Group production facilities are reducing their VOC emissions in several ways, including:

- collecting and treating effluents containing VOCs, with the most common technique being the installation of a thermal oxidizer or vent scrubbing; and
- carrying out regular campaigns to detect and eliminate VOC leaks.

The Group is also reducing its emissions of acidifying substances by:

- fueling boilers with low or ultra-low sulfur fuels, or replacing fuel oil with natural gas; and
- the implementation of nitrogen oxide reduction systems or low-NO_x burner technologies.

With regard to dust emissions, the measures notably involve:

- optimizing the combustion and flue gas cleaning conditions of thermal or catalytic oxidizers; and
- installing and maintaining separation devices (*e.g.*, cyclones and filters) on gas flows, such as those that contribute to drying or transporting powders, before they are discharged.

Absolute indicators for emissions to air

The indicators in the table below present air emissions from the Group's operations in 2023, 2022 and 2021, calculated according to the methodology described in section 4.7 of this chapter.

Emissions to air	2023	2022	2021
Total acidifying substances *(t SO_2e)*	2,320	2,350	2,880
• SO_x *(t)*	1,500	1,480	2,020
• NO_x *(t)*	758	920	970
Carbon monoxide (CO) *(t)*	640	890	806
Volatile organic compounds (VOCs) *(t)*	2,520	3,020	3,330
Dust *(t)*	112	142	188

NO_x emissions, primarily associated with combustion facilities, continued to decline in 2023. This decrease is driven by equipment modernization. For example, the Marseille (France) site cut its emissions by 47%. SO_2 emissions, mainly associated with manufacturing processes involving sulfur products, increased slightly after the sharp fall in 2022: the Kerteh plant (Malaysia) continued to make progress, while filtration performance at the Lacq plant (France) was not as good as in 2022, and the Houston plant (US) was adversely affected by production irregularities.

Volatile organic compounds were down, mostly as a result of sustained efforts on filtration performance and process efficiency, namely at the Hengshui (China), Jarrie and Carling (France) sites.

SO_2 reduction at the Rotterdam site (Netherlands)

In 2022, a flue gas treatment system was installed for the incinerator at the Rotterdam facility: sulfur dioxide (SO_2) is absorbed in a series of filters. As a result, SO_2 emissions were divided by 50 between 2021 and 2023.

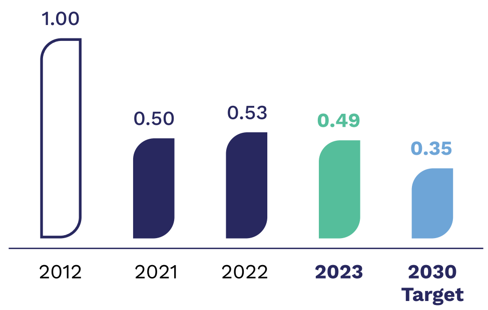
Intensive indicator for emissions to air

The chart below presents the VOC emissions EFPI from the Group's operations in 2023, 2022 and 2021, calculated according to the methodology described in section 4.7 of this chapter. Emissions are calculated using the Group's biggest VOC emitters, which account for more than 80% of the consolidated total.

2030 Target

65% reduction in VOC emissions in EFPI terms compared with 2012.

VOLATILE ORGANIC COMPOUNDS (VOC) EFPI



Thanks to the progress outlined above, the VOC EFPI is back on track towards its 2030 target.

4.5.3.3 Emissions to water

Reducing effluent and other water discharge is one of the Group's main environmental objectives, with particular attention paid to effluents with high chemical oxygen demand (COD) and/or suspended solids. Preventing accidental emissions is a requirement for facilities' operational excellence and mechanical integrity (such as retention capacities), as verified by an internal audit program.

Initiated in 2016 to optimize the Group's water management, the Optim'O project also aims to reduce the amount of effluent discharged by the Group. It is helping to:

- optimize water use, the efficiency of the water treatment process, the initial design of installations and their daily operation, through the use of advanced technologies and the development of innovative solutions;
- ensure compliance with applicable legislation and regulatory developments, such as the Best Available Techniques reference document on Common Waste Water (CWW BREF) issued by the European Union; and
- implement the pretreatment of process effluent, where relevant, to reduce the COD content of effluent sent to wastewater treatment facilities.

Through detailed mapping of water withdrawals and uses and effluent emissions, updated annually since 2017 under the Optim'O project, sites that contribute significantly to the Group's COD, suspended solids and water volume used were identified and submitted for monitoring through a specific audit program. Seven sites were audited in 2023 and all sites with significant water management issues have been audited at least once.

The Optim'O program benefits from a special budget that can be used to speed up the implementation of the action plan.

The Optim'O project is one part of the assessment of the "do no significant harm" criterion regarding the objective of the sustainable use and protection of water and marine resource for Arkema's taxonomy-eligible activities (see section 4.1.5 of this chapter).

Absolute indicators for emissions to water

The environmental indicators in the table hereafter present effluent released from the Group's operations in 2023, 2022 and 2021, calculated according to the methodology described in section 4.7 of this chapter.

Emissions to water	2023	2022	2021
Chemical oxygen demand (COD) *(t O_2)*	1,366	1,484	1,740
Suspended solids (SS) *(t)*	429	494	465

In 2023, COD emissions fell sharply at most sites, particularly Spinetta (Italy) and Nansha (China), thanks to progress in filtration performance efficiency. The performance on suspended solids improved significantly at Calvert-City (US) and Rion-des-Landes (see below).

Upgrading of treatment plants in Lesgor and Rion-des-Landes (France)

In 2020, these two facilities embarked on major upgrades of their wastewater treatment plants, which were successfully commissioned in 2022 at Lesgor and in 2023 at Rion-des-Landes. At Lesgor, metal emissions (copper, nickel, zinc) have been reduced by over 90%. At Rion-des-Landes, COD and SS concentrations have been cut by 70%.

Intensive indicator for emissions to water

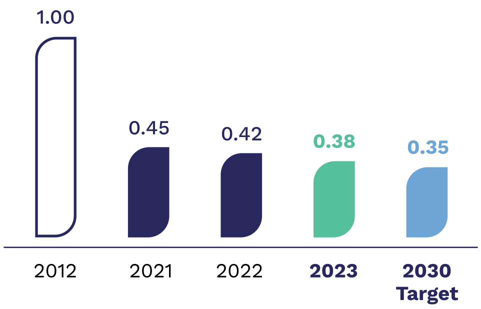
The following chart presents the COD effluent EFPI from the Group's operations in 2023, 2022 and 2021, calculated according to the methodology described in section 4.7 of this chapter. Emissions are calculated using the Group's biggest COD effluent emitters, which account for more than 80% of the consolidated total.

In 2023, the Group set a more ambitious target for 2030:

2030 Target

65% reduction in COD emissions in EFPI terms compared with 2012.

CHEMICAL OXYGEN DEMAND (COD) EFPI



In 2023, the COD EFPI at 0.38 resumed its progress towards the target of 0.35 by 2030, thanks to the Group's ongoing initiatives.

4.5.3.4 Other measures for the environment and biodiversity

Other measures taken to reduce the impact on local residents

Another major focus of the Group's environmental policies is to ease the impacts from its operations on people living in nearby communities. Every year, projects are undertaken to attenuate such other nuisances as:

- odors, by upgrading treatment installations to cut emissions;
- for noise abatement, mapping, soundproofing work or maintenance of soundproofing equipment; and
- visual pollution (smoke), by firing boilers with natural gas rather than fuel oil.

The Group has put in place communication systems to alert stakeholders in real-time about any event likely to result in noise, odors, or visual pollution in and around a production site. In addition, most facilities now have a system for receiving and responding to complaints from local residents so that they can address the issues and minimize the impacts to the extent possible. Complaints are investigated and action plans defined accordingly in liaison with local authorities.

Other measures to develop biodiversity

Despite occupying only a limited amount of land, the Group is leading a number of initiatives to help enhance biodiversity on sites where part of the land is not allocated to industrial operations. One of the purposes is to encourage revegetation and the development of local species on and around the sites.

At the Lannemezan site (France), Arkema launched a revegetation project on about five hectares in 2021, as part of the rehabilitation of a former lime production unit. Said revegetation has had several benefits. By absorbing water from rainfall, plants limit infiltration into the soil and promote evapotranspiration; they also help to improve soil quality and provide a source of food, habitat and protection from predators for animal species. Seeds were sown in the fall of 2022 after the selection of plants capable of adapting to the alkaline pH of these soils. In the summer of 2023, the revegetation of the lime production unit was a success. The total coverage is very significant and the environment has become a habitat for butterflies, beetles, hymenoptera and other dipterans.

In 2023, an awareness-raising campaign on water was organized for Group employees to mark sustainable development weeks worldwide. Three webinars were held to explain the Group's water use and the differences in water efficiency between sites. Three "model" sites (one in each of the Group's host regions worldwide) were invited to present their best practices and the positive results achieved through their initiatives. Local events were organized based on the theme "Water is life: let's take care of it." They included games to raise employee awareness of how much daily water consumption is wasted.

Since 2016, Arkema has been involved in the Pragati initiative for the sustainable production of castor seeds, a raw material used in the manufacture of performance materials. The Pragati project is partly based on SuCCESS (Sustainable Castor Caring for Environmental and Social Standards), which promotes such principles as the preservation of soil and water quality; Integrated Protection, which aims for minimal disturbance of agro-ecosystems and advocates the use of natural pest control mechanisms; good waste management; and the safeguarding of biodiversity on farms by preserving native vegetation and diversifying crops. Other aspects of the Pragati program are set out in section 4.6.4.6 of this chapter.

4.5.3.5 Managing legacy pollution and protecting the soil

Arkema responsibly manages soil and groundwater contamination caused by legacy pollution, including the storage of waste from operating facilities that have been operated, sold or acquired. The Group manages its environmental responsibility in such a way as to ensure that the health impacts and risks of its operations are managed in compliance with the applicable regulations, and that the environment is protected over the long term, with an appropriate allocation of funds.

In addition, Arkema implements prevention policies at all of the operating facilities, with mechanical integrity programs, dedicated incident reporting systems and experience sharing. When soil or groundwater contamination is suspected at a facility, an inquiry is conducted to determine the extent of the area concerned and ascertain the impact. The Group cooperates with the authorities to define the appropriate response, in line with applicable legislation.

The Group also implements a wide range of remediation initiatives using new techniques and looks for ways to reuse redundant industrial sites.

Site pollution risks are described in section 2.1.1 of this document.

Brownfield redevelopment

To redevelop certain vacant brownfield sites, the Group is partnering with local players, academics and specialized companies. For example, in 2019, Corsica Sole installed solar panels to repurpose parcels of land at Arkema's Saint-Auban (France) site. Covering 10 hectares, or 20% of the plant's surface area, the solar power facility plans for annual output of 19 GWh. The energy produced goes towards self-consumption to power the plant's operations.

Provisions for the management of legacy pollution

The amount of provisions for environmental risk at 31 December 2023 can be found in note 11.1.2 to the consolidated financial statements, in section 5.3.3 of this document.

4.6 Labor and stakeholder relations

➔ CULTIVATE A POSITION AS EMPLOYER OF CHOICE AND SEEK INTERACTION AND VALUE CREATION WITH STAKEHOLDERS THROUGH OPEN DIALOGUE

The Group's activities are part of a value chain and an ecosystem comprising numerous partners and stakeholders, as described in section 4.1.3 of this chapter. Open dialogue with its internal and external stakeholders is a cornerstone of Arkema's corporate social policy and a prerequisite for understanding their expectations, building relationships based on trust and cooperation, and ultimately minimizing social risks and creating value for all.

All of the international standards and principles that the Group upholds, and their transposition into Arkema's corporate reference documents, are presented in section 4.1 of this chapter.

In its dialogue with stakeholders, Arkema:

- respects human rights and fundamental freedoms and makes them central to its activities;
- places great importance on conducting its business in line with the principles and rules on ethics, integrity and compliance. Arkema therefore complies with prevailing laws and regulations and best business practices;
- fosters the individual and collective development of all the Group's people. Arkema's global human resources policy places a key focus on the development of skills, the promotion of diversity and inclusion, and employee engagement and well-being;
- establishes open dialogue with its customers, suppliers and partners with a view to building a responsible value chain that creates shared value. In its choice of industrial and business partners, Arkema favors those that respect its social commitments; and
- helps develop lasting relationships based on trust and openness through its Common Ground® initiative, which is aimed at its neighbors and local host communities.

Governance

The CSR/Stakeholder Dialogue Steering Committee guides and supports the Group's progress, particularly in the areas of human resources, human rights, diversity and inclusion, responsible procurement, corporate citizenship, stakeholder dialogue, sustainable finance and non-financial reporting. The composition and organization of the committee are set out in section 4.1.2 of this chapter.

4.6.1 People |DCP|

→ **PROMOTE THE INDIVIDUAL DEVELOPMENT AND COLLECTIVE COMMITMENT OF ALL OF THE GROUP'S EMPLOYEES**

4.6.1.1 Talent management

Arkema considers each of its 21,125 employees as talents. Given the highly technical nature of its businesses, developing expertise and maintaining a high level of engagement among its employees are key objectives for Arkema, which must continuously evolve in order to meet business, technological, social and environmental expectations in a proactive manner.

The objectives of its talent management policy are to support the Group's growth in a multicultural environment, make sure it has the expertise it will need in the medium to long term, meet employees' goals in training and individual development, and enhance employee well-being at work. The actions taken to achieve these objectives are described hereafter.

Two ambitious goals for 2030 reflect the Group's commitment to equal opportunities and its recognition of the contribution of diversity to the company's performance.

2030 Target

Percentage of women in senior management and executive positions: 30%.

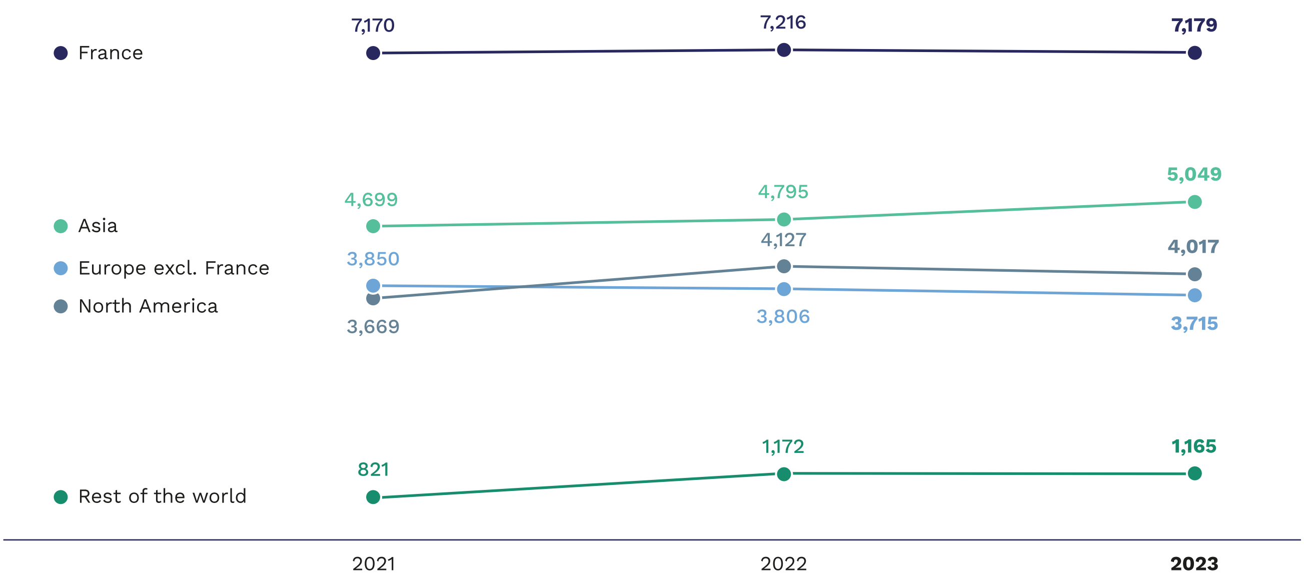
Percentage of non-French nationals in senior management and executive positions: 50%.

Talent management is based on the principles of workplace equality and non-discrimination. It is exercised in keeping with the Group's values of simplicity, performance, solidarity, empowerment and inclusion, while moving towards the UN's Sustainable Development Goals, as indicated in section 4.1.4 of this chapter.

To support the Group's development and its global strategy, the organization of the Human Resources (HR) function consists of corporate departments and geographic HR functions. The heads of these departments report to the Human Resources and Communication Executive Vice-President, who is a member of Arkema's Executive Committee. Highlights and project advancement are communicated to the Group's Executive Committee on a monthly basis. Human resources issues and challenges are presented to the Board of Directors once a year.

The Group clearly states that it consistently complies with the constitutional texts, treaties, conventions, laws and regulations in force in the countries and regions in which it operates, as detailed in section 4.6.2 of this chapter.

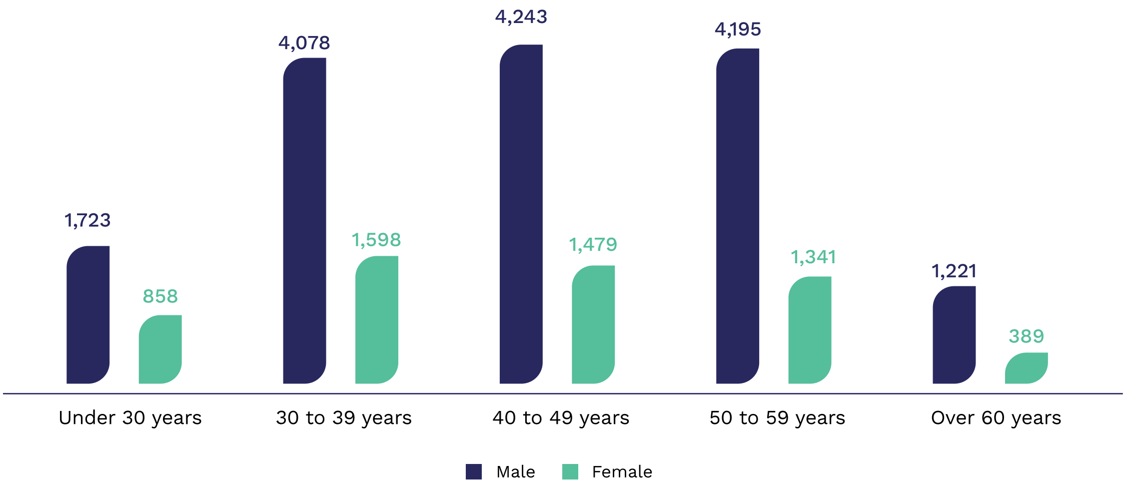
TOTAL HEADCOUNT BY REGION



Total headcount stood at 21,125 at 31 December 2023, compared with 21,116 at 31 December 2022 and 20,209 at 31 December 2021.

The stability of the Group's headcount in 2023 reflects headcount adjustments linked to a more difficult economic environment in certain sectors, together with the impact of the Group's acquisitions policy in line with its strategy.

GROUP EMPLOYEE AGE PYRAMID



The age pyramid shows a balanced distribution in the various deciles between the ages of 30 and 60, reflecting the loyalty of employees. The Group has an internal talent pool sufficient to cover part of the replacement of employees expected to retire over the next ten years. The training and individual development programs implemented and described in section 4.6.1.4 of this chapter will allow for the necessary transfer of skills.

The low proportion of employees under 30 is explained by the high level of qualification required by the Group's businesses.

4.6.1.2 An agile and collaborative organization

Work organization

In every country where Arkema operates, it organizes employee work time to enhance engagement and performance, with the approval of employee representatives and in accordance with local regulations.

Given the specific features of its industrial operations, some employee categories may work on regular continuous or on-call shifts. These requirements are taken into account in a special compensation scheme and adapted work schedule. For regular continuous employees, the number of employees assigned to a given position and daily shift planning are determined in such a way as to safeguard employees' well-being.

Work is organized within the Group so as to provide for full-time positions. Part-time employees accounted for 3.5% of the workforce at 31 December 2023. In the majority of cases, these employees have chosen to work part time.

In response to a sudden demand increase or unusual difficulties, the Group may make use of fixed-term employment contracts, overtime, subcontractors or temporary employment agencies, in compliance with local legislation and depending on the local labor market.

Any overtime worked results in compensatory time off and/or pay, in compliance with the regulations applicable in each country.

In 2023, at the Group level, 30% of employees teleworked, either regularly or occasionally. This represents a high proportion given Arkema's business. In France, the proportion of employees across all sites who may telework amounts to 18% of the total headcount.

Employee engagement

The SMART project is part of the Group's Operational Excellence program. This project aims to bring all employees together under a shared vision, by eliciting their ideas for improvement and helping make active contributions towards progress.

Problem-solving and joint decision-making are two essential focuses of the program.

SMART offers work methods and a collaborative environment to foster and apply ideas and contributions from field staff to benefit from their extensive skills and experience.

82 sites across three continents are involved in this approach designed to transform the organization and change its culture in different areas (*i.e.*, maintenance, production, supply chain, laboratory, human resources).

Digital transformation

New digital technology is completely transforming the work environment. To keep up with these changes, Arkema supports its employees to help them adapt to this transformation, which can create new performance drivers such as collaborative work within an international organization. The digital transformation is mainly understood in light of two aspects: employee experience and collaborative methods. The use of new tools to facilitate creative meetings and virtual collaboration continues to be developed.

Employee experience

Employee experience covers all measures taken to help employees in their everyday tasks and optimize their use of tools.

The Human Resources Information System (HRIS) helps to standardize and share processes and data and facilitates access to organizational information.

In terms of training, new technologies facilitate the implementation of various training modules (presentations, videos, games, etc.) to adapt to the needs, specificities, learning methods and preferred pace of each individual. The feedback collected *via* satisfaction questionnaires allows the relevant expert to adjust the module's content.

ArkemaNews, the Group's intranet, which is translated into eight languages, has for many years informed employees whatever their location, of Group news in real time. An additional version is also in place in the main countries where Arkema operates to provide more specific information on the local environment.

The enterprise social networking tool Viva Engage (previously Yammer) is widely used within the Group to further contribute to creating an agile, spontaneous work environment. It fosters the exchange and sharing of experiences on such cross-cutting topics as safety, mutual aid on new digital tools, communication on major projects and even sport.

Lastly, the Work Together, Work Clever program, co-developed by the IT and human resources functions, has been helping employees get to grips with new digital practices and the resulting changes to ways of working. Topics covered include getting to grips with office automation and remote working tools, document sharing, collective intelligence and visual management.

Collaborative work methods

Digital technology offers opportunities to improve the performance of industrial sites by boosting the added value of human capital, as people play a fundamental role in the value chain of the production process, and by making the best use of production data.

Digital manufacturing project manager is supported by a global network of about 50 digital champions in the various businesses and corporate departments. Their primary role is to identify areas where the use of digital technology makes the most sense based on practical experience culled from the field, and to reinforce the overall manufacturing culture.

They then conduct a Proof Of Concept (POC), a short-term feasibility exercise, to test the value of an idea rapidly before approving a pilot and, where applicable, moving on to industrial scale production. Hundreds of POCs have been launched, in operations, maintenance and engineering.

This agile method also relies on the involvement of operational staff to approve the relevance of ideas, therefore identifying promising projects more quickly. Operational staff contribute to each step in the POC, from testing to industrial production.

These examples illustrate the measures Arkema has taken to enhance collaborative work methods and encourage its teams to embrace digital technology.

Taking the pulse with Energy Dashboard

Energy Dashboard enables Arkema users to track fluctuations in available global energy price indices (oil, natural gas, CO_2, etc.) in real time on their PCs and mobile phones. At a time when markets are under severe pressure, making energy price trends even more compelling for all of Arkema's Business Lines, Energy Dashboard is a powerful new tool available to buyers and sellers to help them manage their activities with greater precision and responsiveness. Energy Dashboard's creation is a perfect example of what can be achieved through the Digital Factory, an in-house unit created by the Group in 2022 to develop some of its digital applications.

MyForms, an application to improve the input, security, and processing of industrial data

Co-constructed in-house and successfully tested at the Privas site (France) before being rolled out, MyForms digitizes most of the forms used in industry, replacing paper. It makes checklists entered directly in the field available in real time. New tools are much more readily accepted by the production teams if they are involved in the development of the application to ensure that it best suits their practices. By improving data input, traceability, security and processing, this new digital tool enriches the Group's Operational Excellence program.

4.6.1.3 Recruitment/Employer brand

The Group's recruitment policies are designed to attract talented, highly skilled individuals to support its growth and workforce renewal. In keeping with its values of simplicity, performance, solidarity, empowerment and inclusion, Arkema attaches a great deal of importance to finding applicants with cultural awareness, teamwork skills, a solutions-driven approach and an entrepreneurial spirit.

BREAKDOWN AND CHANGE IN THE NUMBER OF RECRUITMENTS BY REGION

	2023	**2023**	2022	2021
France	21%	418	502	345
Europe (excluding France)	14%	271	306	282
North America	28%	551	654	691
Asia	28%	544	620	629
Rest of the world	9%	174	130	123
GROUP TOTAL	**100%**	**1,958**	**2,212**	**2,070**

In 2023, Arkema hired 1,958 people under permanent contracts, compared with 2,212 in 2022 and 2,070 in 2021. Despite a less favorable and more uncertain economic climate, the Group's dynamic recruitment policy continued apace, reflecting its proactive approach to achieving sustainable growth.

The geographic distribution of recruitments shows that Asia and North America remain the most active regions, in line with the Group's expansion in Asia and the higher employee turnover in both regions.

To achieve its goals and enhance its reputation while enlarging its international perspective, Arkema has designed a global employer brand that is supported through local actions. The slogan "Go Beyond Your Discoveries" establishes the Company's talent acquisition strategy on three main pillars.

Gaining recognition from young talent as a responsible, preferred employer

In order to strengthen its reputation worldwide and continuously replenish its pool of potential job candidates, the Group nurtures special relationships with the best educational and training institutions for all its professions.

Arkema's teams participate in forums and organize visits to its industrial sites and research and development centers, particularly in France, China and the United States.

In 2023, Arkema made it into the HappyIndex® Trainees France ranking for the fourth year in a row. Based exclusively on feedback from interns and work-study trainees, the "Happy Trainees" label is awarded to organizations where students are motivated by their tasks and happy with their experience.

Attracting the best talent through employer branding

In 2023, Arkema was certified a Top Employer for the second year running in France, China, the United States and Brazil. The Group worked on having five new countries certified in Europe and one in Asia, culminating in Top Employer Europe certification in early 2024. This certification recognizes the excellence of HR practices in ten countries accounting for 80% of the Group's employees and recruitments worldwide.

Also in 2023, Arkema was ranked 94th out of 700 on Forbes' list of the World's Best Employers, 12th among French companies and 2nd in the chemicals sector.

Survey participants rated their employers on image, economic footprint, talent development, gender equality and social responsibility.

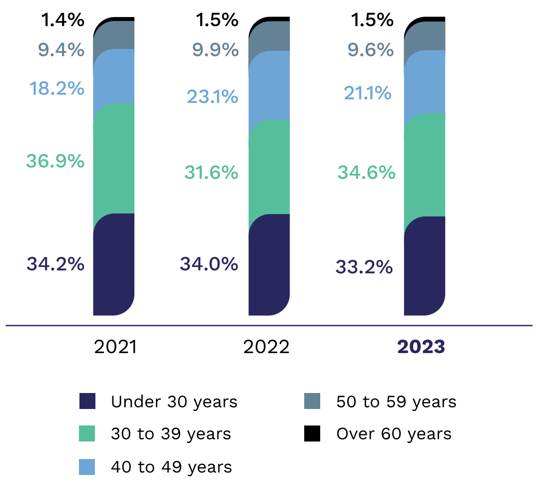
To support its growth, Arkema takes a proactive approach, in line with its diversity policy, to attract talent from a variety of backgrounds, and promote gender diversity. The Group uses various channels, including social media, to communicate externally about the Group, its products and its wide range of jobs.

Visuals are rolled out at the global level to highlight the value of Arkema employees at every level in the organization, to provide an accurate picture of their job and encourage different types of candidates to apply. These images are also a way to combat stereotypes and convince potential applicants from diverse backgrounds that they could enjoy a rewarding career at the Group.

These actions are carried out on social media such as LinkedIn, Facebook and Twitter, giving the internal network of ambassadors the opportunity to interact directly with applicants. On the Glassdoor website, the Group's international rating was 3.9 out of 5 at the end of 2023.

Arkema takes steps to ensure the global coordination and centralized management of job applications. By implementing its new HRIS (Human Resources Information System) worldwide, recruiters can coordinate their actions to bring the Group top skills and diverse profiles that can support Arkema in its long-term development.

RECRUITMENTS UNDER PERMANENT CONTRACTS BY AGE GROUP



Recruitment practices within the Group are designed to provide the skills and expertise that the technical, sales and administrative professions need. People under 40 have accounted for an average of nearly 69% of total recruitments over the last three years. This illustrates the initiatives that have been in place for several years to proactively respond to the wave of retirements projected over the next ten years. The percentage of women among hires decreased in 2023, to 29% from 30% in 2022.

RECRUITMENTS UNDER PERMANENT CONTRACTS BY AGE GROUP AND GENDER IN 2023

	Male	Female
Under 30 years	451	199
30 to 39 years	492	185
40 to 49 years	287	127
50 to 59 years	138	49
Over 60 years	22	8
GROUP TOTAL	**1,390**	**568**

Welcoming and integrating new employees

Arkema guides its new employees, which accounted for around 9% of the Group's headcount in 2023, through the integration process so that they can rapidly become operational.

The onboarding tool developed at Group level has been rolled out in several languages. It consists of an e-learning module, available in 12 languages, presenting the Group, its activities, strategy and values. It can be complemented by a two-hour interactive webinar in English that includes an interactive presentation of the Group with a quiz, a virtual tour of the Arkema showroom (Workshop 4.20) and a discussion with a member of the Executive Committee.

Managing departures

The actions described above have been implemented to hire new employees and help make up for departures. The action plans outlined in section 4.6.1.4 of this chapter on training and talent development round out the recruitment policy.

The breakdown of Group employees by age group in section 4.6.1.1 of this chapter shows that a significant number of Arkema employees will retire over the next few years.

CHANGE IN THE NUMBER OF DEPARTURES BY REASON

	2023	2022	2021
Resignations	1,003	1,236	1,089
Retirement	369	422	357
Dismissals	685	429	439
Other reasons (including divestment)	291	175	1,022

In the event of a reorganization or restructuring that leads to the closure of workshops or sites, Arkema endeavors to offer the staff members concerned adapted solutions, such as internal or external redeployment and retraining. This is outlined in section 4.6.1.8 of this chapter.

Departures for other reasons returned to a level close to that of 2020 following the divestment of Altuglas International in 2021. In 2023, there were 255 dismissals on economic grounds arising from organizational adjustments.

Dismissals for personal reasons represented approximately 2% of the total workforce.

CHANGE IN EMPLOYEE TURNOVER

(As a %)	**2023**	2022	2021
Employee turnover	4.9%	6.0%	5.6%

Employee turnover, *i.e.*, the proportion of resignations among employees on permanent contracts, stood at 4.9% in 2023, down on 2022, reflecting a more stable labor market.

Moreover, resignations concern the managerial and non-managerial categories in proportions close to their respective weighting in the workforce as a whole.

4.6.1.4 Personal development and training

4.6.1.4.1 Training policy

Arkema seeks to offer training that meets the changing needs of the Company and its employees. It also strives to ensure the relevance and effectiveness of the resources provided, in order to optimize the time and money invested. Group-wide training hours in 2023 totaled 427,459 hours.

In 2023, safety, health, environment and quality (HSEQ) training and business training accounted for 47% and 39%, respectively, of the training hours provided in the Group. The hours of training on essential job skills accounted for 65% of all training, while the other hours of training focused on career development for employees.

CHANGE IN TRAINING HOURS (EXCLUDING E-LEARNING)

	2023	2022	2021
Percentage of employees having attended at least one training course during the year	82%	81%	80%
Average number of training hours per employee per year	22	22	24
Average number of training hours per manager	21	20	24
Average number of training hours per non-manager	23	22	24

Professional training concerns all employees regardless of their job, level of responsibility or age. This is why the Group has affirmed its desire to provide every employee with access to lifelong learning in the course of their career at Arkema, as shown by the number of training hours in each job category.

At corporate level and in France, the quality of training modules is assessed by means of questionnaires completed by participants at the end of each session.

In addition to these qualitative evaluations, some training courses include a test to gage the skills acquired.

For example, production line operator training is carried out in stages under a formal process that covers both the program content and subsequent validation of results. This specific practice develops skills and can facilitate employee access to promotions and internal mobility, allowing the Group to enhance its performance while retaining employees. This approach also meets the standards required by the Arkema integrated management system.

Some training programs may:

- be conducive to career advancement (changes in profession, grade or coefficient); and
- develop employee skills in line with transformation underway in a given profession (as with the Supply Chain Academy).

At corporate level, global programs are deployed under the Arkema University label. These include:

Business Academies

These academies offer employees personal and strategic development programs aligned with transformation in their professions, consistent with Group strategy, and create knowledge-sharing communities of experts. Sessions are co-developed and coordinated by internal and external instructors allowing for experience and best practices to be shared.

The current business academies are as follows:

Supply Chain Academy

The Supply Chain Academy has been rolled out to reach supply chain managers at European facilities;

Procurement Academy

This academy addresses all Group buyers in supply chain and purchasing departments (goods & services, raw materials, energy). Its aims are to support transformation in this profession, facilitate exchanges, build bridges between these departments, and develop a global community of buyers;

IT Academy

This academy was opened to help professionals from this field keep up with technological and digital developments. It is also open to digital marketing teams and employees involved in digital projects.

The establishment of new academies addressing transformations in other professions is currently under consideration.

Management and Leadership Academies

The Group has established three management programs:

- the Arkema Leadership Academy is designed for middle managers with high development potential. Training focuses on leadership, allowing managers to analyze their profile individually and take an active role in their professional development. This training is provided by HEC for Europe and Asia, and by Cornell University for America;
- the Arkema Executive Academy is aimed at experienced managers capable of taking on positions of responsibility within the Group. In a single session bringing together employees from around the world, the aim is to provide participants with the resources necessary to develop their skills as future leaders; and
- the Top Executive Academy, created for around 100 executives, is based on 11 masterclass modules covering core subjects relevant to the Group's policies or programs (internal control, digital technology, finance, legal affairs, CSR, talent management) and the development of soft skills in creativity, international relations, negotiation, leadership (decision-making, confidence) and the executive mindset.

These programs contribute to promoting executives to positions with greater responsibility: in 2023, 81% of vacancies for senior management and executive positions were filled *via* internal promotions.

The Group's training offer is rounded out by local programs addressing specific needs.

Arkema Manager Academy

Designed for managers at all levels in the Americas, this program enables them to acquire or reinforce the skills they need to succeed. Topics covered include creating an inclusive environment, establishing and maintaining trust, communicating, coaching, setting goals and monitoring results. The Arkema Manager Academy focuses on the two main areas of a manager's responsibility: people and performance.

Digital learning

Since 2022, the implementation of digital learning has been based on four pillars:

- put digital learning at the heart of training;
- encourage content creation by the Group's industry experts;
- provide all employees with broad access to knowledge; and
- support Arkema's culture, values and strategic priorities through training.

This ambition has been realized through the deployment of a digital learning platform, which offers all employees free access to digital training on soft skills, such as personal organization, leadership and management, languages and office software. Training courses are offered in a variety of didactic formats including videos, infographics and energetic activities.

The platform also enables the Group to roll out e-learning programs providing employees worldwide with a shared set of behaviors, benchmarks and best practices to adopt in fundamental areas such as business conduct and safety.

Available in 18 languages, this new digital learning platform also provides the basis for a program that aims to digitalize training *via* content created by the Group's industry experts. These training courses can be delivered locally, regionally or globally.

CHANGE IN NUMBER OF EMPLOYEES WHO TOOK AN E-LEARNING COURSE

	2023	2022	2021
Number of employees who took an e-learning course	16,232	15,324	15,422
Percentage of employees having attended at least one e-learning course during the year	77%	73%	76%

Internally developed training programs

The Group encourages employees who are experts in their field to become an in-house authority and instructor. These initiatives promote the transfer of skills and highlight the value of instructors' expertise. Group business academies have been developed with this in mind, as have local programs in the United States, France and China.

This type of training provides a way for the Group to offset the risk of losing skills due to the high number of retirements expected in coming years.

4.6.1.4.2 Talent development

Talent development is a key strategic mission for broadening the experience that employees acquire along their career paths, thereby cultivating new skills, this being an essential factor in the Group's development.

In this respect, talent development focuses on both:

- ensuring that the Group has the expertise it needs to meet its strategic challenges and support its development, both today and over the medium-term future; and
- helping employees build their careers, thereby enabling them to increase their skills and realize their career goals depending on the possibilities and opportunities available within the Group.

The talent development policy is based on the same principles, regardless of employee category, country, age or gender, as follows:

- providing each employee with the resources and support they need to manage every phase in their career;
- leading a proactive promotion-from-within policy;
- identifying and developing high-potential individuals to encourage them to take on greater responsibilities and support career development;
- encouraging mobility between subsidiaries and geographical areas; and
- enabling every employee to move up in the organization and enrich their experience and skills, while ensuring organizational flexibility.

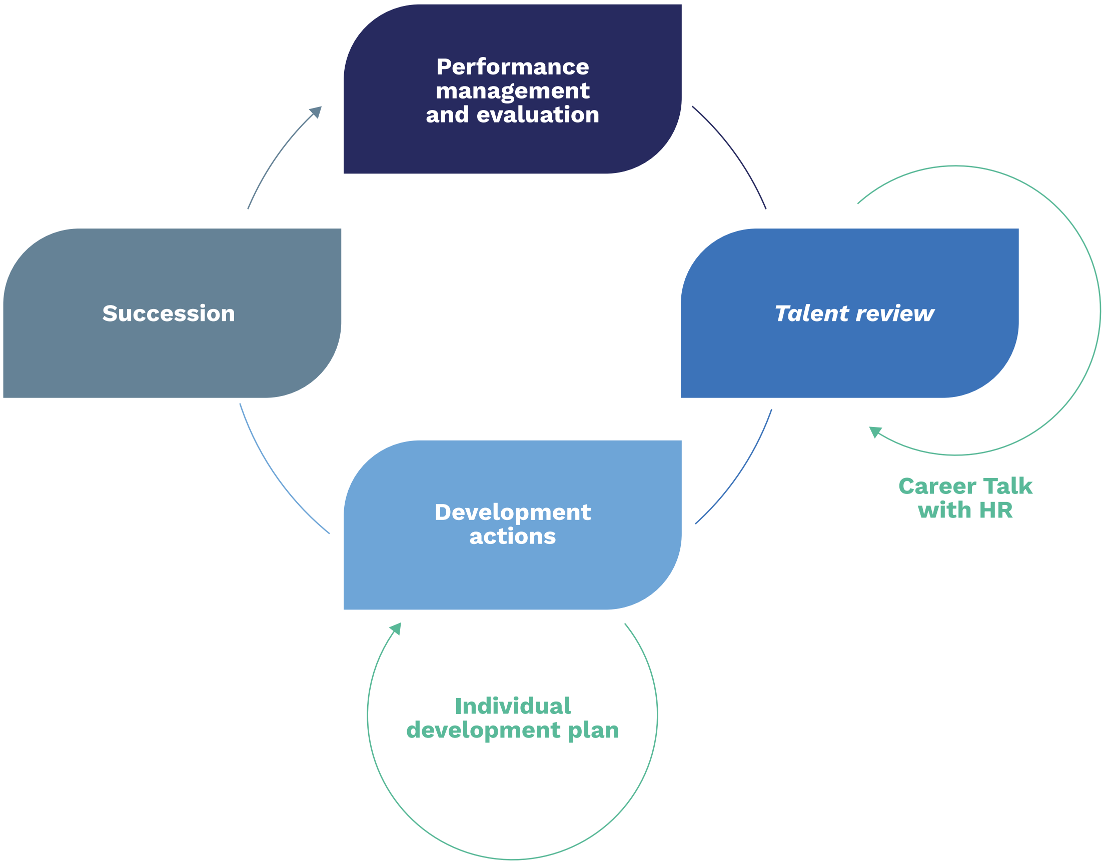
There are two key employee positioning prerequisites for talent management at Arkema:

- a cluster of professions within which jobs are identified by the main type of duties; and
- job evaluation (based on the Hay methodology), for structuring the Group's organization using a common frame of reference, and to support career development and a coherent salary policy. This approach also contributes to the harmonization of positions worldwide.

In 2021, the Group carried through a worldwide overhaul of employee management systems and processes to improve identification and promotion of internal talent throughout the Company.

Talent Management Cycle

The Group's new Talent Management Cycle has the following stages:



Annual performance reviews

All Group employees are entitled to an annual performance review, to discuss the past year's performance with their managers and set objectives for the coming year. Employees are provided with feedback following a self-assessment. This system provides input for preparing personalized action and improvement plans involving specific guidance or training.

The worldwide Human Resources Information System (HRIS) is used to perform these reviews in an electronic format, meaning that information can more easily be shared between employees, management and human resources.

Employees working in matrix organizations receive a review from both their direct and functional supervisors. The HRIS application is used to structure this practice.

Individual development plan

The approach here is to support employees in their development throughout their career. This system helps employees identify their strengths, weaknesses and aspirations, and work with HR and their managers to co-construct their own development initiatives.

Career talk

Career talk meetings with talent managers provide employees with an opportunity to review their career paths, expectations and how they could advance their career in other Group professions. In France, the Motiva tool is used to help employees identify deeper motivations and clarify career plans.

Talent reviews

Annual talent reviews cover all professions and levels. A talent review begins at site level, then is consolidated and analyzed by profession, country, region, Business Line and corporate department, ultimately resulting in a summary shared with the Executive Committee.

This collaborative approach brings together a committee of HR managers and representatives. It involves observing performance to identify potential, map out career projections for each individual and determine action plans accordingly. In 2022, this process was digitalized and is now carried out in the HRIS.

Succession pooling

In 2022, the Group enhanced its Talent Management Cycle system by implementing a succession pooling process, which aims to identify employees worldwide who could move into 140 generic positions across all Arkema businesses in the short to medium term. The process is supported by a module within the HRIS.

Succession and staffing plans

Succession and staffing plans, across all professions and Company levels, ensure continuity in key positions and help to retain expertise throughout the Group.

The career projections obtained from talent reviews as well as information from the succession pooling process are used to build these plans.

Career committees

Drawing upon data from the various meetings forming the Talent Management Cycle, profession-specific career committees are formed to organize internal mobility consistent with the Company's changing needs in the short- and medium-term future.

The committees include HR managers and representatives, and they cover all employees in the scope concerned.

International experience

International talent is developed through:

- the global dimension of many projects and responsibilities, offering employees day-to-day experience in a multicultural environment; and
- expatriation, which aims to enrich employees' skills and experience with a perspective of individual development. It enables the Group to strengthen local skills in the context of strategic projects, while ensuring that expertise is leveraged.

Around 73 Group employees work as expatriates, for an average of three to five years each. This relatively low number reflects the Group's policy of promoting or hiring locally whenever possible, including for executive or high responsibility positions, as outlined in section 4.6.1.7 of this chapter.

MyCareer, a constantly evolving Human Resources Information System

Arkema's talent management platform, MyCareer, is constantly evolving to help employees find their way around the organization, access positions available within the Group, set up one-on-one interviews, track training and quickly access the information needed to support their ongoing performance and professional development. Recent examples include the introduction of PowerBI to enable managers to drive their teams' performance and goals, and the addition of a simplified performance review form for regular continuous employees. Together with their managers, they set and monitor goals. These developments contribute to the standardization and simplification of performance evaluation processes across Group level.

4.6.1.5 Employee engagement and well-being

Arkema maintains its proactive approach to developing employee engagement and workplace well-being, key factors contributing to the Group's performance. The materiality assessment conducted in 2022 and described in section 4.1.3 of this chapter once again confirms the importance that both internal and external stakeholders attribute to this area. The Group firmly believes in sustaining a high level of dialogue with employees to continuously improve the quality and safety of the work environment and the work/life balance, along with workplace atmosphere and organization.

The global Well-Being at Work approach, approved by the Executive Committee, is centered on four pillars:

- health and safety: work/life balance, stress and psychosocial risk prevention, healthy activities, eating and sleeping well;
- work environment: ergonomics, teleworking, workplace conditions;
- digital transformation: digital projects, ease-of-use of digital tools, acculturation, logging on and logging off; and
- interpersonal relations: listening to Group employees, working according to Arkema's values, respect.

The approach is based on the Group's values of solidarity, empowerment, simplicity, performance and inclusion. Led by the Human Resources teams in each country, it involves all employees. In 2022, the Group reaffirmed its commitment by implementing the Well-Being at Work Charter.

Employee engagement and satisfaction

Arkema periodically carries out internal surveys in particular to assess employee satisfaction and engagement and to identify appropriate action plans.

In 2023, Arkema once again conducted its global in-house survey, ARKEMA CARES. A total of 20,172 employees were surveyed on five dimensions: engagement, the Group's strategy and values, employee experience, diversity and inclusion, and performance conditions.

The response rate was 72%, representing a very satisfactory level of coverage.

The results showed a high level of employee engagement, with an engagement score of 77%, two points above the industry benchmark calculated by Mercer, the firm that conducted the survey. The difference from the previous year's engagement score of 82.5% is mainly due to a change in methodology (inclusion of a neutral response option and change in the questions used to calculate the engagement score).

The results were analyzed and communicated to each Group entity and all employees.

2030 TARGET

The Group has also set itself the goal of achieving an engagement score of at least 80% by 2030.

Work/life balance

Arkema intends to remain a great place to work. This is essential to employee well-being and performance, but also in retaining talent and increasing the Group's attractiveness for candidates, which all contribute to Group performance.

The main ways in which the Group helps employees achieve better work/life balance are flexible work arrangements, support for working parents, and improvement of working conditions.

Arkema uses collaborative working methods, encouraging teleworking to provide employees with greater flexibility in their work/life balance (for further details, see section 4.6.1.2 of this chapter).

Another advantage, offered to young parents to safeguard their work/life balance, is paternity leave granted at the birth or arrival of a child. Arkema confirms the importance it gives to parenting by maintaining the employee's full pay during the leave period. This measure applies to many employees across Europe.

Mobile technology has significantly changed the Group's work methods and practices. Keenly aware of the importance of using these devices responsibly to promote the well-being of people within the organization, Arkema has taken measures in France to raise employee awareness about how to use mobile technology, such as:

- information on good teleworking practices, including remote management, ergonomics, and a reminder of the right to disconnect;
- awareness-raising initiatives for all employees, under the Work Together, Work Clever banner, with webinars, expert insights, practical advice; and
- awareness training for managers.

Well-being and better working conditions

Going beyond the legal requirements, the Group has implemented stress prevention policies in its key countries, including France, China and the United States. These policies provide for the assessment of stress levels among employees or for particular positions, as well as training and awareness initiatives to reduce workplace stress.

A global psychological support and anti-harassment system was rolled out in 2023. It is accessible *via* Eutelmed, an online platform that allows employees to contact a psychologist, in 60 languages, to discuss their situation and receive personalized support in a safe, confidential and anonymous manner. The platform also provides access to a wide range of information and counseling modules in French and English.

Lastly, an ergonomics program was initiated in France in 2015 to improve different aspects of working conditions in both manufacturing and services.

In recent years, major changes have been made to the work environments of employees at the head office of Arkema China Investment in Shanghai and those at the Bostik head office in Colombes (France). These projects were carried out with input from the employees concerned, to ensure a comfortable work environment adapted to their needs. Pleasant workspaces significantly contribute to employee well-being.

The Social Club launched in China is another example of initiatives taken to improve well-being in the workplace. A wide range of sports and leisure activities is available for employees. This contributes to their fulfillment and well-being, while encouraging them to talk to each other as equals, without regard for their position in the hierarchy. These actions reinforce employees' feeling of belonging and make a positive contribution to the subsidiary's social life.

Absenteeism

Absenteeism, which includes sickness, accident and maternity leave, as well as strikes and unpaid leave, stood at 4.1% for 2023, down compared with 2022 (5.1%).

Absenteeism for medical reasons also decreased to 2.7%, from 3.5% in 2022, slightly below the level of 2.8% recorded in 2021.

Benefit schemes

In most countries in which the Group operates, employees are covered by mandatory public schemes addressing risks related to death, disability, work incapacity, pensions and healthcare costs.

In addition to this statutory coverage, Group entities in France and abroad are responsible for implementing and updating health, welfare and employee benefit schemes, with a preference for defined contribution plans in line with local requirements and practices. In 2023, 96% of Group's employees accordingly had supplementary life cover, 95% supplementary disability cover, and 80% health insurance cover.

4.6.1.6 A motivating and competitive compensation system

A key component of the Group's human resources policies, total compensation is designed to recognize and equitably reward each employee's contribution to Arkema's success.

The compensation structure comprises a fixed base salary, an individual bonus and a collective bonus, which are applied differently depending on the position and the country. This structure fulfills a number of objectives:

- compensate individual and collective performance;
- enhance each employee's awareness of their responsibilities and involve everyone in meeting objectives;
- offer fair compensation consistently across the organization; and
- manage costs.

48% of employees receive some form of individual bonus, the amount of which depends on their fulfillment of personal objectives and their contribution to the collective performance of a business, a country organization or the Group. The main factor behind the increased percentage is that variable portions reach a wider population. A significant portion of their bonus depends on safety or other CSR objectives.

71% of employees are eligible for some form of collective bonus, which gives them a stake in the Group's expansion and financial performance. This is the case for the incentive and profit-sharing schemes in effect in France.

Group companies regularly participate in compensation surveys organized by specialized structures. They have access to benchmarks used to position themselves on their geographic market against other industrial groups or within the chemical industry, and to measure compensation attractiveness.

All employees benefit from minimum compensation guarantees, and are paid on time, in full and without any deductions.

Total payroll costs for 2023 and previous years are presented in note 7.2 to the consolidated financial statements, in section 5.3.3 of this document.

Equal pay between women and men

The average proportion of women on the payroll is steadily increasing and reached 26.8% at 31 December 2023.

Moreover, equal pay between women and men is a key factor in annual salary reviews and career reviews in all Group companies.

In France, Arkema France and Bostik publish their gender equality scores, as required by law. For 2023, their scores were 88 and 92, respectively.

In addition to equal pay, Arkema has for many years ensured that women enjoy the same career development opportunities as their male counterparts.

Its policy aims to meet the following four objectives:

- strengthening the principle of non-discrimination in the hiring process;
- ensuring equal pay for equal work;
- encouraging and facilitating career development; and
- taking parenthood into account in the career management process.

Employee share ownership

Since its creation, Arkema has encouraged employee share ownership, with plans offered every two years in the Group's main host countries to enable employees to purchase Company shares on preferential terms (for further details, see section 6.3.4 of this document).

At 31 December 2023, 7.7% of outstanding shares were owned by employees, collectively making them one of the Company's leading shareholders.

Performance shares

Performance shares are granted, as decided each year by the Board of Directors, to executives and employees who have demonstrated remarkable performance or whom the Group wishes to incentivize and involve more closely in its long-term development. In 2023, performance shares were granted to almost 1,700 beneficiaries, representing 8.1% of the total headcount. 34% of these beneficiaries were women.

For more information, please refer to section 3.5, section 6.2.6 and note 7.4 to the consolidated financial statements at 31 December 2023 in section 5.3.3 of this document.

4.6.1.7 Diversity, inclusion, equal opportunity and equal treatment

Diversity and equal treatment policy

As part of its policy of non-discrimination, workplace equality and diversity, the Group applies a zero-tolerance approach to discrimination and has committed to hiring people solely on the basis of its needs and each applicant's personal qualities, as defined in its Business Conduct and Ethics Code and its human resources policy memo. These principles feature in the Group's recruitment charter.

Workplace equality is one of the major priorities of the Group's human resources policy, along with the prevention of discrimination in general. Special attention is given to ensure gender equality in the workplace, facilitate the integration of employees with a disability and prevent discrimination on the basis of age, nationality or mandate as employee representative. Measures brought in by the Group to ensure equal opportunity and obtain quantifiable results include:

- a program that periodically revises job descriptions to ensure that they are non-discriminatory and consistent across each profession, with a particular focus on accurately describing the related tasks and responsibilities. In addition, the positions, job titles and requisite profiles are reviewed once a year, department by department;
- recruitment policies based on the sole criterion of suitability for the job. In the United States, for example, Arkema Inc. (i) gives training to people involved in the recruitment and hiring process, (ii) provides them with job descriptions and applicant profiles, and (iii) remedies any situation where there is a significant under-representation of minorities or women in the workforce. In France, human resources managers receive training on the prevention of discrimination during the recruitment process; and
- an annual review of compensation to ensure equal pay.

The strategic objectives set by the Group for 2030, to increase the percentage of women and of non-French nationals in senior management and executive positions, reflect its efforts to support diversity in carrying out its business activities.

The Group Diversity and Inclusion Committee includes Business Line Vice-Presidents, corporate Vice-Presidents and the Sustainable Development Vice-President along with HR and Communication representatives, and regional and Group diversity-inclusion representatives. The topics covered by this international committee include gender equality, promotion of cultural diversity, equal opportunity and inclusion.

Alongside this committee, a Junior Diversity and Inclusion Committee, composed of multidisciplinary representatives in the early stages of their careers or at lower managerial levels, addresses the same issues. By putting the contributions from these two complementary committees to use, the Group seeks to have a fuller grasp on the matters at hand.

The work of these two bodies resulted in the drafting of a Diversity and Inclusion Charter based on the Group's five values and aimed at guaranteeing fair and equitable treatment for all in terms of both recruitment and career management. The Group's roadmap is structured around four pillars: measurable objectives, strong governance at the Group and regional entity levels, HR processes that foster diversity and inclusion, and promotion of an inclusive culture.

Measures to promote female employees' access to positions of responsibility

Although historically not many women have worked in the industry, the proportion of women in the Group's total headcount has steadily increased to 26.8% at 31 December 2023. Women accounted for 29% of new hires across all levels in the organization.

2030 Target

The Group has set a target of senior management and executive positions being 30% held by women.

5 GENDER EQUALITY

The percentage of women senior managers and executives across the Group continued to rise in 2023, reaching 29%, a three-point increase on 2022 (26%). The change is primarily the result of the support program introduced in 2016 to promote equal opportunity and gender diversity.

High-responsibility positions (senior managers and executives) account for around 10% of all managerial positions across the Group. Senior managers account for about 2% of all management positions.

The Group confirms that Arkema France (the only company concerned) is working to comply with French legislation on targets of 30% by 2026 and 40% by 2029 for women in senior management positions, as defined in the Company's collective agreement. In 2023, this proportion was 20%.

More generally, the Group encourages women to move up to senior positions. At 31 December 2023, the Group management committee had twenty-five members, including the ten Executive Committee members, along with Vice-Presidents of some Business Lines, support functions, regions and countries. At 31 December 2023, the Group management committee included five women, 20% of the total. Arkema aims to increase the proportion of women on the Group management committee to 30% by 2030.

During the annual review of human resources issues carried out by the Board of Directors, the number of women on the governing bodies is always examined very closely. The goal of increasing the proportion of women in senior management and executive positions by 2030, defined as a priority in 2015, is the response given to this challenge. Within senior management and executive positions, which constitute a pool for governing body members, support for women's careers is regularly examined by *ad hoc* committees.

Within the scope comprised of France, the United States and China, women hold 39% of lower management positions and about 36% of middle management positions.

The action plan to reach the targets involves:

- annual monitoring of the proportion of women in senior management and executive positions, which is now included in the collective objectives used for calculating variable compensation;
- a mentoring program run by senior executives to help women move into positions of responsibility. Since its creation in 2016, this program has benefited 120 women managers in France. Nearly 90% of them have enjoyed career development since their mentoring, for the most part a promotion to a position with greater responsibility;
- identifying women in key positions in other businesses or organizations to create a pool of female talent for future recruitment needs; and
- an employee collective, Women@Arkema, which regularly organizes awareness-raising events on gender balance and equality.

Arkema stands with the UN

Arkema is a benchmark employer in terms of gender equality. To support its actions, the Group adheres to the United Nations Women's Empowerment Principles (WEPs) program. Arkema is committed to upholding the key principles and reporting on its progress. This membership confirms the continuation of governance favorable to gender equality at the highest level of the company. It establishes the application of fair treatment for everyone in the workplace by combating discrimination. Arkema is also committed to promoting the education, training and professional development of all its female talents.

Diversity, equity and inclusion: A commitment from Arkema China

Arkema's sites in China actively relay the Group's Human Resources policy to promote gender balance, and, more broadly, diversity and inclusion. The Group has two dedicated committees composed of representatives of both sexes from all sites, functions and businesses. They are working to raise awareness of these issues internally through three initiatives aimed at listening to, recognizing and developing the engagement of employees from diverse backgrounds. This promotes an inclusive culture, encourages the sharing of experiences and ideas, and helps women in particular to find their rightful place and grow within the company.

Initiatives to foster international diversity

Developing the percentage of employees of non-French nationality in management positions is a key component of the Group's geographic growth strategy.

2030 TARGET

To strengthen its commitment in terms of diversity, the Group has set an ambitious target: 50% of senior management and executive positions to be held by non-French nationals.

In 2023, the proportion of non-French senior managers remained stable year on year at 40%.

In every country where Arkema operates, local skills and capabilities are prioritized in every aspect of the business, including top management. This is the case, for example, for the entities in Brazil, China, Korea, the United States and Japan.

The action plan involves:

- expatriation programs (for further details, see section 4.6.1.4.2 of this section);
- a fourth edition of the international mentoring program designed to help participants advance in their careers, which was run in 2023, supporting 25 "mentee" participants in 13 countries (Australia, China, India, Italy, Japan, Malaysia, the Netherlands, the Philippines, Singapore, Sweden, Turkey, the United Kingdom and the United States). The program gives talented young employees the opportunity to benefit from the support of a mentor and to increase their visibility within the Group; and
- an e-learning module dealing with diversity and inclusion and targeting all Group employees, which has been completed by nearly 17,000 employees since its creation in 2022.

Initiatives to promote the employment of people with disabilities

The Group contributes to the integration and continued employability of people with disabilities through dedicated training programs and workstation modifications. The Group's recruitment procedures make it possible to offer people with disabilities various job opportunities.

The measures taken in France illustrate the approach implemented by the Group. For the other regions, similar measures have been implemented taking into account local conditions and legislation.

In 2023, a new, three-year agreement was signed by Arkema France (2024-2026) reaffirming the Group's commitment to hiring, integrating, training and retaining disabled employees, raising awareness of the issue and increasing the use of social enterprises and work centers.

At the end of 2023, disabled employees accounted for 5.5% of the Group's workforce in France.

In the United States, to encourage diversity in hiring, Arkema Inc. vacancies for outside applicants are posted on job search sites designed for people with disabilities and emailed to local community organizations that help disabled people find employment.

"Different is beautiful": changing perceptions

Arkema has a proactive policy for recruiting people with disabilities. To support this approach, the Group has become a patron of Different is Beautiful, a non-profit created by Francesca Clayton, an Arkema employee. A photography enthusiast, she has created a series of black and white portraits taken throughout France and Belgium in 2022. The subjects are students, athletes, models or influencers who share their stories and talk about others' perceptions of their disability, self-acceptance and going beyond their limits. Arkema is proud to support its employee's commitment, which dovetails perfectly with its values and its Diversity and Inclusion policy. The exhibition will be on display throughout France into 2024.

Initiatives to hire and retain seniors

In France, the issue of recruiting and retaining seniors is included in the strategic workforce planning (SWP) agreement. "Seniors" are defined as people over 50 years old. The Group pledged to undertake initiatives in the following areas:

- recruitment: 10% of permanent contracts for people aged 50 and over;
- retaining senior employees;
- supporting career-endings;
- transitioning to retirement; and
- knowledge transfer.

In 2023, of the 418 people hired under permanent contracts in France, 46 were over 50 years old, representing 11% of the total.

4.6.1.8 Active social dialogue with employee representatives

The Group respects the fundamental freedoms of its employees, such as the freedom of association and expression, as defined in its Business Conduct and Ethics Code.

The Group Labor Relations Vice-President coordinates all labor relations policies worldwide.

Among the fundamental principles and rights at work, the right to freedom of association and to collective bargaining is a vector of social progress that the Group encourages wherever it operates. These principles are stated in Arkema's human rights policy, outlined in section 4.6.3 of this chapter.

Accordingly, in addition to complying with host country legislation, the Group facilitates employee representation in order to support suitable collective bargaining processes. In countries where the law does not provide for employee representation, specific bodies can be set up locally. A consultation and dialogue structure has been implemented at the European level with the European Works Council.

In France, regular awareness-raising initiatives on trade union presence and rights are run jointly by management and representative trade unions, designed for all employees. Depending on their positions, managers' training programs include sessions on labor relations and union rights. Lastly, in France, the Group provides trade unions with dedicated intranet sites where they can inform employees about their activities.

Arkema pledges to enforce a non-discrimination policy with regard to employee representatives, and to respect and protect their rights. In France, Arkema's collective agreements include provisions guaranteeing that the careers of employee representatives be monitored, to ensure equal treatment with respect to non-mandated employees. Elsewhere, a training program is offered to newly elected employee representatives.

The social dialogue organization

As part of its employee relations policy, the Group fosters ongoing dialogue with employee representatives in every entity, in accordance with local cultural norms and legislation.

At the European level

The social dialogue body is the 25-members European Group Works Council, which holds a one-day plenary meeting at least once every six months to discuss issues within its remit, including:

- business issues: market trends, commercial situation, activity level, main strategic priorities, growth outlook and objectives;
- financial issues: review of the consolidated financial statements, annual report and investments;
- labor issues: human resources policy and the employment situation and outlook;
- environmental issues: Group policy and emerging European regulations; and
- organizational issues: significant changes in the Group's organization, developments in the businesses and the creation or termination of operations affecting at least two European Union countries.

In 2023, three plenary meetings were held. The Group's 2022 results and strategic outlook were discussed and the Chairman and Chief Executive Officer addressed the meetings.

In the United States

Employees at unionized facilities are covered by collective bargaining agreements negotiated with local and national trade unions for an average period of three years. They deal with such issues as compensation, the safety of people and processes, and quality of work life.

In China

An Employee Representatives Congress of Arkema China Investment Co. Ltd, the Group's main local subsidiary, is in place. It currently has 32 members. The ERC has a broad remit, ranging from pay negotiations to safety and training. It complements the labor unions already in place at the Group's local production plants.

Around the world, a high percentage of employees were represented by elected bodies or unions in 2023, as shown in the following table.

PERCENTAGE OF EMPLOYEES REPRESENTED BY ELECTED BODIES AND/OR UNIONS, BY REGION

	2023*
GROUP TOTAL	**82%**
France	100%
Europe (excluding France)	98%
North America	28%
Asia	87%
Rest of the world	100%

* *Data corresponding to sites employing more than 60 people, which accounts for 91% of the Group's total workforce.*

Employee relations with regard to the Group's development

The Group pays a great deal of attention to the social impact of the changes it experiences. Prior to any reorganization within the Group, the Executive Committee carefully examines the social consequences of projects and factors them into its decision-making process.

Reorganization projects also give rise, where necessary, to in-depth discussions with employee representative bodies as part of information and consultation procedures. These negotiations make it possible to implement support measures such as early retirement schemes, internal redeployment or support for external mobility or business start-ups.

With external growth and divestment transactions, specific commitments may also be made to take account of their social implications. For example, when the acquisition of a majority stake in PI Advanced Materials was finalized in 2023, the commitment to maintain employment conditions successfully facilitated the integration of all employees.

The Group Human Resources Vice-President for acquisitions/divestments and labor law oversees the social aspects of divestments and acquisitions worldwide. He reports to the Group Human Resources and Communication Executive Vice-President, a member of Arkema's Executive Committee.

Collective agreements

Since the Group was founded, its collective bargaining policy has led to the signing of a wide range of agreements in each facility or company.

In France, some agreements are Group-wide and therefore applicable to every Group company in the country, while others have been negotiated only for a given company or facility.

In other countries, collective bargaining procedures are aligned with national employee representation practices and legislation.

Negotiations are designed to raise the social status of employees in correlation with the Group's development and with the macroeconomic and legal environment.

In recent years, health and well-being in the workplace have been extensively discussed with labor representatives. For example, an occupational health framework agreement was signed at Arkema France to continue to improve employee health and implement a coordinated policy covering commitments made during negotiations. Shared indicators are monitored at the Company and entity level by multidisciplinary committees.

In 2023, 88 company agreements were signed worldwide, including 13 in France. These agreements cover issues such as health and safety at work, well-being at work, social protection, pensions, working hours and conditions, gender equality, disability, compensation, forward-looking management of jobs and skills, and training.

4.6.2 Business compliance and ethics

The Group places great importance on conducting its business in line with the principles and rules on business compliance and ethics. In particular, Arkema works in line with international conventions, prevailing laws and regulations, and honest business practices. Failure to comply would expose the Group to legal or reputational risks.

Arkema is committed to complying with antitrust regulations and to rejecting and preventing all forms of corruption and fraud using a zero-tolerance approach.

Arkema's general approach helps comply with the "minimum safeguards" criterion on anti-corruption and fair competition for the Group's Taxonomy-eligible operations (see section 4.1.5 of this chapter).

4.6.2.1 The Code of Conduct and Anti-Corruption Policy

The Group's Business Conduct and Ethics Code sets out Arkema's values and describes the principles and rules of conduct all employees are expected to abide by at all times.

In particular, the Code of Conduct specifies that:

- no form of violence, sexual or moral harassment is tolerated in the workplace;
- employees must not offer, provide, promise, request or accept, directly or indirectly, any undue advantage, be it pecuniary or otherwise, in order to secure business relations or any other business advantage;
- employees must scrupulously comply with all applicable laws relating to antitrust in all countries where the Group operates; and
- Arkema employees involved in international trade must ensure compliance with export/import control laws and regulations, as well as international economic sanctions.

Laying down Arkema's Policy on influence peddling and corruption, this Policy:

- defines corruption and influence peddling;
- provides concrete examples of behaviors to avoid that could be construed as acts of corruption or influence peddling; and
- outlines the basic set of rules relating to gifts and hospitality offered to employees.

The Code of Conduct and the Anti-Corruption Policy are available in 13 languages, corresponding to the main languages of the countries in which the Group operates, and are accessible on the Group's intranet and website.

The rules and procedures of Arkema's business compliance and ethics program, which includes the Code of Conduct and the Anti-Corruption Policy, are sent electronically to all employees once a year. As part of this awareness campaign, employees are invited to reiterate their commitment to respecting the Group's principles and rules on ethics and compliance by signing a compliance statement *via* the program's distribution platform.

Compliance with the rules and principles of the Code of Conduct and other Group procedures is assessed as part of the annual employee appraisal process.

4.6.2.2 Measures for reducing business compliance and ethics risks

The Group's business compliance and ethics program primarily covers antitrust, international economic sanctions and the fight against corruption. The program is subject to rules and procedures as well as related risk management processes, the main aspects of which are described hereafter:

- face-to-face training to build employee awareness of antitrust regulations, compliance with international economic sanctions and the fight against corruption;
- e-learning modules on the Code of Conduct, anti-corruption and antitrust legislation, with the latter primarily aimed at employees who are most exposed to these risks. As of 31 December 2023, over 14,000 employees had completed the e-learning course on anti-corruption;
- a practical guide to competition covering rules and recommended behaviors issued to employees;
- integrity checks and other due diligence on third parties who interact with the Group;
- the verification of business intermediaries prior to appointment, according to the business intermediary procedure, to minimize the risks of corruption-prone situations arising;
- rules relating to gifts and invitations;
- guidelines for managing conflicts of interest;
- systematic prior approval required for any export to countries subject to commercial and/or financial restrictions, according to the export control procedure; and
- a whistleblowing system as described in section 4.6.2.5 of this chapter.

4.6.2.3 Control processes and disciplinary action

The Group relies on a network of lawyers in charge of compliance issues to monitor the effectiveness of its business compliance and ethics program.

A Compliance Committee is also responsible for overseeing the implementation and proper application of the rules and principles set out in the Code of Conduct. This committee, whose members are appointed by the Chairman and Chief Executive Officer, is made up of representatives from the following departments: Internal Audit and Internal Control, Human Resources, Sustainable Development, Industry Environmental Safety, Legal Affairs, Raw Materials and Energy Purchasing, Finance & Treasury.

The Compliance Committee sends the minutes of its meetings to Arkema's Executive Committee. It met three times in 2023.

As part of the global risk management process, the Internal Audit and Internal Control department regularly performs audits in the subsidiaries. These include an analysis of the management processes to help detect possible risks of fraud or, more generally, non-compliance, and to define, where appropriate, the necessary corrective measures. For more information on the global risk management process, see section 2.2 of this document.

The corruption risk map, mentioned in section 2.1.2 of this document, is updated regularly.

Disciplinary actions are provided for in the event of non-compliance with the provisions of the Code of Conduct or the Anti-Corruption Policy. They are described in the Internal Rules (or equivalent) of each entity. Of the alerts submitted *via* the whistleblowing system in 2023, three were substantiated and resulted in corrective measures, including disciplinary action. For further details on the whistleblowing system, see section 4.6.2.5 of this chapter.

4.6.2.4 Personal data protection

Arkema takes steps to comply with personal data regulations in all the countries in which the Group operates. A network of local representatives, supervised by the Data Protection Officer, facilitates consistent global management of personal data protection within the Group.

The Data Protection Officer works closely with cybersecurity teams to implement IT security measures in line with the General Data Protection regulation (GDPR) that will protect data handled by the Group.

4.6.2.5 Whistleblowing system |DCP|

The Group has a whistleblowing system whose procedures are available on the Ethics and Compliance section of the Group's website and have been translated into 13 languages. It allows employees and other stakeholders to report any irregularities they are aware of that may be related to Arkema. Examples include corruption, influence peddling or fraud, direct or indirect discrimination, moral and/or sexual harassment, breaches of competition law, or serious violations of human rights, fundamental freedoms, health, personal safety or the environment.

The reports are handled by the Whistleblower Committee, which acts in the strictest confidentiality. The Whistleblower Committee, whose members are appointed by the Chairman and Chief Executive Officer, comprises representatives from the following departments: Internal Audit and Internal Control, Sustainable Development, Legal Affairs and Human Resources.

The whistleblowing system supplements the other disclosure mechanisms available at certain subsidiaries.

In 2023, 20 alerts were received through this channel, three of which were substantiated. In all, 15 (75%) of these alerts were related to human resources issues (including nine relating to discrimination or harassment) and five (25%) concerned issues related to business ethics and fraud. As of 31 December 2023, four alerts were still being processed.

4.6.2.6 Tax policy

Arkema conducts industrial, commercial and service operations in many countries and communities around the world. The Group aims to contribute to the development of these communities through the payment of a tax related to the activities and functions it performs within them.

Arkema complies with the tax laws and regulations of the countries in which it operates, as well as international tax standards, in particular those developed by the OECD. To do so, Arkema relies on a tax department that has tax professionals in the countries where its challenges are greatest. In other countries, the Group's tax department calls on recognized external consultants whenever necessary to validate its practices.

The main objective of tax policy is to provide the Group with long-term legal certainty. Arkema condemns and seeks to prevent all forms of tax evasion. As such, it does not implement aggressive tax planning geared towards transferring tax bases without justification to countries with low tax rates. Neither does it create legal structures devoid of substance for fiscal reasons in such countries. As of 31 December 2022, Arkema had only one entity (Bostik OOO) located in a country (Russia) on the European Union's tax haven blacklist.

Arkema applies transfer pricing policies endorsed by the OECD to its inter-company flows, and believes its policies to be reasonable for the risks and functions of the entities that constitute the Group, and compliant with the arm's length principle. These policies and the corresponding practices are applied within the Group by the tax department, first, *via* training for the employees responsible for applying them, and second, by making documentation available to tax administrations in a timely manner, either spontaneously or on request, depending on the regulations of the country in question.

Arkema cooperates with tax administrations with integrity and transparency when being audited, and ensures the implementation of any corrective measures when the audits are completed. Tax risk reporting is integrated into the risk management process and is presented annually to the Group Audit Committee.

Arkema's general approach helps comply with the "minimum safeguards" criterion on tax-related risks for the Group's taxonomy-eligible operations (see section 4.1.5 of this chapter).

4.6.3 Human rights |DCP|

Arkema respects human rights and fundamental freedoms, as defined in the Universal Declaration of Human Rights, and makes them central to its activities. The Group therefore makes every effort to prevent and identify human rights violations against its employees or those of its suppliers, its subcontractors and other stakeholders, and to remedy any violations that do occur.

Arkema opposes human trafficking, forced labor, child labor, all forms of exploitation, abuse, violence, sexual harassment and bullying, and applies a zero-tolerance policy towards discrimination. The Group asserts its commitment to upholding the fundamental rights of a decent minimum wage, health and safety for its own employees and those of outside companies working at its sites, equal opportunity, equal pay, respect for private life, personal data protection, freedom of association, the right to strike and the right to collective bargaining.

The Group's vigilance in the area of human rights extends throughout its own operations, across its value chain, with particular regard to suppliers and subcontractors, and throughout audit engagements carried out for the evaluation of potential acquisitions.

Arkema's commitments are formalized in its Human Rights Policy, which highlights four areas that are monitored particularly closely:

- health, safety and security: programs, initiatives and results are presented in section 4.5.2 of this chapter;
- health and safety of customers and end users: programs and initiatives on responsible product stewardship are presented in section 4.2.4 of this chapter;
- suppliers and subcontractors: programs, initiatives and results are presented in section 4.6.4 of this chapter; and
- anti-discrimination policy: programs and achievements are described in section 4.6.1.7 of this chapter.

Arkema's Executive Committee is responsible for drawing up the Group's Human Rights Policy and disseminating it across all entities, while the regional entities are tasked with implementation, in compliance with applicable laws and regulations. The CSR/Stakeholder Dialogue Steering Committee regularly takes stock of the situation, and risks relating to human rights fall within the scope of the Group's Risk Review Committee. The two committees comprise Executive Committee members, the Vice-Presidents of certain corporate departments, as well as managers involved in the Group's CSR policy and risk management process. The Sustainable Development Vice-President is a member of both committees and reports on the Group's CSR activity at least once every year to the Executive Committee, the Audit and Accounts Committee and the Board of Directors.

The risk identification process is based on a review of internal feedback, general risks presented in the International Labour Organization's (ILO) Declaration on Fundamental Principles and Rights at Work and the International Bill of Human Rights, risks specific to the chemicals industry, such as risks concerning the health and safety of employees, local communities, customers and end users, the management of major industrial incidents, the transportation of hazardous goods and the commitment of suppliers and subcontractors, which covers the sourcing of conflict minerals. Identified risks are assessed in light of a combination of factors that includes their impact and likelihood of occurrence and the level of control provided by existing prevention and management measures.

To meet stakeholder expectations, keep risk analyses up-to-date and remedy any violations, the Group leverages a number of resources:

- the integration of human rights issues into internal control checklists, internal audit assignments and external growth transactions;
- an annual inventory of risks carried out across the Group's main entities by the Internal Audit and Internal Control department;
- continuous dialogue with local communities *via* the Common Ground® initiative; and
- a whistleblowing system for both internal and external stakeholders.

Arkema's commitment is reflected in its compliance with international standards and the applicable laws in the countries in which the Group operates, identification and regular assessment of the risks that may be generated by the Group's activities, a whistleblowing system for both internal and external stakeholders, the implementation of corrective action when necessary, a policy of continuous improvement of the Company's practices through ongoing process improvements and training initiatives, an assessment and dialogue program with suppliers and subcontractors, aimed at promoting respect for human rights, and transparent communication on the Group's efforts in this area.

Awareness-raising initiatives are undertaken to enable employees, and particularly those in management positions, to respect and protect human rights in the performance of their duties. These awareness-raising initiatives are designed to give all employees a better understanding of the concept of human rights and enable them to apply the associated principles both internally and in their relations with third parties.

Human rights compliance is an integral part of the commitments expected of suppliers and subcontractors, expressed through their adherence to the Supplier Code of Conduct, as well as one of the criteria for assessing and managing suppliers. For further details, see section 4.6.4 of this chapter.

When preparing its duty of care plan in compliance with article L. 225-102-4 of the French Commercial Code, Arkema did not identify any serious risks of human rights violations.

In 2023, the Group used the available internal audit data to identify and analyze any potential human rights violations related to its activities.The results confirmed the absence of any serious violations and did not show any regional differences. Despite this, to prevent these types of violations, improvement initiatives essentially covering safety and personal data protection have been implemented at 44 Group sites over the past three years.

Actions relating to the whistleblowing system are described in further detail in section 4.6.2.5 of this chapter.

Arkema's general approach helps comply with the "minimum safeguards" criterion on human rights for the Group's Taxonomy-eligible operations (see section 4.1.5 of this chapter).

4.6.4 Responsible procurement |DCP|

Arkema is primarily involved in the transformation of raw materials and works with a large number of subcontractors and service providers. Poor performances by these subcontractors and service providers in any area, including those related to social and environmental issues, could therefore have an impact on the Group's performance and on its ability to serve its customers.

The Group has integrated employee, environmental and social issues into its procurement process and strives to build long-term, balanced and sustainable relationships that are based on trust with its suppliers and subcontractors. These relationships are managed transparently and in accordance with negotiated contractual terms, including those related to intellectual property. In its choice of industrial and business partners, Arkema favors those that respect its social commitments.

Purchasing functions are managed globally at Group level. A Responsible Purchasing Steering Committee meets at least three times a year, bringing together representatives from the Procurement departments (Goods and Services/Logistics/Raw Materials and Energy) and the Sustainable Development department. The key items discussed during its meetings are reported to the CSR/Stakeholder Dialogue Steering Committee, and points covered by the vigilance plan concerning suppliers and subcontractors are submitted to the Risk Review Committee. To reduce risks and promote long-term relations with suppliers and subcontractors, Arkema has deployed the resources described in the following sections.

Subcontracting

The Group subcontracts for two main purposes: for investment programs and industrial services, and, to a very limited extent, for the production of certain finished products. Subcontracting therefore accounts for part of the €316 million in capital expenditure dedicated in 2023 to safety, the environment and the maintenance of industrial units.

4.6.4.1 The Supplier Code of Conduct

The Group's responsible procurement process is guided by the ethical principles and rules expressed in the Business Conduct and Ethics Code described in section 4.6.2.1 of this chapter. The Group has also signed the national inter-company charter of the French purchasing managers' organization and the state-sponsored inter-company mediation initiative (*Médiation interentreprises*), which is based on ten responsible procurement commitments. As part of this process, a dedicated Supplier Code of Conduct summarizing all of the related CSR aspects has been issued and circulated to all Group entities.

The Supplier Code of Conduct's guidelines cover human and employee rights, respect for the environment, the quality and safety of the products and services provided, and business compliance and ethics. Environmental compliance requires suppliers, among other things, to prevent and limit the impact of their activities on climate change and biodiversity, implement responsible resource management and promote circular economy practices in their value chain. As part of the focus on business integrity and transparency, suppliers must comply with laws governing competition, corruption, conflicts of interest, confidentiality and the transparency and accuracy of reported information. The code can be accessed on the Group's website.

When selecting a new supplier, the Group looks for the bid that offers the best combination of performance, cost and quality, while also taking into account the supplier's CSR performance. All new suppliers and subcontractors are informed of the code's provisions and are expected to comply with these provisions in addition to general purchasing conditions.

4.6.4.2 Responsible procurement training and awareness

Group buyers are all trained to apply the Supplier Code of Conduct and the CSR performance assessment process, with regular follow-up meetings to inform and maintain awareness. In 2023, sessions were held to present the responsible procurement approach to buyers from all departments and regions. These sessions were followed up with reminders, updates and discussions about implementing the Together for Sustainability supplier assessment initiative. Accordingly, around 84% of buyers attended training or brush-up sessions in 2023.

Arkema also set up the Procurement Academy, an ongoing training program to harmonize rollout of procurement best practices throughout the Group. This program includes training in CSR requirements and Arkema's commitments as well as training on business compliance and ethics. Between 2021 and 2023, 62% of buyers completed this training.

4.6.4.3 Selection of suppliers and subcontractors

The procurement departments carry out preliminary assessments before entering into any business relationships with suppliers or subcontractors, as part of the selection process. These assessments are based on robust criteria that notably include corporate social responsibility issues. Two sources of information are used for these assessments:

- first, suppliers and subcontractors are interviewed about their performance and compliance, to enable Arkema to assess their ability to meet the Group's requirements, particularly in terms of ethics, safety and the environment, corporate social responsibility and product quality; and
- second, external databases providing information and assessments of the company's financial solidity, performance and compliance are queried. For corporate social responsibility, the Group uses the Ecovadis ratings platform. In terms of cybersecurity, the Group has used Vendor Risk Assessments since 2021. This process is based on the analysis of independent audit reports following the Service Organization Control (SOC) framework and assessments by Cybervadis (see section 4.5.2.6 of this chapter).

Logistics services contracts are awarded to transporters and warehouse operators on the basis of their safety, security and environmental performance, while highway hazardous materials transporters are selected based on third-party assessments, such as the Safety and Quality Assessment System (SQAS) in Europe and the Road Safety and Quality Assessment System (RSQAS) in China. Similarly, vessels chartered worldwide for the bulk transportation of Group products are first vetted by a third party.

For purchases of goods, services and trade products, Arkema includes social, environmental and ethical criteria in its supplier evaluation and selection process, in line with the Group's CSR policy.

Raw material suppliers are notably questioned by the Group about their management system (ISO or other certifications), their ability to manage the transportation of materials to Group sites in accordance with safety requirements, regulatory information (REACH, inventories, certificate of analysis, food safety certificate, conflict minerals, etc.), the percentage of renewable or recycled content, and the carbon footprint of their products.

Conflict minerals policy

Since the 2010s, key concerns have emerged about minerals from politically unstable areas. Some illegal minerals operations are used to fund violent activities that maintain or encourage conflict in these areas.

Regulations passed in the United States (2010 United States legislation, Dodd-Frank Wall Street Reform and Consumer Protection Act, section 1502) and the European Union (regulation (EU) 2017/821 of the European Parliament and of the Council of 17 May 2017) urge organizations to source materials responsibly, by applying reasonable care to due diligence and compliance measures for the specified minerals (tin, tantalum, tungsten and gold) coming from conflict-affected and high-risk areas, such as the Democratic Republic of Congo (DRC) and adjoining countries.

The Group does not directly purchase “conflict minerals”, as identified in these regulations. Arkema is nevertheless committed to responsible sourcing.

If the products it buys contain conflict minerals, as defined by the regulations, Arkema requests its suppliers to provide information about the origin of these minerals. In its concern to uphold responsible sourcing practices, the Group makes every effort not to purchase raw materials that Arkema has reason to believe could originate from the DRC or neighboring countries, unless they are certified “conflict-free”. Arkema also supports its customers in complying with regulations, by answering their inquiries as to whether the products purchased contain conflict minerals.

In 2013, Arkema implemented a conflict minerals program utilizing tools and recommendations developed by the Responsible Minerals Initiative (RMI) and set up a framework with its partners along the supply chain. This program is deployed throughout the Group and aims in particular to facilitate the commitment and reporting of suppliers, to automate the generation of Conflict Minerals Reporting Templates (CMRTs), to answer customers’ requests quickly and to coordinate activities between the different functions of the company.

In this way, the conflict minerals management program enables Arkema to meet its regulatory obligations and handle customer requests, while reducing critical risks on its supply chain.

4.6.4.4 Assessment of suppliers and subcontractors

In the context of relationships with suppliers and subcontractors, and in order to drive continuous improvement in safety performance, environmental impact, business ethics, quality and innovation, the Group’s three Procurement departments have introduced continuous assessment processes *via* two complementary systems:

- the first is a periodic assessment based, in particular, on the supplier or subcontractor’s observed performance in terms of its commitments, the number, type and management of any complaints, and the CSR assessment conducted *via* the Together for Sustainability initiative described hereafter; and
- the second is based on targeted audits prioritizing suppliers and subcontractors whose performance needs to be improved. Under the Supplier Code of Conduct, suppliers and subcontractors agree to meet all of the Group’s CSR expectations and to cooperate with its audits of their compliance with the code.

In line with Arkema’s HSE policy, the Goods and Services Procurement department regularly assesses the employee safety performance of the leading contractors working on Group sites. The results of these assessments are systematically discussed during contract reviews. As explained in section 4.5.2.2.1 of this chapter, the safety of contractor employees is considered just as important as that of Arkema personnel, and their incidents are included in the Group’s safety performance.

Supply chain service providers are regularly audited with visits to transportation companies and outside warehouses and assessments of their performance. These audits are supported by third-party assessments, such as the Safety & Quality Assessment System (SQAS) for overland transportation, the Chemical Distribution Institute for maritime shipping, and the European Barge Inspection Scheme for river shipping. Inventory requirements on warehouse operators ensure real-time availability of an itemized list of the Group’s products in stock, along with their exact location.

In addition, every year, the Internal Audit and Internal Control department audits subsidiaries by conducting a range of tests on supplier approval and assessment processes and on the practices and risks associated with raw materials and goods and services procurement.

4.6.4.5 Membership of the Together for Sustainability (TfS) initiative |DCP|

To base its requirements on accepted standards and avoid the need for duplicate supplier assessment procedures, in 2014, the Group joined the Together for Sustainability (TfS) initiative, founded by six European chemical companies. This global program is designed to encourage social responsibility across the chemical industry service chain, and is based on the principles of the United Nations Global Compact and the Responsible Care® Global Charter. It enables member companies to share the findings of assessments or audits of CSR performance of their suppliers or subcontractors conducted by Ecovadis or by independent audit firms, with members of the TfS program sharing the findings. Ecovadis analyzes supplier documents and questionnaires on the basis of CSR criteria in line with international standards, and ensures a 360° watch on information reported by external stakeholders.

A procurement officer is specifically appointed to lead the TfS effort within the Group and reports to the Responsible Procurement Steering Committee (see section 4.6.4 of this chapter).

At the end of 2023, more than 2,000 of the Group’s suppliers and subcontractors had been assessed according to CSR criteria over the last three years. Thanks to these assessments, the Group has identified certain suppliers or subcontractors whose CSR performance is below standard and has requested that they improve their practices in this area. The resulting initiatives are tracked over time by the Group’s procurement teams in liaison with the suppliers and subcontractors in question. The results of these assessments are also taken into account by procurement teams during the supplier selection process.

In 2023, CSR scores rose for 58% of suppliers whose assessments were updated.

2025 Target

To continue its efforts in the area of responsible procurement, the Group has set the following strategic target: 80% of purchasing spend from relevant suppliers covered by a TfS assessment.

	2023	2022	2021
Percentage of purchasing spend with relevant suppliers covered by a TfS assessment (1)	76.5%	75%	73%

(1) Relevant suppliers are suppliers accounting for 80% of the Group's recurring purchasing spend, as defined in the methodology note in section 4.7 of this chapter.

At-risk suppliers

The Group's Procurement departments defined criteria for identifying at-risk suppliers and subcontractors, which are those most likely to present a risk in terms of human rights, personal health and safety, corruption, or compliance with international labor and environmental standards. The three departments organize the supplier assessment and audit process so that recurrent at-risk suppliers are systematically assessed and then contacted and audited if their assessment reveals unsatisfactory practices.

4.6.4.6 Collaborative programs for a responsible value chain |DCP|

A responsible approach to castor oil harvesting

As a producer of high performance materials made from renewable resources, Arkema is participating in the Pragati initiative, alongside industrial partners BASF and Jayant Agro-Organics Ltd. and NGO Solidaridad. Launched in Gujarat, India in 2016, the initiative aims to provide a framework for the sustainable production of castor beans by taking into account all of the related social, environmental and economic issues. To date, the Pragati project has trained more than 7,000 farmers, who are now officially certified, and harvested approximately 74,500 tonnes of certified castor seed. The project's outcomes have been largely positive, including (according to a comparative study commissioned by the Sustainable Castor Association in 2022) a 36% increase in crop yields, improved health and safety conditions for farmers, responsible use of fertilizers and a reduction of approximately 21% in water consumption through the adoption of good agricultural practices promoted by the SuCCESS (Sustainable Castor Caring for Environmental and Social Standards) Code. The Code also promotes respect for basic human rights, such as the payment of minimum wages and equal pay, non-discrimination, the non-use of child labor and the avoidance of all forms of violence.

After seven years in operation, the four founding partners of the Pragati project agreed on a third phase, from 2023 to 2026. During this phase, continued attention will be paid to sustainable agriculture, with particular emphasis on increasing the participation of women and improving water management techniques in farming communities.

Suppliers working with Arkema to reduce their carbon footprint

To combat climate change, commitment is required across the whole of the value chain.

Raw material suppliers

Since 2021, Arkema has asked its most emissions-intensive raw materials suppliers in terms of Scope 3, category 1 emissions to complete the CDP Climate Change questionnaire via the CDP Supply Chain program. In 2023, Arkema surveyed more than 190 suppliers. Based on the responses received, the proportion of suppliers that have already expressed this commitment or that plan to do so within two years represents 49% of the Group's 2023 Scope 3, category 1 emissions.

Logistics suppliers

To better manage the carbon footprint of its transportation operations, Arkema signed a multi-year contract in 2022 with EcoTransIT, a company that specializes in detailed calculations of the emissions generated by transportation activities. An interface has been developed between Arkema's Transport Management System (TMS) and the EcoTransIT calculator, allowing each transport operation to be matched in real time with the volume of CO_2 equivalent emitted. Since the end of 2023, transport-related CO_2 reporting has been dynamic, allowing each Arkema Business Line to measure its impact and the results of actions taken. Adhesives will join the system in 2024 and 2025.

Arkema is also continuing its policy of promoting rail transportation for both the upstream flows under its control and its downstream flows.

In 2024, an industrial project will lead to the start of massive new railway flows. This mode of transportation, preferred to road transportation when establishing the supply chain for a new product, has led to the order of a fleet of 35 new wagons. With the same objective in mind, Arkema chose to help finance the renovation of the service track to the Lannemezan plant (France), which is publicly owned but under threat of closure. Once again, despite the investment required, rail was chosen for environmental and safety reasons.

Arkema has also decided to develop a tailored digital solution to manage its railway flows through a partnership in 2021 with the SNCF and Everysens, a start-up specializing in rail traceability. This confirms Arkema's commitment to maintaining rail as one of the key vectors of decarbonization in its supply chain.

Lastly, communication initiatives are carried out in specialized bodies and media to contribute to the collective action aiming to preserve and develop rail freight; in particular *via* AUTF and France Chimie in France and CEFIC in Europe.

Fight against deforestation

On 29 June 2023, the new EU Regulation on Deforestation-free products ("EUDR") came into force to prohibit the importing of products derived from deforestation into the European Union. Companies will have to comply with this regulation from 30 December 2024.

Arkema is affected as regards palm-, soy- and natural rubber-based raw materials, as well as their respective derivatives.

In order to meet the EUDR requirements by the end of 2024, the Group has initiated action with its relevant suppliers so that they can share their strategy and action plan to ensure their compliance with the forthcoming regulation. In a second phase, based on the information obtained from its suppliers, Arkema will define the actions necessary to ensure the compliance of its supply purchases.

4.6.5 Advocacy

As a responsible chemical company, the Group engages with public authorities wherever it operates. Its advocacy activities support its strategy and adhere strictly to its values and commitments, particularly in terms of social and environmental responsibility. By participating in the public conversation, the Group contributes to the development of legislative and regulatory frameworks that are conducive to the development of its activities.

The Group's positions are communicated to public decision-makers, either directly or through professional associations or other bodies.

When communicating directly, the Group operates with the utmost transparency and within the appropriate national legal framework. The Institutional Relations department is directly represented in France, Europe, the United States and China, and is supported by experts from the Business Lines and corporate departments who take part in working groups within business federations. In these regions and countries, the function is responsible for monitoring public initiatives at the local, national or international level that may impact the Group and are tasked with defending or promoting the interests of the Group in this context. The priority issues addressed concern: the circular economy; responsible product stewardship; the energy and ecological transition; and business competitiveness both globally (*i.e.*, at Group level, on issues such as energy, taxation, particularly on output, payroll taxes, employment law, regulation in general, etc.) and locally (*i.e.*, at plant level, on issues such as health, safety and environmental legislation, and support for expansion projects and reorganizations). The last two issues accounted for 24% and 21%, respectively, of the Group's advocacy expenditure in 2023.

On environmental issues, the Group aligns its institutional policy – and its positions – with the objectives of the Paris Agreement and Arkema's carbon trajectory for 2030, validated by the SBTi. Since October 2023, this policy has included a commitment to contribute to the national and European objective of carbon neutrality by 2050.

Whether advocacy is direct or indirect, the issues are the same. They tend to be more specific when the association or professional body to which the Group belongs represents a specialized sector. In France, Arkema is a member of global employers' federations such as MEDEF *(via France Chimie)*, AFEP and *France Industrie*. The Group also belongs to numerous professional bodies in its industry, such as *France Chimie* in France, CEFIC in Europe, the American Chemistry Council in the United States, and the Association of International Chemical Manufacturers and the China Petroleum & Chemical Industry Federation in China. In addition, the Group is a member of close to 50 other specialized industry associations worldwide whose objectives are closely related to its businesses. In 2023, Arkema also joined *Entreprises pour l'Environnement* (EpE) in France, which is aligned with the Group's climate ambitions.

In 2023, out of a total of €4.5 million, the Group paid €3.7 million in membership fees worldwide to general or specialized industry associations, the two highest amounts being to France Chimie (24% of total fees) and CEFIC (8% of total fees). Between approximately 15% and 20% of the fees paid to the main industry associations support lobbying efforts.

The Group's advocacy work complies with the regulatory provisions in force in each host country. For example, Arkema has been entered in the European Union Transparency Register and has pledged to comply with the related Code of Conduct. Similarly, in France, Arkema reports on its business annually to meet its disclosure requirements as a registered lobbyist in the national digital registry of lobbyists set up in 2017, which is managed by France's High Authority for Transparency in Public Life (HATVP). This also applies to the United States, where the Group files quarterly activity reports with both houses of Congress, as required under section 5 of the Lobbying Disclosure Act of 1995.

Lastly, the Group expressly confirms that it does not finance any political party or organization in the countries where it operates with the aim of influencing their position or obtaining special treatment that could be interpreted as acts of corruption.

4.6.6 Community engagement

In the fifty-five countries where it operates, the Group positions itself as a company contributing to the social development of local communities, by creating and maintaining direct and indirect jobs, developing local skills and expertise, purchasing local goods and services, forming business partnerships and paying taxes.

In particular, the Group focuses on hiring locally at every level of the business, including the senior management teams of its non-French subsidiaries.

As seen in this document, and particularly in chapter 5, the Group's economic contribution to surrounding communities covers many items (sales, capital expenditure, operating expenses, wages and salaries and payroll taxes, income and other business taxes, dividends, etc.), which come together to shape the Group's economic and social footprint.

In addition to contributing to the local economy, the Group deploys a policy of revitalizing regional labor markets and supporting scientific research upstream from industrial innovation.

Lastly, as a responsible company in an increasingly interconnected world, the Group is particularly attentive to the need to nurture close ties with all its stakeholders. Around the world, the Group is deploying local communication initiatives to foster high-quality relationships with host communities that are based on trust. This open dialogue also helps the Group to better understand the expectations of people living in nearby communities and ensure that they are properly addressed in its CSR strategy.

4.6.6.1 Supporting local communities through innovation

The Group has a policy of supporting innovative small and medium-sized enterprises (SMEs) in related business areas through joint projects and equity investments. Each research center, for example, works closely with neighboring universities or research institutes as part of clusters while creating possibilities for partnerships with local SMEs. The Group is a founding member of Axelera, a world-class competitiveness cluster in the field of chemistry and the environment that brings together and coordinates players from industry, research and education in the Auvergne Rhône-Alpes region in France.

Support for small and medium-sized businesses

These kinds of local partnerships contribute to stimulating innovation, while deepening the Group's local roots. For example, at the Lacq site in France, the Group provides technical and infrastructure support to innovative young businesses setting up in the Chemstart'up business incubator dedicated to chemicals.

It is also positioned as a key early-stage player in strategically crucial industries such as materials for the production, storage and conversion of renewable energy, materials for electric mobility and advanced electronics, resources management in the circular economy and additive manufacturing. In 2021, Arkema launched the Start-up Connect program, which invites advanced materials start-ups around the world to approach Arkema with a view to establishing a dedicated research collaboration and benefiting from the Group's technological experience, in the form of technical or financial assistance for their innovations.

In 2019, Arkema inaugurated a Global Center of Excellence for 3D printing at its Cerdato Research and Development Center in Serquigny, Normandy in the north of France. With the Normandy Region authorities as its partner, this center of excellence was created to manufacture additive powders made with high performance polymers. It benefits companies and training organizations in the region, as part of a collaborative initiative striving for swift adoption of these new production methods.

Also in 3D printing, Arkema aims to forge partnerships with players in the additive manufacturing ecosystem:

- a collaboration agreement entered into in 2019 with Idaho-based Continuous Composites was followed up in 2020 with the acquisition of an interest in the SME in order to speed up the development of its continuous fiber 3D printing technology; and
- in 2021, Arkema made an equity investment in Erpro 3D Factory, a French company specializing in mass production through additive manufacturing, founded in 2017 and with which Arkema entered into a partnership as early as 2018.

In renewable energy storage, in 2021, Arkema became a shareholder and technological partner of Verkor, a French start-up specialized in the production of high performance batteries for electric vehicles.

Academic partnerships

Moreover, under its ambitious innovation policy, the Group maintains close ties with the scientific and educational ecosystems in its host regions worldwide, in particular through a wide variety of partnerships with universities and public and private research laboratories, such as the CNRS and the CEA in France and several universities in France, the United States, Canada, Belgium, Japan, South Korea and Malaysia. Further information on these partnerships is provided in section 1.1.5 of this document.

In 2016, Arkema opened an innovation center in South Korea within the HanYang university in Seoul. The center is specialized in high performance polymers and renewable energies, areas in which the university excels. In 2018, Arkema forged a partnership with Monash University in Kuala Lumpur, Malaysia. The aim of this collaborative research center is to enhance understanding of biocatalysis, a discipline that leads to more sustainable processes than those achieved with traditional chemistry or the identification of new avenues for producing sulfur products.

In 2018, Arkema joined forces with France's *École Polytechnique* and its Foundation to create an international research and teaching chair dedicated to innovative materials. Involving *École Polytechnique* students and research professors, this five-year chair provides a special research environment for several doctoral students.

In 2022, Arkema joined forces with the CNRS, Claude Bernard Lyon 1 University and the CPE Lyon engineering school to create a joint research laboratory dedicated to the design of new materials based on fluoropolymers, which will be used in future generations of electric vehicle batteries.

The same year saw the creation of a second joint research laboratory between Arkema and the CNRS, in partnership with the University of Haute-Alsace. Based at the *Institut de Science des Matériaux* (Mulhouse, France), this joint laboratory focuses on the use of light to synthesize and apply materials using photopolymerization.

In 2022, Arkema also joined a Spanish consortium as part of the NextGenerationEU initiative to explore and advance the recyclability of post-consumer PET (bottles and other plastic items) to recover monomers for reuse as raw materials to make more durable polyester powder resins for the coatings market.

Public promotion

Arkema regularly engages with the public to raise awareness of its activities, its materials and their applications.

Since 2017, Arkema has had a dedicated showroom for innovative materials, known as Workshop 4.20. Located at the Group's headquarters in Colombes (France), it enables a wide range of visitors to learn about Arkema's innovations. To date, nearly 18,000 students, institutional investors, journalists and customers have been given personalized visits to gain insights into the Group's know-how and expertise. The showroom can also be set up at many of the Group's sites, and at conferences and events.

In France, since 2020, Arkema has participated in the Big, organized by Bpifrance, the French financing and business development agency, with the aim of bringing together students, start-ups and industrial players to promote entrepreneurship in France.

4.6.6.2 Corporate citizenship

As part of its commitment to societal issues, Arkema undertakes corporate sponsorship and philanthropy initiatives that are aligned with its CSR policy and values, particularly the values of solidarity and inclusion, and focuses primarily on education, inclusion and diversity. These initiatives are overseen at Group level by the Human Resources and Communication Executive Vice-President, who is a member of the Executive Committee. They are rolled out worldwide and are also supported at the local level by the Common Ground® initiative deployed around the Group's industrial sites.

4.6.6.2.1 The Common Ground® initiative

Formalized and introduced over 20 years ago, the pioneering Common Ground® initiative takes community relations beyond the legal minimum requirements by actively encouraging local dialogue and exchange with stakeholders in every country in which the Group operates.

Designed to improve the social acceptability of chemical plants and develop understanding about the Group's business, it is based on the following key principles:

- listening to understand expectations: understanding the concerns of people living in nearby communities is key to effectively addressing their concerns about industrial and chemical risks; and
- engaging in dialogue and informing communities about the Group's activities: at the core of the initiatives are workshops that enable neighbors to discover what the plant does, the products it makes and the processes it uses, and get a first-hand view of how the site runs and what its projects are.

In addition to these discussions about the Group's activities, Arkema also contributes to the social and economic dynamics of local communities through philanthropy initiatives.

Operational implementation of the Common Ground® initiative is overseen by the Group's site managers, who are supported by human resources or communication managers. Employee participation, on a voluntary basis, is also a key component.

4.6.6.2.2 Initiatives focused on priority issues

In line with its history, businesses and core values, and more particularly the values of solidarity and inclusion, the Group takes action both globally and locally to address social challenges that it sees as a priority.

Since its creation in 2016, marking Arkema's tenth anniversary, the Arkema Fund has financed projects proposed by employees who volunteer in the fields of education, inclusion or diversity. The fund is a way for the Group to support the volunteer work carried out by its employees, as well as their engagement and commitment to non-profit organizations. Since its creation eight years ago, 88 educational projects promoted by non-profit organizations in 16 countries have been selected and funded.

Education and workforce integration

Around the world, the Group gives priority attention to strengthening its ties with schools and universities.

Since 1996, the Arkema Inc. Foundation in the United States has been working to improve the quality of life in local communities around the Group's sites, promote science and support science education at all levels through its flagship Science Teachers Program, which aims to make teachers experts in science education and to get elementary school students interested in science. Teachers take part in an intensive session taught by Arkema engineers and scientists, and use innovative science experiment kits to learn compelling new ways to illustrate scientific concepts. Since its inception, the Science Teachers Program has benefited hundreds of school teachers and thousands of students. In 2023, more than 30 teachers completed this module.

In France, the Group has been a sponsor of the CGénial Foundation's program to promote science among middle and high school students since 2016 and provides its support to spotlight science and technical-related disciplines and careers. The aim is to build bridges between business and academia by taking part in the Foundation's flagship programs. In 2023, Arkema joined the Foundation's club of "brilliant" donors and joined its Board of Directors. This year, over 110 teachers were welcomed at the Group's plants and research centers, and close to 3,250 middle and high school students benefited from the experience of Arkema's volunteer speakers in classroom presentations or online discussions. For six years now, volunteer employees in China have been running regular sessions with students from middle and high schools in the vicinity of Group plants as part of the educational project Arkema ChemArt Green Innovation Class. The initiative's aim is to advance the teaching of science subjects, promote chemical industry professions and educate the younger generation on environmental issues. In 2023, after a gap of three years due to the health crisis, several schools again benefited from the commitment of Arkema volunteers.

In addition to educational initiatives, the Group also provides its support to cultural projects.

In France, Arkema has been a patron of the *Théâtre des Champs-Élysées* in Paris since 2017, and in 2019 furthered its involvement by supporting the theater's youth program. This initiative aims to provide disadvantaged children aged six to twelve with greater access to music and opera and is aligned with Arkema's focus on education as well as youth inclusion and with the values of solidarity and inclusion championed by the Group. In 2023, some 500 students in the priority education zone of Colombes (France) visited the *Théâtre des Champs-Élysées* and enjoyed a participatory opera experience *via* singing workshops and attendance at a performance.

In India, in addition to the actions carried out as part of the Pragati program described in section 4.6.4.6 of this chapter, Arkema launched the Eranda scholarship program in 2021 for children living in castor-growing communities. Each year, schools are selected so that hundreds of students can benefit from sustainability courses given by Arkema employees. An art competition is also organized, followed by an awards ceremony for the winning students. The winners receive electronic equipment as prizes, and a grant is given to their school. Eranda is the Gujarati word for castor.

Diversity and social inclusion

In keeping with its internal policy of promoting gender diversity and equal opportunity, Arkema signed a deal with the French Football Federation in 2019 to become the main partner of the division 1 Women's Football League in France, now known as D1 Arkema. In 2023, Arkema became a partner of the French Women's Football Team for the next two seasons, until 2025. These partnerships are a powerful lever to promote the role of women. The aim is to support the development of women's sports in general and women's football in particular, and to show that women have a place in both industry and football, two areas still viewed as male domains. This commitment to women's football has also been extended outside France through local actions with amateur clubs near our sites, for example in the United States, where Arkema works with a team of young women in New York.

Arkema sponsors four top athletes in their respective disciplines (soccer, wheelchair tennis and paratriathlon) who symbolize and embody the Group's values (solidarity, performance, simplicity, empowerment and inclusion). Paris 2024 is the next important date in their sporting calendar. Since 2019, the Group has also become a partner of *Sport dans la Ville*, a French non-profit that runs several programs designed to help teenagers from disadvantaged neighborhoods find their place in society, in particular through sports and cultural activities. In 2023, Arkema strengthened its support for the non-profit by becoming a Grand Partner, the highest level of partnership. By prioritizing the "*Job dans la Ville*" program, the Group supports the professional integration of young people from the age of 14 so as to give each individual access to a qualification and a job. Through this partnership, Arkema helps the non-profit to achieve its objectives locally. To date, over 2,800 young people, of which 38% are girls, have benefited from this program.

Arkema and Habitat for Humanity help the disadvantaged

In the United States, Arkema became a Community Builder partner to Habitat for Humanity in Philadelphia in 2023. The goal of this non-profit is to increase homeownership rates for people from very disadvantaged backgrounds. As part of its three-year commitment, Arkema will provide a total of US$330,000 in funding, donate its sustainable building products, offer technical expertise, and help build or renovate homes with employee volunteers.

In 2023, over 50 employees volunteered to take part in various housing and furniture construction projects.

Environment and biodiversity

The Group is committed to protecting the environment and preserving biodiversity, above and beyond its regulatory obligations, and carries out a diverse array of initiatives worldwide. Participating in community awareness campaigns on waste management and recycling, planting trees, installing beehives or birdhouses, and rehabilitating wastelands both on and off Group sites are just some examples of the actions taken to protect the environment.

Since 2014, employees at Bostik's Tanay site in the Philippines have participated in the local tree planting program Let's mulTREEply. Nearly 9,000 tree seedlings have been planted since the initiative was launched.

Since 2006, the Pierre-Bénite site (France) has deployed numerous pro-biodiversity initiatives in partnership with the Naturama association, to promote and attract wild fauna and flora and raise awareness among company employees of the various animal and plant species in their midst. In 2023, the site welcomed the non-profit to produce a report on biodiversity in the Arkema plant.

Employee giving: participatory sponsorship

In 2018, Arkema introduced a "salary rounding" system in France. This participatory sponsorship system proposed by solidarity economy company MicroDon allows employees to donate the cents from their monthly salary, with Arkema donating the same amount as its employees. Over the past five years, nearly €180,000 has been raised for the six non-profit organizations selected, which take action in areas that are aligned with the Group's corporate philanthropy policy.

4.6.6.3 Economic contribution

The Group commits funds and resources in support of local involvement initiatives. Arkema's corporate sponsorship and philanthropy initiatives and contributions comply with the principles set forth in the Group's Anti-Corruption Policy.

The following items are included in the reporting system below:

- corporate philanthropy initiatives, such as the Arkema Fund, the Arkema Inc. Foundation, and support for the *Sport dans la Ville* organization;
- Arkema product donations;
- academic partnerships; and
- collaborative programs such as the Pragati initiative outlined in section 4.6.4.6 of this chapter.

Because of information availability schedules, the economic data is for 2022. Total contributions of €5 million broke down as 99% in financial contributions and 1% in time spent by employees on program management.

4.7 Reporting methodology

4.7.1 Reporting organization

The CSR reporting organization is designed to enable the Group to manage and measure the effectiveness of its social responsibility policy.

Reporting scope and period

The reporting scope for employee, environmental and climate data corresponds to the scope of consolidation defined in the note 3 to the consolidated financial statements at 31 December 2023 in section 5.3.3 of this document, with the specificities presented in sections 4.7.3.1, 4.7.3.2 and 4.7.4.1 of this chapter. The reporting period is the calendar year, *i.e.*, 1 January 2023 to 31 December 2023.

Reporting organization and protocol

The Group has defined directives governing the reporting of safety, environmental and climate, employee and social data for all facilities. Data are generally reported once a year, but for certain specific issues, interim data are reported quarterly so as to identify trends and implement required corrective measures on a timely basis. The interim data are not published.

Compliance and standards

The Group publishes employee, environmental and social information in compliance with articles L. 225-102-1 and L. 22-10-36 of the French Commercial Code, as amended and created by French Law no. 2020-1142 of 16 September 2020, and with articles R. 225-105 and R. 225-105-1 of said code, as amended in particular by French Decree no. 2017-1265 of 9 August 2017. Arkema also follows the recommendations of ISO 26000. In compliance with the abovementioned articles L. 225-102-1 and L. 22-10-36, this information is reviewed by an independent third-party auditor, who issues a report attesting to the consistency and fairness of the CSR information. The report is presented in section 4.7.9 of this chapter. The Company also publishes a duty of care plan in accordance with article L. 225-102-4 of the French Commercial Code.

The reporting process follows the GRI Guidelines. The GRI content index can be found in section 4.7.7 of this chapter. The Group also refers to the Task Force on Climate-Related Financial Disclosures (TCFD) framework for its climate reporting. Alignment with the TCFD is outlined in section 4.4.2 of this chapter.

4.7.2 Methodological note on sustainable solutions indicators

4.7.2.1 Details on sustainable solutions indicators

Sustainable development patents

Number of original patent applications filed in the reporting year by the Group in response to sustainable development issues and contributing to at least one UN Sustainable Development Goal.

R&D expenditure

R&D expenditure is expressed as a percentage of consolidated revenue for the year.

ImpACT+ solutions

Percentage of third-party sales of ImpACT+ solutions. Solutions in the ImpACT+ category include those that, on the basis of a decision tree, simultaneously (i) meet the basic requirements, (ii) are aligned with regulatory trends and market expectations, (iii) have a positive impact compared with the market standard on at least one of the SDGs, and (iv) do not generate a significant negative impact on the other SDGs.

Percentage of sales from products made from renewable or recycled raw materials

Sales from renewable or recycled raw materials correspond to sales of products that use renewable or recycled raw materials in the proportion of more than 25%.

Renewable content is calculated by determining the proportion of raw materials of renewable origin (biomass, plant or animal) using the biogenic carbon ratio, the renewable material mass ratio, or the certified Mass Balance method. Recycled content is calculated by determining the proportion of raw materials of recycled origin, using the mass ratio or the certified Mass Balance method. Recycled materials are materials that are transformed into new products instead of being disposed of as waste. Scrap materials reused within the same production process are excluded.

Results are becoming increasingly precise with growing understanding of the renewable and recycled content of raw materials, and with improvements in calculation methodologies.

Percentage of sales covered by a life-cycle assessment (LCA)

Percentage of sales of solutions for which a full life-cycle assessment is available. Life-cycle assessments are conducted by Arkema experts or through professional associations.

They are reviewed approximately every five years, or earlier if needed or in the event of significant change. They cover one or more environmental impact categories, with at least cradle-to-gate scope, and may be validated by independent third parties.

4.7.3 Methodological note on environment, climate and safety indicators

4.7.3.1 Environment and climate reporting tools and scope

Absolute data

The Group's absolute environmental data are compiled by its Reporting of Environmental and Energy Data (REED) system, which is accessible worldwide *via* the web platform of a service provider.

The values of the absolute indicators, once published after review by the independent third-party auditor, are saved. Any subsequent retroactive modifications made due to a change in the estimation method or a correction are addressed in section 4.3.3 (The circular economy in transformation processes) and sections 4.4 (Climate) and 4.5 (Safety and environment) of this chapter.

The data are entered by the plant Health, Safety and Environment (HSE) departments and validated at two levels, geographic and corporate.

The scope of consolidation for environment and climate reporting covers all active Group industrial sites for which operating and emissions permits were held in the name of Arkema or a majority-owned subsidiary at 31 December 2023, with the exception of PI Advanced Materials, the acquisition of which was completed in December 2023, and Polytec PT, acquired in June 2023. In 2023, the scope covered industrial operations accounting for more than 99% of the Group's sales. Given its contribution to the climate, American Acryl's Bayport facility, 50% owned by the Group, has been included in the scope of the greenhouse gas emissions strategic indicator since 2019. In addition, since 2019, the Group has included all of its sites (industrial sites operated by the Group or by its majority-owned subsidiaries, head offices, research and development centers and sales offices) when calculating its carbon footprint (Scope 1, ODS, Scope 2, Scope 3).

The scope of consolidation for energy reporting covers all of the sites operated by the Group or by majority-owned subsidiaries, including plants and research and development centers with an operating permit as at 31 December 2023, excepting certain sites acquired recently.

Operations sold or discontinued in 2023 were removed from the scope of reporting for the year but remain in prior-year data.

Newly acquired sites are integrated at the end of the first full year. A few small sites acquired in previous years report only part of their emissions (Scope 2 linked to electricity purchases). These activities accounted for less than 1% of Group sales in 2023.

Operations that started up in 2023 reported data from their start-up date.

Intensive data (EFPIs)

To manage its environmental performance more efficiently and report consolidated data that more accurately track this performance year by year, Arkema uses a methodology that enables production facilities to report relative indicators, known as Environmental Footprint Performance Indicators (EFPIs). This method of calculating the intensity of emissions or resource consumption relative to production volumes, compared with 2012 as a baseline year, minimizes the impact of any changes in the business base and plant output, as well as any changes to the method used to estimate or calculate environmental footprint variables.

These relative environmental data are compiled by the same REED environmental reporting system, which is accessible worldwide *via* the web platform of a service provider.

EFPI data are entered by facility HSE departments and validated first by the factory manager then at Group level. They are subject to a large number of consistency tests.

The scope of consolidation for EFPI reporting covers Group sites for which operations (and emissions) permits were held in the name of the Group or a majority-owned subsidiary at 31 December 2023 and which are among the biggest contributors of the Group's sites. In all, these sites account for at least 80% of the Group's prior-year emissions or consumption.

Any activities sold or terminated in 2023 are not included in the scope of EFPI reporting for 2023, but are still included for previous years.

Operations started up in 2022 will be included in the EFPI reporting in 2024 compared with their 2023 performance.

Operations acquired in 2022 will be included in the 2024 scope of EFPI reporting for all of their 2024 activities, compared with their 2023 performance.

The EFPI methodology allows new reporting units to be included in prior-year performance data. Should the inclusion of a large number of new units result in a significant change to the confidence interval in the calculation of the Group's EFPIs, consideration will be given to whether an adjustment factor should be applied or whether the use of a new baseline year should be used.

4.7.3.2 Safety data reporting tools and scope

Safety data:

- are compiled by the proprietary Reporting of Environmental and Energy Data (REED) system, which is accessible worldwide *via* the web platform of a service provider;
- are recorded by the reporting units and validated at corporate level; and
- cover all of the production facilities operated by the Group or by majority-owned subsidiaries, head offices and research and development centers. The accident figures for newly acquired sites are integrated into the TRIR and LTIR indicators within three years. Some of the sites acquired in 2021 and 2023 are not included in accident safety reporting. Reporting for 2023 covers 95% of the Group's workforce as of 31 December 2023. New sites are included in the calculation of the peer observation indicator within three years of their acquisition or start-up date.

4.7.3.3 Choice of indicators, measurement methods and user information

The Group has designed indicators to track the emissions and consumption levels that concern its operations, in accordance with the information required by articles R. 225-105 and R. 225-105-1 of the French Commercial Code. These indicators enable the Group to assess the impact of its policies and monitor changes over time for certain types of emissions and uses that have been identified as risks.

They were introduced at the time of the Group's creation in 2006 and have been tracked ever since, in compliance with the social and environmental reporting requirements set out in the French New Economic regulations Act (the "NRE Act") of 15 May 2001.

The environmental reporting system is governed by an Environmental reporting directive, an EFPI reporting directive and an Energy reporting directive issued by the Group Safety and Environment (DSEG), Sustainable Development (DDD) and Raw Materials and Energy Procurement (DAMPE) departments and accessible to all employees on the corporate intranet.

Calculation and estimation methods are subject to change, for example due to changes in national or international legislation, measures to improve consistency among regions, or problems with their application.

The directives may then be expressed in guidelines and handbooks, which are supported by training sessions in each region as required.

The safety reporting process is covered by a Monthly Safety reporting directive issued by the Group Safety and Environment department and accessible to all employees on the intranet.

SBT setting method for the target to reduce greenhouse gas (GHG) emissions

Targets adopted by companies to reduce GHG emissions are considered "Science Based Targets (SBTs)" if they are in line with what the latest climate science deems necessary to limit global warming by the end of the century, relative to pre-industrial levels.

The methodology is based on a breakdown over time of the carbon budget in choosing a global GHG emissions scenario adapted to a trajectory to contain global warming to 1.5 °C by the end of the century (2018 report of the Intergovernmental Panel on Climate Change, or IPCC). Next, an allocation mechanism is applied taking the approach of a contraction of absolute emissions, in line with Science Based Targets recommendations. For the Group, to comply with SBTi criteria relating to a 1.5°C trajectory, this corresponds to a reduction of 48.5% for Scopes 1 + 2 as well as 54% for Scope 3 by 2030 relative to 2019.

4.7.3.4 Details on environment, climate and safety indicators

The following information is provided to clarify the definition of the indicators applied by the Group.

Total acidifying substances

This indicator is calculated using sulfur oxide (SO_x), ammonia (NH_3) and nitrogen oxide (NO_x) emissions converted into tonnes of sulfur dioxide (SO_2) equivalent.

Volatile organic compounds (VOCs)

The list of products regarded as VOCs may vary from country to country, in particular between Europe and North America.

The VOC definitions used by the Group are those recommended in Europe by directive 2010/75/EU on industrial emissions, known as the Industrial Emissions directive (IED).

Emission figures for US sites are therefore obtained by adding figures for products such as fluorinated organic compounds to national reported data.

Chemical oxygen demand (COD)

For reporting purposes, COD is measured in effluent released into the natural environment.

In cases where wastewater from a Group facility is treated in an external plant, the reported data takes into account the effectiveness of the treatment process.

In cases where a Group facility takes in COD-laden water, the reported data concern the net COD load effectively produced in the ecosystem by the Group (outgoing less incoming).

Waste

The distinction between hazardous and non-hazardous waste may vary from one region to another. The definitions used by the Group are those of the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal. Wastewater transported to treatment plants, which returns to an aquatic environment after treatment, is excluded.

By-products that are sold to third parties for reuse without processing at a Group site are not counted as waste.

Water withdrawals

All sources of water are included in the reported data, including groundwater/wells, rivers, the sea, public or private networks and drinking water, excluding rainwater collected in separate networks. Water withdrawn by the Group but sold to third parties is excluded from this indicator.

Energy use

Reported use corresponds to net energy purchases.

It does not include self-generated energy, which corresponds to the energy produced by exothermic chemical reactions and therefore does not draw down the planet's energy resources.

Sales of energy are deducted from purchases of energy. This is the case, for example, for facilities fitted with combined heat and power plants that generate steam and electricity from purchased gas (reported), then sell the electricity (deducted).

In cases where sites do not have any December data due to late reporting by energy providers, the values for the year are extrapolated from the data at end-November.

Direct greenhouse gas (GHG) emissions

For reporting purposes, direct GHG emissions correspond to those defined in the Kyoto Protocol.

Their impact is calculated in equivalent tonnes of carbon dioxide (t CO_2e).

In this report, 2023 emissions have been calculated using the Global Warming Potential values published by the Intergovernmental Panel on Climate Change (IPCC) in 2014 for Scopes 1 and 2 (AR5) and in 2007 for Scope 3 (AR4).

In 2022, emissions from the Bayport American Acryl site were reported based on the Group's share in assets (50%) rather than on total emissions as had been the case since 2019. Historical Scopes 1 + 2 emissions have been adjusted accordingly.

Indirect greenhouse gas (GHG) emissions

For the purposes of this report, indirect Scope 2 CO_2 emissions were calculated using electricity and steam purchase and consumption and emission factors in tonnes of CO_2 equivalent per input unit (MWh or tonnes of oil equivalent) reported by suppliers. Where this was not possible, they were calculated using figures provided by local authorities, such as those available in the EPA e-grid database for 2022 in the United States, the 2021 EF grid, OM value issued by the Chinese Ministry for Ecology and the Environment for China, and SEMARNAT data issued by Mexico's Federal Environmental Agency for Mexico. In the absence of specific regional values, calculations were made using national energy-mix emission factors published by the International Energy Agency in 2017. As in 2022, purchases of Guarantee of Origin certificates for electricity were factored into Scope 2 calculations.

The methodology together with the historical values have been adjusted in 2022, in accordance with the GHG Protocol (net consumption replaced by quantities purchased and consumed).

Indirect Scope 3 CO_2 emissions were estimated using the default scenarios in the GHG Protocol guidance for the chemical sector, issued by the World Business Council for Sustainable Development (WBCSD). Indirect Scope 3 emissions relate to the Group's value chain, including both upstream and downstream emissions, and have been estimated for all categories concerned by the Group's activities (*i.e.*, Categories 1 to 12 and 15) (see section 4.4.3.3 of this document).

- Category 1 – Purchased goods and services: emissions are estimated based on purchases of raw materials and packaging. An initial estimate is made on the basis of volumes for which information is processable, *i.e.*, more than 88% of the amount of such purchases. Emissions corresponding to the remaining 12% are then estimated by extrapolation. For processable volume figures, an emission factor specific to each chemical product is applied (in CO_2 equivalent per tonne) where available. Otherwise, an emission factor of 1.8 t CO_2e/t or 1.9 t CO_2e/t is assumed (corresponding to organic and inorganic chemicals in the EcoInvent database, version 3.5). The specific emission factors applied come from suppliers, or from life-cycle assessments conducted by the Group or by professional organizations such as Plastics Europe, or from the EcoInvent database (version 3.5), or from the Base Carbone® (2022).
- Category 2 – Capital goods: emissions are estimated based on the amount of capital expenditure split into 14 categories (Development, R&D, Maintenance, Arkema Energy, etc.). An emission factor from the 2022 Base Carbone® is assigned to each investment category (in kg CO_2e/€k).
- Category 3 – Fuel and energy-related activities: emissions are estimated by applying the default rule set out in the WBCSD guide. These emissions include (i) losses expressed in CO_2 equivalent in relation to electricity and steam transmission and distribution networks in each of the countries in which Arkema has industrial operations, (ii) upstream emissions for fossil fuel, steam and electricity consumed in each country by Arkema industrial sites, and (iii) upstream emissions for fossil fuels, steam and electricity sold by certain Arkema industrial sites. Emission factors for losses on the electricity and steam transmission and distribution networks in each country, and upstream of fossil fuel, steam and electricity are as given in the 2017 version of the DEFRA [9] database, except for electricity in France, for which values are as given by the EDF utility for 2022.

[9] *UK department for Business, Energy and Industrial Strategy.*

- Category 4 – Upstream transportation and distribution: estimated emissions are based on the list of main raw materials representing 88% of purchasing volumes (see Scope 3 – category 1), an average journey of 1,000 km by truck and a factor of average emissions for road transport (in kg of CO_2 per t.km). For the main raw material, actual transportation modes are considered. The resulting emissions are then extrapolated in proportion to the total volume of raw materials transported. The average emission factors by mode of transportation are the same as those used to estimate category 9 emissions.
- Category 5 – Waste generated in operations: the emissions calculated are those related to the waste generated during the Group's operations. The WBCSD rule is applied, with emission estimates based on the Group's waste treatment breakdown and the emission factors given in the EcoInvent base (version 3.5) for incinerated, landfilled and recycled waste. Calculations are based on the actual quantities of waste from each site that is treated in the various ways. As a first step, all of the landfilled organic waste was considered totally decomposed.
- Category 6 – Business travel: the emissions calculated correspond to Group employees' travel and hotel accommodation. Emission values are provided by the travel agencies the Group works with.
- Category 7 – Employee commuting: emissions were estimated using the least favorable scenario, assuming that all 21,125 employees use their own cars to get to work, traveling an average distance of 33 km per day in France [(10)], 26 km in the United States [(11)], and 50 km in other countries. The emission factors applied correspond to the average CO_2 emissions per kilometer by vehicle type and fuel type given in the DEFRA database (2019 version).
- Category 8 – Upstream leased assets: emission figures in this category are for energy consumption at leased real-estate assets (head offices, sales offices and research centers), except for those already included in Scope 2 reporting. Where site electricity consumption data are not directly available, estimates are made working from the consumption ratio per employee and by type of establishment, mainly offices and research centers. Emissions were then calculated by applying the emission factor for the national electricity mix in the country where each site is located.
- Category 9 – Downstream transportation and distribution: the emissions were estimated using Group company logistics data, which account for more than 99% of consolidated shipments. The Group defines a shipment as the transportation of products to customers, as well as any post-production logistics. Since 2019, the calculation has been made by EcoTransIT, whose methodology (https://www.ecotransit.org/methodology.en.html) is based on the EN 16258 standard (Methodology for calculation and declaration of energy consumption and greenhouse gas emissions of transport services [freight and passengers]) and complies with the GHG Protocol and guidelines issues by the GLEC (Global Logistics Emissions Council). In particular, the standard emission factors for road transport are based on the EURO I to VI standards in Europe, the 1994 to 2010 EPA standards in the United States and the 1994 to 2010 JP standards in Japan. For maritime transport, the method is based on the data and methodology developed by the Clean Cargo initiative (https://www.clean-cargo.org/). This method covers 99% of transported volumes. For the remainder, average distance and emission factors were applied. The reporting period runs from 1 October to 30 September of the following year.
- Category 10 – Processing of Sold Products: in 2022 a methodology was devised to estimate emissions for this category. For each Group Business Unit (BU), based on the breakdown of sales by market and application, simplified scenarios have been devised for different cases (market/application) covering a cumulative total of more than 80% of sales volumes. These scenarios are based on customers information, data available in existing literature (life cycle assessment), or on the Group's knowledge of its market. For the electricity emission factor, the value of the IEA's (International Energy Agency) 2020 global energy mix was used.
- Category 11 – Use of Sold Products: in 2022 a methodology was devised to estimate direct and indirect emissions for this category. For each Group Business Unit (BU), based on the breakdown of sales by market and application, simplified scenarios have been devised for different cases (market/application) covering a cumulative total of more than 80% of sales volumes, with a special focus on applications related to transportation, requiring energy or resulting in direct GHG emissions. These scenarios are based on customers information, data available in existing literature (life cycle assessment), or on the Group's knowledge of its market. In 2023, the reporting methodology was changed to consider only direct use-phase emissions for this category.
- Category 12 – End-of-life treatment of sold products: the products sold by the Group have been classified into 15 different categories based on their chemical composition and, by extension, the GHG emissions that they may generate. A scenario was applied to define the end-of-life treatment method for each product category: incineration, landfilling or recycling. Emission factors were then applied in accordance with the WBCSD guide. For this estimate of Category 12, all of the Group's products have been included, including high-emission fluorogases since 2022 for which a specific scenario has been devised, *i.e.*, 50% of the emissions during use (Category 11) and 50% of end-of-life emissions (Category 12). For Bostik products, a special scenario for end-of-life treatment was applied to account for the nature of these products and their applications. Emission calculations take into account the end of life of packaging used for products sold.
- Category 15 – Financial holdings: this category covers emissions related to companies in which the Group holds shares (non-consolidated companies or less than 49% ownership) that are not included in the Scopes 1 + 2 estimates. Emissions are estimated on the basis of sales, Arkema's percentage ownership and Arkema's Scopes 1 + 2 emissions-intensity in relation to the Group's sales (excluding Fluorogases, the intensity of which is not representative). The methodology was developed in 2023.

(10) *Source: National Transportation and Travel Global Survey (2008) by the Observation and Statistics department (SOeS) of the French Ministry of Ecology, Energy, Sustainability and the Sea (MEEDDM).*
(11) *Bureau of Transportation Statistics.*

Commitment from raw materials suppliers that are the main contributors to Scope 3 category 1

On the basis of Scope 3 Category 1 emission calculations (see definition above), Arkema asks its most emissions-intensive suppliers to complete the CDP Climate Change questionnaire and take up a climate commitment to an SBT trajectory. Supplier response is analyzed to calculate the proportion of suppliers already taking up such a commitment or planning to do so within two years.

Accidents

Total recordable injury rates (TRIR) and lost-time injury rates (LTIR) are calculated for both Group and on-site subcontractor employees on the basis of US standard 29 CFR 1904. The average number of days lost per injury mentioned in section 4.5.2.2.1 of this chapter is estimated in mid-January N+1 for the reporting on year N. This figure may be re-evaluated in N+1 depending on the actual average number of days lost. For 2023, these accident-rate figures exclude activities at certain acquisitions made between 2021 and 2023, as detailed in section 4.7.3.2 of this chapter.

Process safety

The safety performance of a plant's production processes is assessed by means of performance indicators that measure and analyze process safety incidents. The Group reports and classifies these indicators in accordance with European Chemical Industry Council (CEFIC) guidelines. Until the end of 2016, the definition used for process safety events was the one proposed by CEFIC. During 2016, the International Council of Chemical Associations (ICCA) proposed new criteria to be used globally. Like CEFIC, Arkema decided to use these new criteria to measure its process safety event rate (PSER), starting in 2017.

AIMS-audited sites

The Group tracks the increase in the percentage of facilities that have been audited in accordance with the AIMS standard. Three protocols are used, depending on the facility's size and specific needs: Full AIMS, which is combined with ISO certifications, for the largest sites or sites that present major risks, Simplified AIMS for smaller sites with low risks, and Light AIMS, for very small sites with low risks and facilities that have been recently acquired.

4.7.4 Methodological note on employee, social and responsible procurement indicators

4.7.4.1 Social and employee reporting tools and scope

Employee data are taken from several different reporting processes.

The employee data presented in section 4.6.1 of this chapter:

- are recorded in the AREA 1 application, accessible *via* the corporate intranet;
- are entered by the human resources managers or company Managing Directors (depending on their size);
- are validated at the Arkema, ArrMaz, Bostik, Coatex and MLPC International group levels; and
- cover all companies in which the Group has at least a 50% interest.

The quantitative and qualitative data concerning other employee and social information:

- are recorded in the AREA 2 application, accessible *via* the corporate intranet;
- are entered by human resources employees of the companies or regional organizations;
- are validated by the regional Human Resources directors or subsidiary managers; and
- cover all companies of 60 or more employees in which the Group has at least a 50% interest at 30 June of the reporting year, which accounts for 91% of the Group's total headcount.

Any changes or corrections to prior-year data are noted in section 4.6.1 of this chapter.

4.7.4.2 Choice of indicators, measurement methods and user information

The Group has defined and tracks indicators relevant to its activities and its main risk and opportunity challenges.

The indicators relating to employee numbers have been tracked since 2006.

Additional employee information and indicators and social data have been reported since 2012 *via* the AREA 2 compilation system, in particular the number of training hours.

Employee data reporting is covered by different procedural documents in the form of AREA 1 and AREA 2 guidelines, which have been provided to all of the contributors and validators.

The calculation methods may have limitations and be subject to change, for example due to varying national labor legislation and practices, difficulties in reporting certain information in some regions, or the unavailability of certain data in some countries.

Food waste, food security and the responsible, equitable and sustainable production of food are not considered as risks for Arkema. As a result, this Universal Registration Document does not include any information about combating food waste, ensuring food security or promoting the responsible, equitable and sustainable production of food.

4.7.4.3 Details on employee indicators

Headcount

For reporting purposes, the headcount includes employees on payroll (employees present and employees whose employment contract, of any type, has been suspended) at 31 December of the reporting year.

Permanent employees are defined as employees that have signed an employment contract for an indefinite period of time. Outside France, employees hired on fixed-term contracts for periods of more than 12 months and renewed more than once are also included among permanent employees.

Employee categories

Data are presented by professional category. In France, manager status (*cadre*) is determined by the collective bargaining agreements governing the company concerned. Outside France, employees with a Hay job level of 10 or more are considered managers.

Recruitment

These data cover only the hiring of employees under permanent contracts, including the transformation of contracts (fixed-term into permanent contracts in France, for example).

Compensation

Collective bonus components are defined as components that vary depending on overall business criteria and the business and financial results of the employee's company. In France, these take the form of incentive and profit-sharing schemes.

Average employee compensation for men and women covers France, China and the United States, which together account for 63% of the Group's workforce. Comparisons are against the base salary.

Health and welfare

Health and welfare cover refers to benefits from a collective or mutual insurance plan providing cover for incapacity/disability/death risks.

Training

The data relate to training hours recorded for Group employees excluding e-learning courses.

Absenteeism

The absenteeism rate corresponds to the total number of hours of absence in the year (due to sickness, injuries, maternity leave, strikes and unpaid leave but excluding paid leave) divided by the total number of hours worked in the year.

Departures

Since 2016, departures are recorded only when the person leaves the Group, so that reported data do not include inter-subsidiary transfers.

Percentage of non-French nationals in senior management and executive positions

Regulations do not allow the nationality of employees to be entered in information systems in all the countries where the Group operates. This is notably the case in the United States. In the absence of data on nationality, by convention, it has been assumed that the employees exercising their activity in these countries are not French nationals. This statement does not apply to expatriate employees.

4.7.4.4 Details on responsible procurement indicators

Percentage of purchasing spend from relevant suppliers covered by a Together for Sustainability (TfS) assessment

Relevant suppliers are suppliers representing 80% of the Group's recurring purchasing spend.

Purchases are considered recurring if made from the same supplier over the last three reporting years. TfS supplier evaluations are considered valid if performed within the last three years.

4.7.5 Indicators [1]

	Units	2023	2022	2021
SUSTAINABLE SOLUTIONS				
Innovation				
Number of patent applications filed during the year relating to sustainable development		204	188	200
Percentage of patent applications filed during the year relating to sustainable development	%	94	92	90
R&D expenditure as a percentage of consolidated revenue	%	2.9	2.3	2.6
Management of the solutions portfolio				
Percentage of ImpACT+ sales [2]	%	51	53	51
Responsible product stewardship				
Number of substances with REACH registration		444	453	425
Circular economy				
Percentage of sales from products made from renewable or recycled raw materials [3]	%	11	10	10
Percentage of sales covered by a life-cycle assessment	%	56	41	27
RESPONSIBLE MANUFACTURER				
Safety, environment and maintenance expenditure	€m	316	314	281
Management system				
Percentage of sites audited according to Arkema Integrated Management System (AIMS) standards	%	94	91	86
Percentage of ISO 45001-certified sites	%	55	58	59
Percentage of employees covered by ISO 45001 certification	%	48	47	48
Percentage of ISO 45001-certified sites in Europe	%	58	58	60
Percentage of ISO 45001-certified sites in the Americas	%	43	48	46
Percentage of ISO 45001-certified sites in Asia	%	69	71	73
Percentage of ISO 14001-certified sites	%	55	58	58
Percentage of ISO 14001-certified sites in Europe	%	75	69	71
Percentage of ISO 14001-certified sites in Asia	%	75	76	79
Percentage of ISO 14001-certified sites in the Americas	%	20	20	20
Number of RCMS certified sites (United States only: health, safety, security, environment)		14	13	13
Percentage of RCMS-certified sites (excluding ISO 14001)	%	8	8	7
Safety				
Total recordable injury rate (TRIR)	per million hours worked	0.9	0.9	1.0
Lost time injury rate (LTIR)	per million hours worked	0.6	0.6	0.5
Percentage of sites practicing peer observation	%	96	96	61
Process Safety Event Rate (PSER)	per million hours worked	2.8	2.8	3.1
Climate				
Greenhouse gas (GHG) emissions				
Direct greenhouse gas emissions corresponding to the Kyoto Protocol	kt CO_2e	1,330	1,527	1,756
• of which CO_2	kt CO_2	1,180	1,294	1,370
• of which HFC	kt CO_2e	125	198	349
• of which others	kt CO_2e	25	35	37
Direct greenhouse gas emissions corresponding to the Kyoto Protocol, by region				
• Europe	%	35	36	32
• Americas	%	52	51	55
• Asia and rest of world	%	13	13	13

	Units	2023	2022	2021
Direct greenhouse gas emissions corresponding to the Montreal Protocol	kt CO_2e	172	188	234
Scope 2 indirect greenhouse gas emissions	kt CO_2e	943	905	1,073
• of which Europe	kt CO_2e	261	214	227
• of which Americas	kt CO_2e	233	238	286
• of which Asia and rest of world	kt CO_2e	449	453	560
SBT commitment – Scopes 1 + 2 GHG emissions	Mt CO_2e	2.3	2.4	2.9
SBT commitment – Scope 3 indirect GHG emissions	Mt CO_2e	71	78 (4)	94 (4)
Energy				
Net energy purchases	TWh	6.68	6.99	7.39
• of which Europe	TWh	3.01	3.37	3.58
• of which Americas	TWh	2.46	2.61	2.67
• of which Asia and rest of world	TWh	1.22	1.00	1.14
Energy EFPI		0.91	0.87	0.85
Net energy purchases by type				
• fuel	TWh	3.41	3.69	3.98
• electricity	TWh	2.14	2.32	2.46
• steam	TWh	1.13	0.98	0.94
Natural gas in net purchases of fuels	%	98	98	98
% of low-carbon energy	%	24	23 (5)	21 (5)
% of renewable energy	%	13	8	6
Renewable electricity as a percentage of total electricity	%	27	24 (5)	19 (5)
Low-carbon electricity as a percentage of total electricity	%	62	68	63
Number of Arkema Energy investments		71	55	52
• of which Europe		44	34	29
• of which Americas		9	7	13
• of which Asia and rest of world		18	14	10
Number of ISO 50001-certified sites		31	31	31
Other environmental information				
Emissions to air				
Acidifying substances	t SO_2e	2,320	2,350	2,880
Carbon monoxide	t	640	890	806
Volatile organic compounds (VOCs)	t	2,520	3,020	3,330
Volatile organic compound (VOC) EFPI		0.49	0.53	0.50
Dust	t	112	142	188
Emissions to water				
Chemical oxygen demand (COD)	t O_2	1,366	1,484	1,740
Chemical oxygen demand (COD) EFPI		0.38	0.42	0.45
Suspended solids	t	429	494	465
Resources management				
Waste				
Total hazardous waste	kt	178	198	197
Hazardous waste recycled into materials	kt	27	27	27
Proportion of hazardous waste recycled into materials	%	15	14	14
Hazardous waste burned as fuel	kt	84	58	63
Proportion of hazardous waste burned as fuel	%	47	29	32
Non-recovered hazardous waste	kt	68	113	107
• of which landfilled	kt	2.7	5.2	3.8
Total non-hazardous waste	kt	213	211	210

	Units	2023	2022	2021
Non-hazardous waste recycled into materials	kt	63	67	58
Non-hazardous waste burned as fuel	kt	11	8	8
Non-recovered non-hazardous waste	kt	140	136	144
• of which landfilled	kt	22	27	25
Water withdrawals				
Water withdrawn (6)	millions of cu.m	86	91	97
Total water withdrawn (7)	millions of cu.m	93	97	104
Water withdrawals as a percentage of Group sales (7)	cu.m/€k	5.9	5.2	6.9
EMPLOYER OF CHOICE AND OPEN DIALOGUE				
People				
Headcount				
Total headcount at 31 December		21,125	21,116	20,209
• of which permanent employees		20,474	20,412	19,305
• of which fixed-term employees		651	704	904
Total headcount at 31 December by region				
• France		7,179	7,216	7,170
• Europe (excluding France)		3,715	3,806	3,850
• North America		4,017	4,127	3,669
• Asia		5,049	4,795	4,699
• Rest of the world		1,165	1,172	821
Managers in the total headcount	%	29.8	28.9	28.6
Diversity				
Women in the total headcount	%	26.8	26.5	26.2
Women in the total headcount by region				
• France	%	29.0	28.5	28.3
• Europe (excluding France)	%	27.2	26.5	26.4
• North America	%	25.1	24.4	24.5
• Asia	%	24.8	25.4	25.1
• Rest of the world	%	27.0	26.1	21.6
Percentage of women managers (all levels)	%	32.6	31.8	31.1
Percentage of women in executive positions (Hay grade 17 or higher)	%	22	19	18
Percentage of women in senior management and executive positions (Hay grade 15 or higher)	%	29	26	24
Non-French nationals in senior management and executive positions (Hay grade 15 or higher)	%	40	40	40
Percentage of women who hold performance shares	%	34	32	32
Percentage of women in lower management (France, United States, China)	%	39	40	39
Percentage of women in middle management (France, United States, China)	%	36	35	35
Percentage of women in business-related positions (France, United States, China)	%	26	26	26
Percentage of women in technical positions (STEM: Science, Technology, Engineering and Mathematics)	%	19	18	19
Equal pay between women and men (women's average base salary/men's average base salary):				
Lower management	%	94	96	96
Middle management	%	91	91	91
Senior management and executive positions (excluding Executive Committee)	%	95	97	97

	Units	2023	2022	2021
Recruitment				
Recruitments during the year		1,958	2,212	2,070
• France		418	502	345
• Europe (excluding France)		271	306	282
• North America		551	654	691
• Asia		544	620	629
• Rest of the world		174	130	123
Manager recruitments		581	662	521
Non-manager recruitments		1,377	1,550	1,549
Percentage of women in recruitments	%	29.0	30.3	26.4
Percentage of new hires aged 50 and over	%	11.1	11.4	10.8
Percentage of new hires aged under 30	%	33.2	34.0	34.2
Departures				
Departures during the year		2,348	2,262	2,907
• of which resignations		1,003	1,236	1,089
• of which dismissals		685	429	439
• of which retirements		369	422	357
• of which following a divestment/merger		57	—	887
• of which other reasons		234	175	135
Work organization				
Full-time employees	%	96.5	96.3	96.2
Part-time employees	%	3.5	3.7	3.8
Employees who telework	%	30.0	23.0	20.0
Absenteeism				
Overall absenteeism rate	%	4.1	5.1	4.5
Absenteeism rate on medical grounds	%	2.7	3.5	2.8
Training				
Number of training hours (excluding e-learning)	thousands	427	412	447
Average number of training hours per employee		22	22	24
Average number of training hours per manager		21	20	24
Average number of training hours per non-manager		23	22	24
Number of employees who received training, excluding e-learning		15,836	15,377	15,032
Number of employees who took an e-learning course		16,232	15,324	15,422
Number of safety training hours	thousands	163	179	149
Number of safety training hours per employee trained		13	14	11
Number of employees who received safety training (excluding e-learning)		12,564	12,865	12,974
Number of employees who took safety-related e-learning courses		13,444	9,942	14,390
Number of environment-related training hours (excluding e-learning)		11,766	13,199	14,913
Number of environment-related training hours per employee trained		3	3	3
Number of employees who received environment-related training (excluding e-learning)		4,645	4,006	4,524
Number of employees who took environment-related e-learning courses		11,657	8,793	4,418
Breakdown of training hours by topic:				
• Technical expertise	thousands	167	150	235
• HSEQ	thousands	203	200	167
• IT/digital technology	thousands	12	11	17
• Management	thousands	46	42	28
Percentage of apprenticeships (Arkema France)	%	4.0	4.7	4.7
Percentage of Group employees benefiting from annual performance reviews	%	100	100	100

	Units	2023	2022	2021
Health and welfare				
Percentage of employees benefiting from regular medical check-ups	%	94	94	95
Occupational illness frequency rate (OIFR) (scope: France)	per million hours worked	3.3	1.9	2.4
Employees benefiting from supplementary disability cover	%	95	91	94
Employees benefiting from supplementary life cover	%	96	95	95
Employees covered by death benefits representing at least 18 months' salary	%	83	85	85
Compensation				
Employees benefiting from minimum compensation guarantees	%	100	100	100
Employees benefiting from collective variable compensation components	%	71	71	73
Employees benefiting from individual variable compensation components	%	48	45	41
Representation				
Percentage of employees benefiting from personnel representation and/or trade union representation	%	82	89 (8)	90 (8)
Responsible procurement				
Percentage of purchasing spend with relevant suppliers covered by a TfS assessment	%	76.5	75	73

(1) Indicators are defined in detail in the methodological note in sections 4.7.2, 4.7.3 and 4.7.4 of this chapter.
(2) The percentage of sales contributing significantly to the United Nations SDGs (ImpACT+) was calculated on the basis of an assessment of 84% of the Group's third-party sales.
(3) The percentage of sales from products made from renewable or recycled raw materials covers products with a renewable or recycled raw material content of at least 25%.
(4) The 2022 and 2021 values have been adjusted following the removal of Category 11 indirect emissions and the addition of Category 15.
(5) The figures for 2021 and 2022 were adjusted to include agreements on renewable electricity.
(6) Water withdrawals: sales to third parties excluded.
(7) Total water withdrawals: sales to third parties included.
(8) The 2021 and 2022 values have been revised following an adjustment to historical data for North America.

4.7.6 Taxonomy Indicators

SUMMARY TABLE

	2023		2022	
	eligible	**aligned**	eligible	aligned
Proportion of Turnover	32%	6%	33%	8%
Proportion of Capex	17%	10%	21%	14%
Proportion of Opex	29%	7%	29%	9%

DETAILS ON CAPEX

	Total Capex in 2023	Of which: capital expenditure		of which assets from acquisitions	of which right-of-use assets
		€m	*%*	*€m*	*€m*
Eligible and aligned Capex	141	141	22%		
Non-aligned eligible Capex	89	89	14%		
Eligible Capex	230	230	36%		
Non-eligible Capex	1,119	404	64%	611 (1)	104 (1)
TOTAL	**1,349**	**634**	**100%**	**611**	**104**

(1) Not analyzed.

DETAILS ON TURNOVER CURRENTLY ELIGIBLE TO THE TAXONOMY REGULATION

Taxonomy-eligible proportion of turnover from taxonomy-aligned products or services – 2023				Substantial contribution criteria					
Economic activity	Code(s)	Absolute Turnover *in €m*	Proportion of Turnover *as a %*	Climate change mitigation *Y; N; N/EL*	Climate change adaptation *Y; N; N/EL*	Water and marine resources *Y; N; N/EL*	Pollution *Y; N; N/EL*	Circular economy *Y; N; N/EL*	Biodiversity *Y; N; N/EL*
A. TAXONOMY-ELIGIBLE ACTIVITIES									
A.1 Environmentally sustainable activities (Taxonomy-aligned)									
Manufacture of plastics in primary form	CCM/CCA 3.17	446	5% (1)	Y	N (2)	N/EL	N/EL	N/EL	N/EL
Manufacture of batteries Manufacture of energy-efficient equipment for the construction of buildings Manufacture of renewable energy technologies	CCM/CCA 3.4 CCM/CCA 3.5 CCM/CCA 3.1	146	2% (1)	Y	N (2)	N/EL	N/EL	N/EL	N/EL
Turnover from environmentally sustainable activities (Taxonomy-aligned) (A.1)		**592**	**6% (1)**	**6%**	**0%**	**—%**	**—%**	**—%**	**—%**
of which Enabling		146	2%	2%	0%	—%	—%	—%	—%
of which Transitional		446	5%	5%					
A.2 Taxonomy-eligible but environmentally unsustainable activities (not Taxonomy-aligned)									
Manufacture of plastics in primary form	CCM/CCA 3.17	2,329	25% (1)	EL	EL	N/EL	N/EL	N/EL	N/EL
Manufacture of batteries Manufacture of energy-efficient equipment for the construction of buildings Manufacture of renewable energy technologies	CCM/CCA 3.4 CCM/CCA 3.5 CCM/CCA 3.1	89	1% (1)	EL	EL	N/EL	N/EL	N/EL	N/EL
Turnover from Taxonomy-eligible but environmentally unsustainable activities (not Taxonomy-aligned) (A.2)		**2,418**	**25% (1)**	**25%**	**0%**	**—%**	**—%**	**—%**	**—%**
TOTAL A. Turnover from taxonomy-eligible activities (A.1 + A.2)		**3,010**	**32%**	**32%**	**0%**	**—%**	**—%**	**—%**	**—%**
B. TAXONOMY-NON-ELIGIBLE ACTIVITIES									
Turnover from Taxonomy-non-eligible activities (B)		**6,504**	**68%**						
TOTAL (A + B)		**9,514**	**100%**						

Y: Yes
N: No
N/EL: non-eligible
(1) Differences due to rounding.
(2) Not analyzed.

Taxonomy-eligible proportion of turnover from Taxonomy-aligned products or services – 2023	Do no significant harm (DNSH) criteria									
	Climate change mitigation	Climate change adaptation	Water and marine resources	Circular economy	Pollution	Biodiversity and ecosystems	Minimum safeguards	**Taxonomy-eligible proportion of turnover Year Y-1**	Enabling activity category	Transitional activity category
Economic activity	*Yes/ No*	*Yes/ No*	*Yes/ No*	*Yes/ No*	*Yes/ No*	*Yes/ No*	*Yes/ No*	*%*	*E*	*T*
A. TAXONOMY-ELIGIBLE ACTIVITIES										
A.1 Environmentally sustainable activities (Taxonomy-aligned)										
Manufacture of plastics in primary form		Yes	Yes	—	Yes	Yes	Yes	4%		T
Manufacture of batteries Manufacture of energy-efficient equipment for the construction of buildings Manufacture of renewable energy technologies		Yes	Yes	Yes	Yes	Yes	Yes	4%	E	
Turnover from environmentally sustainable activities (Taxonomy-aligned) (A.1)		**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**8%**		
of which Enabling		Yes	Yes	Yes	Yes	Yes	Yes	4%	E	
of which Transitional		Yes	Yes	—	Yes	Yes	Yes	4%		T
A.2 Taxonomy-eligible but environmentally unsustainable activities (not Taxonomy-aligned)										
Manufacture of plastics in primary form								24%		
Manufacture of batteries Manufacture of energy-efficient equipment for the construction of buildings Manufacture of renewable energy technologies								1%		
Turnover from Taxonomy-eligible but environmentally unsustainable activities (not Taxonomy-aligned) (A.2)								25%		
TOTAL A. Turnover from Taxonomy-eligible activities (A.1 + A.2)								**33%**		

DETAILS ON CAPEX IN ACTIVITIES CURRENTLY ELIGIBLE TO THE TAXONOMY REGULATION

Taxonomy-eligible proportion of Capex in Taxonomy-aligned activities – 2023				Substantial contribution criteria					
Economic activity	Code(s)	Absolute Capex *in €m*	Proportion of Capex *as a %*	Climate change mitigation *Y; N; N/EL*	Climate change adaptation *Y; N; N/EL*	Water and marine resources *Y; N; N/EL*	Pollution *Y; N; N/EL*	Circular economy *Y; N; N/EL*	Biodiversity *Y; N; N/EL*
A. TAXONOMY-ELIGIBLE ACTIVITIES									
A.1 Environmentally sustainable activities (Taxonomy-aligned)									
Manufacture of plastics in primary form	CCM/CCA 3.17	69	5%	Y	N (2)	N/EL	N/EL	N/EL	N/EL
Manufacture of batteries Manufacture of energy-efficient equipment for the construction of buildings Manufacture of renewable energy technologies	CCM/CCA 3.4 CCM/CCA 3.5 CCM/CCA 3.1	67	5%	Y	N (2)	N/EL	N/EL	N/EL	N/EL
Installation, maintenance and repair of energy-efficient equipment and systems for measuring, regulating and controlling the energy performance of buildings	CCM 7.3 CCM 7.5	5	— %	Y	N (2)	N/EL	N/EL	N/EL	N/EL
Capex in environmentally sustainable activities (Taxonomy-aligned) (A.1)		**141**	**10%**	**10%**	**0%**	**—%**	**—%**	**—%**	**—%**
Of which Enabling			5%	5%	0%				
Of which Transitional			5%	5%					
A.2 Taxonomy-eligible but environmentally unsustainable activities (not Taxonomy-aligned)									
Manufacture of plastics in primary form	CCM/CCA 3.17	86	6% (1)	EL	EL	N/EL	N/EL	N/EL	N/EL
Manufacture of batteries Manufacture of energy-efficient equipment for the construction of buildings Manufacture of renewable energy technologies	CCM/CCA 3.4 CCM/CCA 3.5 CCM/CCA 3.1	3	0% (1)	EL	EL	N/EL	N/EL	N/EL	N/EL
Capex in Taxonomy-eligible but environmentally unsustainable activities (not Taxonomy-aligned) (A.2)		**89**	**7% (1)**	**7% (1)**	**0%**	**—%**	**—%**	**—%**	**—%**
TOTAL A. Capex for Taxonomy-eligible activities (A.1 + A.2)		**230**	**17%**						
B. TAXONOMY-NON-ELIGIBLE ACTIVITIES									
Capex for Taxonomy-non-eligible activities (B)		**1,119**	**83%**						
TOTAL (A + B)		**1,349**	**100%**						

Y: Yes
N: No
N/EL: non-eligible
(1) Differences due to rounding.
(2) Not analyzed.

Taxonomy-eligible proportion of Capex in Taxonomy-aligned activities – 2023	**Do no significant harm (DNSH) criteria**									
	Climate change mitigation	Climate change adaptation	Water and marine resources	Circular economy	Pollution	Biodiversity and ecosystems	Minimum safeguards	**Proportion of Taxonomy-aligned Capex Year Y-1**	Enabling activity category	Transitional activity category
Economic activity	*Yes/ No*	*Yes/ No*	*Yes/ No*	*Yes/ No*	*Yes/ No*	*Yes/ No*	*Yes/ No*	*%*	*E*	*T*
A. TAXONOMY-ELIGIBLE ACTIVITIES										
A.1 Environmentally sustainable activities (Taxonomy-aligned)										
Manufacture of plastics in primary form		Yes	Yes	—	Yes	Yes	Yes	9%		T
Manufacture of batteries Manufacture of energy-efficient equipment for the construction of buildings Manufacture of renewable energy technologies		Yes	Yes	Yes	Yes	Yes	Yes	5%	E	
Installation, maintenance and repair of energy-efficient equipment and systems for measuring, regulating and controlling the energy performance of buildings		Yes					Yes	— %	E	
Capex in environmentally sustainable activities (Taxonomy-aligned) (A.1)								**14%**		
Of which Enabling		Yes	Yes	Yes	Yes	Yes	Yes	5%	E	
Of which Transitional		Yes	Yes	—	Yes	Yes	Yes	9%		T
A.2 Taxonomy-eligible but environmentally unsustainable activities (not Taxonomy-aligned)										
Manufacture of plastics in primary form								6% (1)		
Manufacture of batteries Manufacture of energy-efficient equipment for the construction of buildings Manufacture of renewable energy technologies								0% (1)		
Capex in Taxonomy-eligible but environmentally unsustainable-activities (not Taxonomy-aligned) (A.2)								**7% (1)**		
TOTAL A. Capex for taxonomy-eligible activities (A.1 + A.2)								**21%**		

(1) Differences due to rounding.

DETAILS ON OPEX IN ACTIVITIES CURRENTLY ELIGIBLE TO THE TAXONOMY REGULATION

Taxonomy-eligible proportion of Opex in Taxonomy-aligned activities – 2023				Substantial contribution criteria					
Economic activity	Code(s)	Absolute Opex in €m	Proportion of Opex as a %	Climate change mitigation Y; N; N/EL	Climate change adaptation Y; N; N/EL	Water and marine resources Y; N; N/EL	Pollution Y; N; N/EL	Circular economy Y; N; N/EL	Biodiversity Y; N; N/EL
A. TAXONOMY-ELIGIBLE ACTIVITIES									
A.1 Environmentally sustainable activities (Taxonomy-aligned)									
Manufacture of plastics in primary form	CCM/CCA 3.17	27	5% (1)	Y	N (2)	N/EL	N/EL	N/EL	N/EL
Manufacture of batteries Manufacture of energy-efficient equipment for the construction of buildings Manufacture of renewable energy technologies	CCM/CCA 3.4 CCM/CCA 3.5 CCM/CCA 3.1	9	2% (1)	Y	N (2)	N/EL	N/EL	N/EL	N/EL
Opex in environmentally sustainable activities (Taxonomy-aligned) (A.1)		**36**	**7% (1)**	**7%**	**0%**	**—%**	**—%**	**—%**	**—%**
Of which Enabling			2%	2%	0%	—%	—%	—%	—%
Of which Transitional			5%	5%					
A.2 Taxonomy-eligible but environmentally unsustainable activities (not Taxonomy-aligned)									
Manufacture of plastics in primary form	CCM/CCA 3.17	108	21%	EL	EL	N/EL	N/EL	N/EL	N/EL
Manufacture of batteries Manufacture of energy-efficient equipment for the construction of buildings Manufacture of renewable energy technologies	CCM/CCA 3.4 CCM/CCA 3.4 CCM/CCA 3.1	3	1%	EL	EL	N/EL	N/EL	N/EL	N/EL
Opex in Taxonomy-eligible but environmentally unsustainable activities (not Taxonomy-aligned) (A.2)		**111**	**22%**	**22%**	**0%**	**— %**	**— %**	**— %**	**— %**
TOTAL A (A.1 + A.2)		**147**	**29%**						
B. TAXONOMY-NON-ELIGIBLE ACTIVITIES									
Opex for Taxonomy-non-eligible activities (B)		**358**	**71%**						
TOTAL (A + B)		**505**	**100%**						

Y: Yes
N: No
N/EL: non-eligible
(1) Differences due to rounding.
(2) Not analyzed.

Taxonomy-eligible proportion of Opex in Taxonomy-aligned activities – 2023	Do no significant harm (DNSH) criteria									
Economic activity	Climate change mitigation Yes/No	Climate change adaptation Yes/No	Water and marine resources Yes/No	Circular economy Yes/No	Pollution Yes/No	Biodiversity and ecosystems Yes/No	Minimum safeguards Yes/No	**Proportion of Taxonomy-aligned Opex Year Y-1** %	Enabling activity category E	Transitional activity category T
A. TAXONOMY-ELIGIBLE ACTIVITIES										
A.1 Environmentally sustainable activities (Taxonomy-aligned)										
Manufacture of plastics in primary form		Yes	Yes	—	Yes	Yes	Yes	5% (1)		T
Manufacture of batteries Manufacture of energy-efficient equipment for the construction of buildings Manufacture of renewable energy technologies		Yes	Yes	Yes	Yes	Yes	Yes	3% (1)	E	
Opex in environmentally sustainable activities (Taxonomy-aligned) (A.1)								**9% (1)**		
Of which Enabling		Yes	Yes	Yes	Yes	Yes	Yes	3%	E	
Of which Transitional		Yes	Yes	—	Yes	Yes	Yes	5%		T
A.2 Taxonomy-eligible but environmentally unsustainable activities (not Taxonomy-aligned)										
Manufacture of plastics in primary form								19%		
Manufacture of batteries Manufacture of energy-efficient equipment for the construction of buildings Manufacture of renewable energy technologies								1%		
Opex in Taxonomy-eligible but environmentally unsustainable activities (not Taxonomy-aligned) (A.2)								**20%**		
TOTAL A. Opex for taxonomy-eligible activities (A.1 + A.2)								**29%**		

(1) Differences due to rounding.

SUMMARY OF 2023 KPIS BY OBJECTIVE

	Proportion of Turnover/ Total Turnover		Proportion of Capex/ Total Capex		Proportion of Opex/ Total Opex	
By objective	**Aligned**	**Eligible**	**Aligned**	**Eligible**	**Aligned**	**Eligible**
CCM - Climate Change Mitigation	6%	32%	10%	17%	7%	30%
CCA - Climate Change Adaptation (1)	0%	0%	0%	0%	0%	0%
WTR - Water and Marine Resources	-	0%	-	0%	-	0%
CE - Circular Economy	-	0%	-	0%	-	0%
PPC - Pollution Prevention and Control	-	0%	-	0%	-	0%
BIO - Biodiversity and ecosystems	-	0%	-	0%	-	0%

(1) Not analyzed.

4.7.7 GRI content index

Statement of use	The Arkema Group has reported in accordance with GRI Standards for the period from 1 January to 31 December 2023.
GRI 1 used	GRI 1: Foundation – 2021
Applicable GRI sector Standard(s)	NOT APPLICABLE

To verify the alignment of Arkema's reporting with GRI Standards 2021 principles and requirements, the GRI content index below has been audited by MATERIALITY-reporting.

			Omission		
GRI Standard/ other source	Disclosure	Location	Requirement(s) omitted	Reason	Explanation
GENERAL DISCLOSURES					
GRI 2: General disclosures – 2021	2-1 Organizational details	6.1.1 Information about the Company 6.1.2 Subsidiaries and shareholdings of the Company 6.1.3 Related-party transactions			
	2-2 Entities included in the organization's sustainability reporting	6.1.2 Subsidiaries and shareholdings of the Company 4.7.3.1 Environment and climate reporting tools and scope 4.7.3.2 Safety data reporting tools and scope 4.7.4.1 Social and employee reporting tools and scope			
	2-3 Reporting period, frequency and contact point	The Arkema Group has reported in accordance with GRI Standards for the period from 1 January to 31 December 2023. 5.3.1 Statutory auditors' report on the consolidated financial statements 8.2 Person responsible for the information in the URD			
	2-4 Restatements of information	4.7 Reporting methodology			
	2-5 External assurance	4.7.9 Independent third-party opinion MATERIALITY-reporting reviewed the compliance of the GRI content index as well as all of the references contained in the sustainability reporting statement (URD 2023). The contents are aligned with the principles and reporting requirements of GRI Standards 2021. The audit was performed on the French language version.			
	2-6 Activities, value chain and other business relationships	1.2 Business overview Business model and value creation			

GRI Standard/ other source	Disclosure	Location	Omission: Requirement(s) omitted	Omission: Reason	Omission: Explanation
GRI 2: General disclosures – 2021	2-7 Employees	4.6.1.1 Talent management 4.6.1.3 Recruitment			
	2-8 Workers who are not employees	4.5.2.2.1 Personal safety			
	2-9 Governance structure and composition	Governance			
	2-10 Nomination and selection of the highest governance body	Governance/NOMINATING, COMPENSATION AND CORPORATE GOVERNANCE COMMITTEE 3.3.4.2 The Nominating, Compensation and Corporate Governance Committee			
	2-11 Chair of the highest governance body	Governance			
	2-12 Role of the highest governance body in overseeing the management of impacts	4.1.2 CSR governance			
	2-13 Delegation of responsibility for managing impacts	4.1.2 CSR governance			
	2-14 Role of the highest governance body in sustainability reporting	4.1.2 CSR governance			
	2-15 Conflicts of interest	3.2.3.3 Absence of conflicts of interest			
	2-16 Communication of critical concerns	3.3.2.3 Activities of the Board of Directors			
	2-17 Collective knowledge of the highest governance body	3.3.2.3 Activities of the Board of Directors 3.3.4.3 The Innovation and Sustainable Growth Committee			
	2-18 Evaluation of the performance of the highest governance body	Governance/THE BOARD'S WORK			
	2-19 Remuneration policies	3.4.1.2 Implementation of compensation policy			
	2-20 Process to determine remuneration	3.4 Compensation and benefits awarded to executives and directors			
	2-21 Annual total compensation ratio	3.4.2.2 Implementation of 2023 compensation policy			
	2-22 Statement on sustainable development strategy	MESSAGE FROM THIERRY LE HÉNAFF CHAIRMAN AND CHIEF EXECUTIVE OFFICER			
	2-23 Policy commitments				
	2-24 Embedding policy commitments				
	2-25 Processes to remediate negative impacts	4.1.4 CSR challenges, commitments and outcomes			
	2-26 Mechanisms for seeking advice and raising concerns	4.1.3 Stakeholders and materiality assessment			
	2-27 Compliance with laws and regulations	4.6.2.3 Control processes and disciplinary action			
	2-28 Membership associations	4.6.5 Advocacy			
	2-29 Approach to stakeholder engagement	4.1.3 Stakeholders and materiality assessment			
	2-30 Collective bargaining agreements	4.6.1.8 Active social dialogue with employee representatives			

GRI Standard/ other source	Disclosure	Location	Omission: Requirement(s) omitted	Omission: Reason	Omission: Explanation
ECONOMIC STANDARDS					
GRI 3: Material topics – 2021	3-1 Process to determine material topics	4.1.4 CSR challenges, commitments and outcomes			
	3-2 List of material topics	4.1.3 Stakeholders and materiality assessment			
MATERIAL TOPICS					
GRI 3: Material topics – 2021	3-3 Management of material topics	Chapter 4			
GRI 201: Economic performance – 2016	201-1 Direct economic value generated and distributed	4.6.6 Community engagement			
	201-2 Financial implications and other risks and opportunities due to climate change	4.1.5 Consolidated non-financial information statement/Taxonomy regulation reporting			
	201-3 Defined benefit plan obligations and other retirement plans	3.4.2.1 Compensation principles/Summary of the compensation principles for the executive director			
	201-4 Financial assistance received from government	Chapters 5 and 8			
GRI 202: Market presence – 2016	202-1 Ratios of standard entry level wage by gender compared to local minimum wage	4.6.3 Human rights			
	202-2 Proportion of senior management hired from the local community	4.6.1.7 Diversity, inclusion, equal opportunity and equal treatment			
GRI 203: Indirect economic impacts – 2016	203-1 Infrastructure investments and services supported	4.6.6.3 Economic contribution			
	203-2 Significant indirect economic impacts	4.6.6.3 Economic contribution			
GRI 204: Procurement practices – 2016	204-1 Proportion of spending on local suppliers		Local procurement	Unavailable/ incomplete information	A collection process will be implemented in the next two years
GRI 205: Anti-corruption – 2016	205-1 Operations assessed for risks related to corruption	4.6.2.2 Measures for reducing business compliance and ethics risks			
	205-2 Communication and training about anti-corruption policies and procedures	4.6.2.1 The Code of Conduct and Anti-Corruption Policy			
	205-3 Confirmed incidents of corruption and actions taken	4.6.2.3 Control processes and disciplinary action			
GRI 206: Anti-competitive behavior – 2016	206-1 Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	4.6.2.1 The Code of Conduct and Anti-Corruption Policy 4.6.2.3 Control processes and disciplinary action			
GRI 207: Tax – 2019	207-1 Approach to tax	4.6.2.6 Tax policy			
	207-2 Tax governance, control and risk management	4.6.2.6 Tax policy			
	207-3 Stakeholder engagement and management of concerns related to tax	4.6.2.6 Tax policy			
GRI 207: Tax – 2019	207-4 Country-by-country reporting	4.1.5 Consolidated non-financial information statement 4.6.2.6 Tax policy 5.3.3 Notes to the consolidated financial statements at 31 December 2023/Note 16 List of consolidated companies			

GRI Standard/ other source	Disclosure	Location	Omission: Requirement(s) omitted	Omission: Reason	Omission: Explanation
ENVIRONMENTAL STANDARDS					
GRI 3: Material topics – 2021	3-1 Process to determine material topics	4.1.4 CSR challenges, commitments and outcomes			
GRI 3: Material topics – 2021	3-2 List of material topics	4.1.3 Stakeholders and materiality assessment			
MATERIAL TOPICS					
GRI 3: Material topics – 2021	3-3 Management of material topics	Chapter 4			
GRI 301: Materials – 2016	301-1 Materials used by weight or volume		Weight of raw materials	Confidentiality constraint	
	301-2 Recycled input materials used	4.3.2 Material selection			
	301-3 Reclaimed products and their packaging materials	4.3.3 The circular economy in transformation processes			
GRI 302: Energy – 2016	302-1 Energy consumption within the organization	4.4.3.2 Energy			
	302-2 Energy consumption outside of the organization	4.4.3 Climate change mitigation			
	302-3 Energy intensity	4.4.3.2 Energy			
	302-4 Reduction of energy consumption	4.4.3.2 Energy			
	302-5 Reductions in energy requirements of products and services	4.4.3.2 Energy			
GRI 303: Water and effluents – 2018	303-1 Interactions with water as a shared resource	4.3.3.2 Water use			
	303-2 Management of water discharge-related impacts	4.5.3.3 Emissions to water			
	303-3 Water withdrawal	4.3.3.2 Water use			
	303-4 Water discharge	4.3.3.2 Water use 4.5.3.3 Emissions to water CDP Water Security – 2023 questionnaire			
	303-5 Water consumption	4.3.3.2 Water use 4.5.3.3 Emissions to water CDP Water Security – 2023 questionnaire			
GRI 304: Biodiversity – 2016	304-1 Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	4.5.3.4 Other measures for the environment and biodiversity			
	304-2 Significant impacts of activities, products and services on biodiversity	4.5.3.4 Other measures for the environment and biodiversity			
	304-3 Habitats protected or restored	4.5.3.4 Other measures for the environment and biodiversity			
	304-4 IUCN Red List species and national conservation list species with habitats in areas affected by operations	4.5.3.4 Other measures for the environment and biodiversity			

GRI Standard/ other source	Disclosure	Location	Omission: Requirement(s) omitted	Omission: Reason	Omission: Explanation
GRI 305: Emissions – 2016	305-1 Direct (Scope 1) GHG emissions	4.4.3.1 Emissions of Scope 1 and 2 greenhouse gas emissions covered by the Kyoto Protocol/Direct scope 1 emissions			
	305-2 Energy indirect (Scope 2) GHG emissions	4.4.3.1 Emissions of Scope 1 and 2 greenhouse gas emissions covered by the Kyoto Protocol/indirect Scope 2 emissions			
	305-3 Other indirect (Scope 3) GHG emissions	4.4.3.3 Scope 3 greenhouse gas emissions			
	305-4 GHG emissions intensity	4.4.3 Climate change mitigation			
	305-5 Reduction of GHG emissions	4.4.3 Climate change mitigation			
	305-6 Emissions of ozone-depleting substances (ODS)	4.4.3 Climate change mitigation			
	305-7 Nitrogen oxides (NOx), sulfur oxides (SOx) and other significant air emissions	4.5.3.2. Emissions to air			
GRI 306: Waste – 2020	306-1 Waste generation and significant waste-related impacts	4.3.3.4 The circular economy and industrial operations			
	306-2 Management of significant waste-related impacts	4.3.3.4 The circular economy and industrial operations			
	306-3 Waste generated	4.3.3.4 The circular economy and industrial operations			
	306-4 Waste diverted from disposal	4.3.3.4 The circular economy and industrial operations			
	306-5 Waste directed to disposal	4.3.3.4 The circular economy and industrial operations			
GRI 307: Environmental compliance – 2016	307-1 Non-compliance with environmental laws and regulations	4.5.3.1 Environmental and biodiversity management/Regulatory and compliance monitoring			
GRI 308: Supplier environmental assessment – 2016	308-1 New suppliers that were screened using environmental criteria	4.6.4.3 Selection of suppliers and subcontractors			
	308-2 Negative environmental impacts in the supply chain and actions taken	4.4.4 .1 Analysis of physical and transition risks /Exposure of the Group's value chain to the effects of climate change			
SOCIAL STANDARDS					
GRI 3: Material topics – 2021	3-1 Process to determine material topics	4.1.4 CSR challenges, commitments and outcomes			
GRI 3: Material topics – 2021	3-2 List of material topics	4.1.3 Stakeholders and materiality assessment			
MATERIAL TOPICS					
GRI 3: Material topics – 2021	3-3 Management of material topics	Chapter 4			
GRI 401: Employment – 2016	401-1 New employee hires and employee turnover	4.6.1.3 Recruitment/Employer brand			
	401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees	4.6.1.5 Employee engagement and well-being			
	401-3 Parental Leave	4.6.1.5 Employee engagement and well-being/Work-life balance			

GRI Standard/ other source	Disclosure	Location	Omission: Requirement(s) omitted	Omission: Reason	Omission: Explanation
GRI 402: Labor/ Management Relations – 2016	402-1 Minimum notice periods for operational changes	4.6.1.3 Recruitment/Employer brand/ Change in the number of departures by reason 4.6.1.8 Active social dialogue with employee representatives The Group complies with statutory notice periods in the countries where it operates			
GRI 403: Occupational health and safety – 2018	403-1 Occupational health and safety management system	4.5.2.2 Employee health and safety			
	403-2 Hazard identification, risk assessment and incident investigation	4.5.2.2 Employee health and safety			
	403-3 Occupational health services	4.5.2.2.2 Health at work			
	403-4 Worker participation, consultation and communication on occupational health and safety	4.5.2.2 Employee health and safety			
	403-5 Worker training on occupational health and safety	4.6.1.4.1 Training policy 4.5.1.3 Safety and environmental culture			
	403-6 Promotion of worker health	4.5.2.2.3 Medical care			
	403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	4.5.2.2 Employee health and safety			
	403-8 Workers covered by an occupational health and safety management system	4.5.1.2 Management system and audits			
	403-9 Work-related injuries	4.5.2.2.1 Personal safety/Recordable injury rate			
	403-10 Work-related ill-health	4.5.2.2.4 Occupational illnesses			
GRI 404: Training and education – 2016	404-1 Average hours of training per year per employee	4.6.1.4.1 Training policy			
	404-2 Programs for upgrading employee skills and transition assistance programs	4.6.1.4.1 Training policy 4.6.1.4.2 Talent development			
	404-3 Percentage of employees receiving regular performance and career development reviews	4.6.1.4.1 Training policy 4.6.1.4.2 Talent development			
GRI 405: Diversity and equal opportunity – 2016	405-1 Diversity of governance bodies and employees	4.6.1.7 Diversity, inclusion, equal opportunity and equal treatment			
	405-2 Ratio of basic salary and remuneration of women to men	4.7.5 Indicators			
GRI 406: Non-discrimination – 2016	406-1 Incidents of discrimination and corrective actions taken	4.6.2.3 Control processes and disciplinary action 4.6.3 Human rights			
GRI 407: Freedom of association and collective bargaining – 2016	407-1 Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	4.6.1.8 Active social dialogue with employee representatives			
GRI 408: Child labor – 2016	408-1 Operations and suppliers at significant risk for incidents of child labor	4.6.3 Human rights			
GRI 409: Forced or compulsory labor – 2016	409-1 Operations and suppliers at significant risk for incidents of forced or compulsory labor	4.6.3 Human rights			

GRI Standard/ other source	Disclosure	Location	Omission		
			Requirement(s) omitted	Reason	Explanation
GRI 410: Security practices – 2016	410-1 Security personnel trained in human rights policies or procedures	4.6.3 Human rights			
GRI 411: Rights of Indigenous Peoples – 2016	411-1 Incidents of violations involving rights of indigenous peoples	4.6.3 Human rights 4.6.6.2 Corporate citizenship			
GRI 412: Human rights assessment – 2016	412-1 Operations that have been subject to human rights reviews or impact assessments	4.1.6 Duty of care plan/Human rights and fundamental freedoms 4.6.3 Human rights			
	412-2 Employee training on human rights policies or procedures	4.6.3 Human rights			
	412-3 Significant investment agreements and contracts that include human rights clauses or that underwent human rights screening	4.1.2 CSR governance/Integration of CSR into the Group's organic and external growth projects			
GRI 413: Local communities – 2016	413-1 Operations with local community engagement, impact assessments, and development programs	4.6.6 Community engagement			
	413-2 Operations with significant actual and potential negative impacts on local communities	4.6.6 Community engagement			
GRI 414: Supplier social assessment – 2016	414-1 New suppliers that were screened using social criteria	4.1.6 Duty of care plan 4.6.4.3 Selection of suppliers and subcontractors			
	414-2 Negative social impacts in the supply chain and actions taken	4.1.6 Duty of care plan 4.6.4.3 Selection of suppliers and subcontractors			
GRI 415: Public policy – 2016	415-1 Political contributions	4.6.5 Advocacy			
GRI 416: Customer health and safety – 2016	416-1 Assessment of the health and safety impacts of product and service categories	4.2.4.1 Responsible product stewardship policy			
	416-2 Incidents of non-compliance concerning the health and safety impacts of products and services	4.2.4.1 Responsible product stewardship policy			
GRI 417: Marketing and labeling – 2016	417-1 Requirements for product and service information and labeling	4.2.4.2 Regulatory product management 4.2.4.3 Product information			
	417-2 Incidents of non-compliance concerning product and service information and labeling	4.2.4.3 Product information			
	417-3 Incidents of non-compliance concerning marketing communications	4.2.4.3 Product information			
GRI 418: Customer privacy – 2016	418-1 Substantiated complaints concerning breaches of customer privacy and losses of customer data	4.6.2.4 Personal data protection 4.6.2.5 Whistleblowing system			
GRI 419: Socioeconomic compliance – 2016	419-1 Non-compliance with laws and regulations in the social and economic area	4.6.3 Human rights			

4.7.8 SASB cross-reference table

SASB – CHEMICALS

Resource Processing Sector, Version 2018-10

The SASB standards were established to help companies better identify, manage, and communicate financially relevant sustainability information to investors. They identify the most relevant environmental, social and governance (ESG) issues for 77 business sectors.

The following cross-reference table has been prepared to provide a better understanding of Arkema's performance against these standards.

		Disclosures		
		Section of this document	CDP questions 2023	Comments
GREENHOUSE GAS EMISSIONS				
RT-CH-110a.1	Gross global Scope 1 emissions	4.4.3.1		
	Percentage covered under emissions-limiting regulations		C11.1b	
RT-CH-110a.2	Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	4.4.1		
AIR QUALITY				
RT-CH-120a.1	Air emissions of the following pollutants:			
	NO_x (excluding N_2O)	4.5.3.2		
	SO_X	4.5.3.2		
	Volatile organic compounds (VOCs)	4.5.3.2		
	Hazardous air pollutants (HAPs)			Not disclosed
ENERGY MANAGEMENT				
RT-CH-130a.1	Total energy consumed	4.4.3.2	C8.2a	Reported in TWh
	Percentage grid electricity	4.4.3.2		
	Percentage renewable	4.4.3.2	C8.2d, C8.2e	
	Total self-generated energy			Not disclosed
WATER MANAGEMENT				
RT-CH-140a.1	Total water withdrawn	4.3.3.2		
	Total water consumed		W1.2b	Partially disclosed
	Percentage of each in regions with High or Extremely High Baseline Water Stress	4.3.3.2		
RT-CH-140a.2	Number of incidents of non-compliance associated with water quality permits, standards, and regulations			Not disclosed
RT-CH-140a.3	Description of water management risks and discussion of strategies and practices to mitigate those risks	4.3.3.2		Partially disclosed
HAZARDOUS WASTE MANAGEMENT				
RT-CH-150a.1	Amount of hazardous waste generated	4.3.3.4		
	Percentage recycled	4.3.3.4		
COMMUNITY RELATIONS				
RT-CH-210a.1	Discussion of engagement processes to manage risks and opportunities associated with community interests	4.1.3 4.6.6 4.5.1.2 4.6.4		

		Disclosures		
		Section of this document	CDP questions 2023	Comments
WORKFORCE HEALTH & SAFETY				
RT-CH-320a.1	Total recordable injury rate (TRIR)	4.5.2.2.1		Reported per million hours worked
	Fatality rate for (a) direct employees and (b) contract employees	4.5.2.2.1		
RT-CH-320a.2	Description of efforts to assess, monitor, and reduce exposure of employees and contract workers to long-term (chronic) health risks	4.5.1 4.5.2.2		
PRODUCT DESIGN FOR USE-PHASE EFFICIENCY				
RT-CH-410a.1	Revenue from products designed for use-phase resource efficiency	4.2.3		
SAFETY & ENVIRONMENTAL STEWARDSHIP OF CHEMICALS				
RT-CH-410b.1	Percentage of products that contain Globally Harmonized System of Classification and Labeling of Chemicals (GHS) Category 1 and 2 Health and Environmental Hazardous Substances	4.2.4.2		Reported on the basis of SVHC substances subject to REACH authorization or on the REACH candidate list
	Percentage of such products that have undergone a hazard assessment			Not disclosed
RT-CH-410b.2	Discussion of strategy to (1) manage chemicals of concern and (2) develop alternatives with reduced human and/or environmental impact	4.2.4 4.2.3		
GENETICALLY MODIFIED ORGANISMS				
RT-CH-410c.1	Percentage of products by revenue that contain genetically modified organisms (GMOs)			Not disclosed
MANAGEMENT OF THE LEGAL & REGULATORY ENVIRONMENT				
RT-CH-530a.1	Discussion of corporate positions related to government regulations and/or policy proposals that address environmental and social factors affecting the industry	2.1.2		
OPERATIONAL SAFETY, EMERGENCY PREPAREDNESS & RESPONSE				
RT-CH-540a.1	Process Safety Incidents Count (PSIC)			Not disclosed
	Process Safety Total Incident Rate (PSTIR)	4.5.2.3		
	Process Safety Incident Severity Rate (PSISR)			Not disclosed
RT-CH-540a.2	Number of transport incidents			Not disclosed
ACTIVITY METRICS				
RT-CH-000.A	Production by reportable segment			Not disclosed

4.7.9 Independent third-party opinion pursuant to articles L. 225-102-1 and L. 22-10-36 of the French Commercial Code

Report of one of the Statutory Auditors, appointed as independent third party, on the verification of the consolidated non-financial statement

This is a free English translation of the Statutory Auditor's report issued in French and is provided solely for the convenience of English-speaking readers. This report should be read in conjunction with, and construed in accordance with, French law and professional standards applicable in France.

Year ended December 31st 2023

To the Annual General Meeting,

In our capacity as Statutory Auditor of your company (hereinafter the "Entity") appointed as independent third party, and accredited by the French Accreditation Committee (COFRAC) under number 3-1884 [12], we have undertaken a limited assurance engagement on the historical information (observed or extrapolated) in the consolidated non-financial statement, prepared in accordance with the entity's procedures (hereinafter the "Guidelines"), for the year ended December 31st, 2023 (*hereinafter the* "Information" and the "Statement" respectively), presented in the Group's management report pursuant to the legal and regulatory provisions of Articles L. 225-102-1, R. 225-105, and R. 225-105-1 of the French Commercial Code (*Code de commerce*).

Conclusion

Based on the procedures we performed as described under the "Nature and scope of procedures" paragraph and the evidence we obtained, nothing has come to our attention that causes us to believe that the consolidated non-financial statement is not prepared in accordance with the applicable regulatory provisions and that the Information, taken as a whole, is not presented fairly in accordance with the Guidelines in all material respects.

Preparation of the non-financial performance statement

The absence of a commonly used generally accepted reporting framework or of a significant body of established practices on which to draw to evaluate and measure the Information allows for different, but acceptable, measurement techniques that can affect comparability between entities and over time.

Consequently, the Information needs to be read and understood together with the Guidelines, summarized in the Statement.

Inherent limitations in preparing the Information

As stated in the Statement, the Information may be subject to uncertainty inherent to the state of scientific and economic knowledge and the quality of external data used. Some information is sensitive to the choice of methodology and the assumptions or estimates used for its preparation and presented in the Statement.

Responsibility of the Entity

Management of the Entity is responsible for:

- selecting or establishing suitable criteria for preparing the Information,
- preparing a Statement pursuant to legal and regulatory provisions, including a presentation of the business model, a description of the main non-financial risks, a presentation of the policies implemented considering those risks and the outcomes of said policies, including key performance indicators, and the information set out in Article 8 of Regulation (EU) 2020/852 (Green Taxonomy),
- preparing the Statement by applying the entity's "Guidelines" as referred above, and
- designing, implementing, and maintaining internal control over information relevant to the preparation of the Information that is free from material misstatement, whether due to fraud or error.

The Statement has been prepared by the Management Board.

Responsibility of the Statutory Auditor appointed as independent third party

Based on our work, our responsibility is to provide a report expressing a limited assurance conclusion on:

- The compliance of the Statement with the requirements of Article R. 225-105 of the French Commercial Code,
- The fairness of the historical information (observed or extrapolated) provided pursuant to part 3 of sections I and II of Article R. 225-105 of the French Commercial Code, *i.e.*, the outcome of policies, including key performance indicators, and measures relating to the main risks.

As we are engaged to form an independent conclusion on the Information as prepared by management, we are not permitted to be involved in the preparation of the Information as doing so may compromise our independence.

(12) *Accreditation Cofrac Inspection, number 3-1884, scope available at www.cofrac.fr*

It is not our responsibility to report on:

- the entity's compliance with other applicable legal and regulatory provisions (particularly with regard to the information set-out in Article 8 of Regulation (EU) 2020/852 (Green Taxonomy), the French Duty of care law, and provisions against corruption and tax evasion law),
- the fairness of information set out in Article 8 of Regulation (EU) 2020/852 (Green Taxonomy),
- the compliance of products and services with applicable regulations.

Applicable regulatory provisions and professional guidance

We performed the work described below in accordance with Articles A. 225-1 *et seq.* of the French Commercial Code, the professional guidance issued by the French Institute of Statutory Auditors (*Compagnie Nationale des Commissaires aux Comptes*) applicable to such engagements, in particular the professional guidance issued by the Compagnie Nationale des Commissaires aux *Comptes, "Intervention du commissaire aux comptes - Intervention de l'OTI - Déclaration de performance extra-financière"* acting as the verification program, and with the International Standard ISAE 3000 (revised) [13].

Independence and quality control

Our independence is defined by the provisions of Article L. 822-11 of the French Commercial Code and the French Code of Ethics for Statutory Auditors (*Code de déontologie*) of our profession. In addition, we have implemented a system of quality control including documented policies and procedures aimed at ensuring compliance with applicable legal and regulatory requirements, ethical requirements and the professional guidance issued by the French Institute of Statutory Auditors *(Compagnie Nationale des Commissaires aux Comptes)* relating to this engagement.

Means and resources

Our work engaged the skills of seven people between September 2023 and February 2024 and took a total of ten weeks.

We were assisted in our work by our specialists in sustainable development and corporate social responsibility. We conducted some interviews with the people responsible for preparing the Statement.

Nature and scope of procedures

We are required to plan and perform our work to address the areas where we have identified that a material misstatement of the Information is likely to arise.

The procedures we performed were based on our professional judgment. In carrying out our limited assurance engagement on the Information:

- We obtained an understanding of all the consolidated entities' activities, and the description of the main related risks,
- We assessed the suitability of the criteria of the Guidelines with respect to their relevance, completeness, reliability, neutrality and understandability, taking into account, where appropriate, best practices within the sector,
- We verified that the Statement includes each category of social and environmental information set out in article L. 225-102-1 III of the French Commercial Code as well as information regarding compliance with human rights, anti-corruption and tax avoidance legislation, and includes, where applicable, an explanation for the absence of the information required under article L. 225-102-1 III, paragraph 2 of the French Commercial Code,
- We verified that the Statement provides the information required under article R. 225-105 II of the French Commercial Code, where relevant with respect to the main risks;
- We verified that the Statement presents the business model and a description of main risks associated with all the consolidated entities' activities, including where relevant and proportionate, the risks associated with their business relationships, products or services, as well as policies, measures and the outcomes thereof, including key performance indicators related to the main risks,
- We verified that the Statement includes a clear and motivated explanation of the reasons for the absence of policies implemented considering one or more of these risks required under Article R.225-105 I of the French Commercial Code,
- We referred to documentary sources and conducted interviews to:
  - assess the process used to identify and confirm the main risks as well as the consistency of the outcomes, including the key performance indicators used, with respect to the main risks and the policies presented,
  - corroborate the qualitative information (measures and outcomes) that we considered to be the most important presented in the Appendices. Concerning certain risks [14], our work was carried out on the consolidating entity, for the other risks, our work was carried out on the consolidating entity and on a selection of entities [15].
- We verified that the Statement covers the consolidated scope, *i.e.* all the entities within the consolidation scope in accordance with Article L. 233-16 of the French Commercial Code, within the limitations set out in the Statement,

(13) ISAE 3000 (revised) – Assurance engagements other than audits or reviews of historical financial information.

(14) Ethics and compliance risks, including those relating the fight against corruption; Human rights risk; Risk of social and environmental default by suppliers and subcontractors.

(15) Arkema France, including the Feuchy and Jarrie sites; Bostik S.A.; the Clear Lake and Beaumont sites (United States) of Arkema Inc; the Becancour site (Canada) of Arkema Canada Inc; the Hengshui - Casda site (China) of Casda Biomaterials Co Ltd and the Changshu - Env site (China) of Arkema Changshu Chemicals Co Ltd.

- We obtained an understanding of internal control and risk management procedures the entity implemented, and assessed the data collection process aimed at ensuring the completeness and fairness of the Information,
- For the key performance indicators and other quantitative outcomes that we considered to be the most important, presented in the Appendices, we implemented:
  - analytical procedures to verify the proper consolidation of the data collected and the consistency of any changes in those data,
  - tests of details, using sampling techniques, in order to verify the proper application of definitions and procedures and reconcile the data with supporting documents. This work was carried out on a selection of contributing entities[14] and covers between 16% and 100% of the consolidated data relating to the key performance indicators and outcomes selected for these tests,
- We assessed the overall consistency of the Statement based on our knowledge of all the consolidated entities' activities.

The procedures performed in a limited assurance review are less in extent than for a reasonable assurance opinion in accordance with the professional guidance of the French Institute of Statutory Auditors *(Compagnie Nationale des Commissaires aux Comptes)*, a higher level of assurance would have required us to carry out more extensive procedures.

Paris La Défense, 28 février 2024

KPMG S.A.

Eric Dupré	Fanny Houlliot
Partner	ESG Expert ESG Center of Excellence

Appendix

Qualitative information (actions and results) considered most important
Measures of employee commitment and satisfaction
Policies and actions to promote the circular economy
Measures to reduce compliance and business ethics risks
Measurement of environmental footprint and initiatives to protect biodiversity
Measures to manage the risk of industrial accidents that could have an impact on employee safety
Investment in safety, the environment and the maintenance of industrials facilities
Measures to reduce the carbon footprint of the Group's direct activities
Initiatives to promote innovation and the development of responsible products and services

Key performance indicators and other quantitative results considered most important
Total headcount as of 31st December, and breakdown by age, gender and geographical area
Percentage of women in senior management and executive positions
Average number of training hours per employee per year
Percentage of non-French nationals in senior management and executive positions
Equal pay between men and women
Percentage of employees benefiting from personnel representation and/or trade union representation
Percentage of employees benefiting from regular medical check-ups
Total Recordable Injury Rate (TRIR)
Lost Time Injury Rate (LTIR)
Process Safety Event Rate (PSER)
Percentage of sites audited according to Arkema Integrated Management System (AIMS) standards
Net energy purchases
Volatile Organic Compounds emissions (VOC)
Total water withdrawn
Chemical Oxygen Demand (COD)
Percentage of recovered waste (hazardous + non-hazardous)
Scope 1 and Scope 2 greenhouse gases emissions
Scope 3 greenhous gases emissions
Percentage of sales from products made from renewable or recycled raw materials
Percentage of patent applications filed during the year relating to sustainable development
Percentage of ImpACT+ sales
Percentage of sales covered by life-cycle assessment
Percentage of purchasing spend with relevant suppliers covered by a Together for Sustainability (TfS) assessment

4.7.10 Contacts

See section 8.2 of this document.

FINANCIAL AND ACCOUNTING INFORMATION

5

The different parts constituting the annual financial report are identified in the table of contents by the pictogram |AFR|

5.1 Comments and analysis on the consolidated financial statements

This section should be read jointly with the notes to the consolidated financial statements at 31 December 2023 in section 5.3.3 of this chapter, and in particular with the accounting policies described in the various notes.

All figures contained in this section are provided on a consolidated basis and in accordance with the Group's organization into four business segments.

5.1.1 Indicators used in management analysis

The main alternative performance indicators used by the Group are defined in note 4 to the consolidated financial statements at 31 December 2023 in section 5.3.3 of this chapter.

When analyzing changes in its results, and more particularly changes in its sales, the Group identifies the impact of the following effects (such analysis is unaudited):

- **scope effect:** the scope effect corresponds to the impact of changes in the Group's scope of consolidation, which arise from acquisitions and divestments of entire businesses, or as a result of the first-time consolidation or deconsolidation of entities. Increases or reductions in capacity are not included in the scope effect;
- **currency effect:** the currency effect corresponds to the mechanical impact of consolidating accounts denominated in currencies other than the euro at different exchange rates from one period to another. The currency effect is calculated by applying the foreign exchange rates of the prior period to the figures for the period under review;
- **price effect:** the impact of changes in average selling prices is estimated by comparing the weighted average net unit selling price of a range of related products in the period under review with their weighted average net unit selling price in the prior period, multiplied, in both cases, by the volumes sold in the period under review; and
- **volume effect:** the impact of changes in volumes is estimated by comparing the quantities delivered in the period under review with the quantities delivered in the prior period, multiplied, in both cases, by the weighted average net unit selling price in the prior period.

5.1.2 Impact of seasonality

Due to the standard pattern of its business, the Group is exposed to seasonal effects. For example:

- demand for products manufactured by the Group is generally weaker around February in China due to Chinese New Year, as well as in the summer months and in December, notably as a result of the slowdown in industrial activity during these months, particularly in France and Europe;
- in some of the Group's businesses, particularly those serving the paint and coatings as well as the refrigeration and air-conditioning markets, sales are generally higher in the first half of the year than in the second half. By contrast, in adhesives, both halves of the year are more balanced; and
- major multi-annual maintenance turnarounds at the Group's production plants, which are generally carried out in the second half of the year, also have an impact on seasonality.

These seasonal effects observed in the past are not necessarily representative of future trends, but can have a material effect on changes in results and working capital from one quarter of the year to the next. They can also be impacted by very specific contexts such as the Covid-19 crisis or any other exceptional changes in geopolitical or macroeconomic situations.

5.1.3 Impact of changes to accounting standards

Changes to accounting standards and any related impacts are disclosed in note 2 “Accounting policies and new standards” to the consolidated financial statements at 31 December 2023 in section 5.3.3 of this chapter.

5.1.4 Description of the main factors which affected sales and results in the period

The global economy, which recorded very high inflation in raw material, energy and transport costs since 2021, saw weaker demand in all regions of the world and in most end markets in 2023, amplified by destocking, moderation in raw materials and energy inflation combined with rising interest rates, as well as worsening of geopolitical tensions.

In this demanding and volatile operating environment, Arkema's financial performance remained solid against last year's exceptionally high comparison base, benefiting from the diversity of its end markets and its balanced geographic footprint. EBITDA came in at €1.5 billion, in line with guidance, the EBITDA margin was close to 16% and cash generation remained very high, with an EBITDA to cash conversion rate of 50.7%.

This solid financial performance was attributable in varying degrees to a number of factors, in particular:

- a context of low volumes, marked by softer underlying demand and destocking, first in Europe and then spreading to other regions of the world, albeit subsided in the second half of the year in Adhesive Solutions;
- the progressive normalization of market conditions in upstream acrylics and PVDF after an exceptional 2022, with an estimated impact on Specialty Materials EBITDA of €400 million in that year;
- lower prices for certain raw materials and energy, which led to a gradual adjustment of selling prices for some product lines, mainly in the second half of the year;
- the product mix improvement towards higher value-added solutions, Specialty Materials representing 92% of the Group's sales in 2023, leading to a solid EBITDA margin of 15.8% despite the weaker macroeconomic environment. In 2023, the Group continued its organic growth projects, and in 2024 will notably benefit from the ramp-up of its new bio-based Polyamide 11 capacities in Singapore, the supply of hydrofluoric acid for its fluorinated activities in the United States in partnership with Nutrien, the increase in Pebax® elastomer capacity in France for the sports and electronics segments, and the start-up of its new-generation fluorospecialty 1233zd unit in the United States for the building insulation and battery markets;
- contrasting dynamics in the various Specialty Materials product lines, with Adhesive Solutions and Performance Additives reporting good growth in the second half;
- ongoing favorable market conditions for refrigerant gases in 2023;
- an environment in China remaining unfavorable, with the economy failing to rebound after Covid measures were lifted;
- the appreciation of the euro against the US dollar and Chinese yuan, which had a 2.2% negative currency effect on sales; and
- strict management of working capital in a context of low volumes, resulting in positive cash flow for the year, and tight control of capital expenditure. Consequently, the EBITDA to cash conversion rate came in at 50.7%, and net debt remained below 2x EBITDA of the year, taking into account cash outflows from portfolio management operations of €708 million, mainly reflecting the acquisition of the 54% stake in PI Advanced Materials.

5.1.5 Group income statement analysis

(In millions of euros)	2023	2022	Change
Sales	**9,514**	**11,550**	**-17.6%**
Operating expenses	(7,554)	(8,970)	-15.8%
Research and development expenses	(275)	(270)	+1.9%
Selling and administrative expenses	(874)	(868)	+0.7%
Other income and expenses	(130)	(155)	
Operating income	**681**	**1,287**	**-47.1%**
Equity in income of affiliates	(9)	(6)	
Financial result	(70)	(61)	+14.8%
Income taxes	(177)	(254)	-30.3%
Net income	**425**	**966**	**-56.0%**
Net income attributable to non-controlling interests	7	1	
Net income – Group share	**418**	**965**	**-56.7%**
EBITDA	**1,501**	**2,110**	**-28.9%**
Recurring operating income (REBIT)	**939**	**1,560**	**-39.8%**
Adjusted net income	**653**	**1,167**	**-44.0%**

Sales

Group sales came in at €9,514 million in 2023, down 17.6% on the previous year in a more challenging macroeconomic context, marked by lower underlying demand and destocking, first in Europe and then spreading to other regions of the world. The decline in volumes came in at 10% overall, affecting most of the Group's important end markets like construction, industry and consumer goods. Some markets such as automotive and energy resisted much better, and the dynamic remained positive in high performance solutions addressing sustainable megatrends, particularly in new energies, bio-based and recycled products, as well as in the areas of energy efficiency and materials lightweighting. The negative 6.1% price effect reflects the decline of certain raw materials and the normalization of PVDF and upstream acrylics relative to the particularly favorable conditions of 2022. Moreover, Arkema benefited from the repositioning of its portfolio towards higher value-added solutions.

The scope effect was small, standing at a positive 0.7%, and included mainly two months' additional contribution from Ashland's adhesives business and three small acquisitions, partially offset by the divestment of Febex at the beginning of the year. The currency effect was a negative 2.2%, mainly as a result of the depreciation of the US dollar and Chinese yuan against the euro.

The share of Specialty Materials within total sales grew slightly and represented 92% of the Group's total sales in 2023.

Moreover, the geographic sales split saw the share of North America increase (37% of the Group's sales in 2023 *versus* 35% in 2022), Asia and the rest of the world decline to 29% *versus* 32% in 2022, and Europe remain steady (34% of sales in 2023 *versus* 33% in 2022).

EBITDA, recurring operating income and operating income

At €1,501 million (€2,110 million in 2022), EBITDA held up well in view of the economic context, while reflecting the absence of the exceptional contribution in the prior year of around €400 million from PVDF and upstream acrylics. The dynamics were mixed between the various product lines, with Adhesive Solutions and Performance Additives reporting good growth in the second half of the year, driven by the product mix, dynamic management of sales prices and continued operational excellence actions.

In this less buoyant context than in the prior year, Arkema's EBITDA margin came in at a good level at 15.8% (18.3% in 2022), reflecting notably the quality of the product mix in higher value-added solutions and appropriate management of pricing in a more normalized raw materials context.

Recurring depreciation and amortization rose marginally year on year to €562 million (from €550 million in 2022). Consequently, recurring operating income (REBIT) totaled €939 million (€1,560 million in 2022), representing a REBIT margin of 9.9% (13.5% in 2022).

At €681 million, operating income is therefore down compared with prior year (€1,287 million in 2022), and included:

- €7,554 million in operating expenses, down 15.8% on 2022 (€8,970 million), mainly reflecting the decline in volumes in a weaker macroeconomic context as well as a decrease in raw materials costs, and to a lesser extent the depreciation of the dollar and Chinese yuan against the euro. The impact of the scope evolution remains limited. It included the integration of Ashland's performance adhesives over two additional months, the additional contribution on the full year of Polimeros Especiales and Permoseal, as well as the acquisitions of Polytec PT in June and PIAM in December, partially offset by the disposal of Febex. Operating expenses included €128 million in depreciation and amortization resulting from the revaluation of property, plant and equipment and intangible assets as part of the allocation of the purchase price of businesses. This figure was up €10 million on 2022, reflecting mainly the impact of the additional contribution on the full year of bolt-on acquisitions carried out in 2022;
- research and development expenses, virtually stable at €275 million (€270 million in 2022), representing 2.9% of Group sales; and
- selling and administrative expenses also virtually stable at €874 million (€868 million in 2022), with inflation offset by a favorable currency effect.

Lastly, operating income included other income and expenses representing a net expense of €130 million. This amount comprises in particular €52 million in net restructuring and environmental costs, €28 million in impairment of assets, acquisition costs related to major portfolio management operations during the year partly offset by the capital gain on the disposal of Febex, as well as start-up costs for the Singapore platform.

Financial result

The financial result represented a net expense of €70 million (€61 million in 2022), up by €9 million relative to 2022, reflecting mainly the impact of the bond issues carried out in 2023.

Income taxes

In line with the evolution of the Group's operating performance compared to 2022, the net income tax expense decreased compared to 2022 and was €177 million in 2023 (€254 million in 2022). Excluding exceptional items, the tax rate amounted to 21% of recurring operating income, as in 2022.

At end-2023, unrecognized deferred tax assets amounted to €480 million.

Net income – Group share and adjusted net income

Consequently, net income – Group share totaled €418 million in 2023 (€965 million in 2022).

Excluding the post-tax impact of non-recurring items, adjusted net income amounted to €653 million *versus* €1,167 million in 2022, *i.e.*, €8.75 per share (€15.75 per share in 2022).

5.1.6 Analysis of results by business segment

5.1.6.1 Adhesives Solutions

(In millions of euros)	**2023**	2022	Change
Sales	**2,714**	**2,898**	**-6.3%**
EBITDA	**380**	**366**	**+3.8%**
EBITDA margin	***14.0%***	***12.6%***	
Recurring operating income (REBIT)	**293**	**288**	**+1.7%**
REBIT margin	*10.8%*	*9.9%*	
Other income and expenses	(32)	(63)	
Depreciation and amortization related to the revaluation of assets as part of the allocation of the purchase price of businesses	(102)	(95)	
Operating income	**159**	**130**	**+22.3%**

Sales in the Adhesive Solutions segment fell by 6.3% compared with 2022 to €2,714 million. This figure reflects mainly a 7.5% reduction in volumes linked to weak demand as well as to destocking in the construction sector and certain industrial markets, which nevertheless subsided in the second half of the year. Sales also included a negative 2.8% currency effect. The price effect was slightly positive over the year, amounting to 0.9%, and reflected on the one hand, during the first part of the year, the increased sales prices implemented in 2022 in response to cost inflation, and on the other hand, a negative price effect in the second half linked to the normalization of certain raw materials. The 3.1% positive scope effect corresponds to the integration of Polytec PT and Permoseal, as well as to the additional contribution from Ashland's adhesives business in the first two months of the year.

Recording robust growth of 16% in the second half of the year, EBITDA grew 3.8% in 2023 compared to 2022 and reached €380 million. This higher year-on-year performance despite lower volumes, reflects the dynamic management of sales prices in an evolving environment of raw materials, as well as operational excellence and cost control actions. It also incorporates the contribution of acquisitions.

EBITDA margin improved significantly by 140 bps to 14.0%, also benefiting from the evolution in the product mix towards higher value-added applications.

Recurring operating income (REBIT) was up by 1.7% year on year to €293 million (€288 million in 2022). This figure includes €87 million in recurring depreciation and amortization, up on 2022 (€78 million) reflecting essentially the integration of acquisitions.

Operating income rose by 22.3% to €159 million (€130 million in 2022), including a €32 million net charge for other income and expenses mainly related to restructuring costs, down compared to prior year, which included costs relating to the acquisition of Ashland's adhesives. Operating income also includes €102 million in depreciation and amortization related to the revaluation of assets carried out as part of the allocation of the purchase price of businesses (€95 million in 2022).

5.1.6.2 Advanced Materials

(In millions of euros)	2023	2022	Change
Sales	**3,562**	**4,341**	**-17.9%**
EBITDA	**666**	**941**	**-29.2%**
EBITDA margin	***18.7%***	***21.7%***	
Recurring operating income (REBIT)	**366**	**663**	**-44.8%**
REBIT margin	*10.3%*	*15.3%*	
Other income and expenses	(81)	(79)	
Depreciation and amortization related to the revaluation of assets as part of the allocation of the purchase price of businesses	(19)	(18)	
Operating income	**266**	**566**	**-53.0%**

At €3,562 million, sales of the Advanced Materials segment were down by 17.9% year on year. Reflecting lower demand, volumes declined by 8.0%, also impacted by destocking, mostly in the first half for High Performance Polymers, and throughout the whole year for Performance Additives, mainly in Europe. The business areas linked to sustainable megatrends grew, notably new energies and bio-based and recycled products, and the automotive and energy markets remained well oriented. In the second half of the year, High Performance Polymers volumes were up relative to the prior year, supported in particular by higher demand in batteries in China. The price effect was a negative 7.2%, essentially reflecting the normalization of PVDF in batteries following the significant tightness observed in the prior year. For the segment's other activities, the price effect was broadly positive, demonstrating the strength of their positioning and an improved product mix towards higher value-added solutions. The scope effect was a negative 0.6%, corresponding to the divestment of Febex, and the currency effect was a negative 2.1%.

In this context, EBITDA of €666 million was down 29.2% relative to the prior year's particularly high comparison base. Driven by significant growth in the second half, EBITDA for Performance Additives was up year on year despite lower volumes, supported by growth in high value-added applications in areas linked to sustainable megatrends, in particular new energies. The segment's EBITDA margin thus came to 18.7% *versus* 21.7% in 2022.

In line with the increase in EBITDA, recurring operating income (REBIT) represented €366 million *versus* €663 million in 2022, and included €300 million in recurring depreciation and amortization expense (€278 million in 2022).

Operating income totaled €266 million (€566 million in 2022). It included a net charge of €81 million for other income and expenses, corresponding mainly to start-up costs for the Singapore platform and acquisition costs. Operating income also included €19 million in depreciation and amortization related to the revaluation of assets carried out as part of the allocation of the purchase price of businesses (€18 million in 2022).

5.1.6.3 Coating Solutions

(In millions of euros)	2023	2022	Change
Sales	**2,402**	**3,250**	**-26.1%**
EBITDA	**327**	**593**	**-44.9%**
EBITDA margin	***13.6%***	***18.2%***	
Recurring operating income (REBIT)	**201**	**466**	**-56.9%**
REBIT margin	*8.4%*	*14.3%*	
Other income and expenses	(3)	—	
Depreciation and amortization related to the revaluation of assets as part of the allocation of the purchase price of businesses	(7)	(5)	
Operating income	**191**	**461**	**-58.6%**

Sales of the Coating Solutions segment fell sharply by 26.1% year on year and amounted to €2,402 million, around 30% of which were in acrylic monomers. Volumes in this segment were down 12.4% overall, reflecting subdued demand and destocking in Europe and the United States in the decorative paints and industrial markets. The price effect of negative 13.1% reflects mainly the progressive normalization of market conditions in upstream acrylics after an exceptional 2022, as well as the pass-through of certain lower raw material prices in downstream product lines. The scope effect of positive 0.7% is linked to the integration of Polimeros Especiales, and the currency effect was limited at a negative 1.3%.

In this context, EBITDA declined 44.9% on 2022 to €327 million. Downstream activities nevertheless held up better than upstream acrylics , driven by the benefits of an improved product mix towards higher value-added solutions and by dynamic price management.

In this context of low volumes, EBITDA margin held up relatively well at 13.6% (18.2% in 2022).

Recurring operating income (REBIT) therefore totaled €201 million (€466 million in 2021), and includes recurring depreciation and amortization of €126 million (€127 million in 2022).

In line with the evolution of REBIT, operating income amounted to €191 million (€461 million in 2022) and included a €7 million expense related to the revaluation of assets carried out as part of the allocation of the purchase price of businesses, including a slight increase relating to the full-year consolidation of Polimeros Especiales.

5.1.6.4 Intermediates

(In millions of euros)	2023	2022	Change
Sales	**797**	**1,020**	**-21.9%**
EBITDA	**213**	**306**	**-30.4%**
EBITDA margin	***26.7%***	***30.0%***	
Recurring operating income (REBIT)	**170**	**245**	**-30.6%**
REBIT margin	*21.3%*	*24.0%*	
Other income and expenses	—	23	
Depreciation and amortization related to the revaluation of assets as part of the allocation of the purchase price of businesses	—	—	
Operating income	**170**	**268**	**-36.6%**

At €797 million, sales in the Intermediates segment fell by 21.9% year on year, impacted by an 18.7% drop in volumes linked notably to low demand for acrylics in Asia. The price effect was a positive 0.1%, reflecting good momentum for refrigerant gases in Europe and the United States, which offset less favorable market conditions for acrylics in Asia. The currency effect was a negative 3.3%.

In this context, EBITDA declined by 30.4% to €213 million and EBITDA margin remained at a high level of 26.7% (30.0% in 2022).

Recurring operating income (REBIT) totaled €170 million (€245 million in 2022), and included €43 million in recurring depreciation and amortization (€61 million in 2022).

Operating income was identical to REBIT at €170 million, compared with €268 million in 2022, which included €23 million in other income and expenses relating mainly to the proceeds from the finalization of the PMMA divestment in Asia.

5.1.7 Group cash flow analysis

(In millions of euros)	**2023**	2022
Cash flow from operating activities	1,272	1,496
Cash flow from investing activities	(1,355)	(2,341)
Net cash flow	**(83)**	**(845)**
Of which net cash flow from portfolio management operations	(708)	(1,629)
Free cash flow	**625**	**784**
Of which exceptional capital expenditure	(26)	(123)
Of which non-recurring cash flow	(110)	(26)
Recurring cash flow	**761**	**933**

EBITDA can be reconciled to free cash flow as follows:

(In millions of euros)	**2023**	2022
EBITDA	**1,501**	**2,110**
Taxes	(184)	(326)
Cash items included in the financial result	(53)	(71)
Change in working capital (1)	170	(153)
Change in fixed asset payables (2)	(43)	(23)
Recurring capital expenditure	(608)	(584)
Other	(22)	(20)
Recurring cash flow	**761**	**933**
Exceptional capital expenditure	(26)	(123)
Non-recurring cash flow	(110)	(26)
Free cash flow	**625**	**784**

(1) Excluding flows related to non-recurring items and portfolio management operations. These items represented a net cash outflow of €12 million in 2023. These items represented a net cash inflow of €16 million in 2022.

(2) Excluding flows related to non-recurring items and portfolio management operations. These items represented a net cash outflow of €2 million in 2023 (nil amount in 2022).

In 2023, net cash flow represented a net outflow of €83 million (*versus* a net outflow of €845 million in 2022), and included a net outflow of €708 million from portfolio management operations, corresponding to the acquisition of a 54% controlling interest in PIAM and the acquisition of Polytec PT, partly offset by the sale of Febex. In 2022, this negative cash flow amounted to €1,629 million, and essentially included the acquisition of Ashland's performance adhesives as well as the bolt-on acquisitions of Permoseal and Polimeros Especiales.

Consequently, free cash flow corresponding to net cash flow excluding the impact of portfolio management operations, reached the high level of €625 million for the year (€784 million in 2022), and includes recurring cash flow of €761 million and non-recurring items representing a net cash outflow of €136 million.

This recurring cash flow of €761 million was down by 18.4% relative to the very high comparison base in the prior year, reflecting:

- the resilience of the Group's operating performance in 2023 in a weaker macroeconomic context;
- a €170 million reduction in working capital over the year (€153 million increase in 2022), reflecting the price effect and strict inventory management;
- a decrease in taxes paid, in line with the evolution of the Group’s operating performance compared to 2022;
- tight control of recurring capital expenditure totalling €608 million (€584 million in 2022); and
- a favorable movement in “Change in fixed asset payables” compared with 2022, mainly due to timing effects of expenditures.

Calculated based on recurring cash flow, the EBITDA to cash conversion rate was 50.7%, higher than the Group’s target of 40%.

Exceptional items represented a net cash outflow of €136 million in 2023 (€149 million net outflow in 2022), including a non-recurring cash outflow of €110 million in 2023, corresponding mainly to start-up costs for the Singapore platform and restructuring costs in order to adapt the cost structure to the economic context. These exceptional items included also a net cash outflow of €26 million linked to the bio-based polyamides project in Singapore and the hydrofluoric acid supply project with Nutrien in the United States (€123 million outflow in 2022).

CAPITAL EXPENDITURE OVER THE PAST THREE YEARS

(In millions of euros)	2023	2022	2021
Total intangible assets and property, plant and equipment additions	**634**	**707**	**763**
Of which recurring capital expenditure	*608*	*584*	*506*
Recurring capital expenditure as a % of Group sales	*6.4%*	*5.1%*	*5.3%*
Of which exceptional capital expenditure	*26*	*123*	*252*

Capital expenditure in 2023

Total capital expenditure amounted to €634 million on the year (€707 million in 2022), of which €608 million was recurring and €26 million was exceptional as described above.

Recurring capital expenditure corresponded mainly to:

- growth projects, notably the 50% increases in PVDF production capacity at the Changshu site in China and at the Pierre-Bénite site in France, the 40% increase in global capacity production for Pebax® elastomer at the Serquigny site in France, and the expansion of the Sartomer® photocure resins production unit in China;
- decarbonization projects representing €30 million over the year (€16 million in 2022), including notably expenses on the new purification technology project at the Carling site in France; and
- investments in plant maintenance, safety and the environment totalling €315 million and representing 52% of recurring capital expenditure.

This recurring capital expenditure represented the equivalent of 6.4% of Group sales in 2023.

For further details, see note 4 to the consolidated financial statements at 31 December 2023 in section 5.3.3 of this document.

Capital expenditure over the period from 2021 to 2023

Over the past three years, Arkema's recurring capital expenditure has averaged €566 million per year, focused on (i) facility maintenance, safety and environmental protection, accounting for approximately 54% of the total, and (ii) industrial development and R&D projects, including productivity improvements of existing facilities, accounting for approximately 46%.

Over the period, 65.5% of total capital expenditure on property, plant and equipment and intangible assets was made in the Advanced Materials segment, 16.5% in the Coating Solutions segment, 11.5% in the Adhesive Solutions segment, 3.5% in the Intermediates segment, and 3% on corporate projects. The breakdown of capital expenditure by region was 43% in Europe, 27% in North America, 29% in Asia and 1% in the rest of the world.

Arkema's main capital expenditure for development projects started over the past three years were:

2021		No significant start-ups.
2022	Coating resins	Doubling of polyester resin production capacity at the Navi Mumbai site in India, which came on stream at end-2022.
	High Performance Polymers	50% increase in global amino 11 and PA 11 production capacity thanks to the new plant on Jurong Island, Singapore, where the start-up phases were continuing into 2023.
2023	High Performance Polymers	50% production capacity increase for PVDF at its Changshu sites in China, which started up in mid-2023, and at its Pierre-Bénite site in France at the end of 2023.
	Coating Additives	Doubling of Sartomer® UV/LED photocurable specialty resins capacity at its expanded Nansha site in China at the end of 2023.
2024	High Performance Polymers	40% global production capacity increase for Pebax® elastomers at its Serquigny plant in France, started in the first-quarter 2024.

Capital expenditure financing

The Group's capital expenditure is primarily funded by the cash resources that Arkema generates during the year. The Group may also use the credit resources detailed in notes 12.3 and 13.2 to the consolidated financial statements at 31 December 2023 in section 5.3.3 of this chapter.

5.1.8 Financing sources

5.1.8.1 Borrowing terms and conditions and the Group's financing structure

The Group has diversified financing resources including bond issues, multi-currency credit facilities and a negotiable commercial paper program, as detailed below. At 31 December 2023, and without taking into account the issues of perpetual hybrid bonds completed in 2019 and 2020 and classified as equity, these resources amounted to €5,000 million. Arkema's long-term debt has been rated BBB+ with a positive outlook by Standard & Poor's since 6 July 2023 and Baa1 with a stable outlook by Moody's since 13 November 2019.

Bond issues

As part of the Group's long-term financing policy aimed at diversifying its financing resources as well as extending the maturity of its debt, the Company regularly carries out bond issues, six of which are outstanding at 31 December 2023:

- in December 2013, the Group issued a €150 million bond which matured on 6 December 2023;
- on 20 January 2015, a bond issue for €700 million over ten years with a 1.5% interest rate;
- on 11 April 2017, a bond issue for €700 million over ten years with a 1.5% interest rate and on 23 June 2017, the issue of an additional €200 million tranche, bringing the total of the bond issue to €900 million;
- on 3 December 2019, a bond issue for €500 million over ten years with a 0.75% interest rate;
- on 14 October 2020, a green bond issue for €300 million over six years with a 0.125% interest rate; and
- on 16 January 2023, a bond issue for €400 million over eight years with a 3.50% interest rate; and
- on 20 November 2023, the Group issued a €700 million bond that will mature on 20 May 2030, with a fixed coupon of 4.25%.

Since 2013, bond issues have been part of the Euro Medium Term Notes ("EMTN") program put in place by the Group in 2013 in order to gain easier access to the bond markets and renewed each year since, most recently in March 2023. The prospectus for this program and for its renewal was filed with the AMF under no. 13-535 on 9 October 2013, and under no. 23-132 on 26 April 2023, respectively. The next renewal is scheduled for March 2024. The prospectus includes the usual bond default cases, in particular non-payment, early repayment subsequent to non-payment, insolvency proceedings, or cessation of activity of the issuer or a major subsidiary. These default cases may be conditional upon thresholds being exceeded or grace periods expiring.

Furthermore, all six bond issues are accompanied by an early repayment option at the bondholders' request in the event of a change of control of Arkema also involving a downgrading of its credit rating to non-investment grade, or a simple downgrading thereof if it was non-investment grade prior to the change of control.

The Company has also issued perpetual hybrid bonds, of which two tranches remained outstanding at 31 December 2023:

- perpetual hybrid bonds issued on 17 June 2019 for €400 million. These bonds have a first call option that can be exercised by Arkema between 17 June 2024 and 17 September 2024 and carry an annual coupon of 2.75% until 17 September 2024 (provided they are not redeemed before that date). The coupon will then be reset every five years. The prospectus for this issue, which is part of the Group's EMTN program, was filed with the AMF on 12 June 2019 under no. 19-257; and
- perpetual hybrid bonds issued on 21 January 2020 for €300 million. These bonds have a first call option that can be exercised by Arkema between 21 October 2025 and 21 January 2026 and carry an annual coupon of 1.5% until 21 January 2026 (provided they are not redeemed before that date). The coupon will then be reset every five years. The prospectus for this issue was filed with the AMF on 17 January 2020 under no. 20-015.

All of these bonds are subordinated to any senior debt and are accounted for as equity in accordance with IFRS rules. They are treated as equity for 50% of their amount by rating agencies Standard & Poor's and Moody's.

Further details may be found in the EMTN program base prospectus and in the above-mentioned prospectuses, all of which are available on the Company's website www.arkema.com/global/en/investor-relations/ in the "Debt and ratings" section.

Revolving multi-currency credit facility for €1.1 billion

On 28 July 2022, the Company and Arkema France (the "Borrowers") and a syndicate of banks signed an amendment to the revolving multi-currency credit facility in the maximum amount of €1.1 billion, which can be used in renewable drawings. This credit facility was signed for an initial period of five years with two one-year extension options exercisable, subject to the lenders' approval, at the end of the first year and the second year (the "Facility"). The first one-year extension option was exercised in July 2023. The purpose of the Facility is to finance, in the form of drawings and bank guarantees, the Group's general corporate purposes, and serves as a back-up facility for the commercial paper program. The cost of the credit line is linked to three key CSR criteria for the Group: greenhouse gas emissions (Scope 1 and 2), volatile organic compound emissions and the total recordable injury rate (TRIR). The Facility had not been drawn down at 31 December 2023.

Other Group companies have the possibility to become borrowers under the Facility, in the same capacity as the Company and Arkema France.

The Facility provides for early repayment in certain cases, including a change of control over the Company (defined as any person, acting alone or in concert, holding, directly or indirectly, more than one-third of the voting rights of the Company). Should this clause be triggered by a lender, it could lead to early repayment and the cancellation of the commitments to such lender.

The Facility contains representations to be made by each Borrower relating, among other things, to its financial statements, legal proceedings, or the absence of default events. Some of these representations have to be reiterated at the time of each utilization request.

The Facility also contains the standard undertakings for this type of agreement, including:

- information undertakings (notably accounting and financial information); and
- undertakings relating, among other things, to certain restrictions in connection with (but not limited to) the granting of securities, the completion of merger or restructuring transactions, the sale of assets, and the Group's debt. Depending on the case, such restrictions will not apply to ordinary operations or to transactions involving amounts below certain thresholds.

The Facility also provides for default cases similar to those described in the prospectus of the above-mentioned bond issues.

Lastly, Arkema guarantees on a joint and several basis the obligations of Arkema France under the terms of the Facility to the banks, as well as those of the other borrowers, where applicable. The Facility is not subject to any other personal guarantee or security.

Negotiable commercial paper program

In April 2013, the Group introduced a negotiable commercial paper program with a ceiling of €1 billion. This ceiling was raised to €2 billion on 19 October 2022. At 31 December 2023, the amount of securities issued under this program totaled €400 million.

5.1.8.2 Information on restrictions on the use of capital that have significantly influenced or may significantly influence, directly or indirectly, the Group's business

Subject to the stipulations of the syndicated facility described above, the Group is not subject to any restrictions on the use of capital that may significantly influence, either directly or indirectly, its business.

5.1.9 Balance sheet analysis

(In millions of euros)	**31 December 2023**	31 December 2022	Change
Non-current assets*	9,502	8,583	+10.7%
Working capital	1,275	1,440	-11.5%
Capital employed	**10,777**	**10,023**	**+7.5%**
Deferred tax assets	157	166	-5.4%
Provisions for pensions and other employee benefits	397	382	+3.9%
Other provisions	402	444	-9.5%
Total provisions	**799**	**826**	**-3.3%**
Long-term assets covering some provisions	122	118	+3.4%
Total provisions net of non-current assets	**677**	**708**	**-4.4%**
Deferred tax liabilities	436	362	+20.4%
Net debt (excluding hybrid bonds)	**2,230**	**1,666**	**+33.9%**
Shareholders' equity	**7,455**	**7,339**	**+1.6%**

* *Excluding deferred tax and including pension assets.*

Between 31 December 2022 and 31 December 2023, non-current assets increased by €919 million, primarily due to:

- the impact of acquisitions amounting to €1,094 million. This impact was mainly attributable to the consolidation of PI Advanced Materials assets, giving rise to the recognition of €434 million in goodwill, and also includes, to a lesser extent, the consolidation of Polytec PT assets. For more details, see note 3 "Business combinations" to the consolidated financial statements at 31 December 2023 in section 5.3.3 of this chapter;
- capital expenditure amounting to €634 million, of which €608 million was recurring and €26 million exceptional [(1)]. These investments are detailed in section 5.1.7 of this chapter;

(1) *See note 4 to the consolidated financial statements at 31 December 2023 in section 5.3.3 of this chapter.*

- a €98 million increase in right-of-use assets related to the Group's lease commitments;
- net depreciation, amortization and impairment expense totalling €718 million, including in particular (i) €79 million in depreciation of right-of-use assets recognized in respect of the Group's lease commitments, (ii) €128 million in depreciation and amortization related to the revaluation of property, plant and equipment and intangible assets carried out as part of the allocation of the purchase price of businesses, and (iii) €28 million in non-recurring impairment of property, plant and equipment and intangible assets; and
- a negative translation effect of €186 million, primarily due to the depreciation of the US dollar and Chinese yuan against the euro at 31 December 2023 compared with 31 December 2022.

Arkema has a policy of owning its industrial facilities. However, in rare cases, Arkema sometimes leases offices and warehouses from third-party lessors. The Group's lease commitments are recognized in accordance with IFRS 16 (for further details, see note 9.4 to the consolidated financial statements at 31 December 2023 in section 5.3.3 of this chapter). Excluding right-of-use assets recognized in application of IFRS 16, the net book value of Arkema's property, plant and equipment was €3,513 million at 31 December 2023 *versus* €3,232 million at 31 December 2022 (see note 9.3 to the consolidated financial statements at 31 December 2023 in section 5.3.3 of this chapter).

At 31 December 2023, working capital decreased by €165 million compared to 31 December 2022 and amounted to €1,275 million. This decrease includes a €38 million negative currency effect as well as a €25 million increase in working capital related to the scope effect. The decrease in working capital also reflects the price effect and strict management of inventories. Excluding PI Advanced Materials, working capital thus represented 13.1% of the Group's annual sales at 31 December 2023 (12.6% at 31 December 2022).

Consequently, between 31 December 2022 and 31 December 2023, the Group's capital employed increased by €754 million to €10,777 million. At 31 December 2023, the breakdown of capital employed by segment (excluding corporate) was as follows: 40% for the Adhesive Solutions segment (45% in 2022), 43% for Advanced Materials segment (36% in 2022),

reflecting in particular the integration of PIAM, 14% for the Coating Solutions segment (16% in 2022) and 3% for the Intermediates segment (3% in 2022). The breakdown of capital employed by geographic region is 34% for North America (38% in 2022), 39% for Europe (42% in 2022), and 27% for Asia and the rest of the world (20% in 2022), reflecting in particular the acquisition of a 54% controlling stake in PIAM.

Deferred tax assets amounted to €157 million at 31 December 2023 (€166 million at 31 December 2022).

At 31 December 2023, gross provisions amounted to €799 million. Some of these provisions, accounting for a total of €120 million, are covered by long-term assets, notably by the guarantee facility granted by TotalEnergies SE and described in notes 11.2 and 11.3 to the consolidated financial statements at 31 December 2023 (section 5.3.3 of this chapter). A pension asset of €2 million was also recognized in the balance sheet in 2023. Accordingly, at 31 December 2023, provisions net of these non-current assets amounted to €677 million against €708 million at 31 December 2022.

The breakdown of net provisions by type was as follows: pension liabilities of €265 million (€254 million in 2022), other employee benefit obligations of €130 million (€127 million in 2022), environmental contingencies of €133 million (€132 million in 2022), restructuring provisions of €30 million (€38 million in 2022), and other provisions of €119 million (€157 million in 2022). The increase in net provisions for pension liabilities of €11 million between 31 December 2022 and 31 December 2023, reflects the decrease in discount rates in the United States and Europe, partially offset by the increase in plan assets.

Long-term deferred tax liabilities amounted to €436 million at 31 December 2023, up €74 million on 31 December 2022. This increase corresponded mainly to the recognition of deferred tax liabilities as part of the PI Advanced Materials purchase price allocation processes.

Including the hybrid bonds, net debt stood at €2,930 million at end-December 2023 *versus* €2,366 million at 31 December 2022. The year on year evolution was primarily attributable to the cash flows detailed in section 5.1.7 of this chapter, and also includes the payment of a €3.40 dividend per share for 2022 representing a total payout of €253 million, as well as the €32 million cost of share buybacks carried out by the Group, and €16 million in interest paid on hybrid bonds. The net debt (including hybrid bonds) to EBITDA ratio remains well under control at 1.95x 2023 EBITDA.

Shareholders' equity amounted to €7,455 million *versus* €7,339 million at 31 December 2022. The €116 million increase primarily included (i) €425 million in net income for the period, (ii) the payment of a dividend of €3.40 per share for a total amount of €253 million, (iii) the consolidation of minority interests in PIAM for €214 million, as well as (iv) a negative €189 million translation adjustment mainly due to the depreciation of the US dollar and the Chinese yuan against the euro at end-December 2023 *versus* end-December 2022.

5.2 Trends and outlook

5.2.1 Trends

5.2.1.1 Main trends

As of the date of this document, the macroeconomic environment in which the Group operates remains marked by a lack of visibility and soft demand in line with the end of 2023. Moreover, after the high inflation seen in 2021 and 2022, certain raw materials prices have normalized, and energy costs in Europe have decreased, even if they are still above historical levels. Inflation continues to exert significant pressure on certain other operating expenses, notably wages and services, as well as on investments and interest rates. Lastly, the geopolitical tensions, which worsened following the outbreak of conflict in the Middle East, remains very strong.

Fluctuations in exchange rates can also have an impact on the Group's financial performance. The translation effect on Arkema's income statement and balance sheet resulting from a +/-10% change in the euro/US dollar exchange rate is detailed in note 12.6.1 to the consolidated financial statements at 31 December 2023 in section 5.3.3 of this document.

Finally, in light of the major challenge of decarbonization, the Group, which has strengthened its commitments and obtained SBTi validation for its 1.5°C trajectory by 2030, estimates that it will need to spend €400 million between now and that date in order to implement its climate plan. Taking into account these decarbonization investments and the Group's ongoing organic growth projects, capital expenditure should amount to around €3.85 billion over the period 2024-28, as indicated at its Capital Markets Day in September 2023.

Arkema's performance in 2024 is likely to reflect all of the above factors.

Over the longer term, the global economic environment will notably be characterized by continuing regulatory and legislative changes concerning the chemical industry in many countries where the Group operates and an ever-increasing focus on environmental topics and risks. However, the major underlying trends that are shaping sustainable development in response to the challenges of urbanization and social change, climate change, scarcity of resources and technological transformation all represent promising development opportunities for the Group that will drive its growth in the mid to long term. In parallel, Arkema benefits from a unique positioning in innovative materials to meet its customers' specific needs in market segments such as batteries, hydrogen, bio-based and recyclable materials, more environmentally friendly solutions, new energies, and advanced electronics.

At the date of this document, there is nothing to indicate that the long-term trends of the Group's main markets as described in chapter 1 and in the section "Profile, ambition and strategy" of this document might be significantly and durably affected. However, given the uncertainties surrounding the economic environment, the markets in which the Group operates, the cost of raw materials and energy, the variation in exchange rates and geopolitical stability, as well as the continuous developments in the regulatory environment, there is no guarantee that these trends will endure.

5.2.1.2 Factors likely to affect the Group's outlook

Some of the statements regarding the Group's outlook contained in this document are based on the current opinions and assumptions of the Group's executive management. Those opinions and assumptions could be influenced by certain risks, both known and unknown, as well as by uncertainties, which could lead to actual results, performance or events differing substantially from such outlook. The main risk factors that may influence the Group's future results are described in section 2.1 of this document.

5.2.2 Outlook

In the first quarter of 2024, the macroeconomic context remains marked by a lack of visibility and soft demand in the continuity of fourth-quarter 2023. First-quarter EBITDA should thus be comparable to the fourth-quarter 2023 level and below the first-quarter 2023 level, which still benefited from favorable market conditions in PVDF and upstream acrylics, which progressively normalized during 2023.

Irrespective of a progressive rebound in demand, Arkema will benefit, starting in second-quarter 2024, from the ramp-up of several growth projects, which should contribute in the full year around €60 million to €70 million in terms of EBITDA. These projects include notably the hydrofluoric acid plant in partnership with Nutrien in the United States, the bio-based polyamide 11 unit in Singapore, the expansion of the Sartomer® plant in China and of the Pebax® plant in France, and the development of 1233zd fluorospecialties with low global warming potential. Arkema will also benefit from the contribution of the PIAM acquisition and from its associated growth synergies, in particular in the electronics and battery markets. Adhesive Solutions should achieve good growth in 2024, benefiting from the positive dynamic which started in second-half 2023.

Based on these factors, Arkema aims to achieve in 2024 a higher EBITDA, estimated at €1.5 billion to €1.7 billion depending on the level of recovery in demand, and with seasonality more weighted to the second half of the year.

Moreover, the Group will continue to implement its strategic roadmap unveiled at the Capital Markets Day of September 2023. It should notably confirm during the year its capital expenditure plan to support the growth of batteries for electric vehicles in the United States. It will continue to strengthen, in partnership with its customers, its innovation efforts in solutions for a less carbonized and more sustainable world, and pursue the implementation of its climate plan.

The Group’s long-term ambition is detailed in the “Profile, ambition and strategy” section in the introduction of this document.

5.2.3 Subsequent events after the accounts approval date

At the time of the yearly renewal of its Euro Medium Term Notes (EMTN) program, the Group included the possibility of issuing subordinated bonds in the documentation to give it greater flexibility of access to the markets for this type of instrument. The prospectus was granted the AMF's visa on March 8 under no. 24-064.

On 25 March 2024, as part of this program, Arkema issued hybrid bonds totaling €400 million. These bonds include a first call option that may be exercised at the discretion of the issuer on 25 March 2029.

5.3 Consolidated financial statements

5.3.1 Statutory auditors' report on the consolidated financial statements

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S.A. au capital de €5 497 100
775 726 417 R.C.S. Nanterre

Commissaire aux Comptes
Membre de la compagnie
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Commissaire aux Comptes
Membre de la compagnie
régionale de Versailles et du Centre

Arkema

Year ended December 31, 2023

Statutory auditors' report on the consolidated financial statements

To the Annual General Meeting of Arkema,

Opinion

In compliance with the engagement entrusted to us by your Annual General Meeting, we have audited the accompanying consolidated financial statements of Arkema for the year ended December 31, 2023.

In our opinion, the consolidated financial statements give a true and fair view of the assets and liabilities and of the financial position of the Group as at December 31, 2023 and of the results of its operations for the year then ended in accordance with International Financial Reporting Standards as adopted by the European Union.

The audit opinion expressed above is consistent with our report to the Audit Committee.

Basis for Opinion

Audit Framework

We conducted our audit in accordance with professional standards applicable in France. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Our responsibilities under those standards are further described in the *Statutory Auditors' Responsibilities for the Audit of the Consolidated Financial Statements* section of our report.

Independence

We conducted our audit engagement in compliance with the independence requirements of the French Commercial Code *(Code de commerce)* and the French Code of Ethics for Statutory Auditors *(Code de déontologie de la profession de commissaire aux comptes)* for the period from January 1, 2023 to the date of our report and specifically we did not provide any prohibited non-audit services referred to in Article 5(1) of Regulation (EU) No. 537/2014.

Justification of Assessments - Key Audit Matters

In accordance with the requirements of Articles L. 821-53 and R. 821-180 of the French Commercial Code *(Code de commerce)* relating to the justification of our assessments, we inform you of the key audit matters relating to risks of material misstatement that, in our professional judgment, were of most significance in our audit of the consolidated financial statements of the current period, as well as how we addressed those risks.

These matters were addressed in the context of our audit of the consolidated financial statements as a whole and in forming our opinion thereon, and we do not provide a separate opinion on specific items of the consolidated financial statements.

Valuation of intangible assets and property, plant and equipment

<table>
<tr><th>Risk identified</th><th>Our response</th></tr>
<tr><td>Your Group subjects the recoverable amount of its intangible assets and property, plant and equipment to impairment tests, the terms of which are described in Note 9.5 to the consolidated accounts. As at December 31, 2023, these fixed assets, including goodwill, amounted to M€ 9 186 in net value, or 63.3% of the Group's total assets after recognition of impairments of the fiscal year.

The valuation of these fixed assets is a key audit matter given their highly material amount in the consolidated financial statements of the Group and because the determination of their recoverable amount – based on future discounted cash flow projections – rely on the use of assumptions made by Management, as stated in Note 9.5 to the consolidated financial statements.</td><td>We examined the compliance of the method applied by your Group with IAS 36, particularly with regard to the identification of groups of assets for which the impairment tests are performed. We appraised the conditions of the implementation of these impairment tests as well as the data and assumptions used. In particular, we:
• analyzed the process for developing the cash flow projections used in the plan prepared by the Group for the purpose of impairment testing. We checked that these projections had been approved by the General Management ;
• compared the main assumptions used for these tests with those of the five year plan validated by the Executive Committee ;
• compared the estimates used for previous periods with the actual figures ;
• verified the mathematical accuracy of the calculation, including that of the sensitivity tests ;
• compared, against external references, the discount rate and measured the sensitivity of the impairment tests following the methods described in Note 9.5 to the consolidated financial statements ;
• analyzed the consistency of the information and the parameters used in these tests, with regard to (i) our knowledge of the sectors in which your Group operates, (ii) our assessment of the five year plan, (iii) our interviews with your Group's Management and (iv) considering the elements that could affect certain assets;
• analyzed the compliance of the information provided in the notes to the consolidated financial statements with IAS 36.</td></tr>
</table>

Environmental risks

<table>
<tr><th>Risk identified</th><th>Our response</th></tr>
<tr><td>The areas of activity in which your Group operates present a risk of incurring its environmental liability. Your Group assesses its exposure to these risks and presents, in its consolidated financial statements, an estimate of its liabilities and contingent liabilities relating to costs arising from commitments or legal, regulatory or contractual obligations, or those arising from the Group's practices or public commitments, as described in Note 11 to the consolidated financial statements. As at December 31, 2023, these provisions amounted to M€ 216. The liabilities and contingent liabilities are listed in Note 11.2 to the consolidated financial statements.

We considered the valuation and the presentation in the notes of these liabilities and contingent liabilities to be a key audit matter in light of the fact that they are estimates, their sensitivity to regulatory developments, uncertainties as to the technical solutions to be implemented, and their materiality in the consolidated financial statements.</td><td>Our work, with the help of our environmental risk assessment specialists, consisted in :
• examining the procedures for identifying and recording the risks of incurring your Group's liability in environmental matters ;
• obtaining an understanding of the risk analysis carried out by Management, and examining the corresponding documentation ;
• analyzing the assumptions used by your Group to estimate exposure to those risks and the amount of the provisions or their nature of contingent liabilities ;
• comparing the information provided in the notes to the consolidated financial statements with that required by IFRS.</td></tr>
</table>

Specific Verifications

We have also performed, in accordance with professional standards applicable in France, the specific verifications required by laws and regulations of the information relating to the Group given in the Board of Directors' management report.

We have no matters to report as to its fair presentation and its consistency with the consolidated financial statements.

We attest that the consolidated non-financial statement required by Article L. 225-102-1 of the French Commercial Code (Code de commerce) is included in the information relating to the Group given in the management report, it being specified that, in accordance with Article L. 823-10 of said Code, we have verified neither the fair presentation nor the consistency with the consolidated financial statements of the information contained therein. This information should be reported on by an independent third party.

Report on Other Legal and Regulatory Requirements

Format of preparation of the consolidated financial statements intended to be included in the annual financial report

We have also verified, in accordance with the professional standard applicable in France relating to the procedures performed by statutory auditors regarding the annual and consolidated financial statements prepared in the European single electronic format, that the preparation of the consolidated financial statements intended to be included in the annual financial report mentioned in Article L. 451-1-2, I of the French Monetary and Financial Code *(Code monétaire et financier)*, prepared under the Chairman and Chief Executive Officer's responsibility, complies with the single electronic format defined in Commission Delegated Regulation (EU) No. 2019/815 of 17 December 2018. Regarding consolidated financial statements, our work includes verifying that the tagging thereof complies with the format defined in the above-mentioned regulation.

On the basis of our work, we conclude that the preparation of the consolidated financial statements intended to be included in the annual financial report complies, in all material respects, with the European single electronic format.

Due to the technical limitations inherent to the block-tagging of the consolidated financial statements according to the European single electronic format, the content of certain tags of the notes may not be rendered identically to the accompanying consolidated financial statements.

Furthermore, we have no responsibility to verify that the consolidated financial statements that will ultimately be included by your Company in the annual financial report filed with the AMF *(Autorité des marchés financiers)* agree with those on which we have performed our work.

Appointment of the Statutory Auditors

We were appointed as statutory auditors of Arkema by your annual general meeting held on June 23, 2005 for KPMG S.A. and on May 10, 2006 for ERNST AND YOUNG Audit.

As at December 31, 2023, KPMG S.A. was in the nineteenth year of total uninterrupted engagement, including eighteenth years since the securities of the Company were admitted to trading on a regulated market and ERNST AND YOUNG Audit was in the eighteenth years.

Responsibilities of Management and Those Charged with Governance for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with International Financial Reporting Standards as adopted by the European Union and for such internal control as Management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, Management is responsible for assessing the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless it is expected to liquidate the Company or to cease operations.

The Audit Committee is responsible for monitoring the financial reporting process and the effectiveness of internal control and risk management systems and where applicable, its internal audit, regarding the accounting and financial reporting procedures.

The consolidated financial statements were approved by the Board of Directors.

Statutory Auditors' Responsibilities for the Audit of the Consolidated Financial Statements

Objectives and audit approach

Our role is to issue a report on the consolidated financial statements. Our objective is to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with professional standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users made on the basis of these consolidated financial statements.

As specified in Article L. 821-55 of the French Commercial Code *(Code de commerce)*, our statutory audit does not include assurance on the viability of the Company or the quality of management of the affairs of the Company.

As part of an audit conducted in accordance with professional standards applicable in France, the statutory auditor exercises professional judgment throughout the audit and furthermore:

- Identifies and assesses the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, designs and performs audit procedures responsive to those risks, and obtains audit evidence considered to be sufficient and appropriate to provide a basis for his opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtains an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the internal control.

- Evaluates the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by Management in the consolidated financial statements.
- Assesses the appropriateness of Management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. This assessment is based on the audit evidence obtained up to the date of his audit report. However, future events or conditions may cause the Company to cease to continue as a going concern. If the statutory auditor concludes that a material uncertainty exists, there is a requirement to draw attention in the audit report to the related disclosures in the consolidated financial statements or, if such disclosures are not provided or inadequate, to modify the opinion expressed therein.
- Evaluates the overall presentation of the consolidated financial statements and assesses whether these statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtains sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. The statutory auditor is responsible for the direction, supervision and performance of the audit of the consolidated financial statements and for the opinion expressed on these consolidated financial statements.

Report to the Audit Committee

We submit to the Audit Committee a report which includes in particular a description of the scope of the audit and the audit program implemented, as well as the results of our audit. We also report significant deficiencies, if any, in internal control regarding the accounting and financial reporting procedures that we have identified.

Our report to the Audit Committee includes the risks of material misstatement that, in our professional judgment, were of most significance in the audit of the consolidated financial statements of the current period and which are therefore the key audit matters that we are required to describe in this report.

We also provide the Audit Committee with the declaration provided for in Article 6 of Regulation (EU) No. 537/2014, confirming our independence within the meaning of the rules applicable in France as set out in particular in Articles L. 821-27 to L. 821-34 of the French Commercial Code *(Code de commerce)* and in the French Code of Ethics for Statutory Auditors *(Code de déontologie de la profession de commissaire aux comptes)*. Where appropriate, we discuss with the Audit Committee the risks that may reasonably be thought to bear on our independence, and the related safeguards.

Paris-La Défense, February 28, 2024

The Statutory Auditors

KPMG S.A.		ERNST AND YOUNG Audit
Éric Dupré	François Quédiniac	Christine Vitrac

5.3.2 Consolidated financial statements at 31 December 2023

Consolidated income statement

(In millions of euros)	Notes	2023	2022
Sales	***(4.9 & 4.10)***	**9,514**	**11,550**
Operating expenses	*(6.1.2)*	(7,554)	(8,970)
Research and development expenses	*(6.1.3)*	(275)	(270)
Selling and administrative expenses		(874)	(868)
Other income and expenses	*(6.1.5)*	(130)	(155)
Operating income	***(6.1)***	**681**	**1,287**
Equity in income of affiliates	*(10.1 & 10.2)*	(9)	(6)
Financial result	*(12.1)*	(70)	(61)
Income taxes	*(8.1)*	(177)	(254)
Net income		**425**	**966**
Attributable to non-controlling interests		7	1
Net income – Group share		**418**	**965**
Earnings per share (in euros)	*(13.7)*	*5.39*	*12.81*
Diluted earnings per share (in euros)	*(13.7)*	*5.36*	*12.75*

Consolidated statement of comprehensive income

(In millions of euros)	Notes	2023	2022
Net income		**425**	**966**
Hedging adjustments		(45)	26
Other items		0	1
Deferred taxes on hedging adjustments and other items		3	(2)
Change in translation adjustments	*(13.6)*	(189)	108
Other recyclable comprehensive income		**(231)**	**133**
Impact of remeasuring unconsolidated investments		—	(1)
Actuarial gains and losses	*(7.3)*	(22)	88
Deferred taxes on actuarial gains and losses		4	(14)
Other non-recyclable comprehensive income		**(18)**	**73**
TOTAL INCOME AND EXPENSES RECOGNIZED DIRECTLY THROUGH EQUITY		**(249)**	**206**
Total comprehensive income		**176**	**1,172**
Attributable to non-controlling interests		0	—
Total comprehensive income – Group share		176	1,172

Consolidated balance sheet

(In millions of euros)	Notes	31 December 2023	31 December 2022
ASSETS			
Goodwill	*(9.1)*	3,040	2,655
Other intangible assets, net	*(9.2)*	2,416	2,178
Property, plant and equipment, net	*(9.3)*	3,730	3,429
Investments in equity affiliates	*(10.1 & 10.2)*	13	24
Other investments	*(10.3)*	52	52
Deferred tax assets	*(8.2)*	157	166
Other non-current assets	*(10.4)*	251	245
Total non-current assets		**9,659**	**8,749**
Inventories	*(6.2)*	1,208	1,399
Accounts receivable	*(6.2)*	1,261	1,360
Other receivables and prepaid expenses	*(6.2)*	170	202
Income taxes recoverable	*(8)*	142	130
Current financial derivative assets	*(12.2)*	32	57
Cash and cash equivalents	*(12.4)*	2,045	1,592
Assets held for sale	*(3.3)*	—	22
Total current assets		**4,858**	**4,762**
TOTAL ASSETS		**14,517**	**13,511**
LIABILITIES AND SHAREHOLDERS' EQUITY			
Share capital	*(13.1)*	750	750
Paid-in surplus and retained earnings		6,304	6,218
Treasury shares	*(13.3)*	(21)	(20)
Translation adjustments	*(13.6)*	170	352
Shareholders' equity – Group share		**7,203**	**7,300**
Non-controlling interests		252	39
Total shareholders' equity		**7,455**	**7,339**
Deferred tax liabilities	*(8.2)*	436	362
Provisions for pensions and other employee benefits	*(7.3)*	397	382
Other provisions and non-current liabilities	*(11.1)*	416	458
Non-current debt	*(12.3)*	3,734	2,560
Total non-current liabilities		**4,983**	**3,762**
Accounts payable	*(6.2)*	1,036	1,149
Other creditors and accrued liabilities	*(6.2)*	392	437
Income taxes payable	*(8)*	83	109
Current financial derivative liabilities	*(12.2)*	27	13
Current debt	*(12.3)*	541	698
Liabilities associated with assets held for sale	*(3.3)*	—	4
Total current liabilities		**2,079**	**2,410**
TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY		**14,517**	**13,511**

Consolidated cash flow statement

(In millions of euros)	Notes	2023	2022
OPERATING CASH FLOWS			
Net income		425	966
Depreciation, amortization and impairment of assets		718	707
Other provisions and deferred taxes		(30)	(45)
(Gains)/Losses on sales of long-term assets	*(3.3)*	(34)	(38)
Undistributed affiliate equity earnings		10	6
Change in working capital	*(6.2)*	158	(137)
Other changes		25	37
Cash flow from operating activities		**1,272**	**1,496**
INVESTING CASH FLOWS			
Intangible assets and property, plant and equipment additions	*(4.3)*	(634)	(707)
Change in fixed asset payables	*(6.2)*	(44)	(23)
Acquisitions of operations, net of cash acquired	*(3.2)*	(714)	(1,616)
Increase in long-term loans		(71)	(93)
Total expenditures		**(1,463)**	**(2,439)**
Proceeds from sale of operations, net of cash transferred	*(3.3)*	32	19
Change in fixed asset receivables		(1)	—
Proceeds from sale of intangible assets and property, plant and equipment	*(3.2)*	14	18
Repayment of long-term loans		63	61
Total divestitures		**108**	**98**
Cash flow from investing activities		**(1,355)**	**(2,341)**
FINANCING CASH FLOWS			
Issuance/(Repayment) of shares and paid-in surplus	*(13.1)*	—	48
Purchase of treasury shares	*(13.3)*	(32)	(22)
Dividends paid to parent company shareholders	*(13.4)*	(253)	(222)
Interest paid to bearers of subordinated perpetual notes	*(13.2)*	(16)	(16)
Dividends paid to non-controlling interests and buyout of minority interests		(3)	(4)
Increase in long-term debt	*(12.3)*	1,096	6
Decrease in long-term debt	*(12.3)*	(85)	(233)
Increase/(Decrease) in short-term debt	*(12.3)*	(191)	611
Cash flow from financing activities		**516**	**168**
Net increase/(decrease) in cash and cash equivalents		433	(677)
Effect of exchange rates and changes in scope		20	(16)
Cash and cash equivalents at beginning of period		1,592	2,285
Cash and cash equivalents at end of period	*(12.4)*	**2,045**	**1,592**

Consolidated statement of changes in shareholders' equity

(In millions of euros)	Share capital	Paid-in surplus	Hybrid bonds	Retained earnings	Translation adjustments	Treasury shares	Share-holders' equity – Group share	Non-controlling interests*	Share-holders' equity
At 1 January 2023	**750**	**1,067**	**700**	**4,451**	**352**	**(20)**	**7,300**	**39**	**7,339**
Cash dividend	—	—	—	(269)	—	—	(269)	(3)	(272)
Issuance of share capital	—	—	—	—	—	—	—	—	—
Capital reduction by cancellation of treasury shares	—	—	—	—	—	—	—	—	—
Purchase of treasury shares	—	—	—	—	—	(32)	(32)	—	(32)
Grants of treasury shares to employees	—	—	—	(31)	—	31	—	—	—
Share-based payments	—	—	—	25	—	—	25	—	25
Issuance of hybrid bonds	—	—	—	—	—	—	—	—	—
Redemption of hybrid bonds	—	—	—	—	—	—	—	—	—
Other	—	—	—	3	—	—	3	216	219
Transactions with shareholders	**—**	**—**	**—**	**(272)**	**—**	**(1)**	**(273)**	**213**	**(60)**
Net income	—	—	—	418	—	—	418	7	425
Total income and expenses recognized directly through equity	—	—	—	(60)	(182)	—	(242)	(7)	(249)
Total comprehensive income	**—**	**—**	**—**	**358**	**(182)**	**—**	**176**	**—**	**176**
At 31 December 2023	**750**	**1,067**	**700**	**4,537**	**170**	**(21)**	**7,203**	**252**	**7,455**

* *"Other" refers to the share of the PI Advanced Materials acquisition (see note 3.2 "Business combinations").*

(In millions of euros)	Share capital	Paid-in surplus	Hybrid bonds	Retained earnings	Translation adjustments	Treasury shares	Shareholders' equity – Group share	Non-controlling interests	Shareholders' equity
At 1 January 2022	**767**	**1,272**	**700**	**3,626**	**243**	**(305)**	**6,303**	**47**	**6,350**
Cash dividend	—	—	—	(238)	—	—	(238)	(4)	(242)
Issuance of share capital	7	41	—	—	—	—	48	—	48
Capital reduction by cancellation of treasury shares	(24)	(246)	—	—	—	270	—	—	—
Purchase of treasury shares	—	—	—	—	—	(22)	(22)	—	(22)
Grants of treasury shares to employees	—	—	—	(37)	—	37	—	—	—
Share-based payments	—	—	—	37	—	—	37	—	37
Issuance of hybrid bonds	—	—	—	—	—	—	—	—	—
Redemption of hybrid bonds	—	—	—	—	—	—	—	—	—
Other	—	—	—	—	—	—	—	(4)	(4)
Transactions with shareholders	**(17)**	**(205)**	**—**	**(238)**	**—**	**285**	**(175)**	**(8)**	**(183)**
Net income	—	—	—	965	—	—	965	1	966
Total income and expenses recognized directly through equity	—	—	—	98	109	—	207	(1)	206
Total comprehensive income	**—**	**—**	**—**	**1,063**	**109**	**—**	**1,172**	**—**	**1,172**
At 31 December 2022	**750**	**1,067**	**700**	**4,451**	**352**	**(20)**	**7,300**	**39**	**7,339**

5.3.3 Notes to the consolidated financial statements at 31 December 2023

Note 1 Highlights

1.1 Portfolio management

On 28 June 2023, the Group announced the proposed acquisition of Glenwood Private Equity's 54% stake in the listed South Korean company PI Advanced Materials (PIAM), for an enterprise value of €728 million. With annual sales of over €200 million in 2022, an EBITDA margin of almost 30% and best-in-class manufacturing, PIAM is the global leader in polyimide films, delivering superior growth in the attractive consumer electronics and electric vehicles markets. Given PIAM's best-in-class innovation, ultra-high performance product portfolio and leading position, this project is perfectly aligned with the Group's ambition to be a pure player in Specialty Materials and will strengthen the Advanced Materials segment's portfolio and performance. The company is fully consolidated in Arkema's financial statements as of 1 December 2023, the date the deal was finalized.

In addition, on 1 June 2023, Arkema expanded its offering of engineering adhesives by finalizing the acquisition of Polytec PT, a German company specialized in adhesives for batteries and electronics applications. The business generates annual sales of around €15 million.

Lastly, the Group also continued its dynamic business portfolio management. On 3 January 2023, it finalized the divestment of Febex, a company specialized in phosphorus-based chemistry, to Belgian group Prayon. At 31 December 2022, Febex's assets and liabilities had been reclassified in the balance sheet as assets and liabilities held for sale.

The impacts of these operations are described in note 3.1 "Business combinations" and note 3.2 "Assets held for sale".

1.2 Other highlights

Arkema successfully completed two bond issues:

- a €400 million issue on 16 January 2023 with an 8-year maturity and an annual coupon of 3.50%;
- a €700 million issue on 13 November 2023 with a 6.5-year maturity and an annual coupon of 4.25%.

In line with its financing policy, the Group's aim with these issues is to continue refinancing its upcoming bond maturities and to extend the average maturity of its debt.

Arkema is rated BBB+ (positive outlook) by Standard & Poor's and Baa1 (stable outlook) by Moody's.

Note 2 Accounting policies and new standards

Arkema, a major player in Specialty Chemicals and Advanced Materials, is a French limited liability company *(société anonyme)* with a Board of Directors, subject to the provisions of book II of the French Commercial Code and all other legal provisions applicable to French commercial companies. The Arkema Group's LEI is 9695000EHMS84KKP2785.

The Company's head office is at 420 rue d'Estienne d'Orves, 92700 Colombes (France). It was incorporated on 31 January 2003 and the shares of Arkema have been listed on the Paris stock exchange (Euronext) since 18 May 2006. The Group's parent company is Arkema S.A.

The Group's consolidated financial statements at 31 December 2023 were prepared under the responsibility of the Chairman and CEO of Arkema and were approved for publication by the Board of Directors of Arkema on 28 February 2024. They will be submitted to the approval of the shareholders' general meeting of 15 May 2024.

The consolidated financial statements at 31 December 2023 were prepared in accordance with the IFRS (International financial reporting Standards) issued by the IASB (International Accounting Standards Board) as released at 31 December 2023 and the IFRS endorsed by the European Union at 31 December 2023.

The accounting framework and standards adopted by the European Commission can be accessed from the following website:

https://ec.europa.eu/info/law/international-accounting-standards-regulation-ec-no-1606-2002.

The accounting policies applied in preparing the consolidated financial statements at 31 December 2023 are identical to those used in the consolidated financial statements at 31 December 2022, except for IFRS standards, amendments and interpretations, as adopted by the European Union and the IASB, that are mandatory for accounting periods commencing on or after 1 January 2023 (and which had not been applied early by the Group), namely:

Amendments to IAS 1	Disclosure of accounting policies	Adopted by the European Union on 3 March 2022
Amendments to IAS 8	Definition of accounting estimates	Adopted by the European Union on 3 March 2022
Amendments to IAS 12	Deferred tax related to assets and liabilities arising from a single transaction	Adopted by the European Union on 12 August 2022
Amendments to IAS 12	International tax reform – Pillar Two model rules	Adopted by the European Union on 9 November 2023
Amendments to IFRS 17	Initial application of IFRS 17 and IFRS 9 – Comparative information	Adopted by the European Union on 9 September 2022
IFRS 17	Insurance contracts	Adopted by the European Union on 23 November 2021

Application of these amendments and of IFRS 17 had no significant impact on the financial statements at 31 December 2023.

The standards, amendments and interpretations published by the IASB and the IFRS IC (IFRS Interpretations Committee) which are not yet mandatory for accounting periods commencing on or after 1 January 2023 (and which have not been applied early by the Group) are:

Amendments to IAS 1	Classification of liabilities as current or non-current	Adopted by the European Union on 21 December 2023
Amendments to IAS 7 and IFRS 7	Supplier financing arrangements	Not adopted by the European Union at 31 December 2023
Amendments to IAS 21	Lack of exchangeability	Not adopted by the European Union at 31 December 2023
Amendments to IFRS 16	Lease liability in a sale and leaseback	Adopted by the European Union on 21 November 2023

The Group does not expect application of the amendments to IAS 1, IAS 7, IAS 21, IFRS 7 and IFRS 16 to have a significant impact. The Group is continuing to assess its exposure to Pillar Two provisions. Given the small number of countries affected by the reform, it currently believes that the impact will not be significant.

Preparation of the consolidated financial statements in accordance with IFRS requires Group management to make estimates and determine assumptions that can have an impact on the amounts recognized in assets and liabilities at the balance sheet date, and have a corresponding impact on the income statement. Management made its estimates and determined its assumptions on the basis of past experience and taking into account different factors considered to be reasonable for the valuation of assets and liabilities. These financial statements therefore take into consideration in particular the current conflict in Ukraine and are based on information available at the closing date. Use of different assumptions could have a material effect on these valuations. The main assumptions made by management in preparing the financial statements are those used for measuring the recoverable value of property, plant and equipment and intangible assets, pension benefit obligations, deferred taxes and provisions. The disclosures provided concerning contingent assets and liabilities and off-balance sheet commitments at the date of preparation of the consolidated financial statements also involve the use of estimates.

The estimates and judgments incorporating the impacts of climate change in particular are presented in note 5.

The consolidated financial statements are prepared in accordance with the historical cost convention, except for certain financial assets and liabilities which are recognized at fair value.

The consolidated financial statements are presented in millions of euros, rounded to the nearest million, unless otherwise indicated.

The functional operating currency of foreign companies in the scope of consolidation is their local currency, in which most of their transactions are denominated. Their balance sheets are translated into euros on the basis of exchange rates at the end of the period. The statements of income and of cash flows are translated using the average exchange rates during the period. Foreign exchange differences resulting from translation of the financial statements of these subsidiaries are recorded either in “Translation adjustments” in shareholders’ equity in the consolidated financial statements for the Group share, or in “Non-controlling interests” for the share not directly or indirectly attributable to the Group. In exceptional cases, a company’s functional currency may differ from the local currency.

In application of IAS 21 “The effects of changes in foreign exchange rates”, transactions denominated in foreign currencies are translated by the entity carrying out the transaction into its functional currency at the exchange rate applicable on the transaction date. Monetary balance sheet items are restated at the closing exchange rate at the balance sheet date. Gains and losses resulting from translation are recognized in recurring operating income, unless they result from unhedged financing, in which case they are included in the financial result.

In the notes to the financial statements, the main accounting methods are shown with a blue background.

Note 3 Scope of consolidation

3.1 Consolidation principles

All material transactions between consolidated companies, and all intercompany profits, are eliminated.

Control

The Group controls an entity when all of the three following conditions are fulfilled:

(i) the Group holds power over the entity (has effective rights conferring a current ability to direct the entity's relevant activities);

(ii) the Group is exposed or entitled to variable returns; and

(iii) the Group has the ability to use its power over the investee to influence the amount of the returns received.

Companies controlled directly or indirectly by the Group are fully consolidated, except for certain entities considered non-significant for the consolidated financial statements.

Joint arrangements

A joint arrangement is an operation over which two or more parties have joint control. Joint control is the contractually agreed sharing of control over an arrangement. It exists only when the decisions about the relevant activities require the unanimous consent of the parties sharing control.

There are two categories of joint arrangements:

- a joint operation is a joint arrangement in which the parties have rights to the assets and obligations for the liabilities. The Group recognizes the assets, liabilities, income and expenses in proportion to its percentage of interest in the capital of the joint operation; and
- a joint venture is a joint arrangement in which the parties have rights to the net assets of the arrangement. The Group applies the equity method to this type of joint arrangement.

To determine the type of joint arrangement, the Group must take the following factors into consideration:

- the structure of the joint arrangement (identifying whether it takes the form of a separate vehicle); and
- when the joint arrangement takes the form of a separate vehicle: the legal form, the terms of the contractual arrangements and other facts and circumstances.

Assessment of other facts and circumstances has led the Group to classify a certain number of joint arrangements as joint operations.

Associates

An associate is an entity over which the Group exercises significant influence. If the Group directly or indirectly holds 20% or more of the voting rights in the issuing entity, it is presumed to exercise significant influence. If it holds less than 20%, significant influence must be demonstrated.

Investments in associates are accounted for under the equity method.

Other investments

Shares owned in companies which do not meet the criteria set out above are included in "Other investments" and recognized in accordance with IFRS 9 (see note 10.3 "Other investments").

3.2 Business combinations

The Group uses the acquisition method for the recognition of business combinations, in accordance with IFRS 3 (Revised).

The identifiable assets acquired and liabilities assumed are stated at fair value at the acquisition date.

Where the business combination agreement provides for a purchase price adjustment, the Group includes the fair value of this adjustment at the acquisition date in the cost of the business combination, even if the adjustment is optional.

Non-controlling interests are measured at the acquisition date, either at fair value (the full goodwill method) or the NCI's proportionate share of net assets of the entity acquired (the partial goodwill method). The decision of which option to use is made for each business combination. Subsequent acquisitions of investments are always recorded in equity, regardless of the choice made at the time of the acquisition.

At the acquisition date, goodwill is measured as the difference between:

- the acquisition price plus the amount of any non-controlling interests in the acquired entity and the fair value of the acquirer's previously held equity interest in that acquired entity; and
- the fair value of identifiable assets and liabilities.

Goodwill is recognized in the balance sheet assets. Contingent liabilities are recognized in the balance sheet when the obligation concerned is current at the acquisition date and their fair value can be reliably measured.

Any negative goodwill arising on an acquisition on favorable terms, and direct acquisition expenses, are recognized immediately in the income statement under "Other income and expenses" (see note 6.1.5 "Other income and expenses").

The Group has a maximum of 12 months to finalize determination of the acquisition price and goodwill.

3.2.1 Finalization of the BOSTIK SOUTH AFRICA (PTY) LTD (formerly Permoseal), Shanghai Zhiguan Polymer Materials (PMP) and Polimeros Especiales purchase price allocations

The Group has finalized the purchase price allocations for BOSTIK SOUTH AFRICA (PTY) LTD (formerly Permoseal), Shanghai Zhiguan Polymer Materials (PMP) and Polimeros Especiales.

Intangible assets stated at fair value primarily comprise trademarks, a non-compete agreement, technologies and customer relations. They amount to €37 million.

Final goodwill totals €59 million for the three acquisitions and mainly corresponds to the value of future technologies and expected business development. This goodwill is not amortizable for tax purposes.

3.2.2 Acquisitions in 2023

Business combinations in 2023 correspond to the acquisitions described in note 1 "Highlights", namely:

PI Advanced Materials Co., Ltd., in which the Group acquired a 54% stake; and

Polytec PT Gmbh Polymere Technologien, in which the Group acquired a 100% stake.

The Group used the acquisition method for the accounting treatment of these operations.

Acquisition of PI Advanced Materials Co., Ltd.

On 1 December 2023, Arkema finalized the acquisition of Glenwood Private Equity's 54% stake in the listed South Korean company PI Advanced Materials (PIAM).

In the financial statements at 31 December 2023, provisional goodwill calculated using the partial goodwill method was recognized in an amount of €434 million. This goodwill cannot be amortized for tax purposes. The fair value of the identifiable assets acquired and liabilities assumed amounts to €465 million.

The provisional allocation of the purchase price is detailed below:

(In millions of euros)	Fair value of PI Advanced Materials Co., Ltd.
Intangible assets	323
Property, plant and equipment	259
Other assets and liabilities	(117)
Total net assets acquired (a)	**465**
Net assets attributable to non-controlling interests (b)	(214)
54.07% share of net assets acquired (c)=(a)-(b)	**251**
Purchase price (d)	685
Goodwill at acquisition date (e)=(d)-(c)	**434**

Intangible assets correspond mainly to technology and customer relationships.

Acquisition of Polytec PT Gmbh Polymere Technologien

Provisional goodwill on the acquisition of Polytec PT Gmbh Polymere Technologien amounts to €62 million. Goodwill on the acquisition amortizable for tax purposes represents €12 million. The amount recognized in the financial statements at 31 December 2023 for the identifiable assets acquired and liabilities assumed at the acquisition dates is €7 million, of which €6 million in property, plant and equipment.

3.3 Assets held for sale

On 28 October 2022, Arkema announced the proposed divestment of Febex to Belgian group Prayon. Specialized in phosphorus-based chemistry, Febex reported sales of around €30 million in 2021. This divestment was finalized on 3 January 2023.

In application of IFRS 5 “Non-current assets held for sale and discontinued operations”, the assets held for sale and the associated liabilities were presented in two specific lines of the balance sheet at 31 December 2022. Non-current assets and groups of assets held for sale are stated at the lower of book value and fair value net of costs of disposal.

In the 2023 income statement, the capital gain amounts to €23 million before tax and is included in “Other income and expenses” for €23 million in 2023 (see note 6.1 “Other income and expenses”).

The price received is included in “Proceeds from sale of operations, net of cash transferred” in the cash flow statement in 2023.

The assets sold on 3 January 2023 are identical to those classified as assets held for sale in the 2022 financial statements, and are as follows:

(In millions of euros)	**2023**
Property, plant and equipment	4
Total non-current assets	**4**
Inventories	9
Accounts receivable	3
Other receivables and prepaid expenses	1
Cash and cash equivalents	5
Total current assets	**18**
ASSETS HELD FOR SALE	**22**
Accounts payable	2
Income taxes payable	1
Other current liabilities	1
Total current liabilities	**4**
LIABILITIES ASSOCIATED WITH ASSETS HELD FOR SALE	**4**

3.4 Warranties related to sales of businesses

When selling businesses, the Arkema Group has sometimes granted the purchaser warranties in respect of unrecorded liabilities. In most cases, these warranties are capped and granted for a limited period of time. They are also limited in terms of their coverage to certain types of expenses or litigation. In the majority of cases, they cover risks of occurrence of environmentally related expenses or litigation.

The cumulative residual amount of capped warranties in respect of unrecorded liabilities granted by the Group amounts to €55 million at 31 December 2023 (€55 million at 31 December 2022). These amounts are stated net of provisions recognized in the balance sheet in respect of such warranties.

Note 4 Alternative performance indicators and information by segment

To monitor and analyze the financial performance of the Group and its activities, Group management uses alternative performance indicators. These are financial indicators that are not defined by IFRS. This note presents a reconciliation of these indicators and the aggregates from the consolidated financial statements under IFRS.

4.1 Recurring operating income (REBIT) and EBITDA

(In millions of euros)	Notes	2023	2022
OPERATING INCOME		**681**	**1,287**
• Depreciation and amortization related to the revaluation of property, plant and equipment and intangible assets as part of the allocation of the purchase price of businesses		(128)	(118)
• Other income and expenses	*(6.1.5)*	(130)	(155)
RECURRING OPERATING INCOME (REBIT)		**939**	**1,560**
• Recurring depreciation and amortization of property, plant and equipment and intangible assets		(562)	(550)
EBITDA		**1,501**	**2,110**

Details of depreciation and amortization of property, plant and equipment and intangible assets:

(In millions of euros)	Notes	2023	2022
Depreciation and amortization of property, plant and equipment and intangible assets	***(9.1 & 9.2 & 9.3 & 9.4)***	**(718)**	**(707)**
Of which: Recurring depreciation and amortization of property, plant and equipment and intangible assets		(562)	(550)
Of which: Depreciation and amortization related to the revaluation of property, plant and equipment and intangible assets as part of the allocation of the purchase price of businesses		(128)	(118)
Of which: Impairment included in other income and expenses	*(6.1.5)*	(28)	(39)

4.2 Adjusted net income and adjusted earnings per share

(In millions of euros)	Notes	2023	2022
NET INCOME – GROUP SHARE		**418**	**965**
• Depreciation and amortization related to the revaluation of property, plant and equipment and intangible assets as part of the allocation of the purchase price of businesses		(128)	(118)
• Other income and expenses	*(6.1.5)*	(130)	(155)
• Other income and expenses attributable to non-controlling interests		—	—
• Taxes on depreciation and amortization related to the revaluation of property, plant and equipment and intangible assets as part of the allocation of the purchase price of businesses		30	25
• Taxes on other income and expenses		14	27
• One-time tax effects		(21)	19
ADJUSTED NET INCOME		**653**	**1,167**
Weighted average number of ordinary shares		74,647,205	74,095,040
Weighted average number of potential ordinary shares	*(13.7)*	75,043,514	74,420,933
ADJUSTED EARNINGS PER SHARE *(in euros)*		**8.75**	**15.75**
DILUTED ADJUSTED EARNINGS PER SHARE *(in euros)*		**8.70**	**15.68**

4.3 Recurring capital expenditure

(In millions of euros)	**2023**	2022
INTANGIBLE ASSETS AND PROPERTY, PLANT AND EQUIPMENT ADDITIONS	**634**	**707**
- Exceptional capital expenditure	26	123
- Investments relating to portfolio management operations	—	—
- Capital expenditure with no impact on net debt	0	0
RECURRING CAPITAL EXPENDITURE	**608**	**584**

Exceptional capital expenditure corresponds to a very limited number of capital expenditure items for major development projects that the Group presents separately in its financial reporting due to their size and nature. In the two periods presented, exceptional capital expenditure mainly concerned investments in Specialty Polyamides in Asia and the partnership with Nutrien in the United States for the supply of anhydrous hydrogen fluoride.

Investments relating to portfolio management operations reflect investments relating to acquisition operations.

4.4 Cash flow and EBITDA to cash conversion rate

(In millions of euros)	**2023**	2022
Cash flow from operating activities	1,272	1,496
+ Cash flow from investing activities	(1,355)	(2,341)
NET CASH FLOW	**(83)**	**(845)**
- Net cash flow from portfolio management operations	(708)	(1,629)
FREE CASH FLOW	**625**	**784**
- Exceptional capital expenditure	(26)	(123)
- Non-recurring cash flow	(110)	(26)
RECURRING CASH FLOW	**761**	**933**

The net cash flow from portfolio management operations corresponds to the impact of acquisition and divestment operations described in note 1 “Highlights”.

Non-recurring cash flow corresponds to cash flow from other income and expenses, as described in note 6.1.5 “Other income and expenses”.

(In millions of euros)	**2023**	2022
RECURRING CASH FLOW	**761**	**933**
EBITDA	1,501	2,110
EBITDA TO CASH CONVERSION RATE	**50.7%**	**44.2%**

4.5 Net debt

(In millions of euros)	Notes	**2023**	2022
Non-current debt	*(12.3)*	3,734	2,560
+ Current debt	*(12.3)*	541	698
- Cash and cash equivalents	*(12.4)*	2,045	1,592
NET DEBT		**2,230**	**1,666**
+ Hybrid bonds	*(13.2)*	700	700
NET DEBT AND HYBRID BONDS		**2,930**	**2,366**

4.6 Working capital

(In millions of euros)	Notes	2023	2022
Inventories	*(6.2)*	1,208	1,399
+ Accounts receivable	*(6.2)*	1,261	1,360
+ Other receivables including income taxes recoverable	*(6.2)*	312	332
+ Current financial derivative assets	*(12.2)*	32	57
- Accounts payable (operating suppliers)	*(6.2)*	1,036	1,149
- Other liabilities including income taxes	*(6.2)*	475	546
- Current financial derivative liabilities	*(12.2)*	27	13
WORKING CAPITAL		**1,275**	**1,440**

4.7 Capital employed

(In millions of euros)	Notes	2023	2022
Goodwill, net	*(9.1)*	3,040	2,655
+ Intangible assets (excluding goodwill) and property, plant and equipment, net	*(9.2 & 9.3)*	6,146	5,607
+ Investments in equity affiliates	*(10.1 & 10.2)*	13	24
+ Other investments and other non-current assets	*(10.3 & 10.4)*	303	297
Working capital		1,275	1,440
CAPITAL EMPLOYED		**10,777**	**10,023**
Adjustment*		(1,038)	13
ADJUSTED CAPITAL EMPLOYED		**9,739**	**10,036**

* *In 2022, elements of capital employed classified as assets held for sale (Febex). In 2023, capital employed relating to PIAM, consolidated at the end of the year and with no material contribution to income for the year.*

4.8 Return on capital employed (ROCE)

The return on capital employed (ROCE) corresponds to the recurring operating income (REBIT) for the year as a percentage of the adjusted capital employed at the end of the year.

(In millions of euros)	2023	2022
Recurring operating income (REBIT)	939	1,560
Adjusted capital employed	9,739	10,036
ROCE	**9.6%**	**15.5%**

4.9 Information by segment

As required by IFRS 8 “Operating segments”, segment information for the Group is presented in accordance with the internal reporting structure that is used by executive management in order to assess financial performance and allocate resources.

Operating income and assets are allocated between segments prior to inter-segment adjustments. Sales between segments take place at market prices.

Arkema is organized around three complementary, coherent segments dedicated to Specialty Materials, namely Adhesive Solutions, Advanced Materials and Coating Solutions, and an Intermediates segment consisting of activities with more volatile results.

The Adhesive Solutions segment is headed by a member of the Executive Committee, and the Advanced Materials, Coating Solutions and Intermediates segments are directed by a Chief Operating Officer who is also a member of the Executive Committee. Both of these segment heads report to the Chairman and CEO, Arkema’s chief operating decision-maker as defined by IFRS 8, and are in regular contact with him for the purpose of discussing their segments’ operating activities, financial results, forecasts and plans.

The Chief Operating Officer is supported by three other Executive Committee members, who report to him and are respectively in charge of the Coating Solutions segment and each of the two Business Lines [(2)] making up the Advanced Materials segment: High Performance Polymers and Performance Additives.

(2) *Business Lines are activities or groups of activities.*

The content of the segments is as follows:

- Adhesive Solutions comprises the following Business Lines:
  - Construction and Consumer, providing solutions for construction, renovation of buildings, and DIY; and
  - Industrial Assembly, comprising high performance adhesives for durable goods, and adhesive solutions for packaging and non-woven.

  The Adhesive Solutions segment supplies technologies used in building activities for businesses and individuals, including sealants, tile and flooring adhesives and waterproofing systems, and technologies used in industry, including state-of-the-art know-how in the automotive, textiles, glazing, flexible and rigid packaging, and hygiene markets.
- Advanced Materials comprises the following Business Lines:
  - High Performance Polymers, consisting of specialty polyamides, PVDF, polyimides, fluorospecialties and PEKK, and
  - Performance Additives, covering interface agents combining specialty surfactants and molecular sieves, organic peroxides, thiochemicals and hydrogen peroxide.

  The Advanced Materials segment offers innovative solutions with high added value to meet the major challenges of sustainable development, including lightweighting, new energies, access to water, bio-based products and recycling. These solutions are used in a wide variety of sectors such as the automotive and transportation sectors, oil and gas, renewable energies (photovoltaics, lithium-ion batteries, wind power), consumer goods (sports equipment, packaging, beauty and health products, etc.), electronics, construction, coatings, animal nutrition and water treatment.
- Coating Solutions comprises the following Business Lines:
  - Coating Resins, combining the EU/US acrylics activities and coating resins; and
  - Coating Additives, combining Sartomer photocure resins and Coatex rheology additives and specialties.

  This segment offers a broad range of innovative products for decorative paints, industrial coatings and adhesives, and also provides solutions for applications in the paper industry, superabsorbents, water treatment and oil and gas extraction, and in cutting-edge high-growth markets such as 3D printing and electronics.
- The Intermediates segment comprises the following activities:
  - Fluorogases, and
  - Asia Acrylics.

These industrial intermediate chemicals activities, in which Arkema holds leading positions, concern competitive global product lines used in several industrial sectors such as construction, production of cold (refrigeration and air conditioning), the automotive industry, coatings and water treatment.

Functional and financial activities which cannot be directly allocated to operational activities (notably certain research costs and central costs) are brought together in a Corporate segment.

2023 *(In millions of euros)*	Adhesive Solutions	Advanced Materials	Coating Solutions	Intermediates	Corporate	**Total**
Sales	**2,714**	**3,562**	**2,402**	**797**	**39**	**9,514**
EBITDA*	**380**	**666**	**327**	**213**	**(85)**	**1,501**
Recurring depreciation and amortization of property, plant and equipment and intangible assets*	(87)	(300)	(126)	(43)	(6)	(562)
Recurring operating income (REBIT)*	**293**	**366**	**201**	**170**	**(91)**	**939**
Depreciation and amortization related to the revaluation of property, plant and equipment and intangible assets as part of the allocation of the purchase price of businesses	(102)	(19)	(7)	—	—	(128)
Other income and expenses	(32)	(81)	(3)	—	(14)	(130)
Operating income	**159**	**266**	**191**	**170**	**(105)**	**681**
Equity in income of affiliates	—	(10)	—	1	—	(9)
Intangible assets and property, plant and equipment additions	82	389	115	28	20	634
Of which: Recurring capital expenditure*	82	363	115	28	20	608
Goodwill, net	1,715	902	379	44	—	3,040
Intangible assets excluding goodwill and property, plant and equipment, net	2,148	3,015	752	185	46	6,146
Investments in equity affiliates	—	13	—	—	—	13
Other investments and other non-current assets	10	103	38	—	152	303
Working capital*	374	505	279	37	80	1,275
Capital employed*	**4,247**	**4,538**	**1,448**	**266**	**278**	**10,777**
Provisions and other non-current liabilities	(103)	(351)	(73)	(25)	(697)	(1,249)

* *See note 4 "Alternative performance indicators and information by segment".*

2022 *(In millions of euros)*	Adhesive Solutions	Advanced Materials	Coating Solutions	Intermediates	Corporate	Total
Sales	**2,898**	**4,341**	**3,250**	**1,020**	**41**	**11,550**
EBITDA*	**366**	**941**	**593**	**306**	**(96)**	**2,110**
Recurring depreciation and amortization of property, plant and equipment and intangible assets	(78)	(278)	(127)	(61)	(6)	(550)
Recurring operating income (REBIT)*	**288**	**663**	**466**	**245**	**(102)**	**1,560**
Depreciation and amortization related to the revaluation of property, plant and equipment and intangible assets as part of the allocation of the purchase price of businesses	(95)	(18)	(5)	—	—	(118)
Other income and expenses	(63)	(79)	—	23	(36)	(155)
Operating income	**130**	**566**	**461**	**268**	**(138)**	**1,287**
Equity in income of affiliates	—	(6)	—	—	—	(6)
Intangible assets and property, plant and equipment additions	85	456	127	20	19	707
Of which: Recurring capital expenditure*	85	333	127	20	19	584
Goodwill, net	1,736	484	391	44	—	2,655
Intangible assets excluding goodwill and property, plant and equipment, net	2,211	2,376	756	211	53	5,607
Investments in equity affiliates	—	24	—	—	—	24
Other investments and other non-current assets	12	93	38	—	154	297
Working capital*	455	552	335	45	53	1,440
Capital employed*	**4,414**	**3,529**	**1,520**	**300**	**260**	**10,023**
Provisions and other non-current liabilities	(95)	(384)	(74)	(29)	(620)	(1,202)

See note 4 "Alternative performance indicators and information by segment".

Sales of Specialty Materials, by Business Line:

	2023	2022
Adhesive Solutions	**2,714**	**2,898**
of which Construction and Consumer	*1,250*	*1,349*
of which Industrial Assembly	*1,464*	*1,549*
Advanced Materials	**3,562**	**4,341**
of which High Performance Polymers	*1,457*	*1,926*
of which Performance Additives	*2,105*	*2,415*
Coating Solutions	**2,402**	**3,250**
of which Coating Resins	*1,743*	*2,358*
of which Coating Additives	*659*	*892*

4.10 Information by geographical area

Sales are presented on the basis of the geographical location of customers. Capital employed and gross intangible assets and property, plant and equipment additions are presented on the basis of the location of the assets.

2023 *(In millions of euros)*	Non-Group sales	Capital employed	Intangible assets and property, plant and equipment additions
Europe	3,272	4,205	312
of which France	*743*	*2,724*	*273*
NAFTA*	3,477	3,614	214
of which United States	*3,106*	*3,414*	*204*
Asia	2,244	2,801	101
*of which China***	*1,045*	*770*	*74*
Rest of the world	521	157	7
TOTAL	**9,514**	**10,777**	**634**

* *USA, Canada, Mexico.*
** *China, Hong Kong and Taiwan.*

2022 *(In millions of euros)*	Non-Group sales	Capital employed	Intangible assets and property, plant and equipment additions
Europe	3,803	4,218	299
of which France	*848*	*2,851*	*247*
NAFTA*	4,073	3,803	173
of which United States	*3,664*	*3,603*	*164*
Asia	3,177	1,818	226
*of which China***	*1,725*	*819*	*116*
Rest of the world	497	184	9
TOTAL	**11,550**	**10,023**	**707**

* *USA, Canada, Mexico.*
** *China, Hong Kong and Taiwan.*

Note 5 Climate issues

Arkema is committed to the fight against global warming and in 2022 raised its level of commitment from a “well below 2°C” trajectory to a “1.5°C” trajectory by 2030 in line with the Paris Agreement. This commitment now includes its Scope 3 emissions. In 2023, Arkema obtained SBTi validation of its decarbonization roadmap, which raised its emissions reduction targets to a 48.5% reduction for Scopes 1 and 2 and a 54% reduction for Scope 3 by 2030 *versus* the 2019 baseline.

In this regard, the Group is notably targeting a 25% reduction in its net energy purchases by 2030 *versus* 2012 (EFPI intensive indicator).

To meet these targets, the Group is constantly improving its production processes and looking to improve energy efficiency at its sites by leveraging innovation, particularly through its Arkema Energy program. It is also pursuing its efforts to purchase energy from low-carbon sources.

Its climate plan is supported by investments aimed at furthering decarbonization, which could represent a cumulative amount of €400 million over the 2022-30 period (see note 9.5 Asset value monitoring/Sensitivity analysis).

In line with Arkema’s 2030 climate targets, climate issues are taken into account in its capital expenditure decisions, its raw materials and energy supply contracts, and its analyses of potential acquisition projects. In operational terms, capital expenditure decisions factor in an internal carbon price which is validated by the Group Executive Committee and is in line with the assumptions used in impairment testing.

In preparing the consolidated financial statements, management has identified estimates and judgments that may be impacted by the effects of climate change. They are listed below and are boxed in green in each of the notes:

Subject	Notes	Content
Sustainable capital expenditure	9.3. Property, plant and equipment	• Capital expenditure undertaken to date and aimed at furthering the Group's decarbonization goals include the projects at Carling and Lacq, as well as the Arkema Energy program.
Measurement of non-financial assets	9.3. Property, plant and equipment	• The Group takes climate issues into account when determining the useful lives of its fixed assets, and considers that such issues do not materially impact the value of its fixed assets at 31 December 2023.
	9.5. Asset value monitoring	• Assumptions used in impairment testing (cash flow projections and sensitivity analyses).
Provisions	11.1.2. Other provisions	• Environmental provisions cover, in particular, expenses related to physical risks associated with climate change.
Sustainable financing	12.3.1. Analysis of net debt by category	• A €300 million green bond issue was completed in 2020 to finance a plant manufacturing 100% bio-sourced Rilsan® polyamide 11 in Singapore. • The syndicated credit line is linked to three CSR criteria (greenhouse gas emissions, volatile organic compound emissions and the total recordable injury rate).
Share-based payments	7.4.2. Free share grants	• Performance share grants partly depend on achieving environmental targets, such as the reduction of greenhouse gas emissions. This target determines 15% of the total grant in 2023 (12.5% in 2022).
Compliance with laws and regulations	6.2.3. Greenhouse gas emissions allowances (EUAs)	• Greenhouse gas emissions allowances (EUAs) held by the Group at the reporting date cover the operational needs of the Group's European units, with no foreseeable shortfall until the end of phase 4. The Group does not have any trading activity in respect of CO_2 emissions allowances.
Low-carbon energy contracts	6.3 Off-balance sheet commitments related to the Group's operating activities	• Arkema has signed multi-year contracts to purchase Guarantee of Origin certificates (RECs) within the scope of its Arkema Energy program. When material, these contracts are included within off-balance sheet commitments at the time they are entered into, and later recognized within intangible assets when the certificates are acquired. They give rise to the recognition of an expense when they are used.
	9.3 Property, plant and equipment	• Arkema has signed multi-year low-carbon energy procurement contracts (PPA) within the scope of its Arkema Energy program. These PPAs are analyzed on a case-by-case basis to determine whether they meet the criteria for recognition as property, plant and equipment or as a lease, which depends on the characteristics of the assets and the applicable contractual provisions.

Note 6 Other information relating to operating activities

6.1 Income statement

6.1.1 Sales

Sales consist of sales of chemicals produced or marketed by the Group. They are measured at the fair value of the consideration received or receivable, net of returns, trade discounts and volume rebates. Sales are recognized when control of the goods is transferred to the customer. The transfer of control is determined mainly on the basis of the terms and conditions of the sales contracts.

6.1.2 Operating expenses

Operating expenses correspond to the full cost of sales excluding research and development expenses and selling and administrative expenses which are reported on specific lines.

6.1.3 Research and development expenses

Research and development expenses include salaries, purchases, external services and amortization, and are recognized as incurred. Grants received are recognized as a deduction from research expenses.

The Group recognizes France's research tax credit (CIR) as a deduction from operating expenses.

6.1.4 Operating income

Operating income is calculated as all income and expenses not relating to the financial result, equity affiliates or income taxes.

6.1.5 Other income and expenses

Other income and expenses concern a limited number of well-identified non-recurring items of income and expense of a particularly material nature that the Group presents separately in its income statement in order to facilitate understanding of its recurring operational performance. These items of income and expense notably include:

- impairment losses in respect of property, plant and equipment, intangible assets and financial assets;
- gains or losses on sale of assets, acquisition costs, negative goodwill on acquisitions on favorable terms and the valuation difference on inventories between their fair value at the acquisition date and their production cost;
- expenses related to capital increases reserved for employees;
- start-up costs related to capital expenditure that is considered exceptional;
- large restructuring and environmental expenses which would hamper the interpretation of recurring operating income (including substantial modifications to employee benefit plans and the effect of onerous contracts); and
- material expenses related to litigation and claims whose nature is not directly related to ordinary operations.

	2023			2022		
(In millions of euros)	**Expenses**	**Income**	**Net**	Expenses	Income	Net
Restructuring and environment	(56)	4	(52)	(56)	5	(51)
Goodwill impairment	—	—	—	—	—	—
Asset impairment (excluding goodwill)	(28)	—	(28)	(33)	—	(33)
Litigation and claims	(1)	7	6	(14)	—	(14)
Gains (losses) on sales and purchases of assets	(12)	23	11	(51)	27	(24)
Other	(67)	—	(67)	(33)	—	(33)
TOTAL OTHER INCOME AND EXPENSES	**(164)**	**34**	**(130)**	**(187)**	**32**	**(155)**

In 2023, restructuring expenses mainly concern the Adhesives segment, while environment expenses relate to the Corporate segment, and in particular to an additional charge to the environmental provision concerning the St-Fons site (see note 10.2.1 "Environment"). Specific asset impairments have primarily been recognized in the Hydrogen Peroxide activities for the Jarrie site in France (see note 9.3 “Property, plant and equipment”). The income and expenses relating to sales and purchases of assets were mainly attributable to the capital gain recognized on the divestment of Febex and to costs arising on the acquisition of the 54% stake in PIAM. The item “Other” primarily includes start-up costs for the Singapore site in Specialty Polyamides (see note 4.3 “Recurring capital expenditure”).

In 2022, restructuring and environment expenses mainly concern the Adhesive Solutions, Advanced Materials and Corporate segments. Specific asset impairments have mainly been recognized in the Hydrogen Peroxide activities for the Jarrie site in France (see note 9.3 "Property, plant and equipment"). Expenses related to litigation and claims mainly concern legal fees for ongoing proceedings in the United States. The income and expenses relating to sales and purchases of assets were mainly attributable to the acquisition of Ashland's Performance Adhesives business. The income for this item is primarily attributable to the divestment of the PMMA activity in South Korea. The item "Other" primarily includes start-up costs related to exceptional capital expenditure in Specialty Polyamides in Asia (see note 4.3 "Recurring capital expenditure") and expenses related to the capital increase reserved for employees in the second half of 2022.

The total impairment (including goodwill impairment) included in other income and expenses amounts to a net expense of €28 million at 31 December 2023 compared to a net expense of €39 million at 31 December 2022.

6.2 Working capital

6.2.1 Cash flows

Cash flows in foreign currencies are translated into euros using the average exchange rates of each period. Cash flow statements exclude foreign exchange differences arising from the translation into euros of assets and liabilities recognized in balance sheets denominated in foreign currencies at the end of the period (except for cash and cash equivalents).

The change in working capital reported in the cash flow statement amounts to €158 million in cash flow from operating activities and €45 million in cash flow from investing activities.

(In millions of euros)	31 December 2022	Changes in scope	Monetary flows in the cash flow statement (operating and investing activities)	Translation adjustments	Other non-monetary flows	**31 December 2023**
Inventories	1,399	21	(194)	(30)	12	1,208
+ Accounts receivable, excluding fixed asset receivables	1,360	25	(98)	(30)	3	1,260
+ Other receivables, including income taxes recoverable	332	2	2	(8)	(16)	312
- Accounts payable, excluding fixed asset payables	927	15	(65)	(14)	1	864
- Other liabilities, including income taxes	546	8	(67)	(5)	(7)	475
TOTAL OPERATING CATEGORIES	**1,618**	**25**	**(158)**	**(49)**	**5**	**1,441**
+ Fixed asset receivables	—	—	1	—	—	1
- Other creditors and fixed asset payables	221	—	(44)	(5)	—	172
TOTAL INVESTING CATEGORIES	**(221)**	**—**	**45**	**5**	**—**	**(171)**
+ Current financial derivative assets and liabilities	43	—	—	6	(44)	5
TOTAL WORKING CAPITAL	**1,440**	**25**	**(113)**	**(38)**	**(39)**	**1,275**

6.2.2 Inventories

Inventories are valued in the consolidated financial statements at the lower of cost and net realizable value, in accordance with IAS 2 "Inventories". Cost of inventories is generally determined using the weighted average cost (WAC) method.

Cost of manufactured product inventories includes raw material and direct labor costs, and an allocation of production overheads and depreciation based on normal production capacity. Start-up costs and general and administrative costs are excluded from the cost of manufactured product inventories.

The net realizable value is the sale price as estimated for the normal course of business, less estimated costs for completion and sale.

(In millions of euros)	**31 December 2023**	31 December 2022
INVENTORIES (COST)	**1,333**	**1,522**
Valuation allowances	(125)	(123)
INVENTORIES (NET)	**1,208**	**1,399**
Of which:		
Raw materials and supplies	*413*	*495*
Finished products	*795*	*904*

6.2.3 Greenhouse gas emissions allowances (EUAs)

In the absence of an IFRS standard or interpretation relating to accounting for CO_2 emissions allowances, the following treatment has been adopted:

- allowances allocated without payment of consideration are recognized for nil value; and
- transactions carried out in the market are recognized at the transaction amount.

For the management of its combustion installations and process emissions, the Group is exposed to the risks arising from the European Union Emissions Trading Scheme (EU ETS) for greenhouse gases, which was introduced by the European Union in 2005. In phase 4, which began in 2021 and will continue until the end of 2030, the number of EU allowances (EUAs) for greenhouse gas emissions held in inventory at year-end covers the operational needs of the Group's European units, with no foreseeable shortfall until the end of phase 4. The Group does not have any trading activity in respect of CO_2 emissions allowances. However, in the normal course of its operations, the Group may carry out transactions on the market.

6.2.4 Accounts receivable, other receivables and prepaid expenses

Accounts receivable amount to €1,261 million net at 31 December 2023 (€1,360 million at 31 December 2022) and include a bad debt provision of €25 million at 31 December 2023 (€26 million at 31 December 2022). The maturities of accounts receivable net of provisions are presented in note 12.6.4 "Credit risk". Other receivables and prepaid expenses notably include receivables from governments in an amount of €114 million at 31 December 2023 (€140 million at 31 December 2022), including €97 million of VAT (€115 million at 31 December 2022).

6.2.5 Accounts payable, other creditors and accrued liabilities

Accounts payable amount to €1,036 million at 31 December 2023 (€1,149 million at 31 December 2022).

Other creditors and accrued liabilities mainly comprise employee-related liabilities for €261 million at 31 December 2023 (€280 million at 31 December 2022) and amounts owing to governments for €65 million at 31 December 2023 (€89 million at 31 December 2022), including €35 million of VAT (€55 million at 31 December 2022).

6.3 Off-balance sheet commitments related to operating activities

6.3.1 Off-balance sheet commitments related to the Group's operating activities

The main commitments given are summarized in the table below:

(In millions of euros)	**31 December 2023**	31 December 2022
Guarantees granted	136	132
Comfort letters	—	—
Contractual guarantees	1	2
Customs and excise guarantees	27	32
TOTAL	**164**	**166**

Guarantees granted are mainly bank guarantees in favor of local authorities and public bodies (state agencies, environmental agencies) in respect of environmental obligations or concerning classified sites, as well as rent guarantees for the Group's future headquarters.

6.3.2 Contractual commitments related to the Group's operating activities

In the normal course of business, the Arkema Group has signed multi-year purchase agreements for raw materials and energy for the operational requirements of its factories, in order to guarantee the security and continuity of supply. Signature of such contracts over initial periods generally comprised between one and ten years is a normal practice for companies in the Group's business sector in order to cover their needs.

These purchase commitments were valued taking into account, on a case-by-case basis, Arkema's financial commitment to its suppliers, as certain of these contracts include clauses which oblige the Group to take delivery of the minimum volumes as set out in the contract or, otherwise, to pay financial compensation to the supplier. Depending on the case, these commitments are reflected in the purchase contracts in the form of notice periods, indemnification to be paid to the supplier in case of early termination of the contract or "take or pay" clauses. The value of these agreements thus corresponds to the minimum amount payable to suppliers as indemnification in the event of termination of the contracts or failure to take delivery of the minimum contractual quantities, less any quantities that can be resold on the market when the Group is able to do so (even though this may not be its intention upon entering into the agreements).

This latter case concerns the Group's multi-year low-carbon energy procurement contracts and contracts to purchase Guarantee of Origin certificates, for which the Group's residual exposure has not been deemed material.

Some lease or purchase commitments do not fall within the scope of IFRS 16. Many of them are irrevocable purchase commitments described above, and service contracts or asset provision contracts that are not identified or controlled by Arkema at 31 December 2023. Only the irrevocable portion of outstanding future purchases has been valued, and the corresponding amounts are included in the table below at 31 December 2023.

The total amount of the Group's financial commitments is €1,219 million at 31 December 2023 (year Y) maturing as follows:

(In millions of euros)	**31 December 2023**	31 December 2022
Y	—	273
Y+1	259	140
Y+2	135	106
Y+3	113	103
Y+4	96	97
Y+5 until expiry of the contracts	616	652
TOTAL	**1,219**	**1,371**

Note 7 Workforce, personnel expenses and employee benefits

7.1 WORKFORCE

	Adhesive Solutions	Advanced Materials	Coating Solutions	Intermediates	Corporate	**Total**
Employees at 31 December 2023	6,885	9,245	3,795	886	135	20,946
Employees at 31 December 2022	7,088	8,862	3,849	1,009	136	20,944

	France	Rest of Europe	NAFTA*	Asia	Rest of the world	**Total**
Employees at 31 December 2023	7,178	3,458	4,017	5,180	1,113	20,946
Employees at 31 December 2022	7,216	3,551	4,127	4,922	1,128	20,944

* *USA, Canada, Mexico.*

7.2 PERSONNEL EXPENSES

Personnel expenses, including free share grants (see note 7.4 "Share-based payments"), amount to €1,644 million in 2023 (€1,616 million in 2022).

They comprise €1,238 million of wages and salaries and IFRS 2 expenses (€1,229 million in 2022) and €406 million of social security charges (€387 million in 2022).

7.3 PROVISIONS FOR PENSIONS AND OTHER EMPLOYEE BENEFITS

In accordance with IAS 19 (Revised) "Employee benefits":

- payments made in the context of defined contribution plans are recognized in expenses of the period; and
- obligations in respect of defined benefit plans are recognized and valued using the actuarial projected unit credit method.

Post-employment benefits

For defined benefit plans, the valuation of obligations under the projected unit credit method principally takes into account:

- an assumption concerning the date of retirement;
- a discount rate which depends on the geographical region and the duration of the obligations;
- an inflation rate;
- assumptions in respect of future increases in salaries, rates of employee turnover and increases in health costs; and
- the most recent mortality statistics for the countries concerned.

Returns on plan assets are in line with discount rates.

Differences which arise between the valuation of obligations and forecasts of such obligations (on the basis of new projections or assumptions) and between forecasts and outcomes of returns on plan assets are termed actuarial gains and losses, and are recorded in other non-recyclable comprehensive income.

When a plan is amended or created, the entire past service cost is immediately recognized in the income statement.

A pension asset may be generated where a defined benefit plan is overfunded. The amount at which such an asset is recognized in the balance sheet may be subject to a ceiling, in application of IAS 19.64 and IFRIC 14.

Other long-term benefits

In respect of other long-term benefits, and in accordance with applicable laws and regulations, provisions are recognized using a simplified method. Thus, if an actuarial valuation using the projected unit credit method is required, actuarial gains and losses and all past service costs are recognized immediately in the provision, with a corresponding entry being recognized in the income statement.

The net expense related to pension obligations and other employee benefit obligations is recognized in recurring operating income, with the exception of:

- the effect of curtailments or settlements of plans, which are presented under the "Other income and expenses" caption in the case of substantial modifications to such plans; and
- the net interest expense and the actuarial gains and losses related to changes in the discount rate on other long-term benefits, which are classified within the financial result caption.

IFRIC decision on attributing benefit to periods of service (IAS 19 “Employee benefits”)

From 2021 onward, IFRIC (IFRS Interpretations Committee), in agreement with the IASB, will adopt a new approach for attributing benefit to periods of service.

The following plans are concerned:

- plans with payments on retirement, where benefits are capped in terms of months after a specified number of years of service in the company;
- supplementary defined benefit pension plans other than those affected by the French order of July 2019, which froze any further rights accruals as of the end of 2019; and
- early retirement schemes, where benefits are only paid if the employment contract is terminated.

At 31 December 2023, provisions for pensions and other employee benefits break down as follows:

(In millions of euros)	**2023**	2022
Pension obligations	267	255
Healthcare and similar coverage	45	46
Dispensation from work	14	15
Post-employment benefits	**326**	**316**
Long service awards	71	66
Other long-term benefits	**71**	**66**
Provisions for pensions and other employee benefits	**397**	**382**

(In millions of euros)	**2023**	2022
Provision recognized in liabilities	397	382
Amount recognized in assets	(2)	(1)
Net provisions for pensions and other employee benefits	**395**	**381**

Characteristics of the principal plans

In accordance with the laws and practices of each country, the Group participates in employee benefit plans offering retirement, healthcare and similar coverage, and special termination benefits. These plans provide benefits based on various factors including length of service, salaries, and contributions made to the national bodies responsible for the payment of benefits.

These plans are either defined contribution plans or defined benefit plans. In certain cases they can be either partly or totally funded by investments in dedicated plan assets, mutual funds, general funds of insurance companies or other assets.

The main features of the principal defined benefit plans are as follows:

- in the United States, the largest defined benefit plan is the “Employee Pension Plan”. This plan has been frozen for several years and no new rights can be earned except in the case of a few employees. Under this plan, beneficiaries receive a lump sum or an annuity when they retire. The plan is pre-funded, and the assets funding it are subject to the minimum funding rules laid down in the federal Pension Protection Act. A complementary healthcare plan covering certain medical expenses or insurance premiums for retired employees and their dependents is still open to new members; this plan is not pre-funded. In 2020, to reduce exposure to financial risk and volatility, some of the Employee Pension Plan obligations were outsourced to an insurance company together with the corresponding assets. This resulted in a US$31 million decrease in assets and a US$29.5 million decrease in obligations, with the difference recorded in the 2020 income statement. An additional transfer was carried out in 2021, resulting in a US$42.9 million decrease in assets and a US$44.6 million decrease in obligations, with the difference recorded in the 2021 income statement;
- in France, the top hat pension plans are closed to new members. One of these plans is managed by an insurance company and pre-funded by plan assets. The other plan has been terminated insofar as it concerns the Chairman and Chief Executive Officer, following the resolution adopted at the annual general meeting of 7 June 2016. The portion of the plan related to other beneficiaries was closed and transferred to external management in 2016.

The retiree top-up healthcare plan is also closed and is not pre-funded. Other benefit plans (bonuses, long service awards and retirement gratuities) pay out lump sums; they are open to all employees and are partly pre-funded;

- in Germany, all defined benefit plans are closed to new members. Plan participants receive a monthly payment once they retire (the normal retirement age is set at 65). Only certain plans are pre-funded, involving non-significant amounts;
- in the Netherlands, the defined benefit plans for Arkema and Bostik were open until 31 December 2015 and were then replaced by defined contribution plans from 1 January 2016. Rights vested at 31 December 2015 were transferred to external management; and
- in the United Kingdom, no further rights have been able to be earned under any existing plan for several years now. The UK plans are pre-funded through a pension fund.

2023 French pension reform

On 14 April 2023, France passed amended 2023 social security financing law no. 2023-270, which gradually increases the legal retirement age (from 62 to 64) and lengthens the amount of time workers are required to make contributions.

The impact of this reform is not material for the Group's pension obligations and other employee benefits, as the retirement age assumptions used in previous years were already higher than the minimum age required under the new reform.

7.3.1 Expense in the income statement

The expense related to defined-benefit plans breaks down as follows:

	2023				2022			
(In millions of euros)	**Total**	**Pension obligations**	**Healthcare and similar coverage**	**Dispensation from work**	Total	Pension obligations	Healthcare and similar coverage	Dispensation from work
Current service cost	13	11	1	1	16	14	1	1
Past service cost	—	—	—	—	—	—	—	—
Settlements	—	—	—	—	—	—	—	—
Interest expense	22	20	2	—	15	14	1	—
Expected return on plan assets	(10)	(10)	—	—	(8)	(8)	—	—
Other	—	—	—	—	—	—	—	—
(INCOME)/EXPENSE	**25**	**21**	**3**	**1**	**23**	**20**	**2**	**1**

7.3.2 Change in net provisions over the period

	Pension obligations		**Healthcare and similar coverage**		**Dispensation from work**		**Total post-employment benefits**	
(In millions of euros)	**2023**	2022	**2023**	2022	**2023**	2022	**2023**	2022
Net liability (asset) at beginning of period	**254**	**324**	**46**	**59**	**15**	**19**	**315**	**402**
Provision recognized in liabilities	*255*	*335*	*46*	*59*	*15*	*19*	*316*	*413*
Amount recognized in assets	*(1)*	*(11)*	—		—	—	*(1)*	*(11)*
(Income)/Expense for the period	21	20	3	2	1	1	25	23
Contributions paid to plan assets	(10)	(17)	—	—	—	—	(10)	(17)
Net benefits paid by the employer	(12)	(10)	(7)	(3)	(2)	(3)	(21)	(16)
Changes in scope	—	1	2	2	—	—	2	3
Reclassification as assets held for sale under IFRS 5	—	—	—	—	—	—	—	—
Actuarial gains and losses recognized in shareholders' equity	17	(71)	2	(15)	—	(2)	19	(88)
Translation adjustments	(5)	7	(1)	2	—	—	(6)	8
Net liability (asset) at end of period	**265**	**254**	**45**	**46**	**14**	**15**	**324**	**315**
Provision recognized in liabilities	*267*	*255*	*45*	*46*	*14*	*15*	*326*	*316*
Amount recognized in assets	*(2)*	*(1)*	—	—	—	—	*(2)*	*(1)*

7.3.3 Benefit obligations and provisions at 31 December

Present value of benefit obligations

	Pension obligations		Healthcare and similar coverage		Dispensation from work	
(In millions of euros)	**2023**	2022	**2023**	2022	**2023**	2022
Present value of benefit obligations at beginning of period	**457**	**648**	**46**	**59**	**15**	**19**
Current service cost	11	14	1	1	1	1
Net interest expense	20	14	2	1	—	—
Past service cost (including curtailments)	—	—	—	—	—	—
Settlements	—	—	—	—	—	—
Plan participants’ contributions	—	—	—	—	—	—
Benefits paid	(43)	(72)	(7)	(3)	(2)	(3)
Changes in scope	—	1	2	2	—	—
Reclassification as assets held for sale under IFRS 5	—	(17)	—	—	—	—
Actuarial gains and losses recognized in shareholders’ equity	20	(149)	2	(15)	—	(2)
Translation adjustments	(8)	18	(1)	2	—	—
Present value of benefit obligations at end of period	**457**	**457**	**45**	**46**	**14**	**15**

Change in fair value of plan assets

Plan assets are mainly located in the United States, France and the United Kingdom.

	Pension obligations	
(In millions of euros)	**2023**	2022
Fair value of plan assets at beginning of period	**(203)**	**(324)**
Interest income	(10)	(8)
Settlements	—	—
Plan participants’ contributions	—	—
Employer contributions	(10)	(17)
Benefits paid from plan assets	30	63
Changes in scope	—	—
Reclassification as assets held for sale under IFRS 5	—	17
Actuarial gains and losses recognized in shareholders’ equity	(3)	78
Translation adjustments	4	(12)
Fair value of plan assets at end of period	**(192)**	**(203)**

Obligations in the balance sheet

	Pension obligations		Healthcare and similar coverage		Dispensation from work	
(In millions of euros)	**2023**	2022	**2023**	2022	**2023**	2022
Present value of unfunded obligations	88	88	45	46	14	15
Present value of funded obligations	369	369	—	—	—	—
Fair value of plan assets	(192)	(203)	—	—	—	—
(Surplus)/Deficit of assets relative to benefit obligations	**265**	**254**	**45**	**46**	**14**	**15**
Asset ceiling	—	—	—	—	—	—
Net balance sheet provision	**265**	**254**	**45**	**46**	**14**	**15**
Provision recognized in liabilities	*267*	*255*	*45*	*46*	*14*	*15*
Amount recognized in assets	*(2)*	*(1)*	—	—	—	—

Changes in recent years in the obligation (excluding the dispensation from work mechanism), the value of the plan assets and actuarial gains and losses are as follows:

(In millions of euros)	**2023**	2022	2021	2020
Obligations for pensions, healthcare and similar coverage	502	503	707	804
Plan assets	(192)	(203)	(324)	(354)
Net obligations	**310**	**300**	**383**	**450**
Actuarial (gains) and losses on accumulated rights				
• experience adjustments	11	6	(6)	(7)
• effects of changes in financial assumptions	13	(171)	(43)	77
• effects of changes in demographic assumptions	(5)	1	(6)	—

Pre-tax amount recognized through equity during the valuation period

	Pension obligations		**Healthcare and similar coverage**		**Dispensation from work**	
(In millions of euros)	**2023**	2022	**2023**	2022	**2023**	2022
Actuarial (gains) and losses generated in the period (A)	17	(71)	2	(15)	—	(2)
Effect of the surplus cap and the asset ceiling (B)	—	—	—	—	—	—
Total amount recognized in equity (A+B)	**17**	**(71)**	**2**	**(15)**	**—**	**(2)**
Cumulative actuarial (gains) and losses recognized in equity	**116**	**99**	**(93)**	**(95)**	**(3)**	**(3)**

Composition of the investment portfolio

	Pension obligations							
	At 31 December 2023				**At 31 December 2022**			
	France	**UK**	**Rest of Europe**	**USA**	France	UK	Rest of Europe	USA
Shares	13%	20%	14%	37%	14%	26%	20%	45%
Bonds	15%	38%	43%	40%	18%	30%	31%	41%
Property	2%	—%	—%	10%	2%	—%	17%	10%
Monetary/Cash assets	—%	10%	2%	—%	—%	1%	8%	—%
Investment funds	—%	32%	—%	—%	—%	43%	—%	—%
Funds held by an insurance company	70%	—%	31%	—%	65%	—%	12%	—%
Other	—%	—%	10%	13%	—%	—%	12%	4%

Pension assets are mainly invested in listed financial instruments. Funds are managed in the interests of beneficiaries and of the Group in a manner suited to the liability profile and in compliance with applicable regulations.

Actuarial assumptions

The main assumptions for pension obligations and healthcare and similar coverage are as follows:

	2023					2022				
	France	**Germany**	**UK**	**Rest of Europe**	**USA**	France	Germany	UK	Rest of Europe	USA
Discount rate	3.55	3.60	4.50	3.51	4.95	4.10	4.13	4.80	2.93	5.20
Rate of increase in salaries	2.9-3.5	3.00	N/A	2.30-3.75	4.14	3-3.5	3.00	N/A	2.0-3.75	4.16

The discount rate is determined based on indexes covering bonds by issuers with an AA credit rating, for maturities consistent with the duration of the above obligations.

The rate of increase in healthcare costs has a negligible impact in the United States as a ceiling has been applied since mid-2006, and in Europe since 2008. The impact has been limited to the rate of inflation during the period over which rights vest.

A change of plus or minus 0.50 points in the discount rate has the following effects on the present value of accumulated benefit obligations at 31 December 2023:

Pension obligations, healthcare and similar coverage *(In millions of euros)*	**2023**	
	Europe	**USA**
Increase of 0.50	(16)	(12)
Decrease of 0.50	17	12

A change of plus or minus 0.50 points in the rate of increase in salaries has the following effects on the present value of accumulated benefit obligations at 31 December 2023:

Pension obligations, healthcare and similar coverage *(In millions of euros)*	**2023**	
	Europe	**USA**
Increase of 0.50	7	2
Decrease of 0.50	(7)	(2)

Provisions by geographical area

2023	France	Germany	Rest of Europe	USA	Rest of the world	**Total**
Pension obligations	110	71	10	63	11	265
Healthcare and similar coverage	20	—	—	25	—	45
Dispensation from work	14	—	—	—	—	14

2022	France	Germany	Rest of Europe	USA	Rest of the world	Total
Pension obligations	103	64	11	67	9	254
Healthcare and similar coverage	20	—	—	25	1	46
Dispensation from work	15	—	—	—	—	15.0

Cash flows

The contributions to be paid by the Group in 2024 for funded benefits are estimated at (€9) million.

The benefits to be paid by the Group in 2024 in application of defined benefit plans are valued at €13 million for pension obligations, and €9 million for healthcare and similar coverage.

7.4 SHARE-BASED PAYMENTS

In application of IFRS 2 “Share-based payments”, the free shares granted to management and certain Group employees are measured at their fair value at the date of grant, which generally corresponds to the date of the Board of Directors’ meeting that granted the free shares.

The fair value of rights under free share grants corresponds to the opening market price of the shares on the day of the Board of Directors’ meeting that decides on the grant, adjusted for dividends not received during the period. The expense recognized also reflects the probability that the presence condition will be fulfilled. This expense is included in personnel expenses on a straight-line basis over the vesting period of the rights.

7.4.1 Stock options

The Board of Directors decided several years ago not to introduce any further stock option plans, and there are no remaining stock option plans outstanding.

7.4.2 Free share grants

On 8 November 2023, the Board of Directors decided to introduce two free performance share plans for employees, particularly people in positions of responsibility whose work has an influence on the Group’s results.

Performance shares are generally granted on the condition of continued presence within the Group and achievement of financial and CSR objectives.

These include a greenhouse gas emissions reduction target (climate indicator determining 15% of the total grant in 2023 (12.5% in 2022)).

Movements in the free share grant plans existing at 31 December 2023 are as follows:

Plan	Grant date	Vesting period	Holding period	Total number of free shares granted	Number of shares subject to performance conditions	Fair value *(euros per share)*	Number of shares vested in 2023	Number of shares canceled in 2023	Total number of shares still to be granted at 31 Dec. 2023
2020-1, 2	5 May 2020	3-4 years	0-3 years	9,129	—	10.09-20.94	1,135	41	7,939
2020-3	4 Nov. 2020	3 years	2 years	238,550(1)	226,000	52.58	237,884	1,210	—
2020-4	4 Nov. 2020	4 years	0	128,245(2)	111,365	54.33	—	3,740	116,275
2021-1	9 Nov. 2021	3 years	2 years	239,575(3)	227,387	81.91	—	3,430	232,075
2021-2	9 Nov. 2021	4 years	0	124,713(4)	105,293	83.92	—	3,975	116,153
2022-1, 2	9 Nov. 2022	4 years	0	52,255	—	63.45-70.51	11	—	52,244
2022-3	9 Nov. 2022	3 years	2 years	234,715(5)	219,835	68.26	—	6,780	227,755
2022-4	9 Nov. 2022	4 years	0	128,540(6)	106,515	66.15	—	3,355	124,915
2023-1	8 Nov. 2023	3 years	2 years	247,665(7)	232,980	69.45	—	4,200	243,465
2023-2	8 Nov. 2023	4 years	0	126,995(8)	102,800	67.68	—	315	126,680

(1) May be raised to 283,750 in the event of outperformance.
(2) May be raised to 150,518 in the event of outperformance.
(3) May be raised to 285,052 in the event of outperformance.
(4) May be raised to 145,772 in the event of outperformance.
(5) May be raised to 278,682 in the event of outperformance.
(6) May be raised to 149,843 in the event of outperformance.
(7) May be raised to 294,261 in the event of outperformance.
(8) May be raised to 147,555 in the event of outperformance.

The amount of the IFRS 2 expense recognized in respect of free shares at 31 December 2023 is €25 million (€25 million at 31 December 2022).

7.5 COMPENSATION OF KEY MANAGEMENT PERSONNEL

Key management personnel of a group, as defined in IAS 24, are those persons having authority and responsibility for planning, directing and controlling the activities of the entity, directly or indirectly, including any director (whether executive or otherwise) of that entity.

The key management personnel of the Group are the directors and the members of its Executive Committee.

The compensation and benefits of any kind recognized in expenses by the Group are as follows:

(In millions of euros)	**2023**	2022
Salaries and other short-term benefits	10	10
Pensions, other post-employment benefits and contract termination benefits	—	—
Other long-term benefits	—	—
Share-based payments	7	9

Salaries and other short-term benefits comprise all types of compensation recorded, including variable amounts, bonuses, attendance fees and benefits in kind.

The Chairman and Chief Executive Officer is entitled to a contractual indemnity in the event of non-voluntary departure, up to a maximum of twice his total gross annual compensation (fixed and variable), subject to achievement of performance criteria.

Note 8 Income taxes

Current income taxes

Current taxes are the amount of income taxes that the Group expects to pay in respect of taxable profits of consolidated companies in the period. They also include adjustments to current taxes in respect of prior periods.

The French tax consolidation regime enables certain French companies in the Group to offset their taxable income when determining the tax expense for the entire French tax group. The overall tax expense is payable by Arkema, as the parent company of the tax group. Tax consolidation regimes also exist in countries outside France.

Deferred taxes

The Group uses the liability method whereby deferred taxes are recognized based upon the temporary differences between the financial statement and tax basis of assets and liabilities, as well as on tax loss carryforwards and other tax credits, in accordance with IAS 12 "Income taxes".

Deferred tax assets and liabilities are valued at the tax rates that are expected to apply in the year in which the asset will be realized or the liability settled, on the basis of tax rates (and tax legislation) that have been enacted or virtually enacted at the balance sheet date. The effect of any changes in tax rates is recognized in income for the period, unless it relates to items that were previously debited or credited through equity. Deferred tax assets and liabilities are not discounted.

Deferred tax assets are recognized to the extent that their recovery is probable. In order to assess the likelihood of recovery of such assets, account is notably taken of the profitability outlook at the end of each period, determined by the Group, and historical taxable profits or losses, particularly for the scope of the French tax consolidation group.

A deferred tax liability is recognized for all taxable temporary differences related to investments in subsidiaries, associates and joint ventures, unless:

- the Group controls the timing of the reversal of the temporary difference; and
- it is probable that this difference will not reverse in the foreseeable future.

Deferred tax assets and liabilities are offset if a legally enforceable right to offset current tax assets and liabilities exists and if they relate to income taxes levied by the same tax authority.

8.1 INCOME TAX EXPENSE

The income tax expense breaks down as follows:

(In millions of euros)	**2023**	2022
Current income taxes	(170)	(281)
Deferred income taxes	(7)	27
TOTAL INCOME TAXES	**(177)**	**(254)**

The income tax expense amounts to €177 million in 2023 compared with €254 million in 2022.

8.2 ANALYSIS BY SOURCE OF NET DEFERRED TAX ASSETS (LIABILITIES)

The analysis by source of the net deferred tax assets (liabilities) is as follows, before offset of assets and liabilities at fiscal entity level:

(In millions of euros)	31 December 2022	Change in scope/ Reclassifications	Changes recognized in share-holders' equity	Changes recognized in the income statement	Translation adjustments	**31 December 2023**
Tax loss and tax credit carryforwards	52	2	—	0	0	54
Provisions for pensions and similar benefits	70	1	4	(1)	0	74
Other temporarily non-deductible provisions	343	24	21	(33)	(8)	347
Deferred tax assets	**465**	**27**	**25**	**(34)**	**(8)**	**475**
Valuation allowance on deferred tax assets	**(97)**	**0**	**(10)**	**(7)**	**1**	**(113)**
Excess tax over book depreciation	175	13	(1)	(2)	(5)	180
Other temporary tax deductions	389	101	9	(32)	(6)	461
Deferred tax liabilities	**564**	**114**	**8**	**(34)**	**(11)**	**641**
NET DEFERRED TAX ASSETS (LIABILITIES)	**(196)**	**(87)**	**7**	**(7)**	**4**	**(279)**

After offsetting assets and liabilities at fiscal entity level, deferred taxes are presented as follows in the balance sheet:

(In millions of euros)	**31 December 2023**	31 December 2022
Deferred tax assets	157	166
Deferred tax liabilities	436	362
NET DEFERRED TAX ASSETS (LIABILITIES)	**(279)**	**(196)**

As the Group is able to control the timing of the reversal of temporary differences related to investments in subsidiaries and joint ventures, it is not necessary to recognize deferred taxes in respect of these differences.

8.3 RECONCILIATION BETWEEN INCOME TAX EXPENSE AND PRE-TAX INCOME

(In millions of euros)	**2023**	2022
Net income	425	966
Income taxes	(177)	(254)
Pre-tax income	602	1,220
French corporate income tax rate	25.83%	25.83%
Theoretical tax expense	(156)	(315)
Difference between French and foreign income tax rates	(1)	7
Tax effect of equity in income of affiliates	(2)	(2)
Permanent differences	12	2
Change in valuation allowance against deferred tax asset ceiling	(7)	44
Deferred tax assets not recognized (losses)	(23)	10
INCOME TAX EXPENSE	**(177)**	**(254)**

The French corporate income tax rate includes the standard tax rate (25.00% in 2023) and the additional social security contribution. The overall income tax rate therefore stands at 25.83% in 2023.

8.4 EXPIRY OF TAX LOSS CARRYFORWARDS AND TAX CREDITS

The Group's unrecognized tax loss carryforwards and tax credits can be used up to their year of expiry, indicated in the table below:

	31 December 2023		**31 December 2022**	
(In millions of euros)	**Base**	**Income taxes**	Base	Income taxes
2023	—	—	22	5
2024	16	4	13	3
2025	17	4	17	4
2026	8	2	9	2
2027	26	6	34	8
2028 and beyond	77	19	—	—
Tax losses that can be carried forward indefinitely*	1,313	332	1,253	325
TOTAL	**1,457**	**367**	**1,348**	**347**

* *Essentially in France.*

The Group's unrecognized tax loss carryforwards and tax credits take into account the changes in the tax rate.

8.5 INCOME TAXES PAID

Income taxes paid amount to €191 million.

(In millions of euros)	**31 December 2023**	31 December 2022
Income taxes paid	191	354

Note 9 Intangible assets and property, plant and equipment

9.1 GOODWILL

Goodwill is initially recognized when a business combination takes place, as described in note 3.1 "Consolidation principles".

Goodwill is not amortized after initial recognition. It is included in the cash-generating units (CGUs) that are subject to impairment tests as soon as any indicators of potential impairment are identified. Impairment tests are performed at least annually, following the methodology described in note 9.5 "Asset value monitoring".

	31 December 2023			31 December 2022
(In millions of euros)	Gross book value	Accumulated depreciation and impairment	Net book value	Net book value
Goodwill	3,657	(617)	3,040	2,655

The breakdown by segment is as follows:

Goodwill by segment	31 December 2023 Net book value	31 December 2022 Net book value
Adhesive Solutions	1,715	1,736
Advanced Materials	902	484
Coating Solutions	379	391
Intermediates	44	44
Corporate	—	—
TOTAL	**3,040**	**2,655**

Changes in the net book value of goodwill are as follows:

(In millions of euros)	2023	2022
At 1 January	**2,655**	**1,925**
Acquisitions	481	685
Impairment	—	—
Translation adjustments	(49)	45
Reclassifications	(47)	—
At 31 December	**3,040**	**2,655**

In 2023, the "Acquisitions" line corresponds to goodwill arising on the acquisition of a 54% controlling interest in PI Advanced Materials Co., Ltd. and on the acquisition of Polytec PT Gmbh Polymere Technologien, partly offset by the reduction in goodwill following completion of the purchase price allocation for Bostik South Africa (PTY) Ltd. (formerly Permoseal), Shanghai Zhiguan Polymer Materials (PMP) and Polimeros Especiales. The "Reclassifications" line corresponds to a reclassification to intangible assets (see note 9.2 "Intangible assets").

For 2022, the "Acquisitions" item corresponds to new goodwill recognized on the acquisition of Ashland's Performance Adhesives business, Permoseal, Shanghai Zhiguan Polymer Materials (PMP) and Polimeros Especiales, partially offset by the reduction in goodwill following the finalization of the Poliplas and Agiplast purchase price allocation.

9.2 OTHER INTANGIBLE ASSETS

Other intangible assets mainly include patents and technologies, trademarks, software and IT licenses, capitalized contracts, customer relations, and capitalized research expenses. These intangible assets are recognized in the balance sheet at their acquisition or production cost, less any accumulated amortization and impairment losses recognized following impairment tests as described in note 9.5 "Asset value monitoring".

Intangible assets other than goodwill and trademarks with indefinite useful lives are amortized on a straight-line basis over 3 to 20 years depending on the pattern in which the asset's future economic benefits are expected to be consumed by the entity.

The main categories of intangible assets and the amortization periods applied by the Group are as follows:

- trademarks other than those with indefinite useful lives: useful life of up to 30 years;
- patents: residual period until expiry of patent protection;
- technologies: average useful life;
- software: 3-10 years;
- licenses: term of the contract;
- capitalized contracts: term of the contract;
- customer relations: average useful life;
- capitalized research expenses: useful life of the project; and
- REACH registration fees: protection period of study data.

Trademarks

Acquired trademarks are valued by the relief-from-royalty method.

Software and IT licenses

Software development expenses for the design, programming and test phases are capitalized.

Training costs, expenses related to change management, data transfer and subsequent maintenance costs are recorded as expenses.

Capitalized research and development costs

Under IAS 38 "Intangible assets", development costs are capitalized as soon as the Group can demonstrate, in particular:

- its intention and its financial and technical ability to complete the development project;
- that it is probable that future economic benefits attributable to the development costs will flow to the enterprise, which also implies having successfully completed the main non-toxicity studies relating to the new product; and
- that the cost of the asset can be measured reliably.

Grants received in respect of development activities are recognized as a deduction from capitalized development costs if they have been definitively earned by the Group. The Group also receives public financing in the form of repayable advances for the development of certain projects. Repayment of these advances is generally related to the future revenues generated by the development. The Group recognizes these advances in balance sheet liabilities (in the "Other non-current liabilities" caption) taking account of the probability of their repayment.

REACH (Registration, Evaluation and Authorization of Chemicals)

As no specific IFRS IC interpretations exist on the subject, the Group applies the following methods based on IAS 38:

- when most of the tests required for preparing the registration file have been acquired from a third party, the Group records an operating right in the intangible assets; and
- when most of the expenses involved in preparing the registration file have been carried out internally or outsourced, the Group capitalizes the development costs that meet the requirements for capitalization defined by IAS 38 (see "Capitalized research and development costs" above).

At 31 December 2023, the net book value of intangible assets excluding Goodwill amounts to €2,416 million.

	31 December 2023			31 December 2022
(In millions of euros)	**Gross book value**	**Accumulated depreciation and impairment**	**Net book value**	Net book value
Patents and technologies	623	(293)	330	343
Trademarks	672	(8)	664	632
Software and IT licenses	481	(396)	85	83
Capitalized REACH costs	91	(58)	33	34
Other capitalized research expenses	21	(21)	0	2
Capitalized contracts	88	(75)	13	12
Asset rights	99	(48)	51	51
Customer relations	892	(183)	709	782
Other intangible assets	382	(63)	319	27
Intangible assets in progress	237	(25)	212	212
TOTAL	**3,586**	**(1,170)**	**2,416**	**2,178**

Trademarks essentially comprise the Bostik® and Den Braven® trademarks, which are part of the Adhesive Solutions segment.

Other intangible assets include the provisional allocation of the purchase price for the 54% controlling interest acquired in PI Advanced Materials Co., Ltd. (see note 3.2.2 "Acquisitions in 2023"). This mainly concerns technologies and customer relations.

Changes in the net book value of intangible assets are as follows:

(In millions of euros)	**2023**	2022
At 1 January	**2,178**	**1,516**
Acquisitions	65	56
Depreciation	(179)	(164)
Impairment	—	—
Disposals	—	—
Changes in scope	337	718
Translation adjustments	(36)	46
Reclassifications (including reclassifications as assets held for sale)	51	6
At 31 December	**2,416**	**2,178**

At 31 December 2023, the “Changes in scope” item includes the intangible assets described in note 3.2.2 “Business combinations”. The "Reclassifications" line includes €47 million reclassified from goodwill to intangible assets (see note 9.1 “Goodwill”).

At 31 December 2022, “Changes in scope” included intangible assets relating to Ashland’s Performance Adhesives business.

9.3 PROPERTY, PLANT AND EQUIPMENT

Gross value

The gross value of items of property, plant and equipment other than rights of use corresponds to their acquisition or production cost in accordance with IAS 16 “Property, plant and equipment”. Gross value is not subject to revaluation.

Equipment subsidies are deducted directly from the cost of the assets which they financed. With effect from 1 January 2009 and in accordance with the revised version of IAS 23, borrowing costs that are directly attributable to financing property, plant and equipment that necessarily take a substantial period of time to get ready for their intended use or sale are eligible for capitalization as part of the cost of the assets for the portion of the cost incurred over the construction period.

Routine maintenance and repairs are charged to income in the period in which they are incurred. Costs related to major maintenance turnarounds of industrial facilities which take place at intervals greater than 12 months are capitalized at the time they are incurred and depreciated over the period between two such turnarounds.

Depreciation and impairment

Depreciation is calculated on a straight-line basis on the basis of the acquisition or production cost. Assets are depreciated over their estimated useful lives by category of asset. The principal categories and useful lives are as follows:

- machinery and tools: 5-10 years
- transportation equipment: 5-20 years
- specialized complex installations: 10-20 years
- buildings: 10-30 years

These useful lives are reviewed annually and modified if expectations change from the previous estimates. Such changes in accounting estimates are accounted for on a prospective basis.

Additional impairment is recognized when a loss of value is observed from impairment tests conducted as described in note 9.5 “Asset value monitoring”.

The Group has identified certain assets, such as gas boilers, whose useful lives could be affected by climate-related issues linked to transition risk. However, if these assets were to be replaced by carbon-free solutions, they would be kept until the end of their useful lives as a replacement solution for safety and business continuity reasons.
The remaining useful lives of the Group's other complex installations are fairly short compared with their depreciation periods, ranging from 10 to 20 years. This period may be shorter for installations with high emissive power, such as those used to produce certain types of fluorogases.
The Group therefore believes that transition risk has no material impact on the useful lives of assets and that no additional impairment is required.

CHANGES IN PROPERTY, PLANT AND EQUIPMENT

	31 December 2023			31 December 2022
(In millions of euros)	**Gross book value**	**Accumulated depreciation and impairment**	**Net book value**	Net book value
Land and buildings	2,393	(1,533)	860	724
Complex industrial facilities	3,728	(3,188)	540	571
Other property, plant and equipment	4,735	(3,137)	1,598	1,053
Construction in progress	544	(29)	515	884
TOTAL PROPERTY, PLANT AND EQUIPMENT EXCLUDING RIGHTS OF USE	**11,400**	**(7,887)**	**3,513**	**3,232**
Rights of use	452	(235)	217	197
TOTAL PROPERTY, PLANT AND EQUIPMENT	**11,852**	**(8,122)**	**3,730**	**3,429**

Other property, plant and equipment at 31 December 2023 mainly comprises machinery and tools with a gross value of €3,672 million (€2,978 million at 31 December 2022), and accumulated depreciation and provisions for impairment of €2,438 million (€2,238 million at 31 December 2022).

CHANGES IN PROPERTY, PLANT AND EQUIPMENT EXCLUDING RIGHTS OF USE

Changes in the net book value of property, plant and equipment excluding rights of use are as follows:

(In millions of euros)	2023	2022
At 1 January	**3,232**	**2,874**
Acquisitions	569	651
Depreciation	(430)	(436)
Impairment	(30)	(42)
Disposals	(4)	(11)
Changes in scope	268	140
Translation adjustments	(89)	62
Other	—	—
Reclassifications (including reclassifications as assets held for sale)	(3)	(6)
At 31 December	**3,513**	**3,232**

Impairment at 31 December 2023 mainly concerns specific property, plant and equipment for Hydrogen Peroxide activities at the Jarrie site in France.

Acquisitions include capital expenditure intended to further the Group's decarbonization goals, representing €30 million in 2023 (€16 million in 2022). These include a new purification process for the acrylic monomer plant at its Carling site in France, the Arkema Energy program, and the installation of an innovative catalyst at its Lacq site in France.

Changes in scope are described in further detail in note 3.2 "Business combinations".

Impairment at 31 December 2022 mainly concerned specific property, plant and equipment for Hydrogen Peroxide activities at the Jarrie site in France.

9.4 IFRS 16 LEASES: RIGHTS OF USE AND IFRS 16 DEBT

From 1 January 2019, the Group's lease obligations are recorded in application of IFRS 16 "Leases". In the balance sheet, the Group recognizes an asset corresponding to the right to use the leased asset, and an equivalent financial liability. In the income statement, the lease payment expense is replaced by depreciation of the right to use the asset, recorded in "Depreciation, amortization and impairment", and a financial interest expense, recorded in "Financial result". The cash flow statement is also impacted. The Group records repayments of the financial liability, presented in "Cash flow from financing activities", and a financial interest expense, presented in "Cash flow from operating activities".

The Group first applied this standard at 1 January 2019 under the modified retrospective approach, and opted to use the two exemptions from capitalization allowed for leases of less than twelve months and leases of assets with an individual value of less than US$5,000 when new. For purposes of simplification, the Group excludes a certain number of subsidiaries from the scope of application of IFRS 16. The combined impact of the excluded lease contracts is not material for the Group.

The right of use is recognized at an amount corresponding to the initial debt, adjusted for prepaid and accrued payments on the original lease, and any estimated repair costs. The right of use is depreciated on a straight-line basis over the term of the lease.

In application of the decision of November 2019 by the IFRS IC, the lease term is the irrevocable period, extended where relevant by any renewal options the Group is reasonably certain to use; in particular, the Group applies the recommendation of 3 July 2020 issued by France's Accounting Standards Authority, ANC, to real estate property leases in France.

The lease obligation at 1 January 2019 was calculated under IFRS 16, applying the discount rates in force at that date over the residual term of the lease.

As the implicit interest rate of the leases is not easily determined, the Group applies a discount rate based on the subsidiaries' estimated incremental borrowing rate.

The principal leases affected by IFRS 16 concern real estate property and logistics equipment, excluding servicing obligations associated with the lease.

At 31 December 2023, the net book value of rights of use related to leases is €217 million.

	31 December 2023			31 December 2022
(In millions of euros)	Gross book value	Accumulated depreciation and impairment	Net book value	Net book value
Rights of use: real estate assets (head offices, offices)	96	(68)	28	35
Rights of use: industrial assets (factories, land, warehouses)	70	(24)	46	44
Rights of use: logistics assets (trucks, containers, trolleys)	245	(125)	120	96
Rights of use: other assets (cars, etc.)	41	(18)	23	22
Total rights of use	**452**	**(235)**	**217**	**197**

Changes in the net book value of rights of use are as follows:

(In millions of euros)	2023	2022
At 1 January	**197**	**157**
Acquisitions	105	103
Depreciation	(79)	(67)
Disposals	(4)	(5)
Changes in scope	5	1
Translation adjustments	(4)	5
Reclassifications (including reclassifications as assets held for sale)	(3)	3
At 31 December	**217**	**197**

The IFRS 16 debt amounts to €223 million at 31 December 2023 (see note 12.3 “Debt”). The total non-discounted value of the Group’s future lease payments amounts to €249 million at 31 December 2023, maturing as follows:

(In millions of euros)	31 December 2023
Within one year	72
1-5 years	111
After 5 years	66
TOTAL	**249**

At 31 December 2023, the cash outflows associated with leases amount to €85 million for the year. The financial expenses related to the IFRS 16 debt amount to €7 million.

The application of exemptions for short-term leases and leases of low-value assets concerns amounts that are not material at Group level.

9.5 ASSET VALUE MONITORING

The recoverable amount of property, plant and equipment and intangible assets is tested as soon as any indication of impairment is identified. A review to identify if any such indication exists is performed at each year-end, based on a five-year plan validated by the Executive Committee. This impairment test is performed at least once a year and includes goodwill and trademarks with indefinite useful lives.

An asset’s recoverable amount corresponds to the greater of its value in use and its fair value less costs to sell.

Tests are performed for each autonomous group of assets, termed Cash Generating Units (CGUs). A CGU is a group of assets whose continued use generates cash flows that are substantially independent of cash flows generated by other groups of assets. They are worldwide business operations, which bring together groups of similar products in strategic, commercial and industrial terms. The value in use of a CGU is determined on the basis of the discounted future cash flows that are expected to be generated by the assets in question, based upon Group executive management’s expectation of future economic and operating conditions over the next five years or, when the asset is to be sold, by comparison with its market value. Impairment is calculated as the difference between the recoverable amount and the carrying amount of the CGU. Because of its unusual nature, any such impairment is presented separately in the income statement under the “Other income and expenses” caption. Impairment may be reversed, up to the maximum carrying amount that would have been recognized for the asset had the asset not been impaired. Impairment losses on goodwill are irreversible (in application of IFRIC 10, impairment losses on goodwill recognized in previous interim accounting periods cannot be written back).

In 2023, the terminal value was calculated based on a perpetuity growth rate of 2% for all these CGUs except Fluorogases and Adhesive Solutions, for which the rates used were 0% and 2.5%, respectively (2% for all CGUs in 2022), and mid-cycle cash flows. The after-tax rate used to discount future cash flows and the terminal value is the Group's weighted average cost of capital, estimated at 8.5% in 2023 (8.5% in 2022), except for the Asia Acrylics CGU, for which the rate was 9.5% in 2023 (9.6% in 2022).

Cash flow projections take into account the expected or probable impacts of climate-related issues for the Group, in terms of:

- opportunities for innovation and sustainable growth by reducing the environmental footprint of its products, particularly in the strategic markets of green energy, electric mobility, sustainable lifestyle and construction;
- decarbonization mechanisms, multi-year contracts to purchase low-carbon energy (PPAs) and Guarantee of Origin certificates (RECs), and investments by CGUs intended to move closer to the Group's greenhouse gas emissions reduction targets;
- regulatory developments, with the increase in the cost of GHG emissions for CGUs (emissions trading schemes such as the ETS, carbon taxes, taxes on energy purchases) and new regulations affecting the fluorogases market. The emissions allowance prices used in the projections range from €95 per metric ton in 2024 to €130 per metric ton from 2028.

Sensitivity analyses carried out at 31 December 2023, evaluating the impact of reasonable changes in the basic assumptions – in particular the impact of a 1-point increase in the discount rate, or of a change of minus 0.5 of a point in the perpetuity growth rate, or minus 10% in EBITDA, or plus 20% in capital expenditure – confirmed the net carrying amounts of the different CGUs, excluding the Hydrogen Peroxide CGU, for which the assumption of a change of plus 20% in capital expenditure would lead to impairment losses of less than €20 million.

In addition, these EBITDA and capital expenditure sensitivity analyses include any climate-related impacts in terms of increases in the price per tonne of CO_2 and additional investments enabling the Group to meet its target to reduce its Scope 1 and 2 greenhouse gas (GHG) emissions and its Scope 3 emissions by 46% by 2030 relative to 2019. This target is supported by an increase in investments contributing to decarbonization, which could reach €400 million between 2022 and 2030.

Lastly, impairment losses were recognized on other specific assets at 31 December 2023 (see note 9.3 "Property, plant and equipment").

Note 10 Equity accounted companies and other non-current assets

The accounting methods for associates, joint ventures and other investments are described in note 3.1 "Consolidation principles".

The amounts of the Group's commitments to joint ventures and associates are non-significant.

In addition, in the normal course of business, the Group has business relationships with certain non-consolidated companies or with companies which are accounted for under the equity method. The values involved are not significant.

10.1 ASSOCIATES

The equity value and equity in income (loss) of associates stood at €8 million and a negative €8 million respectively in 2023 (€18 million and a negative €6 million in 2022).

	2023		2022	
(In millions of euros)	**% owner-ship**	**Sales**	% owner-ship	Sales
Arkema Yoshitomi Ltd.	49%	20	49%	19
CJ Bio Malaysia Sdn. Bhd.	14%	163	14%	344
ERPRO 3D FACTORY	10%	1	10%	2
Ihsedu Agrochem Private Ltd.	25%	198	25%	222
TOTAL		**382**		**587**

10.2 JOINT VENTURES

The equity value and equity in income (loss) of joint ventures amounted to €5 million euros and a negative €1 million in 2023 respectively (€6 million and €0 million in 2022).

	2023		2022	
(In millions of euros)	**% owner-ship**	**Sales**	% owner-ship	Sales
Barrflex TU LLC	49%	0	49%	1
TOTAL		**0**		**1**

10.3 OTHER INVESTMENTS

The main movements in 2022 and 2023 are as follows:

(In millions of euros)	**2023**	2022
At 1 January	**52**	**52**
Acquisitions	—	1
Disposals	(3)	—
(Increases)/Reversals of impairment	3	—
Changes in scope	—	—
Translation adjustments	—	—
Other changes	—	(1)
At 31 December	**52**	**52**

10.4 OTHER NON-CURRENT ASSETS

	31 December 2023			31 December 2022		
(In millions of euros)	Gross value	Impairment	Net value	Gross value	Impairment	Net value
Pension assets	2	—	2	1	—	1
Loans and advances	199	(11)	188	203	(10)	193
Security deposits paid	61	—	61	52	—	52
TOTAL	**262**	**(11)**	**251**	**256**	**(10)**	**245**

Loans and advances include amounts receivable from the French tax authorities in respect of France's research tax credit (CIR). Loans and advances also include €64 million of receivables on TotalEnergies SE related to the remediation costs in respect of closed industrial sites in the United States (see note 11.1.2 "Other provisions/Environmental provisions").

The CIR for 2019, amounting to €26 million, was reimbursed in September 2023. The CIR for 2020, amounting to €22 million, will be reimbursed in 2024.

Note 11 Other provisions and other non-current liabilities, contingent liabilities and litigation

11.1 OTHER PROVISIONS AND OTHER NON-CURRENT LIABILITIES

A provision is recognized when:

- the Group has a legal, regulatory or contractual obligation to a third party resulting from past events. An obligation can also result from Group practices or public commitments that create a reasonable expectation among the third parties in question that the Group will assume certain responsibilities;
- it is certain or probable that the obligation will lead to an outflow of resources to the benefit of the third party; and
- its amount can be estimated reliably and corresponds to the best possible estimate of the commitment. In exceptional cases where the amount of the obligation cannot be measured with sufficient reliability, disclosure is made in the notes to the financial statements in respect of the obligation (see note 11.2 "Liabilities and contingent liabilities").

Environmental provisions which are established or reviewed when a business is closed down, or upon a formal request from the authorities, are the subject of an internal review every two years. These provisions are recognized or updated by a dedicated team which calls in specialized external assistance as and when required by the matters identified.

When it is expected that the Group will obtain partial or total reimbursement of the cost that was provided against, the expected reimbursement is recognized in receivables if, and only if, the Group is virtually certain of the receipt.

Long-term provisions, other than provisions for pensions and post-employment benefit obligations, are not inflation-indexed or discounted as the Group considers that the impact of such adjustments would not be significant.

The current (less than one year) portion of provisions is maintained within the "Other provisions and non-current liabilities" caption.

11.1.1 Other non-current liabilities

Other non-current liabilities amount to €14 million at 31 December 2023 *versus* €14 million at 31 December 2022.

11.1.2 Other provisions

(In millions of euros)	Environmental provisions	Restructuring	Other	Total
At 1 January 2023	**217**	**38**	**189**	**444**
Increases in provisions	39	7	22	68
Reversals of provisions on use	(34)	(18)	(14)	(66)
Reversals of unused provisions	(2)	(2)	(32)	(36)
Changes in scope	—	—	—	—
Translation adjustments	(4)	—	(3)	(7)
Other	—	5	(6)	(1)
At 31 December 2023	**216**	**30**	**156**	**402**
Of which: less than one year	35	13	26	74
Of which: more than one year	181	17	130	328

Furthermore, certain provisions are covered by non-current assets (receivables and deposits):

(In millions of euros)	Environmental provisions	Restructuring	Other	**Total**
Total provisions at 31 December 2023	**216**	**30**	**156**	**402**
Portion of provisions covered by receivables or deposits	64	—	37	101
Deferred tax asset related to amounts covered by the Total indemnity	19	—	—	19
Provisions at 31 December 2023 net of non-current assets	**133**	**30**	**119**	**282**

(In millions of euros)	Environmental provisions	Restructuring	Other	Total
At 1 January 2022	**202**	**49**	**178**	**429**
Increases in provisions	42	5	64	111
Reversals of provisions on use	(33)	(16)	(36)	(85)
Reversals of unused provisions	(1)	(1)	(22)	(24)
Changes in scope	—	—	—	—
Translation adjustments	6	1	6	13
Other	1	—	(1)	—
At 31 December 2022	**217**	**38**	**189**	**444**
Of which: less than one year	33	17	35	85
Of which: more than one year	184	21	154	359

Furthermore, certain provisions were covered by non-current assets (receivables and deposits):

(In millions of euros)	Environmental provisions	Restructuring	Other	Total
Total provisions at 31 December 2022	**217**	**38**	**189**	**444**
Portion of provisions covered by receivables or deposits	65	—	32	97
Deferred tax asset related to amounts covered by the Total indemnity	20	—	—	20
Provisions at 31 December 2022 net of non-current assets	**132**	**38**	**157**	**327**

Environmental provisions

Environmental provisions are recognized mainly to cover expenses related to soil and water table clean-up, as well as, to a lesser extent, expenses related to the reinforcement of certain structures to address physical climate risks such as flooding. Environmental provisions are mainly for:

- France for €100 million (€98 million at 31 December 2022);
- the United States for €105 million (€107 million at 31 December 2022), of which €83 million in respect of former industrial sites covered 100% by the TotalEnergies SE group indemnity (receivable recognized in “Other non-current assets” for an amount of €64 million and €19 million recognized in deferred tax assets).

Restructuring provisions

Restructuring provisions are mainly in respect of restructuring measures in France for €20 million (€25 million at 31 December 2022), in Europe excluding France for €5 million (€7 million at 31 December 2022) and in the United States for €3 million (€3 million at 31 December 2022).

Increases in such provisions in the period mainly correspond to the restructuring plans described in note 6.1.5 “Other income and expenses”.

Other provisions

Other provisions amount to €156 million and mainly comprise:

- provisions for labor litigation for €75 million (€71 million at 31 December 2022);
- provisions for commercial litigation and warranties for €32 million (€61 million at 31 December 2022);
- provisions for tax litigation for €30 million (€30 million at 31 December 2022); and
- provisions for other risks for €19 million (€27 million at 31 December 2022).

11.2 LIABILITIES AND CONTINGENT LIABILITIES

Contingent liabilities arising from changes in the scope of consolidation are presented in note 3.4 “Warranties related to sales of businesses”.

IAS 37 defines a contingent liability as:

a) a possible obligation that arises from past events, the existence of which will be confirmed only by the occurrence or non-occurrence of one or more uncertain future events not wholly within the Group's control; or

b) a present obligation that arises from past events but is not recognized because (i) it is not probable that an outflow of resources embodying economic benefits will be required to settle the obligation; or (ii) the amount of the obligation cannot be measured with sufficient reliability.

11.2.1 Environment

The Group’s business activities are subject to constantly changing local, national and international regulations on the environment and industrial safety, which entail meeting increasingly complex and restrictive requirements. In this regard, these activities can involve a risk of the Group’s liability being called upon, particularly in respect of clean-up of sites and industrial safety.

Taking account of the information available, agreements signed with TotalEnergies SE, and the provisions for environmental contingencies recognized, the Group’s executive management considers that the environmental liabilities identified at this point are valued and recognized to the best of their knowledge in the financial statements. However if laws, regulations or government policy in respect of environmental matters were to change, the Group’s obligations could change, which could lead to additional costs.

The competent authorities have made, are making or may in the future make specific demands that the Group rehabilitate or control emissions at certain sites that it is currently operating, or that it operated or disposed of in the past, at neighboring sites or at sites where the Group stored or disposed of waste.

Sites currently in operation

The Group has many sites of which a certain number may be polluted in view of their age and the range of activities that are carried out on them, or that were carried out on them in the past. As regards these sites, certain situations have been identified and the Group has already carried out certain clean-up work, or otherwise developed action plans and recognized provisions in order to cover future clean-up work.

However, in the light of (i) the uncertainties over the technical means to be implemented, (ii) potential issues that are unknown, (iii) uncertainties over the actual time required for remediation compared with the estimated time (*e.g.*, “pump and treat”), and (iv) potential changes in regulations, the possibility that the expenses the Group will incur will be higher than the amounts covered by provisions cannot be excluded. These potential excess costs relate mainly to the sites in Antwerp (Belgium), Calvert City (United States), Carling (France), Günzburg (Germany), Jarrie (France), Lannemezan (France), Leicester (United Kingdom), Lesgor (France), Loison (France), Mont (France), Pierre-Bénite (France), Ribecourt (France), Rion-des-Landes (France), Riverview (United States), Rotterdam (Netherlands), Saint-Auban (France), and Vlissingen (Netherlands) and could adversely affect the Group’s business, results and financial situation.

Pursuant to a prefectural decision issued on 14 June 2023, Arkema is required to perform additional analyses for certain PFAS in the area around the Pierre Bénite site, as well as an environmental assessment *(interprétation de l’état des milieux)* and a health risk assessment. The provisions set aside at 31 December 2023 are sufficient to cover the cost of these studies. Given that (i) the results of these studies are pending, and (ii) regulations may change, it cannot be ruled out that the Group’s exposure will be greater than the provisioned amounts.

Closed industrial sites (former industrial sites)

TotalEnergies SE directly or indirectly took over some closed industrial sites at the date of the Spin-Off of Arkema’s Businesses on 10 May 2006.

Since the Spin-Off, the businesses exercised on the former sites of Dorlyl SNC (France), Ibos (France), Colmar (France), Bernouville (France), Bonn (Germany) and Wetteren (Belgium) have been closed and the land sold. The businesses carried on at the Zaramillo site in Spain have been closed and the real estate assets have been sold. The businesses carried on at the Chauny (France), Miranda (Spain) and Pierrefitte Nestalas (France) sites have also been closed, without selling the land, and where relevant are covered by provisions for amounts that the Group considers adequate.

Furthermore, the Prefect of the Haute-Savoie region issued a prefectural decision on 6 April 2018 ordering Arkema France to carry out investigations on the Chedde site (France), with regard to the perchlorate production operations. Arkema France has met all requirements.

On 15 October 2021, the Republic and Canton of Geneva filed a petition for summary proceedings with the Administrative Court of Grenoble, notably challenging Arkema France in its capacity as beneficiary of the perchlorate production operations on the Chedde site, and requesting the appointment of an expert to determine the causes, origins and consequences of the perchlorate pollution in the groundwater around Geneva. On 19 November 2021, Arkema France filed a petition with the Grenoble Administrative Court seeking to establish the potential liability of the French Ministry of Armed Forces. By order of 26 January 2022, the Administrative Court of Grenoble granted the Swiss authorities’ request for an expert assessment of this matter. The assessment is currently underway.

Sites in operation that have been sold

a) Saint-Fons (Arkema France)

In the sale of the Group's vinyls activities to the Klesch Group in early July 2012, all industrial installations on the Saint-Fons site were transferred to Kem One, apart from the land, which is held under a long-term lease. The agreements for the sale stipulated that Arkema France remains liable for legacy pollution at the site.

The Prefect of the Rhône region issued decisions on 14 May 2007, 19 and 27 June 2012, ordering Arkema France to carry out quality monitoring on underground water and propose a plan to manage the legacy pollution affecting the site (T112 and other pollutants). Following issuance of the most recent prefectural decision on 22 December 2020, Arkema France submitted a new management plan in April 2023 and adjusted its provisions accordingly in 2023. However, in the light of (i) potential issues that are unknown, (ii) uncertainties over the actual time required for remediation compared with the estimated time, and (iii) potential changes in regulations, the possibility that the expenses the Group will incur on the Saint-Fons site will be higher than the amounts covered by provisions cannot be excluded.

b) Parrapon mining concession

Under a prior commitment made by the Arkema Group to the French authorities in connection with the transfer of the Parrapon mining concession to Kem One SAS, which was authorized by a ministerial decision of 13 January 2016, the Group will bear the costs that may be payable by Kem One SAS, as concession operator, as a result of surveillance and safety measures for the 31 salt mines which were permanently closed down on 12 February 2014.

To meet the requirements of the authorities, Kem One sent a proposal to the DREAL in a letter dated 21 August 2017 setting out a program of work. At 31 December 2022, the balance of the provision corresponds to an amount considered adequate by the Group to cover the cost of the work.

Porto Marghera site (Italy)

As part of the divestment of the PMMA business in 2021, the Porto Marghera site was sold to Trinseo, which took over all environmental obligations. At 31 December 2023, administrative formalities related to the sale had yet to be finalized.

11.2.2 Litigation, claims and proceedings in progress

Labor litigation

a) Occupational illness (France)

In the manufacture of its products, the Group uses and has used toxic or hazardous substances. Despite the safety and monitoring procedures that have been instituted at Group level and for each production site, Group employees may have been exposed to such substances and may develop specific pathologies as a result of such exposure.

In this respect, like most industrial companies, in the past, the Group has used a variety of insulating or heat-proofing materials containing asbestos in its production facilities. Consequently, certain employees may have been exposed to such materials before they were gradually eliminated and replaced with substitute products.

At its French sites, the Group anticipated the regulatory provisions applicable to asbestos (Decrees no. 96-97 and 96-98 of 7 February 1996 and Decree no. 96-1133 of 24 December 1996). The Group made an inventory of building materials within its premises that contained asbestos, notified employees of the results of these investigations and took the collective and individual protective measures required by the applicable laws. However, claims for occupational illness related to past asbestos exposure have been filed against the Group, mostly for periods before 1980. Given the latency period of asbestos-related pathologies, additional claims for occupational illness are likely to be filed in the years ahead.

The Group has recognized provisions to cover the risks of employer liability claims related to notified cases of occupational illness, which are reversed as appropriate depending on case outcomes.

b) Anxiety suffered as a result of exposure to asbestos or a harmful or toxic substance (Arkema France)

In a ruling of 11 May 2010, the labor chamber of the French Supreme Court *(Cour de Cassation)* recognized the existence of a prejudice of anxiety, eligible for compensation, for employees who in the past worked on sites included in the list of establishments whose workers were eligible for the early retirement system for asbestos workers.

Two decisions by the French Supreme Court (*Cour de Cassation*, on 5 April 2019 and 11 September 2019) extended the right to compensation for the prejudice of anxiety to employees who have not worked in an establishment classified as exposing workers to asbestos, but can prove they have been exposed to asbestos, and employees who can prove they have been exposed to a harmful or toxic substance entailing a high risk of developing a serious medical condition.

To date, 52 former employees of the Carling plant have appealed to the employee claims court seeking damages for anxiety suffered as a result of alleged past exposure to trichloroethylene during their working lives.

It is possible that other current or former employees of Arkema France who were effectively exposed to asbestos, who worked on sites that are added by ministerial decision to the official list of eligible sites, or who may have been exposed to carcinogenic or other toxic substances during their working lives, could bring action in the future before an employee claims court to claim compensation for the prejudice of anxiety.

Tax litigation

a) Arkema Quimica Ltda

Arkema's Brazilian subsidiary Arkema Quimica Ltda, which merged with Arkema Coatex Brasil Indústria e Comércio Ltda. on 1 January 2021, started offsetting certain tax assets and liabilities in 2000 following a declaration as to the unconstitutional nature of certain taxes. The Brazilian government contested the justification for this offset and in 2009 claimed repayment of 19.5 million reais (around €6 million). In mid-2017, Arkema Quimica Ltda reassessed its risk and decided to opt into an amnesty program that reduced the amount payable to 6 million reais, to be paid in installments until September 2029.

b) Arkema Srl

In 2013, the Lombardy Regional Tax office (Italy) conducted a tax inspection of Arkema Srl for the 2008, 2009 and 2010 financial years, subsequently extended to 2011, 2012, 2013 and 2014, after which, among other observations, it contested the purchase prices of products for resale and the level of commission paid to the Company in intragroup transactions, and applied a withholding tax on interest on intragroup financing. The tax reassessments notified for 2008, 2009, 2010, 2011, 2012, 2013 and 2014 amount to €14.7 million including interest and penalties. All of these reassessments were contested and no provisions recognized in this respect. Arkema Srl won all of its disputes in every year except 2011. On 19 October 2021, the Supreme Court overturned the court's decision on the grounds of mistake of law (burden of proof) and remanded the matter back to the court. In 2023, the Company opted to apply a moratorium proposed by Italian regulations, enabling it to put an end to litigation still in progress in exchange for payment of an amount lower than the costs of pursuing the litigation, except for 2011. On 14 July 2023, the Lombardy Court of Appeal ruled against the Company in the last outstanding dispute concerning 2011 (€2 million). As no grounds were given for the ruling, the Company appealed the decision.

Other litigation

a) Harvey (Arkema Inc.)

As a result of Hurricane Harvey, Arkema's Crosby, Texas plant experienced unprecedented flooding leading to a loss of power, the loss of back up refrigeration, the decomposition of certain organic peroxides products that require refrigeration and, ultimately, a series of fires at the plant. Floodwaters also caused wastewater releases. Since September 2017, Arkema Inc. has been defending, and continues to defend, multiple civil lawsuits that were filed against it by private individuals and governmental entities.

One of those cases was certified in May 2022 as a class action for certain claims asserted under federal statutes. A class action settlement was reached in 2023 and submitted to the federal court for approval. In January 2024, the court entered a Preliminary Approval Order for that settlement.

All but one of the remaining lawsuits were consolidated in 2020 for pre-trial purposes into a state multi-district litigation pending in Texas court. The matters involving the largest number of private individuals has been settled, and negotiations are ongoing to settle the other cases concerning private individuals. Arkema Inc. continues to vigorously defend the civil matters brought by governmental entities. Most of these claims are covered by environmental liability insurance. When claims are not covered by insurance policies, provisions have been made for such claims in an amount which the Group considers sufficient.

The Company has been dismissed from all of the lawsuits in which it was named.

b) Fluorinated substances

Arkema Inc., and in some instances Arkema France, along with numerous other users and multiple fluorochemical manufacturers, have been sued, and continue to be sued, in the United States in a substantial number of cases involving per- and poly-fluoroalkyl substances.

The majority of these concern fluorinated substances used in firefighting foams. These cases are either filed directly in or transferred to a single multi-district litigation action pending in federal court in South Carolina (the "AFFF MDL"). On October 2022, the Court appointed a mediator for the AFFF MDL.

A class action was previously filed in federal court in Ohio, on behalf of all persons in the United States who have been exposed to such substances. In March 2022, the District Court issued a decision certifying the following class: "Individuals subject to the laws of Ohio who have .05 parts per trillion (ppt) of PFOA (C-8) and at least .05 ppt of any other PFAS in their blood serum." Defendants (including Arkema Inc. and Arkema France) filed a petition for leave to appeal that class certification decision and that petition was granted by the 6th Circuit Court of Appeals in September 2022. In November 2023, the 6th Circuit vacated the class certification and ordered the district court to dismiss the case. In January 2024 the 6th Circuit denied plaintiff's petition for rehearing and rehearing *en banc*.

There are also cases involving a former operating site in New Jersey for which Arkema Inc. is indemnified by Legacy Site Services, LLC as more fully described in note 10.3 "Commitments received". The two companies are vigorously defending against the allegations of these lawsuits. The Group is not, as at the date of these financial statements, in a position, having regard to the information available to it, to estimate the amount of the claims that might finally be upheld against it by the various competent courts after the exhaustion of any avenues of appeal. The Group has taken provisions net of insurance reimbursements for the expected costs of defense associated with these contingent liabilities.

c) Asbestos risk (Arkema Inc.)

In the United States, Arkema Inc. is involved in a number of asbestos-related proceedings in various State courts. The proceedings typically involve claims by third parties (other than employees) relating to (i) alleged exposure to asbestos on the Group's sites, or (ii) exposure to products containing asbestos and sold by former subsidiaries of the Group in the United States and elsewhere. The mix of claims has shifted in recent years away from premises claims and to include product claims alleging exposure to dental tape and cosmetic talcum products. Most claims against Arkema Inc. are made by third party contractors or product users and are covered by legacy liability insurance, while claims by Arkema Inc. employees are processed under the workers' compensation statutes in each state and covered by workers' compensation insurance policies. However, in 2015 Arkema Inc. settled two disputes concerning former employees' alleged exposure to asbestos before State courts. When claims are not covered by insurance policies, provisions have been made for such claims in an amount which the Group considers sufficient. However, due to the continuing uncertainties as to the outcome of these proceedings, the Group is not, as at the date of these financial statements, in a position, having regard to the information available to it, to estimate the total amount of the claims that might finally be upheld against it by the various competent courts after the exhaustion of any avenues of appeal.

d) Coem (Arkema France)

As there were no product supplies by Kem One SAS to the Italian company Coem, Coem in August 2012, and subsequently its shareholder Industrie Generali in March 2016, issued written complaints to Arkema France and Kem One that they had suffered losses through breach of commercial relations. On 27 June 2017, Industrie Generali brought a tort action before the Nanterre commercial court claiming €8.9 million from Arkema France in compensation for the banks' activation of the guarantees it had provided when Coem was placed in receivership. Arkema considers that these claims have no legal foundation, and no provision has been recognized in the financial statements. The case was heard in court on 29 January 2020. In a ruling of 6 May 2020, the Nanterre commercial court rejected the claim brought by Industrie Generali and ordered it to pay Arkema France the sum of €30,000 in costs (under article 700 of the Code of Criminal Procedure). Industrie Generali filed an appeal against this decision on 25 August 2020. In a decision handed down on 19 May 2022, the Versailles court of appeal upheld the 6 May 2020 ruling dismissing Industrie Generali's claims. Industrie Generali has appealed the matter to France's Court of Cassation *(Cour de cassation)*, where proceedings are underway. Arkema considers that these claims have no legal foundation, and no provision has been recognized in the financial statements.

11.3 COMMITMENTS RECEIVED

Commitments received from TotalEnergies SE in 2006

In connection with the Spin-Off of Arkema's Businesses, TotalEnergies SE and certain TotalEnergies companies extended certain indemnities, or assumed certain obligations, for the benefit of the Arkema Group. Some are still in application while others terminated during 2017. The indemnities and obligations concerned are described below, and relate to actual or potential environmental liabilities of the Group arising from certain sites in France, Belgium and the United States, the operations of which in the majority of cases have ceased.

Obligations and indemnities given in respect of Former Industrial Sites

In order to cover certain risks relating to certain industrial sites situated in France, Belgium and the United States in respect of which the Group is or could be held liable, and where, for the most part, operations have ceased (the Former Industrial Sites), TotalEnergies SE companies have entered into indemnity and service agreements with Arkema or its subsidiaries.

Pursuant to these agreements, the obligations and environmental responsibilities associated with these former industrial sites in France and at Rieme in Belgium were transferred to TotalEnergies SE group companies.

Agreement relating to certain former industrial sites located in the United States

In March 2006, Arkema Participations (which absorbed Arkema Amériques SAS in 2023) completed the acquisition from Elf Aquitaine Inc. and Arkema France of Arkema Delaware Inc., a holding company for most of the Group's operations in the United States. The negotiated terms of the stock purchase agreement among Elf Aquitaine Inc., Legacy Site Services and Arkema Participations (which absorbed Arkema Amériques SAS in 2023), dated 7 March 2006 (the Arkema Delaware Main SPA) required Elf Aquitaine Inc. to use US$270 million to capitalize a new subsidiary, Legacy Site Services LLC, to perform remediation services and indemnify the Group against the cost of environmental contamination liabilities incurred by the Group entities covered by this indemnity, and related personal injury and property damage claims associated with contamination at 35 of the Group's closed and formerly operated facilities and 24 third party sites where the Group's liability arises solely out of waste shipments from the sites other than currently operated sites. In exchange for this indemnification, Arkema Participations (which absorbed Arkema Amériques SAS in 2023) agreed to grant to Legacy Site Services LLC control over remediation activities and the defense of claims relating to contamination liabilities at these facilities and sites.

The sites currently operated by the Group are excluded from this indemnity, as are sites that received waste associated with current operations of the Group, certain sites where no significant restoration work is currently underway or anticipated, and other sites where the Group could be held liable for environmental pollution. These other sites include, for example, sites where remediation has been conducted in the past or where future remediation costs or liability are believed to be insignificant or non-existent based upon information available at the time when the indemnity was entered into. Arkema Participations (which absorbed Arkema Amériques SAS in 2023) has waived any claims against Legacy Site Services LLC, TotalEnergies SE or their respective subsidiaries in respect of the sites not covered by the indemnity.

The Legacy Site Services LLC indemnity covers the costs of restoration and clean-up of the soil and groundwater, the costs of related defense and settlement costs and personal injury, property and natural resource damages. The indemnity does not cover liabilities unrelated to site remediation, in particular liabilities in respect of products manufactured on the said sites, liability arising from certain dangerous and potentially dangerous substances, particularly asbestos exposure, and criminal liability.

The indemnity described above is capped at US$270 million. The amount received by Arkema under this indemnity amounts to US$167 million. At the same time as the stock purchase agreement and the indemnity described above, Legacy Site Services LLC and Arkema Inc. entered into a supplemental contamination indemnity agreement pursuant to which Legacy Site Services LLC will indemnify the liabilities of the Group in excess of US$270 million, on the same terms, for the same sites and subject to the same exceptions as the indemnity described in the preceding paragraph.

Note 12 Financing, financial instruments and risk management

12.1 FINANCIAL RESULT

Financial result includes the cost of debt adjusted for capitalized financial expenses, and as regards provisions for pensions and employee benefits, the interest cost, the expected return on plan assets and the actuarial gains and losses related to changes in the discount rate on other long-term benefits. It also includes the portion of foreign exchange gains and losses corresponding to the interest income/expense reflected by the difference between the spot exchange rate and the forward exchange rate, and the foreign exchange gain/loss on unhedged financing.

(In millions of euros)	**2023**	2022
Cost of debt	(23)	(43)
Spot/forward exchange rate difference and foreign exchange gain/loss on unhedged financing	(27)	(27)
Financial income/expenses on provisions for pensions and employee benefits	(18)	10
Capitalized interest	5	3
Interest expenses on leases	(7)	(4)
Other	0	0
FINANCIAL RESULT	**(70)**	**(61)**

In 2023, the change in the cost of debt is linked to the additional cost of new bonds issued during the year, and to the sharp rise in investment income.

12.2 FINANCIAL ASSETS AND LIABILITIES

Financial assets and liabilities principally comprise:

- other investments;
- loans and financial receivables, included in other non-current assets;
- accounts receivable;
- cash and cash equivalents;
- debt and other financial liabilities (including accounts payable); and
- derivatives, reported in other current assets and liabilities.

Other investments

These securities are recognized at fair value in accordance with IFRS 9. In cases where fair value cannot be reliably determined, they are recognized at their historical cost. At the date of application of IFRS 9, the Group opted to record changes in the fair value of unconsolidated investments in “Other comprehensive income”, except for investments in the process of liquidation at that date.

In general, other investments acquired by the Group are strategic investments to prepare the Group’s long-term development, and are therefore classified as assets/liabilities measured at fair value through other comprehensive income. Nonetheless, in application of IFRS 9 criteria for classification of investments, for investments due to be sold the Group can opt to recognize changes in fair value in profit and loss.

Loans and financial receivables

These financial assets are recognized at amortized cost. They are subject to impairment tests involving a comparison of their carrying amount to the present value of estimated recoverable future cash flows. These tests are carried out as soon as any indicator inferring that the present value of these assets is lower than their carrying amount is identified. As a minimum such tests are performed at each balance sheet date. Any impairment loss is recognized in recurring operating income.

Accounts receivable

Accounts receivable are initially recognized at their fair value. Subsequent to initial recognition, they are recognized at amortized cost. If required, a bad debt provision is recognized on the basis of the risk of non-recovery of the receivables.

Cash and cash equivalents

Cash and cash equivalents are liquid assets and assets which can be converted into cash within less than three months that are subject to a negligible risk of change in value.

Non-current and current debt (including accounts payable)

Non-current and current debt (other than derivatives) is recognized at amortized cost.

Derivatives

The Group may use derivatives to manage its exposure to foreign currency risks and risks of changes in the prices of raw materials and energy. Derivatives used by the Group are recognized at their fair value in the balance sheet, in accordance with IFRS 9. The fair value of these unlisted derivatives is determined by reference to current prices for contracts with similar maturity. They therefore correspond to the "Level 2" category defined in IFRS 7.

Changes in the fair value of these derivatives are recognized within operating income and, for foreign currency instruments, in financial result for the portion of foreign exchange gains and losses corresponding to the interest income/expense reflected by the differences between the spot exchange rate and the forward exchange rate, except for those on instruments which are considered to meet the criteria for cash flow hedge accounting or hedge accounting of a net investment in a foreign operation under IFRS 9.

For items that qualify for cash flow hedge accounting, the effective portion of the change in fair value is recognized in shareholders' equity under the "Total income and expenses recognized directly through equity" caption until such time as the underlying hedged item is recognized through the income statement. Any ineffective portion is recognized in operating income.

A hedge of a net investment in a foreign operation hedges the exposure to foreign exchange risk of the net assets of the foreign operation (IAS 21 "The effects of changes in foreign exchange rates"). The effects of this hedge are recorded directly in shareholders' equity under the "Total income and expenses recognized directly through equity" caption.

12.2.1 Financial assets and liabilities by accounting category

2023

IFRS 9 category: Class of instrument *(In millions of euros)*	Notes	Assets/liabilities measured at fair value through profit or loss	Assets/liabilities measured at fair value through other comprehensive income	Assets/ liabilities measured at amortized cost	**Total net carrying amount**	Fair value level**
Other investments	*(10.3)*	—	52	—	52	3
Other non-current assets (loans and advances, security deposits paid)	*(10.4)*	—	2	154	156	1 and 2
Accounts receivable	*(6.2)*	—	—	1,261	1,261	N/A
Cash and cash equivalents	*(12.4)*	2,045	—	—	2,045	1
Derivatives*	*(12.2.2)*	16	16	—	32	2
FINANCIAL ASSETS		**2,061**	**70**	**1,415**	**3,546**	
Current and non-current debt	*(12.3)*	—	—	4,275	4,275	N/A
Accounts payable	*(6.2)*	—	—	1,036	1,036	N/A
Derivatives*	*(12.2.2)*	5	22	—	27	2
FINANCIAL LIABILITIES		**5**	**22**	**5,311**	**5,338**	

* *Derivatives are carried in the balance sheet in the lines "Current financial derivative assets" and "Current financial derivative liabilities".*
** *The fair value hierarchy is as follows:*
- *Level 1: assumptions based on quoted prices in active markets for identical assets or liabilities;*
- *Level 2: assumptions based on inputs other than quoted prices included within Level 1 that are observable for the asset or liability;*
- *Level 3: assumptions based on unobservable inputs for the asset or liability.*

2022

IFRS 9 category: Class of instrument *(In millions of euros)*	Notes	Assets/liabilities measured at fair value through profit or loss	Assets/liabilities measured at fair value through other comprehensive income	Assets/liabilities measured at amortized cost	**Total net carrying amount**	Fair value level**
Other investments	*(10.3)*	—	52	—	52	3
Other non-current assets (loans and advances, security deposits paid)	*(10.4)*	—	1	332	333	1 and 2
Accounts receivable	*(6.2)*	—	—	1,360	1,360	N/A
Cash and cash equivalents	*(12.4)*	1,592	—	—	1,592	1
Derivatives*	*(12.2.2)*	30	27	—	57	2
FINANCIAL ASSETS		**1,622**	**80**	**1,692**	**3,394**	
Current and non-current debt	*(12.3)*	—	—	3,258	3,258	N/A
Accounts payable	*(6.2)*	—	—	1,149	1,149	N/A
Derivatives*	*(12.2.2)*	4	9	—	13	2
FINANCIAL LIABILITIES		**4**	**9**	**4,407**	**4,420**	

* *Derivatives are carried in the balance sheet in the lines "Current financial derivative assets" and "Current financial derivative liabilities".*
** *The fair value hierarchy is as follows:*
- *Level 1: assumptions based on quoted prices in active markets for identical assets or liabilities;*
- *Level 2: assumptions based on inputs other than quoted prices included within Level 1 that are observable for the asset or liability;*
- *Level 3: assumptions based on unobservable inputs for the asset or liability.*

At 31 December 2023, as at 31 December 2022, the fair value of financial assets and liabilities is approximately equal to the net carrying amount, except in the case of bonds.

12.2.2 Derivatives

The main derivatives used by the Group are as follows:

	Notional amount of contracts at 31 December 2023			Notional amount of contracts at 31 December 2022			Fair value of contracts	
(In millions of euros)	**< 1 year**	**< 5 years and > 1 year**	**> 5 years**	< 1 year	< 5 years and > 1 year	> 5 years	**31 December 2023**	31 December 2022
Forward foreign currency contracts	2,018	3	—	2,301	26	—	26	21
Commodities and energy swaps	46	34	11	55	17	—	(21)	23
TOTAL	**2,064**	**37**	**11**	**2,356**	**43**	**—**	**5**	**44**

12.2.3 Impact of financial instruments on the income statement

The income statement includes the following items related to financial assets (liabilities):

(In millions of euros)	**2023**	2022
Total interest income (expenses) on financial assets and liabilities*	(18)	(40)
Impact on the income statement of valuation of derivatives at fair value	6	2
Impact on the income statement of operations on other investments	7	3

* *Excluding interest costs on pension obligations and the expected return on related plan assets.*

The amount of foreign exchange gains and losses recognized in recurring operating income in 2023 is a net gain of €24 million (net loss of €25 million in 2022).

12.2.4 Impact of financial instruments on shareholders' equity

At 31 December 2023, the impact of financial instruments net of deferred taxes on the Group's shareholders' equity is a negative €42 million (positive €24 million at 31 December 2022), essentially reflecting the net-of-tax fair value of foreign currency and commodity hedges.

12.3 DEBT

Group net debt amounted to €2,230 million at 31 December 2023, taking account of cash and cash equivalents of €2,045 million.

12.3.1 Analysis of net debt by category

(In millions of euros)	**31 December 2023**	31 December 2022
Bonds	3,486	2,392
Bank loans	70	—
Other non-current debt	22	22
Non-current debt excluding IFRS 16 debt	**3,578**	**2,414**
Bonds	—	150
Syndicated credit facility	—	—
Negotiable European Commercial Paper	389	442
Other bank loans	45	20
Other current debt	40	23
Current debt excluding IFRS 16 debt	**474**	**635**
Debt excluding IFRS 16 debt	**4,052**	**3,049**
Non-current IFRS 16 debt	156	146
Current IFRS 16 debt	67	63
Debt	**4,275**	**3,258**
Cash and cash equivalents	2,045	1,592
NET DEBT	**2,230**	**1,666**

Bonds

- In December 2013, the Group issued a €150 million bond which matured on 6 December 2023.
- In January 2015, the Group issued a €700 million bond that will mature on 20 January 2025, with a fixed coupon of 1.50%.

  At 31 December 2023, the fair value of this bond is €684 million.
- In April 2017, the Group issued a €700 million bond that will mature on 20 April 2027, with a fixed coupon of 1.50%. A further €200 million tap issue was undertaken in June 2017, bringing the total amount of this bond issue to €900 million.

  At 31 December 2023, the fair value of this bond is €856 million.
- In December 2019, the Group issued a €500 million bond that will mature on 3 December 2029, with a fixed coupon of 0.75%.

At 31 December 2023, the fair value of this bond is €436 million.

In October 2020, the Group issued a €300 million green bond that will mature on 14 October 2026, with a fixed coupon of 0.125%. This bond is entirely dedicated to the financing of Arkema's new, world-scale plant in Singapore to manufacture 100% bio-based Rilsan® polyamide 11.

At 31 December 2023, the fair value of this bond is €277 million.

In November 2023, the Group issued a €700 million bond that will mature on 20 May 2030, with a fixed coupon of 4.25%.

At 31 December 2023, the fair value of this bond is €730 million.

In January 2023, the Group issued a €400 million bond that will mature on 23 January 2031, with a fixed coupon of 3.5%.

At 31 December 2023, the fair value of this bond is €401 million.

These issues are part of the Group's Euro Medium Term Notes (EMTN) program introduced in October 2013.

Negotiable European Commercial Paper

In April 2013, the Group introduced an annually renewed Negotiable European Commercial Paper program. The maximum amount of this debt program is €2 billion.

Issues outstanding as part of this program amount to €400 million at 31 December 2023.

Syndicated line of credit

On 28 July 2022, the Group amended and extended its syndicated line of credit maturing on 29 July 2024. The amount was increased to €1.1 billion and the maturity extended to 28 July 2027 with two one-year extension options subject to lender approval. The first option was exercised in July 2023, extending maturity to 28 July 2028.

Following this amendment, the financial commitment to respect a certain ratio of net debt/EBITDA no longer appears among the criteria for early payment. The cost of the credit line is linked to three key CSR criteria for the Group: greenhouse gas emissions, volatile organic compound emissions and the total recordable injury rate (TRIR). These indicators are calculated each year.

This line is intended to finance the general needs of the Group and serves as a back-up facility for the short-term negotiable securities program.

IFRS 16 debt

The maturities of the Group's future lease payments, at non-discounted value, are presented in note 9.4 "IFRS 16 leases".

12.3.2 Analysis of debt excluding IFRS 16 debt by currency

The Arkema Group's debt excluding IFRS 16 debt is mainly denominated in euros.

(In millions of euros)	**31 December 2023**	31 December 2022
Euros	3,922	3,019
South Korean won	105	—
US Dollars	12	11
Other	13	19
TOTAL DEBT EXCLUDING IFRS 16 DEBT	**4,052**	**3,049**

Part of the debt in euros is converted through swaps to the accounting currency of internally financed subsidiaries, in line with the Group's policy. At 31 December 2023, the swapped portion, mainly in US dollars, represented approximately 21% of gross debt excluding IFRS 16 debt.

12.3.3 Analysis of debt excluding IFRS 16 debt by maturity

The breakdown of debt by maturity, excluding IFRS 16 debt and including interest costs, is as follows:

(In millions of euros)	**31 December 2023**	31 December 2022
Less than 1 year	517	648
Between 1 and 2 years	778	29
Between 2 and 3 years	365	731
Between 3 and 4 years	965	319
Between 4 and 5 years	51	918
More than 5 years	1,673	517
TOTAL DEBT EXCLUDING IFRS 16 DEBT	**4,349**	**3,162**

12.3.4 Changes in liabilities from financing activities

(In millions of euros)	31 December 2022	Changes in scope	Monetary flows in the cash flow statement (financing activities)	Translation adjustment	Non-current/ current reclassifications	Other non-monetary flows	**31 December 2023**
Non-current debt excluding IFRS 16 debt	2,414	71	1,096	(1)	(2)	—	3,578
Current debt excluding IFRS 16 debt	635	37	(197)	(3)	2	—	474
IFRS 16 debt	209	6	(79)	(4)	—	91	223
– Cash and cash equivalents	1,592	35	433	(15)	—	—	2,045
NET DEBT	**1,666**	**79**	**387**	**7**	**—**	**91**	**2,230**

12.4 CASH AND CASH EQUIVALENTS

(In millions of euros)	**31 December 2023**	31 December 2022
Short-term cash advances	5	3
Money market funds	1,373	924
Available cash	667	664
CASH AND CASH EQUIVALENTS	**2,045**	**1,592**

12.5 INTEREST PAID AND RECEIVED

Additional information on the amounts of interest received and paid included in cash flow from operating activities is shown below:

(In millions of euros)	**31 December 2023**	31 December 2022
Interest paid	48	48
Interest received	(11)	(4)

12.6 MANAGEMENT OF RISKS RELATED TO FINANCIAL ASSETS AND LIABILITIES

The Arkema Group's businesses expose it to various risks, including market risks (risk of changes in exchange rates, interest rates and the prices of raw materials, energy and equities), credit risk and liquidity risk.

12.6.1 Foreign currency risk

The Group is exposed to transaction risks and translation risks related to foreign currencies.

The Group hedges the transaction risk mainly through spot foreign currency transactions or through forward transactions over short maturities generally not exceeding two years.

The fair value of the Group's forward foreign currency contracts is €26 million.

In 2023, the euro/US dollar exchange rate changed from 1.0666 at 1 January to 1.1050 at 31 December 2023.

The amount of foreign exchange gains and losses recognized in recurring operating income excluding other income and expenses in 2023 is a net gain of €24 million (net loss of €25 million in 2022).

The portion of foreign exchange gains and losses corresponding to the interest income/expense reflected by the difference between the spot exchange rate and the forward exchange rate recorded in financial result amounts to a net loss of €27 million in 2023 (net loss of €27 million at in 2022).

The translation effect of a 10% change in the euro/US dollar exchange rate would have an estimated impact on 2023 EBITDA excluding other income and expenses of around €45 million (around €60 million in 2022).

At 31 December 2023, the Group's balance sheet exposure in transaction currencies other than the euro is as follows:

Group exposure to operating foreign currency risk *(In millions of euros)*	USD	KRW	CNY	Other currencies
Accounts receivable	618	14	111	194
Accounts payable	(252)	(17)	(55)	(63)
Bank balances and loans/borrowings	(62)	(27)	72	67
Off-balance sheet commitments (forward currency hedging)	(1,141)	(133)	81	(319)
NET EXPOSURE	**(837)**	**(163)**	**209**	**(121)**

This net exposure comprises all Group companies' outstanding amounts stated in any of the above currencies, whether their accounting currency is one of those currencies or a different currency.

12.6.2 Interest rate risk

Exposure to interest rate risk is managed by the Group's Central Treasury department and simple derivatives are used as hedging instruments. The Group has not entered into any interest rate hedges at 31 December 2023.

An increase (decrease) of 1% (100 basis points) in interest rates would have the effect of increasing (decreasing) the interest on net debt by €5 million.

At 31 December 2023, debt excluding IFRS 16 debt is distributed between variable and fixed rates as follows:

(In millions of euros)	Variable rates	Fixed rates		
	Overnight-1 year	1-5 years	Over 5 years	Total
Current and non-current debt (excluding IFRS 16 debt)	(474)	(1,900)	(1,678)	(4,052)
Cash and cash equivalents	2,045	—	—	2,045
Net exposure before hedging	1,571	(1,900)	(1,678)	(2,007)
Hedging instruments	—	—	—	—
Off-balance sheet items	—	—	—	—
NET EXPOSURE AFTER HEDGING	**1,571**	**(1,900)**	**(1,678)**	**(2,007)**

12.6.3 Liquidity risk

The Group's Central Treasury department manages the liquidity risk associated with the Group's debt.

Liquidity risk is managed with the main objective of providing the Group with sufficient financial resources to honor its commitments, and, in the context of meeting this objective, optimizing the annual cost of the debt.

In almost all cases, Group companies obtain their financing from, and manage their cash with, Arkema France or other Group entities that manage cash pooling mechanisms.

The Group reduces the liquidity risk by spreading maturities, favoring long maturities and diversifying its sources of financing. At 31 December 2023, the Group thus has:

- a €700 million bond maturing on 20 January 2025;
- a €300 million bond maturing on 14 October 2026;
- a €900 million bond maturing on 20 April 2027;
- a €500 million bond maturing on 3 December 2029;
- a €700 million bond maturing on 20 May 2030;
- a €400 million bond maturing on 23 January 2031; and
- a €1.1 billion syndicated credit facility maturing on 28 July 2028. This credit facility is used particularly as a substitute line for the Negotiable European Commercial Paper program (see note 11.3 "Debt").

At 31 December 2023, the Group's debt maturing in more than one year is rated BBB+/positive outlook by Standard & Poor's and Baa1/stable outlook by Moody's.

Negotiable European Commercial Paper issues are rated A-2 by Standard & Poor's.

The Group's net debt at 31 December 2023 amounts to €2,230 million and represents 1.5 times the consolidated EBITDA for the year 2023.

At 31 December 2023, the amount of the unused syndicated credit facility is €1.1 billion and the amount of cash and cash equivalents is €2,045 million.

Note 12.3 "Debt" provides details of the maturities of debt.

12.6.4 Credit risk

The Group is potentially exposed to credit risk on its accounts receivable and as regards its banking counterparties.

Credit risk on accounts receivable is limited because of the large number of its customers and their geographical dispersion. No customer represented more than 4% of Group sales in 2023. The Group's general policy for managing credit risk involves assessing the solvency of each new customer before entering into business relations: each customer is allocated a credit limit, which constitutes the maximum level of outstandings (receivables plus orders) accepted by the Group, on the basis of the financial information obtained on the customer and the analysis of solvency carried out by the Group. These credit limits are revised regularly and, in any case, every time that a material change occurs in the customer's financial position. Customers who cannot obtain a credit limit because their financial position is not compatible with the Group's requirements in terms of solvency only receive deliveries when they have paid for their order.

For several years, the Group has covered its accounts receivable credit risk through a global credit insurance program. Given the statistically low bad debt rate experienced by the Group, the rate of cover is significant. Customers with whom the Group wishes to continue commercial relations but which are not covered by this insurance are subject to specific centralized monitoring.

In addition, the Group's policy for recognizing bad debt provisions in respect of receivables not covered by credit insurance, or the portion of receivables that are not so covered, has three components: receivables are individually provided against as soon as a specific risk of loss (economic and financial difficulties of the customer in question, entry into receivership, etc.) is clearly identified. The Group may also recognize general provisions for receivables that are overdue for such a period that the Group considers that a statistical risk of loss exists. These periods are adapted depending on the Business Lines and the geographical regions in question. Finally, the Group makes sure that the provisions determined in this way are not lower than expected credit losses, which are estimated based on individual credit scores for customers, multiplied by coefficients for the probability of default.

At 31 December 2023, the maturity status of accounts receivable net of provisions is as follows:

Accounts receivable net of provisions *(In millions of euros)*	**31 December 2023**	31 December 2022
Receivables not yet due	1,141	1,260
Receivables overdue by 1-15 days	75	71
Receivables overdue by 16-30 days	14	15
Receivables overdue by more than 30 days	31	14
TOTAL NET RECEIVABLES	**1,261**	**1,360**

Banking credit risk is related to financial investments, derivatives and credit facilities granted by banks. The Group limits its exposure to credit risk by only investing in liquid securities with first-class commercial banks.

The net carrying amount of financial assets indicated in note 12.2.1 "Financial assets and liabilities by accounting category" represents the maximum exposure to credit risk.

12.6.5 Risk related to raw materials and energy

The prices of certain raw materials used by the Group can be highly volatile, with fluctuations leading to significant variations in the cost price of the Group's products; in addition, because certain of its manufacturing processes have significant requirements in terms of energy resources, the Group is also sensitive to changes in the price of energy.

In order to limit the impact of the price volatility of the principal raw materials it uses, the Group may decide to use derivatives matched with existing contracts, or negotiate fixed price contracts for limited periods.

Recognition of these derivatives resulted in an expense of €12 million in the income statement at 31 December 2023 (expense of €17 million at 31 December 2022).

12.6.6 Equity risk

At 31 December 2023, the Company holds 228,901 of its own shares in treasury. These shares are used to cover its free share grant plans.

In compliance with IAS 32, changes in share price have no impact on the Group's consolidated net assets.

The equity risk is not material for the Company.

Note 13 Shareholders' equity and earnings per share

At 31 December 2023, Arkema's share capital amounted to €750 million, divided into 75,043,514 shares with a par value of €10.

13.1 CHANGES IN SHARE CAPITAL AND PAID-IN SURPLUS

	2023	2022
Number of shares at 1 January	**75,043,514**	**76,736,476**
Issuance of shares following the capital increase reserved for employees	—	757,473
Issuance of shares following the exercise of subscription options	—	—
Share capital reduction	—	(2,450,435)
Number of shares at 31 December	**75,043,514**	**75,043,514**

13.2 HYBRID BONDS

At 31 December 2023, the total nominal value of Arkema's perpetual hybrid bonds is €700 million. The breakdown is as follows:

Issue date	Nominal value *(in millions)*	Currency	Redemption option	Annual coupon rate
17 June 2019	400	EUR	5.25 years	2.75 %
21 January 2020	300	EUR	6 years	1.50 %

Arkema has an option to defer payment of coupons for the above bonds.

In accordance with IAS 32, when there is an unconditional right to avoid delivering cash or another financial asset in the form of repayment of principal or interest, an instrument is recognized in shareholders' equity. In application of this principle, the hybrid bonds are recorded in shareholders' equity, and the coupons paid are recorded as dividends in the Group's consolidated financial statements.

13.3 TREASURY SHARES

The Company bought back 357,726 treasury shares during 2023. In addition, 359,912 free shares vested to Arkema Group employees (see note 7.4 "Share-based payments").

	2023	2022
Number of treasury shares at 1 January	231,087	2,779,553
Purchase of treasury shares	357,726	262,945
Grants of treasury shares	(359,912)	(360,976)
Share capital reduction	—	(2,450,435)
Number of treasury shares at 31 December	228,901	231,087

13.4 DIVIDENDS

The combined annual general meeting of 11 May 2023 approved the distribution of a €3.40 dividend per share in respect of the 2022 financial year, or a total amount of €253 million. This dividend was paid out on 17 May 2023.

The Board of Directors has decided to propose a dividend of €3.50 per share to the annual general meeting to be held on 15 May 2024.

13.5 NON-CONTROLLING INTERESTS

Non-controlling interests mainly correspond to minority interests in PI Advanced Materials for an amount of €214 million at 31 December 2023.

13.6 TRANSLATION ADJUSTMENTS

The change in translation adjustments recognized in other recyclable comprehensive income mainly comprises the impacts of movements in the USD-EUR exchange rate.

13.7 EARNINGS PER SHARE

In accordance with IAS 33, the earnings per share and diluted earnings per share are calculated based on net income (Group share) less the net-of-tax interest paid to bearers of subordinated perpetual notes (hybrid bonds).

After this adjustment, the net income (Group share) is divided by the weighted average number of ordinary shares outstanding since the start of the year to calculate the earnings per share.

For the diluted earnings per share, the effect of dilution is thus calculated taking account of stock options and grants of free shares to be issued.

	2023	2022
Weighted average number of ordinary shares	74,647,205	74,095,040
Dilutive effect of stock options	0	0
Dilutive effect of free share grants	396,309	325,893
Weighted average number of potential ordinary shares	75,043,514	74,420,933

(In millions of euros)	2023	2022
Net income – Group share	418	965
Interest on subordinated perpetual notes, net of tax	(16)	(16)
Net income used in calculating earnings per share	402	949

	2023	2022
Earnings per share *(in euros)*	5.39	12.81
Diluted earnings per share *(in euros)*	5.36	12.75

Note 14 Statutory auditors' fees

	KPMG		Ernst & Young	
(In millions of euros)	**2023**	2022	**2023**	2022
Statutory audit, review of the individual and consolidated financial statements	**2.5**	**2.6**	**2.6**	**3.2**
Issuer	0.7	0.7	0.6	0.7
Fully consolidated subsidiaries	1.8	1.9	2.0	2.5
Other non-audit services*	**0.2**	**0.2**	**0.1**	**—**
Issuer	0.1	0.1	0.1	—
Fully consolidated subsidiaries	0.1	0.1	—	—
SUBTOTAL	**2.7**	**2.8**	**2.7**	**3.2**
Other services provided by the networks to fully consolidated subsidiaries	**—**	**—**	**—**	**—**
TOTAL	**2.7**	**2.8**	**2.7**	**3.2**

* *In application of an internal rule validated by the Audit Committee, the amount of fees for other due diligence work and services directly related to the auditors' engagement cannot exceed 30% of fees for the audit of the individual and consolidated financial statements.*

Note 15 Subsequent events

On 2 January 2024, the Group finalized its planned acquisition of Arc Building Products in Ireland, specialized in construction adhesives and sealants and with around €15 million in annual sales.

Note 16 List of consolidated companies

The percentage of control indicated below also corresponds to the Group's ownership interest.

AEC Polymers		France	100.00	FC
Afinitica Technologies, S.L.		Spain	100.00	FC
Agiplast Italia S.r.l.		Italy	100.00	FC
American Acryl LP		United States	50.00	JO
American Acryl NA, LLC		United States	50.00	JO
Arkema Co., Ltd.	(a)	South Korea	100.00	FC
Arkema		France		FC
Arkema Ameriques SAS	(b)	France	100.00	FC
Arkema Antwerp		Belgium	100.00	FC
Arkema Argentina S.A.U.		Argentina	100.00	FC
Arkema B.V.		Netherlands	100.00	FC
Arkema Canada Inc.		Canada	100.00	FC
Arkema (Changshu) Chemicals Co., Ltd.		China	100.00	FC
Arkema (Changshu) Fluorochemical Co., Ltd.		China	100.00	FC
Arkema Chemicals India Private Limited		India	100.00	FC
Arkema (Changshu) Polyamides Co., Ltd.		China	100.00	FC
Arkema (China) Investment Co., Ltd.		China	100.00	FC
Arkema Coatex Brasil Indústria e Comércio Ltda.		Brazil	100.00	FC
Arkema Coating Resins Malaysia Sdn. Bhd.		Malaysia	100.00	FC
ARKEMA UK LIMITED		United Kingdom	100.00	FC
Arkema Company Limited		Hong Kong	100.00	FC
Arkema Delaware Inc.		United States	100.00	FC
Arkema France		France	100.00	FC
Arkema GmbH		Germany	100.00	FC
Arkema Hydrogen Peroxide Co., Ltd. Shanghai		China	66.67	FC
Arkema Inc.		United States	100.00	FC
Arkema Insurance Designated Activity Company		Ireland	100.00	FC
Arkema K.K.		Japan	100.00	FC
Arkema Kimya Sanayi ve Ticaret AS		Turkey	100.00	FC
Arkema Korea Holding Co., Ltd.	(d)	South Korea	100.00	FC
ARKEMA Holding Limited		United Kingdom	100.00	FC
Arkema Mexico S.A. de C.V.		Mexico	100.00	FC
Arkema Participations		France	100.00	FC
Arkema Peroxides India Private Limited		India	100.00	FC
Arkema Pte. Ltd.		Singapore	100.00	FC
Arkema Pty Ltd.		Australia	100.00	FC
Arkema Quimica SAU		Spain	100.00	FC
Arkema Chemicals Saudi Arabia		Saudi Arabia	65.00	FC
Arkema (Shanghai) Distribution Co., Ltd.		China	100.00	FC
Arkema Sp. z.o.o		Poland	100.00	FC
Arkema S.r.l.		Italy	100.00	FC
Arkema (Suzhou) Polyamides Co., Ltd.		China	100.00	FC
Arkema Taixing Chemicals Co., Ltd.		China	100.00	FC
Arkema Thiochemicals Sdn Bhd		Malaysia	86.00	FC
Arkema Yoshitomi Ltd.		Japan	49.00	SI
AMP Trucking, Inc.		United States	100.00	FC
ARR MAZ GLOBAL HOLDINGS, S.L.		Spain	100.00	FC
ARR-MAZ Brazil LLC		United States	100.00	FC
ArrMaz Chemicals (Yunnan) Co., Ltd.		China	100.00	FC
ArrMaz China, LLC		United States	100.00	FC
ARR-MAZ DO BRASIL LTDA.		Brazil	99.99	FC
ArrMaz Gulf Chemicals Ltd.		Saudi Arabia	100.00	FC
ARRMAZ MOROCCO SARLAU	(e)	Morocco	100.00	FC

ArrMaz Morocco, LLC	(e)	United States	100.00	FC
ArrMaz Products Inc.		United States	100.00	FC
ArrMaz Speciality Chemicals, Inc.		United States	100.00	FC
ARRMAZ TECHNOLOGY AFRICA, SARL		Morocco	100.00	FC
A/S LIP Bygningsartikler. Nørre Aaby		Denmark	100.00	FC
Barrflex TU LL		United States	49.00	JV
Bostik Aktiebolag	(a)	Sweden	100.00	FC
Bostik Adhesives Limited		United Kingdom	100.00	FC
Bostik Aerosols GmbH	(b)	Germany	100.00	FC
Bostik Argentina S. A.		Argentina	100.00	FC
Bostik A/S		Denmark	100.00	FC
Bostik AS		Norway	100.00	FC
Bostik Australia Pty Ltd.		Australia	100.00	FC
Bostik Belux S.A. – N.V.		Belgium	100.00	FC
Bostik Benelux B.V.		Netherlands	100.00	FC
Bostik B.V.		Netherlands	100.00	FC
Bostik Canada Ltd.		Canada	100.00	FC
Bostik Egypt for the production of adhesive materials (Bostik Egypt) S.A.E.		Egypt	100.00	FC
Bostik Findley (China) Co., Ltd		China	100.00	FC
Bostik Findley (Malaysia) Sdn. Bhd.		Malaysia	100.00	FC
Bostik GmbH		Germany	100.00	FC
Bostik Hellas S.A.		Greece	100.00	FC
Bostik Holding Hong Kong Ltd.		Hong Kong	100.00	FC
Bostik Holding		France	100.00	FC
Bostik, Inc.		United States	100.00	FC
Bostik India Private Limited		India	100.00	FC
Bostik Industries Limited		Ireland	100.00	FC
Bostik Kimya Sanayi Ve Ticaret A.S		Turkey	100.00	FC
Bostik Korea Limited		South Korea	100.00	FC
Bostik Limited		United Kingdom	100.00	FC
Bostik Mexicana S.A. de C.V.		Mexico	100.00	FC
Bostik Nederland B.V.		Netherlands	100.00	FC
Bostik New Zealand Limited		New Zealand	100.00	FC
Bostik-Nitta Co., Ltd.		Japan	80.00	FC
Bostik L.L.C.		Russia	100.00	FC
Bostik OY		Finland	100.00	FC
Bostik Philippines Inc.		Philippines	100.00	FC
Bostik Portugal Unipessoal Lda		Portugal	100.00	FC
Bostik Technology GmbH	(b)	Germany	100.00	FC
Bostik Romania S.r.l		Romania	100.00	FC
Bostik SA		France	100.00	FC
Bostik S.A.		Spain	100.00	FC
Bostik (Shanghai) Management Co., Ltd.		China	100.00	FC
BOSTIK SOUTH AFRICA (PTY) LTD	(a)	South Africa	100.00	FC
Bostik Sp. z.o.o.		Poland	100.00	FC
Bostik (Thailand) Co., Ltd		Thailand	100.00	FC
Bostik Vietnam Company Limited		Vietnam	100.00	FC
Casda Biomaterials Co., Ltd		China	100.00	FC
Changshu Coatex Additives Co., Ltd.		China	100.00	FC
CJ Bio Malaysia Sdn. Bhd.		Malaysia	14.00	SI
Coatex Asia- Pacific, Inc.		South Korea	100.00	FC
Coatex CEE s.r.o		Slovakia	100.00	FC
Coatex Inc.		United States	100.00	FC
Coatex Netherlands B.V.		Netherlands	100.00	FC
Coatex		France	100.00	FC
CRACKLESS MONOMER Co Ltd		Taiwan	51.00	FC
Den Braven SA (Pty) Ltd.		South Africa	100.00	FC
Delaware Chemicals Corporation		United States	100.00	FC

DIFI 13		France	100.00	FC
DIFI 14	(d)	France	100.00	FC
DIFI 16		France	100.00	FC
DIFI 19	(b)	France	100.00	FC
DIFI 20	(b)	France	100.00	FC
ERPRO 3D FACTORY		France	10.00	SI
Febex SA	(g)	Switzerland	96.77	FC
FIXATTI		Belgium	100.00	FC
FIXATTI (CHINA) POLYMER SPECIALTIES Co LTD		China	100.00	FC
Fixatti AG		Switzerland	100.00	FC
FIXATTI GmbH	(b)	Germany	100.00	FC
Fixatti Holding AG		Switzerland	100.00	FC
IDEAL WORK Srl		Italy	100.00	FC
Ishedu Agrochem Private Limited		India	24.90	SI
Jiangsu Bostik Adhesive Co., Ltd		China	100.00	FC
Lambson Limited		United Kingdom	100.00	FC
Lip Norge AS		Norway	100.00	FC
Lip Sverige AB		Sweden	100.00	FC
Michelet Finance, Inc.		United States	100.00	FC
MLPC International		France	100.00	FC
Ozark- Mahoning Company		United States	100.00	FC
PI Advanced Materials Co., Ltd	(d)	South Korea	54.07	FC
Polimeros Especiales, S.A. de C.V.		Mexico	100.00	FC
POLYTEC PT GmbH Polymere Technologien	(d)	Germany	100.00	FC
Prochimir		France	100.00	FC
PT.Bostik Indonesia		Indonesia	100.00	FC
Sartomer (Guangzhou) Chemicals Ltd.		China	100.00	FC
SDP Holding		Belgium	100.00	FC
Seki Arkema Co., Ltd.		South Korea	51.00	FC
Shanghai Zhiguan Polymer Materials Co. Ltd		China	100.00	FC
Siroflex Limited		United Kingdom	100.00	FC
Société Marocaine des Colles		Morocco	97.01	FC
Sovereign Chemicals Limited		United Kingdom	100.00	FC
Taixing Sunke Chemicals Co., Ltd.		China	100.00	FC
The LightLock Company Limited		Hong Kong	55.00	FC
Thermoplastic Powder Holding AG		Switzerland	100.00	FC
Turkish Products, Inc.		United States	100.00	FC
Usina Fortaleza Indústria E Comércio de Massa Fina Ltda.		Brazil	100.00	FC
Viking Chemical Company		United States	100.00	FC

(a) Companies that changed their name in the period.
(b) Companies merged in the period.
(c) Companies liquidated in the period.
(d) Companies consolidated for the first time in the period.
(e) Companies for which the percentage ownership changed in the period, with no change in control.
(f) Companies for which the percentage ownership changed in the period, with change in control.
(g) Companies deconsolidated in the period.
NB: FC: full consolidation.
JO: joint operation – consolidated based on shares of assets, liabilities, income and expenses.
JV: joint venture – consolidation by the equity method.
SI: significant influence – consolidation by the equity method.

5.4 Company's annual financial statements

5.4.1 Statutory auditors' report on the financial statements

KPMG S.A.

Tour Eqho
2, avenue Gambetta
CS 60055
92066 Paris-La Défense cedex
S.A. au capital de € 5 497 100
775 726 417 R.C.S. Nanterre

Commissaire aux Comptes
Membre de la compagnie
régionale de Versailles et du Centre

ERNST & YOUNG Audit

Tour First
TSA 14444
92037 Paris-La Défense cedex
S.A.S. à capital variable
344 366 315 R.C.S. Nanterre

Commissaire aux Comptes
Membre de la compagnie
régionale de Versailles et du Centre

This is a translation into English of the statutory auditors' report on the financial statements of the Company issued in French and it is provided solely for the convenience of English-speaking users.

This statutory auditors' report includes information required by European regulations and French law, such as information about the appointment of the statutory auditors or the verification of the management report and the other documents provided to the shareholders.

This report should be read in conjunction with, and construed in accordance with, French law and professional auditing standards applicable in France.

Arkema

Year ended December 31, 2023

Statutory auditors' report on the financial statements

To the Annual General Meeting of Arkema,

Opinion

In compliance with the engagement entrusted to us by your annual general meetings, we have audited the accompanying financial statements of Arkema for the year ended December 31, 2023.

In our opinion, the financial statements give a true and fair view of the assets and liabilities and of the financial position of the Company as at December 31, 2023 and of the results of its operations for the year then ended in accordance with French accounting principles.

The audit opinion expressed above is consistent with our report to the Audit Committee.

Basis for Opinion

Audit Framework

We conducted our audit in accordance with professional standards applicable in France. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Our responsibilities under those standards are further described in the *Statutory Auditors' Responsibilities for the Audit of the Financial Statements* section of our report.

Independence

We conducted our audit engagement in compliance with the independence requirements of the French Commercial Code (Code de commerce) and the French Code of Ethics for Statutory Auditors (Code de déontologie de la profession de commissaire aux comptes) for the period from January 1, 2023 to the date of our report, and specifically we did not provide any prohibited non-audit services referred to in Article 5(1) of Regulation (EU) No. 537/2014.

Justification of Assessments - Key Audit Matters

In accordance with the requirements of Articles L. 821-53 and R. 821-180 of the French Commercial Code *(Code de commerce)* relating to the justification of our assessments, we inform you of the key audit matters relating to risks of material misstatement that, in our professional judgment, were of most significance in our audit of the financial statements of the current period, as well as how we addressed those risks.

These matters were addressed in the context of our audit of the financial statements as a whole and in forming our opinion thereon, and we do not provide a separate opinion on specific items of the financial statements.

Valuation of investments (Note D1 to the financial statements)

Risk identified	As at December 31, 2023, the investments recorded in the balance sheet at an amount of M€ 4,044, after reversal during the period of the depreciation of Arkema France's investments for M€ 248, represent 45% of total assets. They are recognized in the balance sheet at the lower of their acquisition cost or value in use. Estimating the value in use of these investments requires Management's judgement in choosing the information to consider, which, depending on the case, can be historical elements (equity value) or forecast elements (multiple, future cash flows). Given the weight of investments in the balance sheet and the importance of Management's judgement in determining the assumptions on which the estimates of the value in use are based, we considered the valuation of investments to be a key audit matter.
Our response	In order to assess the reasonableness of the estimates of the value in use of the investments, our work consisted primarily in: a) For valuations based on historical elements: • assessing whether the equity used correspond to the annual financial accounts of the entities that were audited. b) For valuations based on forecast elements: • examining that the estimates of the value in use that are used by Management are supported by an appropriate justification of the valuation method and of the amounts used; • examining the continuation of the valuation method used; • examining that the data used in valuing investments are reconciled with the data from the accounting records, and verifying that the adjustments made, if applicable, to this data are based on appropriate documentation; • verifying the mathematical accuracy of the calculations. Our work also consisted in comparing the information provided in the notes to the financial statements with the French accounting principles.

Specific Verifications

We have also performed, in accordance with professional standards applicable in France, the specific verifications required by laws and regulations.

Information given in the management report and in the other documents with respect to the financial position and the financial statements provided to the shareholders

We have no matters to report as to the fair presentation and the consistency with the financial statements of the information given in the Board of Directors' management report and in the other documents with respect to the financial position and the financial statements provided to the shareholders.

We attest the fair presentation and the consistency with the financial statements of the information relating to payment deadlines mentioned in Article D. 441-6 of the French Commercial Code *(Code de commerce)*.

Report on Corporate Governance

We attest that the Board of Directors' Report on Corporate Governance sets out the information required by Articles L. 225-37-4, L. 22-10-10 and 22-10-9 of the French Commercial Code *(Code de commerce)*.

Concerning the information given in accordance with the requirements of Article L. 22-10-9 of the French Commercial Code *(Code de commerce)* relating to the remuneration and benefits received by, or allocated to the directors and any other commitments made in their favor, we have verified its consistency with the financial statements, or with the underlying information used to prepare these financial statements and, where applicable, with the information obtained by your Company from companies controlled thereby, included in the consolidation scope. Based on these procedures, we attest the accuracy and fair presentation of this information.

With respect to the information relating to items that your Company considered likely to have an impact in the event of a takeover bid or exchange offer, provided pursuant to Article L. 22-10-11 of the French Commercial Code *(Code de commerce)*, we have agreed this information to the source documents communicated to us. Based on these procedures, we have no observations to make on this information.

Other information

In accordance with French law, we have verified that the required information concerning the purchase of investments and controlling interests and the identity of the shareholders and holders of voting rights has been properly disclosed in the management report.

Report on Other Legal and Regulatory Requirements

Format of preparation of the financial statements intended to be included in the annual financial report

We have also verified, in accordance with the professional standard applicable in France relating to the procedures performed by statutory auditors regarding the annual and consolidated financial statements prepared in the European single electronic format, that the preparation of the financial statements intended to be included in the annual financial report mentioned in Article L. 451-1-2, I of the French Monetary and Financial Code *(Code monétaire et financier)*, prepared under the Chairman and Chief Executive Officer's responsibility, complies with the single electronic format defined in Commission Delegated Regulation (EU) No. 2019/815 of 17 December 2018.

On the basis of our work, we conclude that the preparation of the financial statements intended to be included in the annual financial report complies, in all material respects, with the European single electronic format.

We have no responsibility to verify that the financial statements that will ultimately be included by your Company in the annual financial report filed with the AMF *(Autorité des marchés financiers)* agree with those on which we have performed our work.

Appointment of the Statutory Auditors

We were appointed as statutory auditors of Arkema by your annual general meeting held on June 23, 2005 for KPMG S.A. and on May 10, 2006 for ERNST & YOUNG Audit.

As at December 31, 2023, KPMG S.A. was in the nineteenth year of total uninterrupted engagement, including eighteen years since the securities of the Company were admitted to trading on a regulated market, and ERNST & YOUNG Audit was in the eighteenth year.

Responsibilities of Management and Those Charged with Governance for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with French accounting principles and for such internal control as Management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, Management is responsible for assessing the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless it is expected to liquidate the Company or to cease operations.

The Audit Committee is responsible for monitoring the financial reporting process and the effectiveness of internal control and risk management systems and where applicable, its internal audit, regarding the accounting and financial reporting procedures.

The financial statements were approved by the Board of Directors.

Statutory Auditors' Responsibilities for the Audit of the Financial Statements

Objectives and audit approach

Our role is to issue a report on the financial statements. Our objective is to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with professional standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users made on the basis of these financial statements.

As specified in Article L. 821-55 of the French Commercial Code *(Code de commerce)*, our statutory audit does not include assurance on the viability of the Company or the quality of management of the affairs of the Company.

As part of an audit conducted in accordance with professional standards applicable in France, the statutory auditor exercises professional judgment throughout the audit and furthermore:

- Identifies and assesses the risks of material misstatement of the financial statements, whether due to fraud or error, designs and performs audit procedures responsive to those risks, and obtains audit evidence considered to be sufficient and appropriate to provide a basis for his opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtains an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the internal control.
- Evaluates the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by Management in the financial statements.

- Assesses the appropriateness of Management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. This assessment is based on the audit evidence obtained up to the date of his audit report. However, future events or conditions may cause the Company to cease to continue as a going concern. If the statutory auditor concludes that a material uncertainty exists, there is a requirement to draw attention in the audit report to the related disclosures in the financial statements or, if such disclosures are not provided or inadequate, to modify the opinion expressed therein.
- Evaluates the overall presentation of the financial statements and assesses whether these statements represent the underlying transactions and events in a manner that achieves fair presentation.

Report to the Audit Committee

We submit to the Audit Committee a report which includes in particular a description of the scope of the audit and the audit program implemented, as well as the results of our audit. We also report significant deficiencies, if any, in internal control regarding the accounting and financial reporting procedures that we have identified.

Our report to the Audit Committee includes the risks of material misstatement that, in our professional judgment, were of most significance in the audit of the financial statements of the current period and which are therefore the key audit matters that we are required to describe in this report.

We also provide the Audit Committee with the declaration provided for in Article 6 of Regulation (EU) No. 537/2014, confirming our independence within the meaning of the rules applicable in France as set out in particular in Articles L. 821-27 to L. 821-34 of the French Commercial Code *(Code de commerce)* and in the French Code of Ethics for Statutory Auditors *(Code de déontologie de la profession de commissaire aux comptes)*. Where appropriate, we discuss with the Audit Committee the risks that may reasonably be thought to bear on our independence, and the related safeguards.

Paris-La Défense, February 28, 2024

The Statutory Auditors

French original signed by

KPMG S.A.		ERNST & YOUNG Audit
Éric Dupré	François Quédiniac	Christine Vitrac

5.4.2 Parent company financial statements at 31 December 2023

BALANCE SHEET

ASSETS *(In millions of euros)*	Notes	31.12.2023 Gross	31.12.2023 Depreciation and impairment	31.12.2023 Net	31.12.2022 Net
Investments	*D1*	4,044	—	4,044	3,172
Other financial assets	*D1*	4,247	—	4,247	3,280
Total fixed assets		**8,291**	**—**	**8,291**	**6,452**
Advances		—	—	—	—
Trade receivables	*D2*	10	—	10	65
Other amounts receivable	*D2*	186	—	186	163
Subsidiary current accounts	*D2*	401	—	401	1,274
Treasury shares	*D2*	20	—	20	19
Cash and cash equivalents		—	—	—	—
Total current assets		**616**	**—**	**616**	**1,521**
Bond premium and issuing costs	*D2*	15	—	15	10
TOTAL ASSETS		**8,922**	**0**	**8,922**	**7,982**

LIABILITIES AND SHAREHOLDERS' EQUITY *(In millions of euros)*	Notes	31.12.2023 Net	31.12.2022 Net
Share capital		750	750
Paid-in surplus		1,067	1,067
Legal reserve		77	77
Retained earnings		1,721	1,873
Net income for the year		350	101
Total shareholders' equity	***D3***	**3,964**	**3,868**
Additional equity	***D4***	**700**	**700**
Provisions	***D5***	**62**	**53**
Bonds and other financial debt	*D 6-8*	3,934	3,021
Subsidiary current accounts	*D8*	119	90
Accounts payable	*D8*	5	118
Tax and employee-related liabilities	*D8*	8	11
Other payables	*D8*	129	122
Total liabilities		**4,195**	**3,361**
TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY		**8,922**	**7,982**

Income statement

(In millions of euros)	Notes	**2023**	2022
Services billed to related companies	*D9*	124	121
Other purchases and external expenses		(106)	(106)
Taxes other than income taxes		(1)	(1)
Personnel expenses		(22)	(26)
Other operating income and expenses		—	(1)
Depreciation and amortization		(1)	(1)
Increases and reversals of provisions	*D5*	—	—
Operating income		**(6)**	**(13)**
Dividends from investments		100	100
Interest income		85	56
Interest expenses		(80)	(52)
Net foreign exchange gains (losses)		—	—
Impairment of investments	*D1*	248	—
Depreciation and amortization		(3)	(2)
Increases and reversals of provisions for financial risks	*D5*	—	—
Financial result	***D10***	**350**	**102**
Income before tax and exceptional items		**344**	**89**
Increases and reversals of exceptional provisions	*D5*	(10)	17
Other exceptional income		8	12
Income and expenses on capital transactions		(4)	(24)
Exceptional items		**(5)**	**4**
Income taxes	*D11*	11	8
NET INCOME		**350**	**101**

CASH FLOW STATEMENT

(In millions of euros)	**2023**	2022
Net income	350	101
Changes in provisions	13	(14)
Changes in impairment	(248)	—
Gains and losses on sales of assets	—	—
Gross operating cash flow	115	87
Change in working capital	**(85)**	**124**
Cash flow from operating activities	**30**	**211**
Cost of acquisition of investments	(624)	270
Change in loans	(967)	—
Sale of investments	—	—
Cash flow from (used in) investing activities	**(1,591)**	**270**
Increase (decrease) in bonds	966	—
Increase in additional equity	—	—
Change in share capital and other equity	—	(222)
Dividends paid to shareholders	**(254)**	**(222)**
Cash flow from (used in) financing activities	**712**	**(444)**
Change in net cash	**(849)**	**37**
Net cash at beginning of period [(1)]	742	705
Net cash at end of period [(1)]	(107)	742

(1) including current accounts with Arkema France and Arkema Insurance, and commercial paper net of accrued interest.

TABLE OF SUBSIDIARIES AND INVESTMENTS AT 31 DECEMBER 2022

Subsidiaries and investments *(In millions of euros)*	Share capital	Shareholders' equity other than share capital, excluding net income	Gross value of shares owned	Net carrying amount of shares owned	Number of shares owned	Ownership interest *(%)*	Loans, advances & current accounts – gross value	Guarantees given by the Company	Sales (excl. taxes) for 2023 (1) *(In millions of euros)*	Net income for 2023 (1) *(In millions of euros)*	Dividends received by the Company
FRENCH SUBSIDIARIES											
Arkema France 420, rue d'Estienne-d'Orves 92705 Colombes Cedex – France	894	429	1,159	1,159	5,244,920	100%	4,601	1,239	2,995	156	3
Arkema Participations SAS 420, rue d'Estienne-d'Orves 92705 Colombes Cedex – France	188	3,223	2,885	2,885	488,178	100%	0.00	0.00	0.00	671	850
TOTAL INVESTMENTS			**4,044**	**4,044**			**4,601**	**1,239**	**2,995**	**827**	**853**

(1) financial statements not yet approved by the shareholders at the annual general meeting

5.4.3 Notes to the parent company financial statements

A. Highlights

- On 11 May 2023, the combined annual general meeting of Arkema's shareholders approved the distribution of a €3.40 dividend per share in respect of the 2022 financial year.
- On 16 January 2023, Arkema issued €400 million worth of 8-year bonds with a 3.5% coupon.
- On 13 November 2023, Arkema issued €700 million worth of 6.5-year bonds with a 4.25% coupon.
- As part of an internal reorganization of the Arkema group, Arkema Amériques was merged in Arkema Participations (formerly Arkema Asie) on 2 June 2023, with retroactive effect for accounting and tax purposes from 1 January 2023, pursuant to the merger agreement signed on 28 April 2023. As this was a simplified merger between sister companies with no exchange of shares, the net book value of the shares in Arkema Amériques (€1,057 million) was added to the net book value of the shares in Arkema Participations (€340 million).
- As part of an internal reorganization of the Arkema Group, on 22 February 2023 and 24 October 2023 Arkema France transferred 89,818 shares in Arkema Participations to its sole shareholder Arkema. The value of Arkema Participations shares increased by €1,488 million, and the value of Arkema France shares was reduced accordingly.
- Following these transactions, the net book value of Arkema Participations shares held by Arkema amounts to €2,885 million.
- Arkema S.A. increased the capital of Arkema France on 3 May 2023 for an amount of €624 million, corresponding to the issue of 3,660,667 new shares.
- The provision for Arkema France shares was fully reversed for €248 million.

B. Accounting policies

The annual financial statements of Arkema S.A. were prepared under the responsibility of the Chairman and Chief Executive Officer of Arkema S.A. and approved for publication by the Board of Directors on 28 February 2024.

The annual financial statements of Arkema S.A. were prepared in accordance with French laws and regulations. It is specified that the presentation of the balance sheet and the income statement has been adapted to the Company's activity as a holding company.

French generally accepted accounting principles (GAAP) have been applied, including the principle of prudence, using the following basic assumptions:

- going concern basis;
- consistency of accounting policies from one financial year to the next; and
- accruals basis of accounting and cut-off.

The basic method used to value items recorded in the accounting records is the historical cost method.

The main accounting policies used by the Company are presented below.

1. Investments

Investments are stated at the lower of acquisition cost and value in use. Investment acquisition expenses are recognized in the income statement as incurred.

The value in use of the investments held by Arkema SA is assessed by reference to the share held in the investee's net assets. However, value in use may also be assessed:

- by reference to an external valuation; or
- by standard valuation methods (multiples, discounted future cash flows) when these methods provide more relevant information than the share held in the investee's net assets.

2. Costs of capital increases

In accordance with opinion 2000D of the urgent issues committee of the French National Accounting Board (*Conseil national de la comptabilité* – CNC), issued on 21 December 2000, the Company has opted to recognize the costs of capital increases as a deduction from issue premiums.

3. Receivables

Receivables are recognized at their nominal value. A bad debt provision is recognized when the net realizable value is lower than the book value. Receivables denominated in foreign currencies are translated at the exchange rate at 31 December.

4. Treasury shares

Treasury shares held by Arkema S.A. are recognized at acquisition cost in current assets. They are valued in accordance with the FIFO (first-in, first-out) method. Treasury shares are normally written down, if necessary, on the basis of the average market price on the Paris stock exchange for the last month preceding the balance sheet date. By exception, and in accordance with regulation no. 2014-03 of the French Accounting Standards Authority (*Autorité des normes comptables* – ANC), these shares are not written down on the basis of their market value when they have been allocated to a plan, because of the commitment to make grants to employees and the provision recognized in this respect in liabilities.

Treasury shares initially allocated to cover share grants to employees are reclassified as other financial assets in a "Treasury shares for cancellation" sub-account when a decision is made to cancel the shares. They are then recorded at their net carrying amount at the date on which their allocation is changed.

When the annual general meeting authorizes the Board of Directors to implement a share buyback program with a view to canceling the purchased shares, these shares are recognized directly in financial assets in accordance with article 942-27 of the French Chart of Accounts (*plan comptable général* – PCG).

5. Bonds

Bonds are recognized at nominal value in the balance sheet liabilities.

Bond issuing costs and bond premiums (arising when the bond is issued at a price below its nominal value) are recognized in the balance sheet as a separate asset. However, if the bond is issued at a price higher than the nominal value, the difference between the issue price and the nominal value minus issuing costs is recognized as a liability under "Bonds".

Issuing costs comprise bank charges for setting up the bond, and legal fees. They are spread over the duration of the bond under the effective interest rate method, with the corresponding expense recognized in operating income.

The bond premium is also spread over the duration of the bond under the effective interest rate method, with the corresponding expense recognized in financial result. If the bond is issued at a price higher than the nominal value, the same method is applied to the difference between the issue price and the nominal value, with the corresponding income recognized in financial result.

The effective interest rate corresponds to the interest rate which, when used to determine the discounted value of expected cash outflows till maturity date, leads to the initial book value of the bond.

6. Perpetual hybrid bonds

Perpetual bonds whose redemption remains under the exclusive control of the issuer are recorded as "Additional equity".

Costs and the premium related to the issue of such instruments are recorded in the balance sheet assets as prepaid expenses, and spread over the duration of the relevant tranche.

The expense resulting from spreading issuing costs is recognized in operating income by a direct credit to the bond issuing costs account (only the net amount is shown in the balance sheet).

The expense resulting from spreading issue premiums is recognized in financial expenses by a direct credit to the bond issue premium account (only the net amount of the premiums is shown in the balance sheet).

Accrued interest not yet due is included in other financial debt.

The annual interest expense on these instruments is included in financial expenses in the income statement.

7. Stock options and free share grants

7.1 Stock options

Stock options are accounted for, at the date of exercise, as a capital increase for an amount corresponding to the subscription price paid by the stock option holders. Any difference between the subscription price and the par value of the shares created represents an issue premium.

7.2 Free share grants

Arkema S.A. shares vest to beneficiaries at the end of a vesting period subject to the beneficiary remaining with the Company and fulfilling any performance conditions set by the Board of Directors.

7.2.1 Issue of new shares

When a free share grant is carried out by issuing new shares, a capital increase by means of a capitalization of reserves in the aggregate par value of the shares created is recognized in the financial statements at the end of the set vesting period.

7.2.2 Buyback of existing shares

When a free share grant is carried out through buybacks of existing shares (following a decision by the Board of Directors in relation to the plan in question), a provision representing the obligation to deliver the shares is recognized at year-end.

The amount of this provision is equal to the probable purchase price, valued on the basis of the closing share price if the shares have not yet been purchased, or the net carrying amount of the treasury shares if they have already been purchased. On delivery at the end of the vesting period, the purchase price paid by the company for the shares granted is recognized in exceptional expenses and the provision previously recorded is reversed. However, the expense related to delivery of vested shares to Arkema S.A. personnel under performance share plans is reclassified from exceptional items to operating income.

The provision is recognized on a time-proportion basis over the vesting period and takes into account, where relevant, the probability of the beneficiaries' remaining with the Company and fulfilling the performance conditions set by the Board of Directors.

7.3 Social security contributions on stock options and free share grants

The 2008 French social security financing act (law no. 2007-1786 of 19 December 2007) created a new employer contribution on stock options and free share grants.

This contribution is payable to the mandatory health insurance schemes to which the beneficiaries are affiliated. For free share grants, starting from the 2016 plan, the 20% contribution is calculated on the basis of the value of the shares granted at their vesting date, and is payable the month after the shares vest to the beneficiary. The provision corresponding to the contribution payable for Arkema S.A. personnel is established progressively over the vesting period.

8. Pension and similar benefit obligations

The complementary "top hat" defined benefit pension plan was terminated in 2016 following a decision by the Board of Directors on 9 March 2016. Other non-pension benefits (lump-sum payments on retirement, long service awards, death and disability benefits, contributions to healthcare bodies) remained unchanged, and provisions are recognized in respect of these obligations in the financial statements.

The amount of the provision corresponds to the actuarial value of employees' vested rights at the balance sheet date.

The valuation of obligations under the projected unit credit method principally takes into account:

- a discount rate, which depends on the duration of the obligations (3.55% at 31 December 2023 versus 4.1% at 31 December 2022);
- an assumption concerning the date of retirement;
- an inflation rate;
- assumptions in respect of future increases in salaries, rates of employee turnover and increases in health costs.

Actuarial gains and losses are fully recognized in the income statement.

ANC decision on attributing benefit to periods of service:

- The French Accounting Standards Authority, ANC, has amended its recommendation no. 2013-02 to allow for a choice between two accounting methods when calculating obligations for certain defined benefit plans.
- For the French statutory financial statements, the Arkema Group has chosen to apply the option that aligns with the new method applicable to the consolidated financial statements in 2021.
- This method has led to a review of how benefit costs are spread over periods of service and, by extension,
- to a change in how obligations are valued for plans capped at a specified number of years of service.

The following plans are concerned:

- Plans with payments on retirement, where benefits are capped in terms of months after a specified number of years of service in the company.

2023 French pension reform

On 14 April 2023, France passed amended 2023 social security financing law no. 2023-270, which gradually increases the legal retirement age (from 62 to 64) and lengthens the amount of time workers are required to make contributions.

The impact of this reform is not material for the company's pension obligations and other employee benefits, as the retirement age assumptions used in previous years were already higher than the minimum age required under the new reform.

9. Tax consolidation

The tax consolidation agreements signed between Arkema S.A. and the other companies in the tax consolidation group refer to a neutrality principle in accordance with which each tax consolidated subsidiary must recognize in its own financial statements, during the entire period of its inclusion in the tax consolidation group, a tax expense (or benefit) corresponding to income tax and additional levies, identical to that which it would have recognized had it not formed part of the tax consolidation group.

In its accounting records, Arkema S.A. recognizes:

- in "other receivables", with an offsetting entry to income taxes, the amount of income taxes due by profitable companies in the tax consolidation group;
- in "other payables", with an offsetting entry to income taxes, the amount of taxes due by the tax consolidation group.

The tax consolidation agreements also state that Arkema S.A. will benefit from the tax savings generated by the use of its subsidiaries' tax losses without any obligation to refund them (even if the said subsidiaries leave the tax consolidation group). On this basis, in accordance with opinion 2005-G of the CNC urgent issues committee, Arkema S.A. does not recognize any provision for taxes.

C. Subsequent events

None.

D. Notes to the parent company financial statements

The figures presented in the notes to the parent company financial statements are expressed in millions of euros (unless otherwise indicated).

Note 1 Investments and other financial assets

1.1 Investments

(In millions of euros)	31.12.2022	Increase	Decrease	**31.12.2023**
Gross value	3,420	624	-	4,044
Impairment	(248)	-	248	-
NET VALUE	**3,172**	**624**	**248**	**4,044**

Arkema France recognized a capital increase of €624 million.

The reversal of impairment concerns exclusively shares in Arkema France, given the company's net assets at 31 December 2023.

Shares in Arkema Amériques were derecognized in the amount of €1,057 million following the merger with Arkema Participations (merger between sister companies with no exchange of shares) and an increase in the value of Arkema Participations shares was then recognized in the same amount.

Transfer by Arkema France of shares in Arkema Participations for an amount of €1,488 million, and corresponding reduction in the value of shares in Arkema France.

1.2 Other financial assets

Arkema S.A. transferred to its subsidiary Arkema France the cash received from the various bond issues (see notes D4 and D6), in the form of loans with the same maturity.

The corresponding loans total €4,200 million (excluding accrued interest) at 31 December 2023.

Note 2 Current assets

2.1 Breakdown of receivables

The breakdown by maturity of the Company's receivables at 31 December 2023 is as follows:

(In millions of euros)	Gross amount	Maturing within one year	of which more than one year
Operating receivables and taxes (1)	10	10	-
Cash advances to the subsidiary (2)	401	401	-
Other receivables (3)	205	102	103
TOTAL	**616**	**513**	**103**

(1) Since 2018, Arkema S.A. has invoiced support functions to all Arkema Group entities.
(2) Arkema France current account.
(3) Mainly income tax receivables, intragroup receivables and treasury shares.

2.2 Treasury shares

As at 31 December 2023, Arkema S.A. holds 228,901 treasury shares, which are recorded at a total value of €20 million. These shares are used to cover its free share grant plans (see note D13).

No impairment was therefore recognized in the financial statements at 31 December 2023.

The Company bought back 357,726 treasury shares during 2023. The Arkema Group definitively granted 359,912 free shares to its employees in November 2023, mainly in application of the 2019 and 2020 plans.

	2023	2022
Number of treasury shares at 1 January	231,087	329,118
Purchase of treasury shares	357,726	262,945
Grants of treasury shares	(359,912)	(360,976)
Number of treasury shares at 31 December	228,901	231,087

2.3 Bond premium and issuing costs

The following amounts are recognized in this item:

(In millions of euros)	31 December 2022	Increase	Decrease	**31 December 2023**
BONDS				
Issue premiums	7.4	6.4	2.7 (1)	11.1
Issuing costs	1.9	2.0	0.6 (1)	3.3
Subtotal	**9.3**	**8.4**	**3.3**	**14.4**
PERPETUAL HYBRID BONDS				
Issue premiums	—	—	—	—
Issuing costs	0.6	—	0.3(1)	0.3
Subtotal	**0.6**	**—**	**0.3**	**0.3**
TOTAL	**9.9**	**8.4**	**3.6**	**14.7**

(1) Amount charged to expenses for the period.

Note 3 Shareholders' equity

At 31 December 2023, Arkema's share capital comprises 75,043,514 shares with a par value of €10.

Changes in shareholders' equity are as follows:

(In millions of euros)	Opening balance at 01/01/2023	Appropriation of 2022 net income	Distribution of dividends [(1)]	2023 net income	Capital reduction	Capital increase reserved for employees	**31 December 2023 before appropriation**
Share capital	750.4						750.4
Issue premium	316.1					(0.1)	316
Paid-in surplus	625.8						625.8
Merger surplus	124.8						124.8
Legal reserve	76.7						76.7
Other reserves	—						—
Retained earnings	1,873.1	101.4	(253.8)				1,720.7
2022 net income	101.4	(101.4)					—
2023 net income				349.9			349.9
TOTAL SHAREHOLDERS' EQUITY	**3,868.4**	**—**	**(253.8)**	**349.9**	**—**	**(0.1)**	**3,964.3**

(1) On 11 May 2023, the annual general meeting of shareholders adopted a resolution to distribute a dividend of €3.40 per share, or a total amount of €253.8 million, in respect of the 2022 financial year.

Note 4 Additional Equity

(In millions of euros)	Gross amount	Maturing within one year	of which more than one year
Issue of perpetual hybrid bonds	700	-	700

At 31 December 2023, the total nominal value of Arkema's perpetual hybrid bonds is €700 million. The breakdown is as follows:

Issue date	Nominal value *(in millions)*	Currency	Redemption option	Annual coupon rate
17 June 2019	400	EUR	5.25 years	2.75%
21 January 2020	300	EUR	6 years	1.50%

Arkema has an option to defer payment of coupons for the above bonds.

Note 5 Provisions

Changes in provisions recognized in the Company's balance sheet are set out in the table below:

(In millions of euros)	31 December 2022	Increase	Decrease	31 December 2022
Provisions for pensions and similar benefits (1)	2.0	0.3	—	2.3
Provisions for long service awards	0.3	0.1	—	0.4
Provisions for free share grants (2)	49.4	36.3	27.3(3)	58.4
Provisions for risks related to subsidiaries	—	—	—	—
Provisions for other risks	0.8	0.5	—	1.3
TOTAL	**52.5**	**37.2**	**27.3**	**62.4**

(1) The increase mainly corresponds to entitlements earned over the year.
(2) Increases and reversals of these provisions are recorded in exceptional items.
(3) The decrease corresponds to a reversal following delivery of shares under plans 2019-2 and 2020-1.

These movements break down as follows:

(In millions of euros)	**Increases in provisions**	**Reversals**
Recognized in operating income	0.4	(0.0)
Recognized in financial result	0.0	0.0
Recognized in exceptional items	36.8	(27.3)
TOTAL	**37.2**	**(27.3)**

Note 6 Bonds and other financial debt

This item covers:

- the €700 million bond issued in January 2015 that will mature on 20 January 2025, with a fixed coupon of 1.5%;
- the bond issued in April 2017 that will mature on 20 April 2027, with a fixed coupon of 1.5%, and the tap issue undertaken in June 2017 bringing its total amount to €900 million;
- the €500 million bond issued in December 2019 that will mature on 3 December 2029, with a fixed coupon of 0.75%;

The €300 million green bond issued in October 2020 that will mature on 14 October 2026, with a fixed coupon of 0.125%. This bond is entirely dedicated to the financing of Arkema's new, world-scale plant in Singapore to manufacture 100% bio-based Rilsan® polyamide 11.

- the €400 million bond issued on 16 January 2023 that will mature on 23 January 2031, with a fixed coupon of 3.50%;
- the €700 million bond issued on 14 November 2023 that will mature on 20 May 2030, with a fixed coupon of 4.25%.

  These issues are part of the Group's Euro Medium Term Notes (EMTN) program introduced in October 2013.
- the difference between the issue price and the nominal value of the 2017 bond, recorded in liabilities in the amount of €2.2 million (net of issuing costs); after a €0.2 million charge to the period, the balance of this difference amounts to €1.2 million at 31 December 2021;
- the accrued interest on bonds, amounting to €36.3 million;
- the accrued interest on the perpetual hybrid bond, amounting to €7.4 million;
- 389 million in commercial paper, net of accrued interest.

Note 7 Negotiable European Commercial Paper

In April 2013, the Group introduced a Negotiable European Commercial Paper program with a ceiling of €1 billion.

No issues are outstanding as part of this program at 31 December 2023.

Note 8 Liabilities

The breakdown by maturity of the Company's liabilities at 31 December 2023 is as follows:

(In millions of euros)	Gross amount	Maturing within one year	Maturing in 1 to 5 years	Maturing after 5 years
Debt	3,934	433 (1)	1,900 (2)	1,600 (2)
Subsidiary current accounts	119	119		
Accounts payable	5	5	-	-
Tax and employee-related liabilities	8	8	-	-
Other payables	129(3)	72	57	-
TOTAL	**4,195**	**637**	**1,957**	**1,600**

(1) Commercial paper (€400 million); accrued interest (€33 million).
(2) Long-term bonds issued by Arkema S.A. (see note D6).
(3) Income tax payables owed to the tax authorities and to companies in the tax consolidation group.

Note 9 Details of items concerning related companies

(In millions of euros)	
INVESTMENTS	
Investments in other companies (1)	4,044
Receivables related to subsidiaries	4,247
RECEIVABLES	
Accounts receivable	9
Other receivables (current account)	401
Other amounts receivable	64
LIABILITIES	
Financial debt	119
Trade payables	3
Other payables	117
SALES	
Services billed to related companies (2)	124
OPERATING EXPENSES	
Services billed by related companies (2)	97
FINANCIAL INCOME AND EXPENSES	
Dividends from investments	100
Income on loans and current accounts	82

(1) Net book value.
(2) Mainly management fees.

Note 10 Financial result

Interest income corresponds mainly to the remuneration of the amounts made available to Arkema France in the context of the Group's cash pooling system.

Note 11 Income taxes

In 2023, application of the French tax consolidation system resulted in an income tax benefit of €10.6 million for Arkema S.A.

This amount breaks down as:

- Income of €22.9 million corresponding to the income tax paid by subsidiaries included in the tax consolidation group as if they were taxed separately;
- An income tax expense of €12.3 million relating to the tax consolidation group.

Note 12 Deferred tax position

Temporarily non-deductible expenses relating to provisions for pensions and similar benefits at 31 December 2023 amount to €2.3 million.

After integration of €46.6 million corresponding to the 2023 taxable income under the French tax consolidation system, the tax loss carryforwards of the Company's tax consolidation group at 31 December 2023 amount to €1,167 million, and can be used indefinitely.

Note 13 Stock option plans and free share grants

13.1 Stock options

The Board of Directors has decided not to introduce any further stock option plans.

13.2 Free share grants

On 9 November 2023, the Board of Directors decided to introduce two free performance share plans for employees, particularly people in positions of responsibility whose work has an influence on the Group's results.

Movements in the free share grant plans existing at 31 December 2023 are as follows:

Plan	Grant date	Vesting period	Holding period	Total number of free shares granted	Number of shares subject to performance conditions	Fair value *(euros per share)*	Number of shares vested in 2023	Number of shares canceled in 2023	Total number of shares still to be granted at 31/12/2023
2019-2	29 Oct. 2019	4 years	-	131,035	112,740	59.76	120,832	1,250	-
2020-1	5 May 2020	4 years	-	6,453	-	10.09			6,439
2020-2	5 May 2020	3 years	3 years	1,176	-	20.94	1,135	41	-
2020-3	5 May 2020	4 years	-	1,500	-	0.00			1,500
2020-4	4 Nov. 2020	3 years	2 years	238,550	226,000	52.58	237,884	1,210	-
2020-5	4 Nov. 2020	4 years	-	128,245(1)	111,365	54.33		3,740	116,275
2021-1	9 Nov. 2021	3 years	2 years	239,575(2)	227,387	81.91		3,430	232,075
2021-2	9 Nov. 2021	4 years	-	124,713(3)	105,293	83.92	50	3,975	116,153
2022-1	9 Nov. 2022	4 years	-	46,116	-	63.45	11		46,105
2022-2	9 Nov. 2022	3 years	3 years	3,739	-	70.51			3,739
2022-3	9 Nov. 2022	4 years	-	2,400	-	0.00			2,400
2022-4	9 Nov. 2022	3 years	2 years	234,715(4)	219,835	68.26		6,780	227,755
2022-5	9 Nov. 2022	4 years	0	128,540(5)	106,515	66		3,355	124,915
2023-1	8 Nov. 2023	3 years	2 years	247,665(6)	232,980	69		4,200	243,465
2023-2	8 Nov. 2023	4 years	0	126,995(7)	102,800	68		315	126,680

(1) May be raised to 135,940 in the event of outperformance.
(2) May be raised to 285,052 in the event of outperformance.
(3) May be raised to 145,772 in the event of outperformance.
(4) May be raised to 278,682 in the event of outperformance.
(5) May be raised to 149,843 in the event of outperformance.
(6) May be raised to 294,261 in the event of outperformance.
(7) May be raised to 147,555 in the event of outperformance.

13.3 Income and expenses in the financial year in respect of delivered plans

The delivery of shares in respect of plans 2019-2 and 2020-1 led to recognition of a net exceptional expense of €3.6 million in the 2023 financial statements (exceptional expense of €30.9 million partly offset by a €27.3 million provision reversal).

The provision for free share grants was increased in 2023 by €36.3 million (of which €2.4 million in respect of the 2023 plans).

The total amount of provisions in respect of all plans is €58.5 million at 31 December 2023.

Note 14 Off-balance sheet commitments

The information set out below concerns Arkema S.A. or certain of its subsidiaries, and is disclosed on account of Arkema S.A.'s holding company status.

On 28 July 2022, the Group amended and extended its syndicated line of credit maturing on 29 July 2024. The amount was increased to €1.1 billion and the maturity extended to 28 July 2027 with two one-year extension options subject to lender approval. The first option was exercised in July 2023, extending maturity to 28 July 2028. The margin is linked to three CSR indicators which now take into account the Group's new objectives.

Arkema S.A. has given rent guarantees under the lease signed on 1 January 2015 for the Group's current headquarters and under the lease signed on 18 May 2022 for a building being constructed for the Group's future headquarters.

Note 15 Liabilities and contingent liabilities

As a result of Hurricane Harvey, Arkema's Crosby, Texas plant experienced unprecedented flooding leading to a loss of power, the loss of back up refrigeration, the decomposition of certain organic peroxides products that require refrigeration and, ultimately, a series of fires at the plant. Floodwaters also caused wastewater releases. Since September 2017, Arkema Inc. has been defending, and continues to defend, multiple civil lawsuits that were filed against it. One of them has been certified in May 2022 as a class action for certain claims asserted under federal statutes, to be tried by the court; however, class certification in the federal case was denied for all state law claims for monetary damages that had been asserted under Texas common law. In January 2024, the court entered a Preliminary Approval Order for that settlement. The remaining lawsuits were consolidated in 2020 for pre-trial purposes into a state multi-district litigation pending in Texas court. Mediations have been held and negotiations are ongoing to settle some disputes. Most claims against Arkema Inc. are covered by environmental liability insurance. When claims are not covered by insurance policies, provisions have been made for such claims in an amount which the Group considers sufficient.

The Company has been dismissed from all of the lawsuits in which it was named.

Note 16 Employees

The average number of employees by category of personnel is as follows:

Engineers and managers	10
Supervisors and technicians	0
TOTAL	**10**

Note 17 Transactions with related parties

The compensation and benefits of any kind awarded to directors and Executive Committee members are recognized as expenses in the Arkema S.A. financial statements as follows:

(In millions of euros)	**2023**	2022
Salaries and other short-term benefits	10	10
Pensions, other post-employment benefits and contract termination benefits	-	-
Other long-term benefits	-	-
Share-based payments	7	9

Salaries and other short-term benefits comprise all types of compensation recorded, including variable amounts, bonuses, attendance fees and benefits in kind.

The Chairman and Chief Executive Officer is entitled to a contractual indemnity in the event of non-voluntary departure, up to a maximum of twice his total gross annual compensation (fixed and variable), subject to achievement of performance criteria.

Other transactions with related parties involve subsidiaries directly or indirectly wholly owned by Arkema S.A. and do not fall within the scope of article 831-3 of ANC Regulation no. 2014-03 of 5 June 2014.

5.4.4 Information on Company payment terms (articles R. 441-6-1 and D. 441-4 of the French Commercial Code)

The following table shows the number and total amount of supplier invoices received and overdue at 31 December 2023:

(In thousands of euros)	**Article D. 441 I-1°: invoices received and overdue at the year-end**					
	by 0 days (indicative)	by 1-30 days	by 31-60 days	by 61-90 days	by 91 days and more	Total (1 day and more)
(A) Period overdue						
Number of invoices concerned	0	2	0	0	4	6
Total amount of invoices concerned	0	57	0	0	(30)	27
Percentage of annual purchases, excluding taxes	N/A	0.05%	N/A	N/A	-0.03%	0.03%
(B) Invoices excluded from (A) relating to disputed or unrecognized liabilities and payables						
Number of invoices excluded	0	0	0	0	0	0
Total amount of invoices excluded	0	0	0	0	0	0
(C) Standard payment terms used (contractual or defined by law)						
Payment terms used to calculate overdue payments	Contractual payment terms					

The following table shows the number and total amount of customer invoices issued and overdue at 31 December 2023:

	Article D. 441 I-1°: invoices issued and overdue at the year-end					
	by 0 days (indicative)	by 1-30 days	by 31-60 days	by 61-90 days	by 91 days and more	Total (1 day and more)
(A) Period overdue						
Number of invoices concerned						44
Total amount of invoices concerned		(304)	606	393	326	304
Percentage of annual sales		0.25%	0.49%	0.32%	0.26%	0.25%
(B) Invoices excluded from (A) relating to disputed or unrecognized liabilities and payables						
Number of invoices excluded	0	0	0	0	0	0
Total amount of invoices excluded	0	0	0	0	0	0
(C) Standard payment terms used (contractual or defined by law)						
Payment terms used to calculate overdue payments	Contractual payment terms defined in the invoice					

5.4.5 Results of the Company in the last five years (articles R. 225-81, R. 225-83 and R. 225-102 of the French Commercial Code)

(In millions of euros, unless otherwise indicated)	2019	2020	2021	2022	**2023**
TYPE OF DISCLOSURES					
I – Financial position at year-end					
a) Share capital	766	767	767	750	750
b) Number of shares issued	76,624,220	76,736,476	76,736,476	75,043,514	75,043,514
II – Operations and results					
Sales (excluding taxes)	109	99	114	121	124
a) Income before tax, depreciation, impairment and provisions	155	103	2	80	104
b) Income taxes	9	11	22	8	11
d) Employee profit-sharing					
e) Income after tax, depreciation, impairment and provisions	165	103	282	101	350
f) Amount of dividends distributed	168	191	222	254	263 (1)
III – Earnings per share *(in euros)*					
a) Income after tax but before depreciation, impairment and provisions	2.15	1.48	0.31	1.17	1.53
b) Income after tax, depreciation, impairment and provisions	2.15	1.34	3.68	1.35	4.66
c) Net dividend per share	2.20	2.50	3.00	3.40	3.50 (1)
IV – Employee data					
a) Number of employees	8	10	9	10	10
b) Total payroll	9	9	10	10	10
c) Amounts paid for employee benefits in the year	7	7	4	9	7

(1) Subject to approval by the 2024 annual general meeting.

5.5 Information on Arkema's Green Bond issue

Fully in line with its CSR policy, Arkema issued its first green bond on 14 October 2020 for a total of €300 million, with a maturity of six years and an annual coupon of 0.125%. This bond is entirely dedicated to the financing of Arkema's new, world-scale plant in Singapore (the "Eligible Project"), a major, innovative and sustainable project at the heart of its organic growth strategy.

Information on the issue can be found on the Group's website: https://www.arkema.com/global/en/investor-relations/regulated-information/

The commitments made by Arkema under its Green Bond Framework are aligned with the four components of the International Capital Market Association's Green Bond Principles. They are outlined below.

Use of proceeds

The proceeds of the green bond issue will be used to finance or refinance, in whole or in part, investments made by Arkema in the Eligible Project, which meet the three eligibility criteria described in the Green Bond Framework. This world-scale plant based in Singapore, whose initial start-up phase began at the end of 2022, is designed with state-of-the-art technology to maximize its efficiency and minimize its environmental impact. The facility will produce 100% bio-based amino 11 monomer and Rilsan® polyamide 11 from castor oil, a renewable and sustainable feedstock.

Project evaluation and selection process

The Eligible Project was selected by the Group Executive Committee given:

- the unique contribution of Arkema's bio-based polyamide 11 to the development of sustainable solutions in fast-growing areas such as mobility, and in particular new energy vehicles, 3D printing, and consumer goods, and
- the project's importance in ensuring this product's worldwide development and growth.

A Green Bond Committee was set up at the time of the issue's structuring. It is comprised of members from the Financing and Treasury, Sustainable Development and Investor Relations departments, as well as the High Performance Polymers Business Line. The committee meets at least once a year until the bond matures to ensure that the project is compliant with the eligibility criteria described in the Green Bond Framework and to validate the allocation and impact reports.

Management of proceeds

The proceeds are managed by the Finance and Treasury department, which makes sure they are allocated solely to the Eligible Project and do not exceed the total investment amount. All capital expenditure related to the Eligible Project is monitored locally and reported to the Accounting and Consolidation department on a monthly basis. The balance of the proceeds is invested in cash or cash equivalent products or in liquid marketable instruments, as per the Group's financial policy.

Reporting

In accordance with the Green Bond Framework, Arkema will publish:

- an annual report on the allocation of the proceeds until they have been fully allocated; and
- an impact report on the progress of the Eligible Project, each year during the construction phase of the plant. After the start-up of operations, and at least once during the green bond's lifetime, Arkema will publish an impact indicator assessing the number of tons of CO_2 avoided by the Eligible Project.

Every year, an independent auditor will express a limited assurance conclusion on the conformity of the proceeds allocation process and the validity of the impact indicator.

Allocation report

The funds raised under the green bond were fully allocated to the plant construction project in Singapore, with all remaining funds allocated in 2022.

(In millions of euros)	Amount	%
Aggregate nominal amount of the 14 October 2020 issue	300	100%
Aggregate amount allocated to the project on 31 December 2020	89	30%
Aggregate amount allocated to the project on 31 December 2021	271	90%
Aggregate amount allocated to the project on 31 December 2022	300	100%
Of which refinancing share (from 1 January 2019 to 14 October 2020)	*68*	*23%*
Of which financing share (from 15 October 2020 to 31 December 2021)	*203*	*67%*
Of which financing share (from 1 January 2022 to 31 December 2022)	*29*	*10%*
Non-allocated amount on 31 December 2022	0	0%

Impact report

Plant construction work started in the first half of 2020 and the overall rate of completion was 25% at the end of 2020 and 64% at the end of 2021. Construction was completed in the second part of 2022, a few months behind the initial project schedule due to the impact of Covid.

Production start-up operations for the Eligible Project began at the end of 2022 and continued in 2023.

Since then, the plant has gradually ramped up production.

Arkema has undertaken to provide an assessment of the Eligible Project's impact on climate change, at least once during the lifetime of the green bond from the moment the project is commissioned. This impact assessment, expressed in tons of CO_2 avoided, will be based on data provided by Arkema's High Performance Polymers Business Line and the Analysis, Environment and Process Evaluation department's life-cycle assessment team. As a reminder, a critical review of the Rilsan® polyamide 11 life cycle assessment was performed by a third party. The findings, published in February 2021, confirm that the study was carried out in accordance with ISO 14040/44 and ISO 14067, thus giving all the necessary credibility to the impact indicator that the Group will publish.

Statutory auditor's limited assurance report on selected information published in the Group universal registration document for fiscal year 2022 relating to the Green Bond issuance on 14 October 2020.

This is a free English translation of the Assurance report issued in French and is provided solely for the convenience of English-speaking readers. This report should be read in conjunction with, and construed in accordance with, French law and professional standards applicable in France.

INFORMATION ABOUT THE COMPANY AND ITS SHARE CAPITAL

6

The different parts constituting the annual financial report are identified in the table of contents by the pictogram **|AFR|**

6.1 Legal presentation of the Group

6.1.1 Information about the Company

Arkema was established in October 2004 within Total's Chemical business, which subsequently became TotalEnergies, to bring together the Vinyl Products, Industrial Chemicals and Performance Products businesses. On 18 May 2006, the Company's stock market listing marked the Group's independence.

Since 2006, a number of significant operations, as mentioned below, have enabled the Group to strengthen its portfolio of businesses and to refocus on Specialty Materials.

Date	Nature of operation	Company	Products	Segment
October 2007	Acquisition	Coatex	Rheology additives	Coating Solutions
January 2010	Acquisition	Certain assets of The Dow Chemical Company in North America	Acrylics and emulsions	Coating Solutions
July 2011	Acquisition	Cray Valley, Cook Composites & Polymers	Coating resins	Coating Solutions
		Sartomer	Photocure resins	Coating Solutions
February 2012	Acquisition	Suzhou Hipro Polymers Co. Ltd.	Specialty polyamides	Advanced Materials
July 2012	Divestment	Vinyl Products division	Vinyls	Vinyl Products
October 2014	Joint venture	Taixing Sunke Chemicals	Acrylics	Intermediates
February 2015	Acquisition	Bostik	Adhesive solutions and sealants	Adhesive Solutions
December 2016	Acquisition	Den Braven	High performance sealants	Adhesive Solutions
January 2018	Acquisition	XL Brands	Flooring adhesives	Adhesive Solutions
July 2019	Acquisition	ArrMaz	Specialty surfactants	Advanced Materials
September 2019	Acquisition	Sunke (buyback of 45% interest held by Taixing Jurong Chemical)	Acrylics	Intermediates
June 2020	Divestment	Functional polyolefins	Ethylene polymers	Intermediates
May 2021	Divestment	Altuglas (PMMA business)	Polymethyl methacrylate	Intermediates
February 2022	Acquisition	Ashland's performance adhesives	Performance adhesives	Adhesive Solutions
December 2023	Acquisition	PI Advanced Materials (PIAM) (acquisition of a 54% controlling stake)	Polyimides	Advanced Materials

Arkema is a French joint stock corporation (*société anonyme*) with a share capital of €750,435,140 and its registered office is located at 420, rue d'Estienne d'Orves, 92700 Colombes, France (telephone: +33 (0)1 49 00 80 80). It is governed by French law and, as a result, is subject to the legislative and regulatory provisions of the French Commercial Code (*Code de commerce*).

The Company is registered with the Nanterre Trade and Companies Registry (*Registre du commerce et des sociétés*) under number 445 074 685. Its SIRET number is 445 074 685 00030. Its NAF code is 6420 Z. Its legal entity identifier ("LEI") is 9695000EHMS84KKP2785.

It is specified that the information displayed on the Company's website is not part of this document, except that expressly incorporated by reference. Therefore, such information has not been reviewed or approved by the French financial markets authority (*Autorité des marchés financiers* – AMF).

The Company was incorporated on 31 January 2003 for a fixed period of 99 years from its date of registration at the Trade and Companies Registry, until 31 January 2102, unless the term is extended or the Company is wound up earlier.

The Company's corporate purpose (article 3 of its Articles of Association), directly or indirectly, in any country, is:

- to carry out all operations directly or indirectly relating to research, production, processing, distribution and marketing of all chemical and plastic products and their derivatives, by-products thereof and of all parachemical products;
- to acquire, hold and manage all securities, negotiable or otherwise, in French and foreign companies, through newly created companies, contributions, limited partnerships, or by subscribing for or purchasing securities or corporate rights, or through mergers, combinations, joint venture companies, or by obtaining the use of or providing any property or rights under a lease or lease management agreement or otherwise; and
- more generally, to enter into all financial, commercial, industrial, real estate or securities transactions that may be directly or indirectly related to any of the purposes referred to above or to any other similar or connected purposes, and designed to promote the Company's purpose, expansion or development.

The Company's Articles of Association, minutes of annual general meetings, statutory auditors' reports and other Company documents may be consulted at the Group's Legal department at the registered office located at 420, rue d'Estienne d'Orves, 92700 Colombes, France. Furthermore, historical financial information, regulated information, reference documents, Universal Registration Documents, annual and sustainable development reports and other documents are available on the Company's website: www.arkema.com.

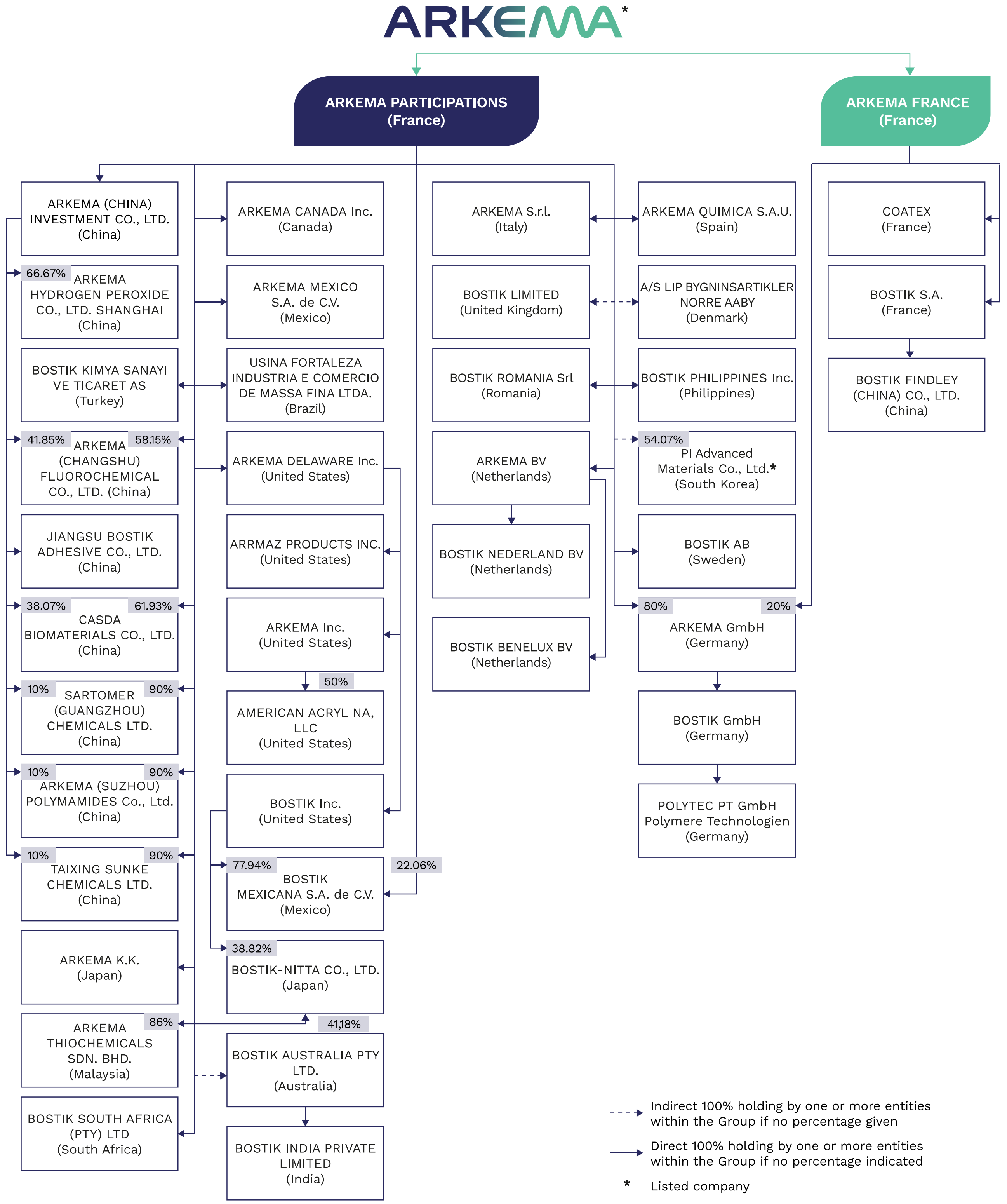
6.1.2 Subsidiaries and shareholdings of the Company

The Company is the Group's ultimate parent company. It is also the head of the French tax group put in place among companies subject to French corporation tax.

The Company is a holding company that does not have its own operational or industrial activity.

The Company indirectly holds, *via* Arkema Participations and Arkema France companies, all the Group's French and foreign subsidiaries. Arkema France is both a holding and an operating company.

The Company's main direct and indirect subsidiaries at the date of this document are shown in the simplified organizational chart below.



A comprehensive list of all of the Group's consolidated subsidiaries and their geographical location is given in the notes to the consolidated financial statements at 31 December 2023 in section 5.3.3 of this document.

Detailed information on the Company's main subsidiaries is also given in section 5.4.2 of this document.

Information on the Group's structure and the results of each segment are presented respectively in section 1.2 and chapter 5 of this document.

6.1.3 Related-party transactions

Arkema, the Group's ultimate parent company, is a holding company and provides administrative services to Group companies. The related service agreements are not material and are entered into under normal conditions comparable to those applicable to similar transactions with third parties.

Some of the Group's non-consolidated companies sell products or provide services to consolidated Group companies. In addition, certain consolidated Group companies sell products or provide services to certain non-consolidated companies.

These transactions, taken separately or together, are not material. They are carried out under normal conditions comparable to those applicable to similar transactions with third parties.

A description of related-party transactions is provided in notes 7.5 and 10 to the consolidated financial statements at 31 December 2023 in section 5.3.3 of this document and in the statutory auditors' special report on related-party agreements and commitments, which is included in chapter 7 of this document.

6.2 Share capital

6.2.1 Amount of share capital

At 31 December 2023, the Company's share capital was €750,435,140 divided into 75,043,514 fully paid-up ordinary shares of the same class, with a par value of €10 per share. At that date, 228,901 shares were held in treasury.

At 1 January 2023, the Company's share capital was also comprised of 75,043,514 shares. The Company's share capital therefore remained unchanged in 2023.

6.2.2 History of the Company's share capital over the past three years

Date	Amount of capital	Total number of shares	Nature of operation	Number of shares issued/canceled	Capital increase/ reduction	Share premium
24 January 2022	€742,860,410	74,286,041	Share capital reduction by cancellation of shares	-2,450,435	-€24,504,350	-€245,495,513.71
27 October 2022	€750,435,140	75,043,514	Share capital increase reserved for employees	757,473	€7,574,730	€41,168,657.55

6.2.3 Pledges, guarantees, securities

At 31 December 2023, existing pledges on the Company's direct registered shares and administered registered shares respectively concerned 147 shares held by two shareholders, and 17,287 shares held by three shareholders, representing 0.02% of the share capital.

The Company has no knowledge of pledges concerning other shares of its share capital.

The shares held by the Company in its subsidiaries have not been pledged.

6.2.4 Treasury shares

At 31 December 2023, the Company directly held 228,901 treasury shares.

This section includes (i) a review of the share buyback program authorized in 2023, and (ii) the information that must be given in the description of the share buyback program in accordance with article 241-2 of the general regulations of the French financial markets authority (*Autorité des marchés financiers* – AMF) as well as information required under article L. 225-211 of the French Commercial Code.

Review of share buyback program authorized on 11 May 2023 (2023 share buyback program)

The combined annual general meeting of 11 May 2023 authorized the Board of Directors to implement a share buyback program capped at 10% of the total number of shares comprising the share capital and subject to a maximum purchase price per share of €160. This authorization, which supersedes the unused portion of the authorization granted by the annual general meeting of 19 May 2022, was granted for an 18-month period from the annual general meeting of 11 May 2023, *i.e.*, until 10 November 2024. It is therefore still in force at the date of this document.

By way of illustration, based on the share capital at 31 December 2023, the theoretical maximum amount of funds to be allocated to the implementation of the share buyback program may not exceed €1,200,696,224.

At its meeting of 22 February 2023, the Board of Directors decided to implement the share buyback program subject to the authorization of the combined annual general meeting of 11 May 2023.

Transactions carried out as part of the 2023 share buyback program

At 11 May 2023, when the annual general meeting approved the 2023 share buyback program, the Company held, directly or indirectly, 379,628 treasury shares.

The following tables give a summary of the transactions carried out as part of the 2023 share buyback program.

Summary statement at 31 January 2024	
Number of shares comprising the Company's share capital at 11 May 2023	75,043,514
Treasury shares held directly or indirectly at 11 May 2023	379,628
Number of shares purchased between 11 May 2023 and 31 January 2024	208,000
Weighted average gross price of shares purchased *(in euros)*	88.58
Number of shares canceled in the last 24 months	0
Number of treasury shares at 31 January 2024	228,901
Par value of treasury shares	2,289,010
Book value of portfolio *(in euros)*	20,249,488
Market value of portfolio *(in euros)* based on closing price at 31 January 2024, *i.e.*, €101.3	23,187,671

	Aggregate gross movements		**Open positions at 31 January 2024**	
Summary of transactions carried out through the program between 11 May 2023 and 31 January 2024	Purchases	Sales/transfers	Open buying positions	Open selling positions
Number of shares	208,000	358,727	-	-
Average price of transaction *(in euros)*	88.58	-	-	-
Amounts *(in euros)*	18,424,102	-	-	-

Breakdown of treasury shares by objective

At 31 January 2024, the Company's 228,901 treasury shares were allocated for the purpose of covering the Company's plans to grant free shares to its employees and executive officers and those of its affiliated companies.

Share buyback program submitted to the annual general meeting of 15 May 2024 (2024 share buyback program)

The Board of Directors would like the Company to continue to have a share buyback program.

To this end, the Board of Directors will propose to the combined annual general meeting of 15 May 2024 to cancel the thirteenth resolution voted by the combined annual general meeting of 11 May 2023, for its unused portion, and to authorize the implementation of a new share buyback program in accordance with the provisions of regulation (EU) no. 596/2014 of the European Parliament and of the Council of 16 April 2014 and Title IV of Book II of the general regulations of the French financial markets authority (*Autorité des marchés financiers* – AMF).

In accordance with articles 241-2 and 241-3 of the AMF's general regulations, the following sections give a description of the share buyback program subject to the authorization of the Company's next annual general meeting.

Objectives of the 2024 share buyback program

As part of the 2024 share buyback program that will be submitted to the combined annual general meeting of 15 May 2024, the Company is considering purchasing its own shares for any purpose permitted by law either now or in the future, and notably for the following purposes (unchanged compared to the previous program):

- implementing market practices allowed by the AMF such as purchasing or selling shares within the scope of a liquidity agreement entered into with an investment services provider and compliant with the code of conduct approved by the AMF, as well as any market practice subsequently permitted by the AMF or by law;
- purchasing shares in the Company in order to hold them and subsequently tender them in exchange or as payment for any potential external growth operations, it being specified that the number of shares acquired for this purpose may not exceed 5% of the share capital at the time of the acquisition;
- putting in place and complying with obligations and in particular delivering shares upon the exercise of rights attached to negotiable securities giving immediate or future access by any means to shares in the Company, as well as carrying out any hedging transactions in respect of the Company's obligations regarding such securities, in accordance with the conditions provided for by the market authorities and at the times the Board of Directors or its delegated representative deems appropriate;
- covering stock option plans granted to employees or executive officers of the Company or its group;
- granting free shares in the Company to the employees or executive officers of the Company or its group, particularly under the conditions provided for in articles L. 225-197-1 to L. 225-197-3, L. 22-10-59 and L. 22-10-60 of the French Commercial Code;
- offering employees the opportunity to acquire shares, whether directly or *via* a company savings plan (*Plan d'Épargne d'Entreprise*), under the terms defined by law, and notably articles L. 3332-1 *et seq.* of the French Labor Code (*Code du travail*); and
- canceling all or some of the purchased shares in order to reduce the Company's share capital.

Maximum portion of share capital to be bought back and maximum number of shares that may be acquired under the 2024 share buyback program

The maximum portion of the share capital that may be bought back under the 2024 share buyback program shall be 10% of the total number of shares making up the Company's share capital (*i.e.*, 75,043,514 shares at 31 December 2023).

In accordance with article L. 225-210 of the French Commercial Code, the number of shares held by the Company at any given date may not be greater than 10% of the shares constituting the Company's share capital on that date.

The securities that the Company is considering acquiring are shares.

Maximum unit purchase price authorized

The maximum purchase price would be €140 per share, it being specified that this purchase price may be adjusted to account for the impact on the share price resulting from transactions such as a capitalization of share premiums, reserves or earnings giving rise either to an increase in the par value of the shares or to the issuance and distribution of free shares as well as a stock split or reverse stock split or any other transaction affecting equity.

Based on the share capital at 31 December 2023, the theoretical amount that may be dedicated to this share buyback program may not exceed €1,050,609,196.

Terms and conditions for the 2024 share buyback program

The shares may be purchased or transferred at any time, except during a takeover bid for the Company's shares, under the conditions and within the limits, particularly as regards volume and price, permitted by law at the date of the transaction concerned, on one or more occasions, by any and all means, including on the market or over the counter, by way of block trades or by way of derivatives traded on a regulated or over-the-counter market, or through an investment services provider or a member of a regulated market referred to in article L. 225-206 of the French Commercial Code, under the conditions permitted by the market authorities and at the times that the Board of Directors or its delegated representative deems appropriate.

Duration of the 2024 share buyback program

In accordance with the resolution to be submitted for the approval of the combined annual general meeting of 15 May 2024, the 2024 share buyback program would be authorized for a period of 18 months from the date of its approval, *i.e.,* until 14 November 2025.

6.2.5 Summary of authorizations and their application

At 31 December 2023, there were no securities, other than the Company's shares, giving access to the Company's share capital.

The following table summarizes the outstanding delegations of authority and authorizations granted by the annual general meeting to the Board of Directors, in particular to increase the share capital, as well as their use.

Type of authorization	Description	Date of annual general meeting	Duration of authorization	Maximum authorized nominal amount or percentage	Use at 31 December 2023 *(unless otherwise specified)*
Capital increase [(1)]	Issue shares in the Company and/or securities giving access to shares in the Company **with** preferential subscription rights (A)	19 May 2022	26 months	50% of the Company's share capital at 19 May 2022 €1.5 billion (debt securities)	None
Capital increase [(1)]	Issue shares in the Company and/or securities giving access to shares in the Company by means of a public offering other than that referred to in article L. 411-2 1° of the French Monetary and Financial Code (*Code monétaire et financier*), **without** preferential subscription rights but with a priority period of at least three days (B)	19 May 2022	26 months	10% of the Company's share capital at 19 May 2022 €1.5 billion (debt securities)	None
Capital increase [(1)]	Increase the Company's share capital, **without** preferential subscription rights, through the issue of shares and/or securities giving access to shares in the Company, by means of a public offering referred to in article L. 411-2 1° of the French Monetary and Financial Code (C)	19 May 2022	26 months	10% of the Company's share capital at 19 May 2022 €1.5 billion (debt securities)	None
Capital increase [(1)]	In the event of the issue of shares **without** preferential subscription rights, set the issue price in accordance with the terms set forth by the annual general meeting up to a maximum of 10% of the share capital over a 12-month period (D)	19 May 2022	26 months	10% of the Company's share capital over a 12-month period (amount included in the (B) or (C) limit, as appropriate)	None
Capital increase [(1)]	Increase the Company's share capital, within the limit of 10% of the share capital, as compensation for contributions in kind (E)	19 May 2022	26 months	10% of the Company's share capital at 19 May 2022 (amount included in the (C) limit)	None
Capital increase [(1)]	In the event of a share capital increase with or without preferential subscription rights, increase the number of shares to be issued (F)	19 May 2022	26 months	15% of the initial issue, subject to the limit stated in the resolution authorizing the issue	None
Capital increase [(1)]	Place an overall limit on authorizations to increase the Company's share capital immediately and/or in the future	19 May 2022	26 months	50% of the Company's share capital at 19 May 2022: maximum overall nominal amount of the capital increases set out in (A) to (F); 10% of the Company's share capital at 19 May 2022: overall amount of the capital increases set out in (B), (C) and (E)	None
Capital increase [(1)]	Carry out capital increases reserved for members of a company savings plan	11 May 2023	26 months	€13.5 million	None
Share buyback [(1)]	Carry out a share buyback program	11 May 2023	18 months	€160 per share 10% of the total number of shares comprising the Company's share capital	Use at 31 January 2024: see section 6.2.4 of this chapter

Type of authorization	Description	Date of annual general meeting	Duration of authorization	Maximum authorized nominal amount or percentage	Use at 31 December 2023 *(unless otherwise specified)*
Performance shares	Grant free shares in the Company subject to performance conditions	19 May 2022	38 months	1,500,000 shares (*i.e.*, 2.02% of the share capital at 19 May 2022)	Grant of 363,255 shares (2) (9 November 2022) Grant of 374,660 shares (2) (8 November 2023)
Capital reduction	Reduce the share capital by canceling shares	11 May 2023	24 months	10% of the share capital over a 24-month period	None

(1) *This new authorization is detailed in chapter 7 of this document and will be submitted to the vote of the combined annual general meeting of 15 May 2024.*
(2) *This number could be increased to 428,525 for 2022 and 441,816 for 2023 in case of outperformance.*

There are no other securities giving access to the Company's capital either immediately or in the future (see section 6.2.6 of this chapter for a description of these options).

6.2.6 Stock options and performance share plans

In order to retain executives and certain employees and to involve them more closely in the Group's future growth as well as its stock market performance, the Board of Directors has put in place stock option plans and free performance share plans, subject to performance conditions.

In accordance with the applicable stock-based compensation policy, there are currently no stock option plans nor stock options outstanding.

Additional information on the performance share plans put in place by the Group is given in section 3.5 of this document, as well as in note 7.4 to the consolidated financial statements at 31 December 2023 in section 5.3.3 of this document.

6.2.7 Stock transactions by the Company's executives

Pursuant to article 223-26 of the AMF general regulations, the following table details the transactions disclosed by the individuals concerned by article L. 621-18-2 of the French Monetary and Financial Code in 2023:

2023		Vesting (1)	Subscription (including dividend conversion)	Disposal
Thierry Le Hénaff Chairman and Chief Executive Officer	Arkema shares FCPE units	- -	- -	- -
Bernard Boyer member of the Executive Committee of the Arkema Group	Arkema shares FCPE units	- -	- 974.78	- -
Luc Benoit-Cattin member of the Executive Committee of the Arkema Group	Arkema shares FCPE units	- -	- 261.96	- -
Thierry Parmentier member of the Executive Committee of the Arkema Group	Arkema shares FCPE units	- -	- -	- -
Vincent Legros member of the Executive Committee of the Arkema Group	Arkema shares FCPE units	- -	- -	- -
Erwoan Pezron member of the Executive Committee of the Arkema Group	Arkema shares FCPE units	- -	- -	600 -
Marc Schuller member of the Executive Committee of the Arkema Group	Arkema shares FCPE units	- -	- 645.61	- -
Marie-José Donsion member of the Executive Committee of the Arkema Group	Arkema shares FCPE units	- -	- -	- -
Richard Jenkins member of the Executive Committee of the Arkema Group	Arkema shares FCPE units	- -	- -	3,759 -
Nathalie Muracciole director representing employees	Arkema shares FCPE units	- -	- -	117 -
Séverin Cabannes director	Arkema shares FCPE units	450 -	- -	- -

(1) *Performance shares vested to Thierry Le Hénaff, Thierry Parmentier, Luc Benoit-Cattin, Bernard Boyer, Erwoan Pezron, Marc Schuller, Vincent Legros, Marie-José Donsion and Nathalie Muracciole under the 4 November 2020 plan and were disclosed to the AMF on 7 November 2023. Performance shares vested to Richard Jenkins under the 29 October 2019 plan and were disclosed to the AMF on 3 November 2023.*

6.3 Share ownership

6.3.1 Breakdown of share ownership and voting rights at 31 December 2023

At 31 December 2023, the share capital of the Company was made up of a total of 75,043,514 shares (of which 17,980,811 shares with double voting rights), carrying 92,795,424 voting rights (including double voting rights and after deduction of treasury shares). The breakdown of share ownership at 31 December 2023 was established on this basis, drawing on an analysis by the Company using data from the SRD II analysis (previously performed using identifiable bearer shares – *titres au porteur identifiable* – and known as the TPI procedure) and taking into account threshold declarations made to the AMF or the Company. TPI procedures and SRD II analyses were carried out at the end of 2021 and 2022.

To the best of the Company's knowledge, the breakdown of Arkema's share ownership and voting rights at 31 December 2023 was as follows:

Main shareholders owning at least 5% of the share capital and/or voting rights	% of share capital	% of voting rights	% of theoretical voting rights*
Fonds Stratégique de Participations	7.9	12.8	12.8
Employee share ownership** (1)	7.7	11.2	11.1
Lac I SLP	7.2	11.6	11.6
Norges Bank	6.4	5.2	5.2
Treasury shares	0.3	0.0	0.2
Public	70.5	59.2	59.1
TOTAL	**100**	**100**	**100**

* *Pursuant to article 223-11 of the AMF's general regulations, the number of theoretical voting rights is calculated on the basis of all shares.*

** *See details presented in section 6.3.4 of this chapter.*

(1) *To the Company's knowledge, the Arkema Actionnariat France and Arkema Actionnariat International company mutual funds (*Fonds Commun de Placement d'Entreprise *– FCPE) held 5.7% of the Company's share capital at 31 December 2023, representing 8.5% of the Company's voting rights. These funds include the shareholdings of employees of the Arkema Group (see section 6.3.4 of this chapter), Total and businesses divested by the Group.*

To the Company's knowledge, based on its registers and except for the pledges described in section 6.2.3 of this chapter, no shares of the Company have been pledged or used as a guarantee or a surety.

The Company has also put in place an American Depositary Receipt (ADR) program in the United States. For this purpose, it entered into a deposit agreement with Bank of New York Mellon on 18 May 2006. At 31 December 2023, 689,794 shares were held by Bank of New York Mellon on behalf of ADR bearers.

6.3.2 Control of the Company

At the date of this document:

- the Company is not controlled, either directly or indirectly, by any single shareholder; and
- to the Company's knowledge, there is no agreement or pact between shareholders, the implementation of which would result in the takeover of the Company.

6.3.3 Clauses likely to have an effect on the control of the Company

No provision of the Articles of Association can delay, defer or prevent a change of control over the Company. However, there are provisions pertaining to double voting rights and limitations on voting rights in articles 17.3 and 17.4 of the Articles of Association, which are presented in section 6.5.2 of this chapter.

6.3.4 Employee share ownership

Share capital increase reserved for employees

In addition to free performance shares granted to certain employees, the Board of Directors regularly reaffirms its intention to pursue a dynamic employee share ownership policy by offering Group employees the opportunity to purchase Arkema shares on preferential terms every two years.

The last share capital increase reserved for employees took place in September 2022 in 30 countries in which the Group is present. The subscription conditions were as follows:

- subscription price to which a 25% discount was applied;
- for employees of Group companies outside France, allocation of one free share for every four subscribed, up to a maximum of 25 free shares, with a vesting period of four years, with no holding period required, except in Italy and Spain (vesting period of three years and a holding period of three years);
- for employees of French companies, possibility of subscribing to the capital increase using sums from the incentive scheme or the profit-sharing scheme, supplemented, as the case may be, by the employer; and
- possibility of spreading payment for the shares over 24 months.

Demand was high for the operation, with an average participation rate of 35% (55% of employees in France and 23% outside France).

Employees based in countries where the operation could not be carried out were allocated three free shares per employee, with a vesting period of four years.

The next share capital increase reserved for employees should take place in the second half of 2024, as in 2022, in order to continue to give the greatest number of employees possible a stake in the Group's growth.

Employee share ownership

According to the definition of employee share ownership under the terms of article L. 225-102 of the French Commercial Code, the number of Arkema shares held by employees at 31 December 2023 was 5,796,713, representing 7.7% of the share capital and, taking into account double voting rights, 11.2% of the voting rights. These shares, held by over 50% of the Group's employees, may be broken down as follows:

Shares held by Group employees within the Arkema Actionnariat France FCPE	2,919,001
Shares held by Group employees within the Arkema Actionnariat International FCPE	474,795
Direct registered shares held within a Group savings plan *(Plan d'Épargne Groupe)*	372,412
Shares arising from the exercise of stock options and held as direct registered shares within a Group savings plan	212,304
Free shares	1,818,201
TOTAL EMPLOYEE SHARE OWNERSHIP	**5,796,713**

6.3.5 Legal threshold disclosures

The following legal threshold disclosures were made to the AMF in 2023 and up to the 15th of March 2024:

Company	Date threshold crossed	Threshold crossed
BlackRock Inc.	2 January 2023	exceeded the 5% share capital threshold
BlackRock Inc.	3 January 2023	dropped below the 5% share capital threshold
Amundi AM – Arkema Actionnariat France FCPE	3 April 2023	exceeded the 5% share capital threshold
Amundi AM – Arkema Actionnariat France FCPE	27 April 2023	dropped below the 5% share capital threshold
Amundi AM – Arkema Actionnariat France FCPE	5 May 2023	exceeded the 5% share capital threshold
Amundi AM – Arkema Actionnariat France FCPE	5 December 2023	dropped below the 5% share capital threshold
BlackRock Inc.	5 March 2024	exceeded the 5% share capital threshold
BlackRock Inc.	6 March 2024	dropped below the 5% share capital threshold
BlackRock Inc.	14 March 2024	exceeded the 5% share capital threshold
BlackRock Inc.	15 March 2024	dropped below the 5% share capital threshold

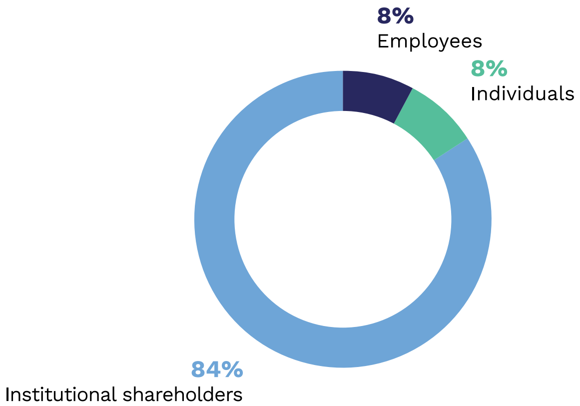
6.3.6 Historical breakdown of share ownership and voting rights

To the best of the Company's knowledge, Arkema's estimated share ownership at 31 December 2023, 2022 and 2021 was as follows[(1)]:

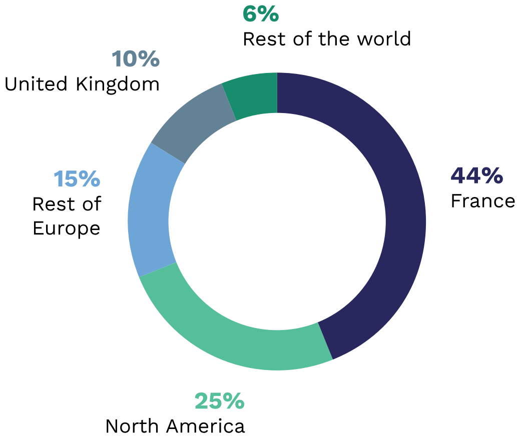
	31 December 2023		31 December 2022		31 December 2021	
	% of share capital	**% of voting rights**	% of share capital	% of voting rights	% of share capital	% of voting rights
Fonds Stratégique de Participations	7.9	12.8	7.9	13.0	7.7	12.6
Lac I SLP	7.2	11.6	7.2	10.4	7.0	6.3
Norges Bank	6.4	5.2	6.4	5.2	5.7	5.2
BlackRock Inc.	n.a	n.a	5.0	4.1	5.6	5.1
NNS	n.a	n.a	n.a	n.a	5.1	4.6
Other institutional shareholders	62.1	50.1	57.4	47.2	52.0	46.9
Individual shareholders	8.4	9.1	8.2	9.0	7.3	8.9
Employee share ownership	7.7	11.2	7.6	11.1	6.0	10.4
Treasury shares	0.3	0.0	0.3	0.0	3.6	0.0
TOTAL	**100**	**100**	**100**	**100**	**100**	**100**
Number of shares/voting rights	75,043,514	92,795,424	75,043,514	91,429,125	76,736,476	84,830,548

(1) Only shareholdings in excess of 5% of the share capital threshold are shown in the table above.

BREAKDOWN OF SHARE OWNERSHIP BY SHAREHOLDER TYPE (AT 31 DECEMBER 2023)



BREAKDOWN OF SHARE OWNERSHIP BY REGION (AT 31 DECEMBER 2023)



6.4 Stock market

6.4.1 Stock market information

The Arkema share is listed on Euronext Paris, compartment A. It is eligible for the Deferred Settlement Service (*Système de Règlement Différé* – SRD) as well as the Personal Equity Savings Plan (*Plan d'Épargne en Actions* – PEA).

An American Depositary Receipt (ADR) program has been in place in the United States since 18 May 2006. Each ADR represents one American Depositary Share (ADS), and each ADS in turn represents one Arkema share.

Codes

ISIN	FR0010313833
Ticker	AKE
Reuters	AKE.PA
Bloomberg	AKE FP

Indexes

The Arkema share is included in the following indexes:

- CAC Next 20;
- CAC Large 60;
- CAC 40 ESG and CAC SBT 1.5°;
- SBF 120;
- Euronext FAS IAS;
- Euro Stoxx Chemicals; and
- MSCI.

Arkema share performance

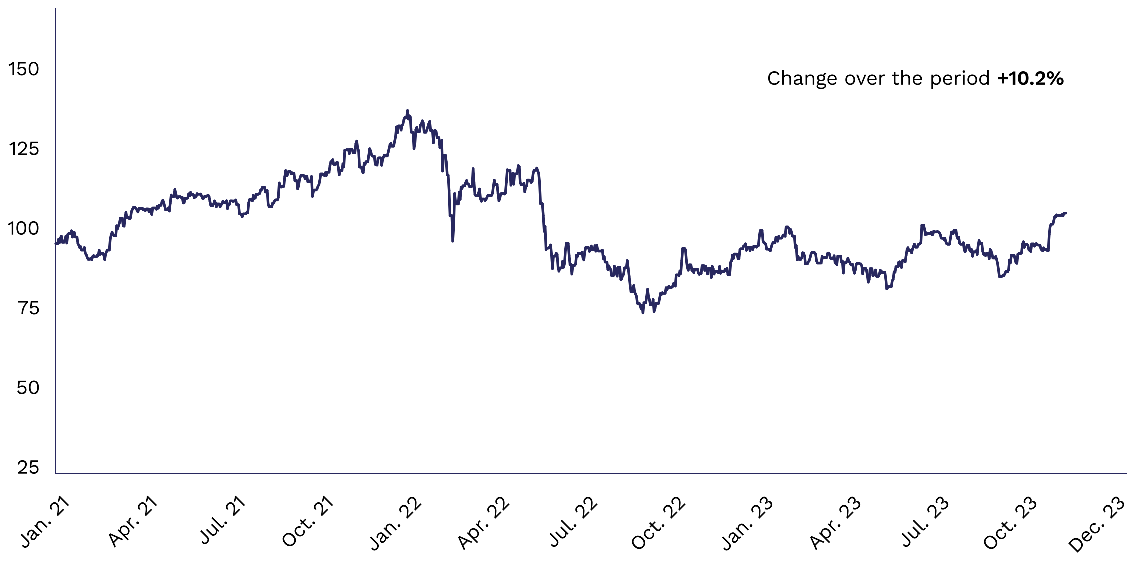
	2023	2022	2021
Market capitalization at year-end *(in billions of euros)*	7.7	6.3	9.5
Performance since 1 January (situation at 31 December)	+22.8%	-32.3%	+32.5%
Last closing price of the year *(in euros)*	103.00	83.88	123.85
Average of last 30 closing prices *(in euros)*	95.48	85.07	120.71
Highest closing price of the year *(in euros)*	103.00	134.95	125.45
Lowest closing price of the year *(in euros)*	79.42	71.90	88.52

Arkema share historical data since 1 January 2023

Month	Number of shares traded *(Euronext volumes)* (1)	Trading volume on Euronext *(in millions of euros)* (1)	Highest price *(in euros)*	Lowest price *(in euros)*
January 2023	3,286,141	298.92	93.86	84.42
February 2023	3,353,031	317.24	97.78	90.54
March 2023	4,025,887	370.68	99.80	85.46
April 2023	2,509,707	223.60	92.26	85.56
May 2023	3,630,492	311.66	90.04	80.16
June 2023	4,317,505	360.33	87.40	78.50
July 2023	2,816,835	257.51	99.36	85.42
August 2023	2,569,640	247.25	97.92	92.56
September 2023	3,496,611	323.87	98.66	88.54
October 2023	2,621,184	230.24	94.36	81.92
November 2023	3,026,936	275.27	94.66	86.26
December 2023	2,867,321	278.98	103.30	90.62
January 2024	2,885,923	287.59	103.90	95.88
February 2024	2,552,586	250.06	101.55	94.38

(1) Source – Euronext monthly statistics.

Arkema share price changes



6.4.2 Financial communication

The Group regularly provides information on its activities, results and outlook to its shareholders, investors and analysts, and to the financial community at large. Group press releases, financial reports, presentations and minutes of annual general meetings are available in the "Investors" section on the Group's website: www.arkema.com/global/en/investor-relations/.

Every year, the Group files a Universal Registration Document with the AMF. This document is available on the AMF website (www.amf-france.org) and on the Group's website (www.arkema.com/global/fr/investor-relations/). A free translation into English of this Universal Registration Document is also available on the Group's website.

6.4.3 Relations with institutional investors and financial analysts

The Group is committed to maintaining an active and permanent dialogue with institutional investors and financial analysts, in particular through roadshows and conferences that may be held in person or virtually. Representatives from the Group's executive management, primarily the Chairman and Chief Executive Officer and the Chief Financial Officer, regularly meet with portfolio managers and financial analysts of the main financial hubs in Europe, North America and Asia. The Investor Relations team also regularly meets with the financial community. The purpose of these various meetings is to inform the market of the Group's results and main operations as well as to improve investors' and analysts' understanding of its activities, strategy and outlook.

On the publication of its quarterly, half-yearly and annual results, a conference call and a webcast are hosted by the Chairman and Chief Executive Officer and the Chief Financial Officer for the financial community.

In 2023, the Group held approximately 360 meetings as part of roadshows and conferences. Arkema also organized a Capital Markets Day in Paris on 27 September 2023, which brought together nearly 60 investors and analysts in person.

6.4.4 Relations with individual shareholders

The Group aims to inform its individual shareholders about its strategy, results and activities, with an emphasis on open dialogue, discussion and meetings.

Arkema meets with its individual shareholders on a regular basis, in particular at the annual general meeting, which is a special opportunity for information and dialogue about the Group's strategy and development. Last year, the annual general meeting of 11 May 2023 was held at the Maison de la Mutualité in Paris, with shareholders attending in person and a live webcast and replay available in the Investors section of the Group's website (www.arkema.com/global/en/investor-relations/).

In addition, following the Capital Markets Day on 27 September 2023, the Group met individual shareholders in Nantes on 29 November 2023, as it usually does. Arkema continued to use digital technology to supplement its interactions with individual shareholders, and carried out eight email campaigns to share news about the Group throughout the year.

Additionally, through its shareholders' club, the Group organizes various activities throughout the year that give its members the opportunity to discover the world of chemistry, innovations and their applications in everyday life. It ran several visits in 2023.

Presentations, shareholder newsletters and other documents intended for individual shareholders are available in the dedicated Investors section of the Group's website (www.arkema.com/global/en/investor-relations/individual-shareholder/).

6.4.5 Investor relations contacts

Institutional investor relations department

Telephone: +33 (0)1 49 00 74 63

Email address: investor-relations@arkema.com

Individual shareholder relations department

Telephone:

0 800 01 00 01 (free call within France)

+33 (0)1 86 86 05 90 (outside France)

Email address: actionnaires-individuels@arkema.com

6.4.6 Registered shares

Arkema shares can be registered in the name of the holders. In this case, shareholders are identified by Arkema in its capacity as issuer, or by its agent Uptevia, which is responsible for the shareholders' register.

Advantages of registered shares include:

- double voting rights if shares are held for two years continuously (see section 6.5.2 of this chapter); and
- the possibility of directly receiving the notice of the annual general meeting.

Contact details for registered shares:

Uptevia

90-110 Esplanade du Général de Gaulle

92931 Paris La Défense Cedex – France

Telephone:

0 800 115 153 (within France)

+33 (0)1 55 77 41 17 (outside France)

Website: https://www.uptevia.com

6.4.7 Dividend policy

During the Capital Markets Day of 27 September 2023, the Group reiterated its determination to progressively increase the dividend, aiming for a 40% payout ratio for the 2024-28 period.

The Board of Directors decided at its meeting on 28 February 2024 that, at the annual general meeting of 15 May 2024, it will recommend a dividend payment of €3.50 per share in respect of 2023 (*vs.* €3.40 per share in respect of 2022), to be paid entirely in cash. Shares will be traded ex-dividend on 17 May 2024 and the dividend will be paid as from 21 May 2024.

	2023 (1)	2022	2021	2020	2019
Dividend per share *(in euros)* (2)	3.50	3.40	3.00	2.50	2.20
Payout ratio (dividend per share/adjusted net income per share)	40%	22%	25%	49%	27%

(1) Dividend proposed to the annual general meeting of 15 May 2024.
(2) Dividend eligible for the 40% deduction under article 158, 3., 2° of the French Tax Code (Code général des impôts).

Since 2007, the first year during which the Group distributed a dividend, the dividend has increased by nearly 10% per year.

6.5 Extract from the Articles of Association

6.5.1 General meetings (articles 16, 17.1 and 17.2)

Notice of meeting – place of meeting – admission

General meetings are called under the conditions provided for by applicable laws and regulations.

Meetings are held at the registered office or at any other place indicated in the notice of meeting.

In compliance with current regulatory requirements, all shareholders have the right to attend general meetings and to participate in the deliberations or to be represented, regardless of the number of shares they own, provided that it can be proven in accordance with legal and regulatory provisions that the shares have been registered in their name or in that of an intermediary duly authorized on their behalf under the terms of paragraph 7 of article L. 228-1 of the French Commercial Code, within the regulatory period, either in the registered share accounts held by the Company or in the bearer securities accounts held by the authorized intermediary.

The registration or accounting entry of the shares in bearer securities accounts held by the authorized intermediary shall be evidenced by a shareholding certificate issued by the intermediary of the account holder under applicable legal and regulatory conditions.

Exercise of voting rights

As from the time the meeting is called, any shareholder may request from the Company in writing a paper absentee ballot, or, if the Board of Directors provides for this option in both the announcement and notice of meeting, an electronic absentee ballot. Such requests must be delivered to or received at the registered office of the Company no later than six days before the date of the meeting. The Board of Directors has the power to reduce or waive this period.

Paper absentee ballots must be delivered to or received by the Company at least three days before the date of the general meeting. Electronic absentee ballots may be delivered to or received by the Company until 3.00pm (CET) on the eve of the general meeting. The Board of Directors or Chairman, if so authorized by delegation, has the power to reduce or waive this period.

Representation

A shareholder may be represented at general meetings by another shareholder, his or her spouse, civil union partner, or by any other person or legal entity under the terms provided for in articles L. 225-106 *et seq.* and L. 22-10-39 *et seq.* of the French Commercial Code.

Shareholders that are legal entities attend meetings through their legal representatives or any proxy appointed for this purpose.

Any member of the meeting who wishes to be represented by proxy must send a proxy form to the Company, either on paper, or, if the Board of Directors provides for this option in both the announcement and notice of meeting, in electronic format, at least three days before the meeting. However, the Board of Directors, or by delegation, the Chairman, has the power to reduce or waive such notice periods and to accept proxy forms that do not fall within this limit.

Proxies in electronic format may be delivered or received by the Company until 3.00pm (CET) on the eve of the general meeting. The Board of Directors, or by delegation, the Chairman, has the power to reduce or waive this period.

Use of telecommunications

The Board of Directors has the power to decide that shareholders who take part in the general meeting by video conference or other means of telecommunication that enable them to be identified, and where the nature and conditions of such means of participation are determined by the French Commercial Code, shall be deemed present for the purposes of calculating the quorum and majority.

Chairman of the general meeting

General meetings are chaired by the Chairman of the Board of Directors or, in his or her absence, by a director who is appointed specifically for this purpose by the Board of Directors. Failing this, the meeting elects its own Chairman.

Quorum and majority

General meetings, whether they are ordinary, extraordinary, combined or special, are duly constituted when they meet the quorum and majority conditions provided for by applicable laws and regulations governing such meetings, and exercise the powers ascribed to them by the law.

6.5.2 Voting rights (articles 17.3 and 17.4)

Voting rights, double voting rights

Subject to the provisions set forth below, each member of the meeting is entitled to as many voting rights and votes as the number of shares he owns or represents, providing that all payments due for such shares have been met.

However, double voting rights are conferred on all fully paid up shares in registered form that have been registered in the name of the same shareholder for at least two years, under the conditions applicable by law and by regulations.

Furthermore, in the event of a capital increase by capitalization of reserves, profits or share premiums, double voting rights are conferred, as of their issue, to shares in registered form allocated to shareholders on the basis of existing shares held by such shareholders and conferring such entitlement.

The merger or spin-off of the Company has no effect on double voting rights, which may be exercised within the beneficiary company or companies if the Articles of Association of such company provide for such rights.

Any share converted to a bearer share or the ownership of which is transferred loses the double voting rights gained under the three provisions above. However, a transfer resulting from inheritance, the separation of assets between spouses or an *inter vivos* gift to a spouse or close relative does not result in the loss of rights acquired or interrupt the qualifying period indicated above.

Limitation on voting rights

In a general meeting, no shareholder may, directly or through a proxy, express more than 10% of the total voting rights attached to the Company's shares, taking into account single voting rights attached to shares that he directly or indirectly holds and to the powers conferred to him. However, if such a shareholder also holds double voting rights personally or as a proxy, the 10% limit may be exceeded, taking into account only the additional voting rights resulting therefrom, and the combined voting rights expressed shall not exceed 20% of the total voting rights attached to the Company's shares.

In application of the foregoing provisions:

- the total number of voting rights attached to the Company's shares that is taken into consideration is calculated as of the date of the general meeting and the shareholders are notified thereof at the beginning of such general meeting;
- the number of voting rights held directly or indirectly means those that are attached to shares held by an individual, either personally or jointly, or by a company, group, association or foundation, and those that are attached to shares held by a company that is controlled within the meaning of article L. 233-3 of the French Commercial Code, by another company or by an individual, association, group or foundation; and
- a shareholder's proxy returned to the Company without stating the name of the proxy is subject to the foregoing limitations. However, such limitations do not apply to the chairman of a general meeting who is voting by virtue of all such proxies combined.

The limitations provided in the foregoing paragraphs have no impact on the calculation of the total number of voting rights, including double voting rights, which are attached to the Company's shares and which must be taken into account when applying the legal, regulatory or statutory provisions providing for specific obligations by reference to the number of voting rights existing in the Company or the number of shares having voting rights.

The limitations set forth above shall lapse, without any need for a new resolution by an extraordinary general meeting, whenever an individual or a legal entity, acting separately or in concert with one or more individuals or legal entities, should come to hold at least two-thirds of the total number of shares in the Company following a takeover bid for all of the Company's shares. The Board of Directors then recognizes that the limitations have lapsed, and carries out the related formalities to amend the Articles of Association.

6.5.3 Rights and obligations attached to the shares (article 9)

In addition to the right to vote, each share gives the holder the right of ownership of a portion of the Company's assets, profits and winding-up dividends *(boni de liquidation)*, determined proportionately to the shareholding it represents.

Ownership of a share entails compliance with the Articles of Association of the Company and with all resolutions approved by the Company's shareholders at general meetings.

Any changes to the rights attached to the shares are subject to legal provisions.

6.5.4 Thresholds (article 8)

In addition to the legal obligation to inform the Company of any shareholdings or voting rights that they may hold, any individual or legal entity acting alone or in concert that has come into possession, within the meaning of articles L. 233-9 and L. 233-10 of the French Commercial Code, either directly or indirectly, of a percentage of the share capital or voting rights equal to or greater than 1%, is required to inform the Company, by registered mail with return receipt, of the total number of shares, voting rights and securities giving future access to the Company's capital, as well as the voting rights attached thereto, whether they are held alone or in concert, directly or indirectly, within five stock market trading days starting on the date on which it crossed this threshold.

Above this 1% threshold and up to 30%, this disclosure requirement must be fulfilled under the conditions set forth above, each time the shareholder crosses a multiple of 0.5% of the share capital or voting rights.

Failure to make the threshold disclosures as set forth in the first two paragraphs above shall result in those shares that should have been disclosed being disqualified for voting purposes at general meetings, if such failure is acknowledged and if so requested at a meeting by one or more shareholders together holding at least 3% of the Company's share capital or voting rights.

All shareholders, whether natural or legal persons, must also notify the Company in the manner and within the time limits indicated in the first two paragraphs above, whenever their direct, indirect or joint holdings fall below any of the thresholds mentioned in the said paragraphs.

ANNUAL GENERAL MEETING

7

The different parts constituting the annual financial report are identified in the table of contents by the pictogram **|AFR|**

7.1 Statutory auditors' special report on related-party agreements

KPMG S.A.

Tour Eqho
2, avenue Gambetta
CS 60055
92066 Paris-La Défense cedex
S.A. au capital de € 5 497 100
775 726 417 R.C.S. Nanterre

Commissaire aux Comptes
Membre de la compagnie
régionale de Versailles et du Centre

ERNST & YOUNG Audit

Tour First
TSA 14444
92037 Paris-La Défense cedex
S.A.S. à capital variable
344 366 315 R.C.S. Nanterre

Commissaire aux Comptes
Membre de la compagnie
régionale de Versailles et du Centre

This is a translation into English of a report issued in French and it is provided solely for the convenience of English-speaking users.

This report should be read in conjunction with, and construed in accordance with, French law and professional auditing standards applicable in France.

Arkema

Annual General Meeting held to approve the financial statements for the year ended December 31, 2023

Statutory auditors' report on related party agreements

To the Annual General Meeting of Arkema,

In our capacity as statutory auditors of your Company, we hereby present to you our report on related party agreements.

We are required to inform you, on the basis of the information provided to us, of the terms and conditions of those agreements indicated to us, or that we may have identified in the performance of our engagement, as well as the reasons justifying why they benefit the Company. We are not required to give our opinion as to whether they are beneficial or appropriate or to ascertain the existence of other agreements. It is your responsibility, in accordance with Article R-225-31 of the French Commercial Code *(Code de commerce)*, to assess the relevance of these agreements prior to their approval.

We are also required, where applicable, to inform you in accordance with Article R-225-31 of the French Commercial Code *(Code de commerce)* of the continuation of the implementation, during the year ended December 31, 2023, of the agreements previously approved by the Annual General Meeting.

We performed those procedures which we deemed necessary in compliance with professional guidance issued by the French Institute of Statutory Auditors *(Compagnie nationale des commissaires aux comptes)* relating to this type of engagement. These procedures consisted in verifying the consistency of the information provided to us with the relevant source documents.

Agreements submitted for approval to the Annual General Meeting

We hereby inform you that we have not been notified of any agreements authorized and concluded during the year ended December 31, 2023 to be submitted to the Annual General Meeting for approval in accordance with Article L. 225-38 of the French Commercial Code *(Code de commerce)*.

Agreements previously approved by the Annual General Meeting

In accordance with Article R-225-30 of the French Commercial Code *(Code de commerce)*, we have been notified that the implementation of the following agreements, which were approved by the Annual General Meeting in prior years, continued during the year ended December 31, 2023.

- ***With Natixis***

Person concerned

Mr Laurent Mignon, Director of your Company (until May 11, 2023), and of Natixis.

1) Syndicated Loan Agreement

Nature and purpose

This agreement, authorized by your Board of Directors on July 29, 2020, consists in the implementation, by nine banks, including Natixis, in favor of your Company and its subsidiary Arkema France, of a syndicated loan to finance the general requirements of your Company for a period of three years, and two extension options of one year each, guaranteed by your Company, also acting as joint and several guarantor.

Conditions

The agreement is a multicurrency syndicated line of credit in the amount of EUR 1 billion, the equivalent of which is at most of USD 200,000,000. The financial terms of the agreement reflect the market conditions at the time of its performance, and no participating bank benefits from special financial conditions.

This agreement is accompanied by cases of early repayments, including the ownership change of your Group, and includes (i) reporting obligations and customary commitments for this type of financing and (ii) a financial commitment, under which your Group undertakes to respect a consolidated net debt to consolidated EBITDA ratio (tested half-yearly) of less than 3.5.

2) Amendment No. 1 to the Syndicated Loan Agreement

Nature and purpose

This amendment to the existing Syndicated Loan Agreement, authorized by the Board of Directors on May 5, 2021, consists in the inclusion of a Corporate Social Responsibility (CSR) clause of the multi-currency Syndicated Loan Agreement entered into between your Company and Natixis on July 29, 2020.

Conditions

The first amendment adds CSR criteria to the existing multicurrency Syndicated Loan Agreement allowing the adjustment of the margin applicable to the credit, upwards or downwards, depending on the annual performance of the CSR objectives set by your Group and in line with your Company's long-term strategy.

3) Amendment No. 2 to the Syndicated Loan Agreement

Nature and purpose

The purpose of this amendment to the existing Syndicated Loan Agreement, authorized by the Board of Directors on July 28, 2022, is to (i) modify the financial terms, (ii) extend the final maturity date, (iii) increase the line to EUR 1.1 billion, (iv) make adjustments relating to the corporate social responsibility (CSR) criteria and (v) modify the early payment cases applicable to the multi-currency Syndicated Loan Agreement entered into on July 29, 2020 between your Company and Natixis.

Conditions

Amendment No. 2 modifies the margin grid and the non-utilization fee, increases the syndicated credit facility to EUR 1.1 billion, removes the consolidated net debt to consolidated EBITDA ratio of early payment cases and substitutes the compound SOFR for USD LIBOR for the purposes of calculating the interest on the dollar drawings applicable to the multi-currency Syndicated Loan Agreement.

Paris-La Défense, February 28, 2024

The Statutory Auditors

French original signed by

KPMG S.A.		**ERNST & YOUNG Audit**
Éric Dupré	François Quédiniac	Christine Vitrac

7.2 Proposed agenda and proposed resolutions submitted to the combined annual general meeting

7.2.1 Proposed agenda for the combined annual general meeting of 15 May 2024

Resolutions submitted to the ordinary general meeting

- Approval of the Company's financial statements for the year ended 31 December 2023.
- Approval of the consolidated financial statements for the year ended 31 December 2023.
- Allocation of profit for the year ended 31 December 2023 and setting of the dividend.
- Statutory auditors' special report on the agreements referred to in articles L. 225-38 *et seq.* of the French Commercial Code (*Code de commerce*).
- Reappointment of Thierry Le Hénaff as a member of the Board of Directors.
- Approval of the compensation policy for directors, other than the Chairman and Chief Executive Officer.
- Approval of the compensation policy for the Chairman and Chief Executive Officer.
- Approval of the information on the compensation of directors referred to in article L. 22-10-9 I of the French Commercial Code (*Code de commerce*).
- Approval of the components of compensation paid or awarded to the Chairman and Chief Executive Officer for the year ended 31 December 2023.
- Reappointment of ERNST & YOUNG Audit as statutory auditor.
- Appointment of KPMG Audit as statutory auditor responsible for certifying sustainability disclosures.
- Appointment of Mazars & Associés as statutory auditor responsible for certifying sustainability disclosures.
- Authorization granted to the Board of Directors to carry out a share buyback program.

Resolutions submitted to the extraordinary general meeting

- Delegation of authority granted to the Board of Directors to issue shares or securities giving access to existing shares in the Company, with preferential subscription rights for shareholders.
- Delegation of authority granted to the Board of Directors to issue shares in the Company and/or securities giving access to shares in the Company, by means of a public offering other than that referred to in article L. 411-2 1° of the French Monetary and Financial Code (*Code monétaire et financier*), without preferential subscription rights but with a mandatory priority period.
- Delegation of authority granted to the Board of Directors to issue shares in the Company and/or securities giving access to shares in the Company, without preferential subscription rights, by means of a public offering referred to in article L. 411-2 1° of the French Monetary and Financial Code.
- Authorization granted to the Board of Directors, in the event of the issue of shares in the Company and/or securities giving access to shares in the Company, without preferential subscription rights, to set the issue price in accordance with the terms set forth by the annual general meeting up to a maximum of 10% of the share capital over a 12-month period.
- Delegation of authority granted to the Board of Directors to carry out capital increases as compensation for contributions in kind.
- Authorization granted to the Board of Directors to increase the number of shares to be issued in the event of excess demand.
- Overall limit on authorizations to issue shares in the Company immediately and/or in the future.
- Delegation of authority granted to the Board of Directors to carry out capital increases reserved for members of a company savings plan (*Plan d'Épargne d'Entreprise*), without preferential subscription rights.
- Powers to carry out formalities.

7.2.2 Proposed resolutions submitted to the combined annual general meeting of 15 May 2024

Resolutions submitted to the ordinary general meeting

First resolution

(Approval of the Company's financial statements for the year ended 31 December 2023)

The annual general meeting, voting in accordance with the quorum and majority requirements for ordinary general meetings, and having considered the Company's financial statements for the year ended 31 December 2023, the Board of Directors' management report and the statutory auditors' reports, approves said financial statements, as well as the transactions reflected therein and described in said reports.

In accordance with the provisions of article 223 *quater* of the French Tax Code *(Code général des impôts)*, the annual general meeting approves the expenses and charges mentioned in article 39-4 of said Code, which amounted to €96,155 for the year ended 31 December 2023, and given the Company's tax position in 2023, the non-deductibility of these expenses resulted in an additional current tax charge of €24,039.

Second resolution

(Approval of the consolidated financial statements for the year ended 31 December 2023)

The annual general meeting, voting in accordance with the quorum and majority requirements for ordinary general meetings, and having considered the consolidated financial statements for the year ended 31 December 2023, the Board of Directors' Group management report and the statutory auditors' report on the consolidated financial statements, approves said financial statements, as well as the transactions reflected therein and described in said reports.

Third resolution

(Allocation of profit for the year ended 31 December 2023 and setting of the dividend)

The annual general meeting, voting in accordance with the quorum and majority requirements for ordinary general meetings, having considered the Board of Directors' report and the statutory auditors' report and having noted that the Company's financial statements for the year ended 31 December 2023 show a profit of €349,859,881.81, plus prior retained earnings of €1,720,701,728.41, decides, as recommended by the Board of Directors, to allocate the distributable profit for the financial year as follows:

Source	
Profit for the period	€349,859,881.81
Prior retained earnings	€1,720,701,728.41
Distributable profit	€2,070,561,610.22

Allocation	
Legal reserve	€-
Dividend distribution (1)	€262,652,299.00
Retained earnings	€1,807,909,311.22

(1) The total dividend distribution is calculated on the basis of the number of shares existing at 31 December 2023 and granting dividend rights. The total may vary if the number of shares carrying dividend rights changes up to the ex-dividend date depending, for example, on the number of treasury shares (which do not carry dividend rights) held by the Company. The abovementioned dividend distribution is the gross amount, calculated before any taxes or social security contribution that may apply to shareholders depending on their particular situation. Dividends paid to individual shareholders domiciled for tax purposes in France are in principle subject either to a 12.8% flat tax (prélèvement forfaitaire unique – PFU), calculated on the gross amount of the dividend (article 200 A of the French Tax Code), or, if the beneficiary expressly and irrevocably so elects, to taxation on the progressive income tax scale, after application of 40% tax relief (article 158, 3. ,2° of the French Tax Code). This option is applicable to all income subject to the PFU flat tax, with no possibility of a partial option. It must be exercised by beneficiaries each year when filing their income tax return and no later than the filing deadline. In addition, the dividend is subject to social security contributions at a rate of 17.2%, a percentage of which may be deductible in the event of election of taxation on the progressive income tax scale. Beneficiaries whose reference taxable income exceeds certain thresholds are also subject to an exceptional surtax on high incomes (contribution exceptionnelle sur les hauts revenus – CEHR), provided for in article 223 sexies of the French Tax Code, on a scale adjusted for family status (single persons or equivalent, couples with joint taxation). Shareholders are invited to contact their tax advisor.

Accordingly, the annual general meeting decides to pay a dividend of €262,652,299 with regard to the 75,043,514 existing shares at 31 December 2023 corresponding to a distribution of three euros and fifty cents (€3.50) per share, it being specified that full powers are granted to the Board of Directors to set the definitive total amount of the dividend (on the basis of the change in the number of shares carrying dividend rights between 1 January 2024 and the ex-dividend date), the balance of distributable income and consequently the amount to be allocated to retained earnings.

The shares will be traded ex-dividend as of 17 May 2024 and the dividend for the 2023 financial year will be paid as of 21 May 2024.

This dividend will be eligible in full for the 40% tax relief available to individual shareholders domiciled for tax purposes in France as provided for in article 158, 3., 2° of the aforementioned Tax Code, under certain conditions and only if the beneficiary has elected for taxation on the progressive income tax scale (see above).

In accordance with the provisions of article 243 *bis* of the French Tax Code, it is recalled that the dividend paid for the last three financial years was as follows:

Financial year	2022	2021	2020
Dividend distribution *(in euros)*	253,830,012.40	221,907,138.00	190,660,817.50
Net dividend per share *(in euros)*	3.40 [(1)]	3.00 [(1)]	2.50 [(1)]

(1) *Eligible in full for the 40% tax relief available to individual shareholders domiciled for tax purposes in France as provided for in article 158, 3., 2° of the French Tax Code applicable, only under certain conditions, in the event of election of taxation on the progressive income tax scale.*

Fourth resolution

(Statutory auditors' special report on the agreements referred to in articles L. 225-38 *et seq.* of the French Commercial Code)

The annual general meeting, voting in accordance with the quorum and majority requirements for ordinary general meetings, and having considered the statutory auditors' special report provided for in article L. 225-40 of the French Commercial Code, in which no new agreement is identified, duly notes the information relating to the agreements entered into and the commitments made during prior financial years and approved by the annual general meeting, referred to in this report.

Fifth resolution

(Reappointment of Thierry Le Hénaff as a member of the Board of Directors)

The annual general meeting, voting in accordance with the quorum and majority requirements for ordinary general meetings, having considered the Board of Directors' report and noting that the term of office of Thierry Le Hénaff expires at the close of this annual general meeting, decides to reappoint him for a term of four (4) years expiring at the close of the ordinary general meeting to be held in 2028 to approve the financial statements for the year ending 31 December 2027.

Sixth resolution

(Approval of the compensation policy for directors, other than the Chairman and Chief Executive Officer)

The annual general meeting, voting in accordance with the quorum and majority requirements for ordinary general meetings, and having considered the corporate governance report referred to in article L. 225-37 of the French Commercial Code describing the compensation policy for directors, other than the Chairman and Chief Executive Officer, approves said policy as presented in section 3.4.1.1 of this document, in compliance with article L. 22-10-8 II of the French Commercial Code.

Seventh resolution

(Approval of the compensation policy for the Chairman and Chief Executive Officer)

The annual general meeting, voting in accordance with the quorum and majority requirements for ordinary general meetings, and having considered the corporate governance report referred to in article L. 225-37 of the French Commercial Code describing the compensation policy for the Chairman and Chief Executive Officer, approves said policy as presented in section 3.4.2.1 of this document, in compliance with article L. 22-10-8 II of the French Commercial Code.

Eighth resolution

(Approval of the information on the compensation of directors referred to in article L. 22-10-9 I of the French Commercial Code)

The annual general meeting, voting in accordance with the quorum and majority requirements for ordinary general meetings, and having considered the corporate governance report referred to in article L. 225-37 of the French Commercial Code, approves the information provided for in article L. 22-10-9 I of said Code and presented in sections 3.4.1.2 and 3.4.2.2 of this document, in compliance with article L. 22-10-34 I of the French Commercial Code.

Ninth resolution

(Approval of the components of compensation paid or awarded to the Chairman and Chief Executive Officer for the year ended 31 December 2023)

The annual general meeting, voting in accordance with the quorum and majority requirements for ordinary general meetings, and having considered the corporate governance report referred to in article L. 225-37 of the French Commercial Code, approves the fixed, variable and exceptional components of the total compensation and benefits of any kind paid in or awarded for the year ended 31 December 2023 to Thierry Le Hénaff, as presented in section 3.4.2.2 of this document, in compliance with article L. 22-10-34 II of the French Commercial Code.

Tenth resolution

(Reappointment of ERNST & YOUNG Audit as statutory auditor)

The annual general meeting, voting in accordance with the quorum and majority requirements for ordinary general meetings, noting that the term of office of statutory auditor ERNST & YOUNG Audit expires at the close of this annual general meeting, decides to reappoint the firm for a term of six years expiring at the close of the ordinary general meeting to be held in 2030 to approve the financial statements for the year ending 31 December 2029.

Eleventh resolution

(Appointment of KPMG Audit as statutory auditor responsible for certifying sustainability disclosures)

The annual general meeting, voting in accordance with the quorum and majority conditions for ordinary general meetings, and having considered the Board of Directors' report, decides, in accordance with articles L. 821-40 *et seq.* of the French Commercial Code, to appoint KPMG Audit as statutory auditor responsible for certifying sustainability disclosures.

Notwithstanding the provisions of article L. 821-44 of the French Commercial Code and in accordance with article 38 of Order no. 2023-1142 of 6 December 2023 relating to the publication and certification of sustainability disclosures and to the environmental, social and corporate governance obligations of commercial companies, the term of this appointment will be equivalent to that of KPMG's Audit remaining term of office as statutory auditor of the financial statements, and will expire at the close of the annual general meeting to be called in 2026 to approve the financial statements for the year ending 31 December 2025.

Twelfth resolution

(Appointment of Mazars & Associés as statutory auditor responsible for certifying sustainability disclosures)

The annual general meeting, voting in accordance with the quorum and majority conditions for ordinary general meetings, and having considered the Board of Directors' report, decides, in accordance with articles L. 821-40 *et seq.* of the French Commercial Code, to appoint Mazars & Associés as statutory auditor responsible for certifying sustainability disclosures.

Notwithstanding the provisions of article L. 821-44 of the French Commercial Code and in accordance with article 38 of Order no. 2023-1142 of 6 December 2023 relating to the publication and certification of sustainability disclosures and the environmental, social and corporate governance obligations of commercial companies, the term of this appointment will be three financial years, expiring at the close of the ordinary general meeting called in 2027 to approve the financial statements for the year ending 31 December 2026.

Thirteenth resolution

(Authorization granted to the Board of Directors to carry out a share buyback program)

The annual general meeting, voting in accordance with the quorum and majority requirements for ordinary general meetings, and having considered the Board of Directors' report, authorizes the Board of Directors, or any person duly authorized to act on its behalf, to purchase or arrange to have purchased shares in the Company in accordance with articles L. 22-10-62 *et seq.* of the French Commercial Code, regulation (EU) no. 596/2014 of the European Parliament and of the Council of 16 April 2014 and Title IV of Book II of the general regulations of the French financial markets authority (*Autorité des marchés financiers* – AMF). The number of shares that may be held by the Company under this authorization at any given date may not be greater than 10% of the share capital. The number of shares held by the Company may be adjusted as necessary to take into account transactions that affect the share capital occurring after this annual general meeting. The authorization is granted under the following conditions:

(i) the maximum purchase price is €140 per share. However, the Board of Directors may adjust the aforementioned purchase price to take into account the impact on the share price of transactions such as a capitalization of share premiums, reserves or earnings giving rise either to an increase in the par value of the shares or the issuance and award of free shares, a stock split or reverse stock split, or any other transaction affecting shareholders' equity;

(ii) based on the share capital at 31 December 2023, the theoretical amount that may be dedicated to this share buyback program may not exceed €1,050,609,196;

(iii) under no circumstances may the Company hold, directly or indirectly, more than 10% of its share capital as a result of the purchases made pursuant to this authorization;

(iv) the shares bought back and held by the Company shall have no voting or dividend rights; and

(v) such shares may be purchased or transferred at any time, except from the date of a takeover bid until the end of the offer period, under the conditions and within the limits, particularly as regards volume and price, permitted by law at the date of the transaction in question, on one or more occasions, by any and all means, including on the market or over the counter, by way of block trades or derivative financial instruments or warrants traded on a regulated market or over the counter, or through an investment services provider or a member of a regulated market referred to in article L. 225-206 of the French Commercial Code, under the conditions permitted by the market authorities and at the times the Board of Directors or its delegated representative deems appropriate.

The annual general meeting decides that these share purchases can be made for any purpose permitted by law either now or in the future, and notably for the following purposes:

(i) implementing market practices allowed by the AMF such as purchasing or selling shares within the scope of a liquidity agreement entered into with an investment services provider and compliant with the code of conduct approved by the AMF, as well as any market practice subsequently permitted by the AMF or by law;

(ii) purchasing shares in the Company in order to hold them and subsequently tender them in exchange or as payment for any potential external growth operations, it being specified that the number of shares acquired for this purpose may not exceed 5% of the Company's share capital at the time of the acquisition;

(iii) putting in place and complying with obligations and in particular delivering shares upon the exercise of rights attached to securities giving immediate or future access by any means to shares in the Company, as well as carrying out any hedging transactions in respect of the Company's obligations regarding such securities, in accordance with the conditions provided for by the market authorities and at the times the Board of Directors or its delegated representative deems appropriate;

(iv) covering stock option plans granted to employees or executive officers of the Company or its group;

(v) granting free shares in the Company to employees or executive officers of the Company or its group, particularly under the conditions provided for in articles L. 225-197-1 to L. 225-197-3, L. 22-10-59 and L. 22-10-60 of the French Commercial Code;

(vi) offering employees the opportunity to acquire shares, whether directly or *via* a company savings plan *(Plan d'Épargne d'Entreprise)*, under the terms provided for by law, and notably articles L. 3332-1 *et seq.* of the French Labor Code (*Code du travail)*; and

(vii) canceling all or some of the purchased shares in order to reduce the Company's share capital.

The annual general meeting grants full powers to the Board of Directors, with the possibility to sub-delegate such powers under the conditions set by law, to ensure the implementation of this authorization, and in particular to set the terms and conditions thereof, carry out the share buyback program and notably place all stock market orders, enter into any agreements, prepare and amend any documents, in particular information documents, carry out all formalities, including assigning or reassigning the purchased shares to the various purposes pursued, make all declarations to the AMF and any other bodies and, in general, do whatever may be necessary.

The annual general meeting decides that this authorization is granted to the Board of Directors for a period of eighteen (18) months from the date of this annual general meeting. It renders ineffective the unused portion of any prior authorization granted for the same purpose and in particular that given by the combined annual general meeting of 11 May 2023 in its 13th resolution.

Resolutions submitted to the extraordinary general meeting

Fourteenth resolution

(Delegation of authority granted to the Board of Directors to issue shares or securities giving access to existing shares in the Company, with preferential subscription rights for shareholders)

The annual general meeting, voting in accordance with the quorum and majority requirements for extraordinary general meetings, and having considered the Board of Directors' report and the statutory auditors' special report, in accordance with the French Commercial Code, in particular articles L. 225-129 to L. 225-129-6, L. 225-132 to L. 225-134, L. 228-91 *et seq.* and L. 22-10-49:

(i) authorizes the Board of Directors to carry out one or more capital increases, in the proportions and at the times that it deems appropriate, *via* the issue, with preferential subscription rights, in France or any other country, in euros or any other currency, for subscription in cash or by offsetting due and payable receivables, of (i) ordinary shares in the Company, and/or (ii) equity securities in the Company giving immediate and/or future access by any means to other Company equity securities and/or granting entitlement to the award of debt securities, and/or (iii) debt securities giving or potentially giving immediate and/or future access by any means to existing equity securities or equity securities to be issued in the Company;

(ii) decides that the maximum nominal amount of the capital increase resulting immediately or in the future from all the issues made pursuant to this delegation of authority is 50% of the Company's share capital at the date of this annual general meeting, which will be included in the overall maximum nominal amount provided for in the 20th resolution submitted to this annual general meeting and which may be increased, where applicable, by the additional nominal amount of the shares to be issued in order to preserve the rights of holders of securities and other rights granting access to shares in the Company, in accordance with the law and any applicable contractual provisions;

(iii) decides that the maximum nominal amount of debt securities giving immediate or future access to shares in the Company that may be issued pursuant to this resolution is one billion five hundred million euros (€1,500,000,000) or the euro equivalent in a foreign currency or unit of account based on a basket of currencies at the date of the decision to carry out the issue. This amount (a) does not include any redemption premium(s) in excess of par value and (b) applies to all the debt securities that may be issued pursuant to the 14th to 19th resolutions submitted to this annual general meeting, but (c) is independent of, and separate from, the amount of the debt securities that the Board of Directors may authorize or decide to issue in accordance with article L. 228-40 of the French Commercial Code;

(iv) decides that existing shareholders shall have, in proportion to their shareholding, preferential rights to subscribe for the shares and securities issued pursuant to this resolution, and that the Board of Directors may grant shareholders a right to subscribe for additional shares or securities in proportion to their subscription rights and within the limit of their requests;

(v) decides that, if subscriptions made by shareholders on the basis of the shares they hold and, where applicable, for additional shares or securities, have not covered the full number of shares or securities issued, the Board of Directors will be able to make use of the possibilities provided for in article L. 225-134 of the French Commercial Code or certain of them in the order it chooses;

(vi) duly notes that this delegation of authority automatically entails a waiver by the shareholders of their preferential right to subscribe for the Company shares that result from the securities giving access to shares in the Company that could be issued pursuant to this delegation of authority;

(vii) decides that the Board of Directors may not use this delegation of authority without prior authorization from the annual general meeting from the date a takeover bid for the Company's shares is filed by a third party until the end of the offer period; and

(viii) grants full powers to the Board of Directors, or any person duly authorized under the conditions set by law to act on its behalf, to *inter alia*:

- set the amount of the issues, the issue price, the nature and characteristics of the securities to be issued, as well as the other terms and conditions of the issue thereof,
- carry out the planned issues and, where applicable, suspend them,
- deduct the costs of issuing shares in the Company and the fees related to their admission to trading on a regulated market from the share premium amount related to such transactions, and withhold the necessary sums to bring the legal reserve up to one-tenth of the new share capital after each capital increase and, generally, enter into any agreement, in particular in order to successfully complete the planned issues, take all steps and carry out all appropriate formalities for the issue, listing and financial servicing of the shares and securities issued pursuant to this delegation of authority as well as the exercise of the rights attached thereto.

The annual general meeting decides that this delegation of authority is granted to the Board of Directors for a period of twenty-six (26) months from the date of this annual general meeting. It renders ineffective the unused portion of any prior delegation of authority granted for the same purpose and in particular that given by the combined annual general meeting of 19 May 2022 in its 16th resolution.

Fifteenth resolution

(Delegation of authority granted to the Board of Directors to issue shares in the Company and/or securities giving access to shares in the Company, by means of a public offering other than that referred to in article L. 411-2 1° of the French Monetary and Financial Code *(Code monétaire et financier)*, without preferential subscription rights but with a mandatory priority period)

The annual general meeting, voting in accordance with the quorum and majority requirements for extraordinary general meetings, and having considered the Board of Directors' report and the statutory auditors' special report, in accordance with the French Commercial Code, in particular articles L. 225-129 to L. 225-129-6, L. 225-135 to L. 225-136, L. 228-91 *et seq.*, L. 22-10-51 and L. 22-10-52:

(i) authorizes the Board of Directors to carry out one or more capital increases, in the proportions and at the times that it deems appropriate, *via* the issue, without preferential subscription rights, by means of a public offering (other than that referred to in article L. 411-2 1° of the French Monetary and Financial Code), in France or any other country, in euros or any other currency, for subscription in cash or by offsetting due and payable receivables, of (i) ordinary shares in the Company, and/or (ii) equity securities in the Company giving immediate and/or future access by any means to other Company equity securities and/or granting entitlement to the award of debt securities, and/or (iii) debt securities giving or potentially giving immediate and/or future access by any means to existing equity securities or equity securities to be issued in the Company;

(ii) decides to cancel the shareholders' preferential subscription rights to the shares or securities to be issued pursuant to this delegation of authority;

(iii) decides that the shareholders will benefit, in accordance with the provisions of articles L. 225-135 and L. 22-10-51 of the French Commercial Code and without giving rise to a negotiable right, from a priority period of at least three (3) stock market trading days for subscriptions in proportion to their shareholding and for any additional subscriptions; any remaining unsubscribed securities may be the subject of a public placement in France or any other country, or on the international market;

(iv) decides that the maximum nominal amount of the capital increase resulting immediately or in the future from all the issues made pursuant to this delegation of authority is 10% of the Company's share capital at the date of this annual general meeting, which will be included in the overall maximum nominal amount provided for in the 20th resolution submitted to this annual general meeting and which may be increased, where applicable, by the additional nominal amount of the shares to be issued in order to preserve the rights of holders of securities and other rights granting access to shares in the Company, in accordance with the law and any applicable contractual provisions;

(v) decides that the maximum nominal amount of debt securities giving immediate or future access to shares in the Company that may be issued pursuant to this resolution is one billion five hundred million euros (€1,500,000,000) or the euro equivalent in a foreign currency or unit of account based on a basket of currencies at the date of the decision to carry out the issue. This amount (a) does not include any redemption premium(s) in excess of par value and (b) applies to all the debt securities that may be issued pursuant to the 14th to 19th resolutions submitted to this annual general meeting, but (c) is independent of, and separate from, the amount of the debt securities that the Board of Directors may authorize or decide to issue in accordance with article L. 228-40 of the French Commercial Code;

(vi) decides that if the subscriptions, including where applicable those by shareholders, have not covered the full amount of the issue, the Board of Directors will be able to limit the amount of the transaction under the conditions provided for in article L. 225-134 of the French Commercial Code;

(vii) duly notes that this delegation of authority automatically entails a waiver by the shareholders of their preferential right to subscribe for the Company shares that result from the securities giving access to shares in the Company that could be issued pursuant to this delegation of authority;

(viii) decides that the issue price of shares issued or resulting from securities issued pursuant to this delegation of authority will be set on the basis of the conversion or exchange rate to ensure that the issue price of the shares that may be created by conversion, exchange or in any other manner, shall be at least equal to the minimum amount provided for by the laws and regulations in force at the time of use of this delegation of authority (at this date, the weighted average Arkema share price for the three trading days prior to the opening date of the offering within the meaning of regulation (EU) no. 2017/1129 of 14 June 2017, less a potential maximum discount of up to 10%), after correction, if any, of this amount to take into account the difference in the dividend entitlement date;

(ix) decides that the Board of Directors may use this delegation of authority, in whole or in part, for the purpose of paying for securities tendered to a public exchange offering initiated by the Company, within the limits and on the conditions provided for in article L. 22-10-54 of the French Commercial Code;

(x) decides that the Board of Directors may not use this delegation of authority without prior authorization from the annual general meeting from the date a takeover bid for the Company's shares is filed by a third party until the end of the offer period; and

(xi) grants full powers to the Board of Directors, or any person duly authorized under the conditions set by law to act on its behalf, to *inter alia*:

- set the amount of the issues, the issue price, the nature and characteristics of the securities to be issued, as well as the other terms and conditions of the issue thereof,
- carry out the planned issues and, where applicable, suspend them,
- deduct the costs of issuing shares in the Company and the fees related to their admission to trading on a regulated market from the share premium amount related to such transactions, and withhold the necessary sums to bring the legal reserve up to one-tenth of the new share capital after each capital increase,
- and generally, enter into any agreement, in particular in order to successfully complete the planned issues, take all steps and carry out all appropriate formalities for the issue, listing and financial servicing of the shares and securities issued pursuant to this delegation of authority as well as the exercise of the rights attached thereto.

The annual general meeting decides that this delegation of authority is granted to the Board of Directors for a period of twenty-six (26) months from the date of this annual general meeting. It renders ineffective the unused portion of any prior delegation of authority granted for the same purpose and in particular that given by the combined annual general meeting of 19 May 2022 in its 17th resolution.

Sixteenth resolution

(Delegation of authority granted to the Board of Directors to issue shares in the Company and/or securities giving access to shares in the Company, without preferential subscription rights, by means of a public offering referred to in article L. 411-2 1° of the French Monetary and Financial Code)

The annual general meeting, voting in accordance with the quorum and majority requirements for extraordinary general meetings, and having considered the Board of Directors' report and the statutory auditors' special report, in accordance with the French Commercial Code, in particular articles L. 225-129 to L. 225-129-6, L. 225-135, L. 225-136, L. 22-10-52 and L. 228-91 *et seq.* and article L. 411-2 1° of the French Monetary and Financial Code:

(i) authorizes the Board of Directors to carry out one or more capital increases, in the proportions and at the times that it deems appropriate, *via* the issue, without preferential subscription rights, by means of a public offering referred to in article L. 411-2 1° of the French Monetary and Financial Code, in France or any other country, in euros or any other currency, for subscription in cash or by offsetting due and payable receivables, of (i) ordinary shares in the Company, and/or (ii) equity securities in the Company giving immediate and/or future access by any means to other Company equity securities and/or granting entitlement to the award of debt securities, and/or (iii) debt securities giving or potentially giving immediate and/or future access by any means to existing equity securities or equity securities to be issued in the Company;

(ii) decides that these issues may only be made in order to (a) directly or indirectly finance an external growth transaction, (b) issue convertible bonds, or (c) repay a financing arrangement put in place by the Company;

(iii) decides to cancel the shareholders' preferential subscription rights to the shares or other securities to be issued pursuant to this delegation of authority;

(iv) decides that the maximum nominal amount of the capital increases that may be carried out, immediately or in the future, pursuant to this delegation of authority is 10% of the Company's share capital at the date of this annual general meeting, which will be included in the overall limit for issues without preferential subscription rights provided for in the 20th resolution submitted to this annual general meeting and which may be increased, where applicable, by the additional nominal amount of the shares to be issued in order to preserve the rights of holders of securities and other rights granting access to shares in the Company, in accordance with the law and any applicable contractual provisions;

(v) decides that the maximum nominal amount of debt securities giving immediate or future access to shares in the Company that may be issued pursuant to this resolution is one billion five hundred million euros (€1,500,000,000) or the euro equivalent in a foreign currency or unit of account based on a basket of currencies at the date of the decision to carry out the issue. This amount (a) does not include any redemption premium(s) in excess of par value and (b) applies to all the debt securities that may be issued pursuant to the 14th to 19th resolutions submitted to this annual general meeting, but (c) is independent of, and separate from, the amount of the debt securities that the Board of Directors may authorize or decide to issue in accordance with article L. 228-40 of the French Commercial Code;

(vi) duly notes that this delegation of authority automatically entails a waiver by the shareholders of their preferential right to subscribe for the Company shares that result from the securities giving access to shares in the Company that could be issued pursuant to this delegation of authority;

(vii) decides that the issue price of shares issued or resulting from securities issued pursuant to this delegation of authority will be set on the basis of the conversion or exchange rate to ensure that the issue price of the shares that may be created by conversion, exchange or in any other manner, shall be at least equal to the minimum amount provided for by the laws and regulations in force at the time of use of this delegation of authority (at this date, the weighted average Arkema share price for the three trading days prior to the opening date of the offering within the meaning of regulation (EU) no. 2017/1129 of 14 June 2017, less a potential maximum discount of up to 10%), after correction, if any, of this amount to take into account the difference in the dividend entitlement date;

(viii) decides that the Board of Directors may not use this delegation of authority without prior authorization from the annual general meeting from the date a takeover bid for the Company's shares is filed by a third party until the end of the offer period; and

(ix) grants full powers to the Board of Directors, or any person duly authorized under the conditions set by law to act on its behalf, to *inter alia*:

- set the amount of the issues, the issue price, the nature and characteristics of the securities to be issued, as well as the other terms and conditions of the issue thereof,
- carry out the planned issues and, where applicable, suspend them,
- to deduct the costs of issuing shares in the Company and the fees related to their admission to trading on a regulated market from the share premium amount related to such transactions, and withhold the necessary sums to bring the legal reserve up to one-tenth of the new share capital after each capital increase,
- and generally, enter into any agreement, in particular in order to successfully complete the planned issues, take all steps and carry out all appropriate formalities for the issue, listing and financial servicing of the shares and securities issued pursuant to this delegation of authority as well as the exercise of the rights attached thereto.

The annual general meeting decides that this delegation of authority is granted to the Board of Directors for a period of twenty-six (26) months from the date of this annual general meeting. It renders ineffective the unused portion of any prior delegation of authority granted for the same purpose and in particular that given by the combined annual general meeting of 19 May 2022 in its 18th resolution.

Seventeenth resolution

(Authorization granted to the Board of Directors, in the event of the issue of shares in the Company and/or securities giving access to shares in the Company, without preferential subscription rights, to set the issue price in accordance with the terms set forth by the annual general meeting up to a maximum of 10% of the share capital over a 12-month period)

The annual general meeting, voting in accordance with the quorum and majority requirements for extraordinary general meetings, and having considered the Board of Directors' report and the statutory auditors' special report, in accordance with the provisions of articles L. 225-136 and L. 22-10-52 of the French Commercial Code:

(i) authorizes the Board of Directors, or any person duly authorized under the conditions set by law to act on its behalf, in the event of implementation of the 15th or 16th resolution submitted to this annual general meeting, to deviate from the terms for setting the issue price for ordinary shares outlined in the aforementioned resolutions and to set the price based on the following terms:

- issue price of shares to be issued or resulting from securities to be issued under the aforementioned resolutions will, at the Board of Directors' discretion, be equal to (i) the volume weighted average price on the Euronext Paris regulated market on the last trading day preceding the day the issue price was set, or (ii) the volume weighted average price on the Euronext Paris regulated market determined during the trading session when the issue price was set, less, in either case as appropriate, a maximum discount of 10%,
- issue price of securities giving immediate or future access to shares in the Company shall be set to ensure that the amount received immediately by the Company, increased where applicable by the amount that it is likely to receive at a later date for each share issued as a result of the securities issued, shall be at least equal to the amount mentioned in the bullet point above,
- maximum nominal amount of capital increases carried out pursuant to the implementation of this resolution is 10% of the share capital (the number of shares held by the Company may be adjusted as necessary to take into account transactions that affect the share capital occurring after this annual general meeting and assessed on the date the Board of Directors uses this delegation of authority) over a 12-month period, and will be included in the limit provided for in the 15th or 16th resolution as applicable and in the overall limits provided for in the 20th submitted to this annual general meeting; and

(ii) decides that the Board of Directors may not use this authorization without prior authorization from the annual general meeting from the date a takeover bid for the Company's shares is filed by a third party until the end of the offer period.

The annual general meeting decides that this authorization is granted to the Board of Directors for a period of twenty-six (26) months from the date of this annual general meeting. It renders ineffective the unused portion of any prior authorization granted for the same purpose and in particular that given by the combined annual general meeting of 19 May 2022 in its 19th resolution.

Eighteenth resolution

(Delegation of authority granted to the Board of Directors to carry out capital increases as compensation for contributions in kind)

The annual general meeting, voting in accordance with the quorum and majority requirements for extraordinary general meetings, and having considered the Board of Directors' report and the statutory auditors' report, in accordance with the French Commercial Code, in particular articles L. 225-129, L. 225-129-2, L. 225-147, L. 22-10-53 and L. 228-91 *et seq.*:

(i) gives full powers to the Board of Directors, or any person duly authorized under the conditions set by law to act on its behalf, to carry out one or more capital increases, as compensation for contributions in kind granted to the Company in the form of shares or securities giving access to shares in other companies, *via* the issue of (i) ordinary shares in the Company, and/or (ii) equity securities in the Company giving immediate and/or future access by any means to other Company equity securities and/or granting entitlement to the award of debt securities, and/or (iii) debt securities giving or potentially giving immediate and/or future access by any means to existing equity securities or equity securities to be issued in the Company, when the provisions of article L. 22-10-54 of the French Commercial Code do not apply;

(ii) decides that the maximum nominal amount of the capital increases that may be carried out, immediately or in the future, pursuant to this delegation of authority may not exceed 10% of the Company's share capital at the date of this annual general meeting, which is included in the maximum nominal amount provided for in the 16th resolution submitted to this annual general meeting and which may be increased, where applicable, by the additional nominal amount of the shares to be issued in order to preserve the rights of holders of securities and other rights granting access to shares in the Company, in accordance with the law and any applicable contractual provisions;

(iii) decides that the maximum nominal amount of debt securities giving immediate or future access to shares in the Company that may be issued pursuant to this resolution is one billion five hundred million euros (€1,500,000,000) or the euro equivalent in a foreign currency or unit of account based on a basket of currencies at the date of the decision to carry out the issue. This amount (a) does not include any redemption premium(s) in excess of par value and (b) applies to all the debt securities that may be issued pursuant to the 14th to 19th resolutions submitted to this annual general meeting, but (c) is independent of, and separate from, the amount of the debt securities that the Board of Directors may authorize or decide to issue in accordance with article L. 228-40 of the French Commercial Code;

(iv) duly notes that this delegation of authority automatically entails a waiver by the shareholders of their preferential right to subscribe for the Company shares that result from the securities giving access to shares in the Company that could be issued pursuant to this delegation of authority;

(v) decides that the Board of Directors, or any person duly authorized to act on its behalf, will have full powers to implement this delegation of authority; and

(vi) decides that the Board of Directors may not use this delegation of authority without prior authorization from the annual general meeting from the date a takeover bid for the Company's shares is filed by a third party until the end of the offer period.

The annual general meeting decides that this delegation of authority is granted to the Board of Directors for a period of twenty-six (26) months from the date of this annual general meeting. It renders ineffective the unused portion of any prior delegation of authority granted for the same purpose and in particular that given by the combined annual general meeting of 19 May 2022 in its 20th resolution.

Nineteenth resolution

(Authorization granted to the Board of Directors to increase the number of shares to be issued in the event of excess demand)

The annual general meeting, voting in accordance with the quorum and majority requirements for extraordinary general meetings, and having considered the Board of Directors' report and the statutory auditors' special report, in accordance with the provisions of article L. 225-135-1 of the French Commercial Code:

(i) authorizes the Board of Directors, or any person duly authorized under the conditions set by law to act on its behalf, to decide, in the event of the use of the delegations of authority granted by the 14th to 18th resolutions submitted to the annual general meeting and within thirty days of the close of the subscription period for the initial issue, to increase the number of shares to be issued, within the limit of 15% of the initial issue and at the same price as that applied for the initial issue, and up to the limit provided for in the resolution authorizing the issue;

(ii) decides that the Board of Directors may not use this delegation of authority without prior authorization from the annual general meeting from the date a takeover bid for the Company's shares is filed by a third party until the end of the offer period; and

(iii) gives full powers to the Board of Directors to implement this authorization, in accordance with the law and the regulations.

The annual general meeting decides that this authorization is granted to the Board of Directors for a period of twenty-six (26) months from the date of this annual general meeting. It renders ineffective the unused portion of any prior authorization granted for the same purpose and in particular that given by the combined annual general meeting of 19 May 2022 in its 21st resolution.

Twentieth resolution

(Overall limit on authorizations to issue shares in the Company immediately and/or in the future)

The annual general meeting, voting in accordance with the quorum and majority requirements for extraordinary general meetings, and having considered the Board of Directors' report, decides to set:

(i) the maximum overall nominal amount of the immediate or future capital increases that may be carried out pursuant to the delegations of authority and authorizations granted by the 14th to 19th resolutions at 50% of the share capital on the date of this annual general meeting;

(ii) the overall limit for issues without preferential subscription rights that may be carried out pursuant to the delegations of authority and authorizations granted by the 15th, 16th and 18th resolutions at 10% of the share capital on the date of this annual general meeting;

it being specified that these nominal amounts may be increased, where applicable, by the nominal amount of the shares to be issued in respect of adjustments made to preserve the rights of holders of securities and other rights giving access to shares in the Company, in accordance with the law and any applicable contractual provisions.

Twenty-first resolution

(Delegation of authority granted to the Board of Directors to carry out capital increases reserved for members of a company savings plan *(Plan d'Épargne d'Entreprise)*, without preferential subscription rights)

The annual general meeting, voting in accordance with the quorum and majority requirements for extraordinary general meetings, and having considered the Board of Directors' report and the statutory auditors' special report, in accordance with articles L. 225-129, L. 225-129-2, L. 225-129-6, L. 228-91, L. 228-92, L. 225-138 I and II, and L. 225-138-1 of the French Commercial Code and articles L. 3332-18 *et seq.* of the French Labor Code:

(i) authorizes the Board of Directors, or any person duly authorized under the conditions set by law to act on its behalf, to carry out one or more capital increases *via* the issue, in the proportions and at the times that it deems appropriate, of shares and/or securities giving immediate and/or future access by any means to the Company's share capital, reserved for employees and former employees of the Company and of any French or foreign related companies or groups within the meaning of article L. 225-180 of the French Commercial Code and article L. 3344-1 of the French Labor Code, who are members of a company savings plan (hereinafter, the "Beneficiaries");

(ii) decides to cancel the shareholders' preferential subscription rights to the shares and securities giving access to shares to be issued pursuant to this delegation of authority and, where applicable, to the shares and other securities granted free of consideration pursuant to this delegation of authority;

(iii) duly notes that this delegation of authority automatically entails a waiver by the shareholders of their preferential right to subscribe for the Company shares that result from the securities giving access to shares in the Company that could be issued pursuant to this delegation of authority;

(iv) decides that the maximum nominal amount of the capital increase resulting immediately or in the future from all the issues made pursuant to this delegation of authority is thirteen million five hundred thousand euros (€13,500,000). This limit may be increased, where applicable, by the additional nominal amount of the shares to be issued in order to preserve the rights of holders of securities and other rights granting access to shares in the Company, in accordance with the law and any applicable contractual provisions;

(v) decides that the subscription price of the shares to be issued will be equal to the average Arkema share price on Euronext Paris for the twenty (20) trading days prior to the date of the decision setting the subscription period opening date, less the maximum discount provided for by law on the date of the Board of Directors' decision. The Board of Directors may however, if it considers it appropriate, reduce or eliminate the abovementioned discount, in order to take into account, in particular, the local legal requirements applicable in the event of a share offering to members of a company savings plan on the international market or in a foreign country; and

(vi) decides that the Board of Directors may grant free shares or securities giving access to shares in the Company to replace all or part of the abovementioned discount and/or the employer's top-up contribution. The total benefit resulting from this grant may not exceed the limits provided for by the laws or regulations pursuant to articles L. 3332-21 and L. 3332-11 of the French Labor Code, and the maximum nominal amount of the capital increases that may be carried out, immediately or in the future, pursuant to the grant of free shares or securities giving access to shares in the Company, shall be included in the limits referred to in paragraph (iv) above.

The annual general meeting decides that the Board of Directors, or any person duly authorized under the conditions set by law to act on its behalf, will have full powers to implement this resolution and in particular to:

(a) determine that the subscriptions can be carried out directly by the Beneficiaries or *via* a mutual fund or any other collective undertaking authorized by the regulations;

(b) establish, under the conditions required by law, the list of companies or groups whose employees and former employees that are members of one or more company savings plans will be able to subscribe to the shares or securities issued and, where applicable, receive the shares or securities granted free of consideration;

(c) set the subscription price of the shares and the opening and closing dates of the subscription period;

(d) set the amount of the issues that may be made pursuant to this authorization and, in particular, set the issue price, dates, periods, terms and conditions of subscription, payment, delivery and dividend entitlement (which may be retroactive) and all other terms and conditions of the issues, within the applicable legal and regulatory limits;

(e) in the event of a grant of free shares or securities giving access to shares of the Company, set the number of shares or securities giving access to shares in the Company to be issued, the number of shares or securities to be awarded to each Beneficiary, and set the dates, periods, terms and conditions of the grant within the applicable legal and regulatory limits, and in particular, elect either to substitute in whole or in part the grant of said shares or securities giving access to shares in the Company for the discounts provided for above or deduct the equivalent value of the shares or securities granted from the total amount of the employer's top-up contribution, or a combination of both;

(f) record the completion of the capital increase for the amount of the shares that will actually be subscribed, after any reduction in the event of oversubscription;

(g) determine, where appropriate, the amount of the sums to be capitalized within the limit set above, the shareholders' equity account(s) from which they will be deducted and the dividend entitlement date of the shares created;

(h) at its sole discretion and as it deems appropriate, charge the costs of capital increases against the share premium amounts relating thereto and withhold the necessary sums to bring the legal reserve up to one-tenth of the new share capital after each capital increase; and

(i) take all necessary measures to complete the capital increases, carry out the related formalities, particularly those concerning the listing of the shares created, amend the Articles of Association accordingly, and generally do whatever may be necessary.

The annual general meeting decides that this delegation of authority is granted for a period of twenty-six (26) months from the date of this annual general meeting. It renders ineffective the unused portion of any prior delegation of authority granted for the same purpose and in particular that given by the combined annual general meeting of 11 May 2023 in its 14th resolution.

Twenty-second resolution

(Powers to carry out formalities)

The annual general meeting grants full powers to the bearer of an original, a copy or an excerpt of the minutes of this annual general meeting for the purposes of performing all filing, publicity or other formalities that may be required.

7.3 Board of Directors' report on the resolutions submitted to the combined annual general meeting of 15 May 2024

The Board of Directors proposes to submit the resolutions described below to the vote of the shareholders at the combined annual general meeting of 15 May 2024.

Resolutions submitted to the ordinary general meeting

Approval of the annual financial statements (1st and 2nd resolutions)

The purpose of the **1st and 2nd resolutions** is to approve the Company's financial statements and the Arkema Group's consolidated financial statements, respectively, for the year ended 31 December 2023.

In the **1st resolution**, the Board recommends that you approve the Company's financial statements for the year ended 31 December 2023 as presented in the Board of Directors' management report, as well as all the transactions reflected or described therein. In accordance with article 223 *quater* of the French Tax Code *(Code général des impôts)*, you are also asked to approve the amount of the expenses and charges referred to in article 39-4 of said Code, which amounted to €96,155 in the past year. Given the Company's tax position in 2023, the non-deductibility of these expenses resulted in an additional current tax charge of €24,039.

In the **2nd resolution**, in accordance with the provisions of article L. 225-100 of the French Commercial Code *(Code de commerce)*, it is recommended that you approve the consolidated financial statements for the year ended 31 December 2023, as well as all the transactions reflected or described therein.

Allocation of profit and setting of the dividend (3rd resolution)

The purpose of the **3rd resolution** is to decide the allocation of the Company's profit for the year ended 31 December 2023 amounting to €349,859,881.81, as presented in the Company's financial statements, plus prior retained earnings of €1,720,701,728.41. The Board of Directors recommends consequently that the distributable profit be allocated as follows:

Source	
Profit for the period	€349,859,881.81
Prior retained earnings	€1,720,701,728.41
Distributable profit	€2,070,561,610.22

Allocation	
Legal reserve	€-
Dividend distribution (1)	€262,652,299.00
Retained earnings	€1,807,909,311.22

(1) *The total dividend distribution is calculated on the basis of the number of shares existing at 31 December 2023 and granting dividend rights. The total may vary if the number of shares carrying dividend rights changes up to the ex-dividend date depending, for example, on the number of treasury shares (which do not carry dividend rights) held by the Company. The abovementioned dividend distribution is the gross amount, calculated before any taxes or social security contribution that may apply to shareholders depending on their particular situation. Dividends paid to individual shareholders domiciled for tax purposes in France are in principle subject either to a 12.8% flat tax (prélèvement forfaitaire unique – PFU), calculated on the gross amount of the dividend (article 200 A of the French Tax Code), or, if the beneficiary expressly and irrevocably so elects, to taxation on the progressive income tax scale, after application of 40% tax relief (article 158, 3., 2° of the French Tax Code). This option is applicable to all income subject to the PFU flat tax, with no possibility of a partial option. It must be exercised by beneficiaries each year when filing their income tax return and no later than the filing deadline. In addition, the dividend is subject to social security contributions at a rate of 17.2%, a percentage of which may be deductible in the event of election of taxation on the progressive income tax scale. Beneficiaries whose reference taxable income exceeds certain thresholds are also subject to an exceptional surtax on high incomes (contribution exceptionnelle sur les hauts revenus – CEHR), provided for in article 223 sexies of the French Tax Code, on a scale adjusted for family status (single persons or equivalent, couples with joint taxation). Shareholders are invited to contact their tax advisor.*

The payment of the dividend of €262,652,299 with regard to the 75,043,514 shares carrying dividend rights and existing on 31 December 2023, would correspond to a distribution of three euros and fifty cents (€3.50) per share.

The shares would be traded ex-dividend as of 17 May 2024 and the dividend for the 2023 financial year would be paid as of 21 May 2024.

This dividend would be eligible for the 40% tax relief available to individual shareholders domiciled for tax purposes in France as provided for in article 158, 3., 2° of the aforementioned Tax Code, provided notably that the beneficiary has elected for taxation on the progressive income tax scale.

In accordance with article 243 *bis* of the French Tax Code, it is recalled that the dividend paid for the last three financial years was as follows:

Financial year	2022	2021	2020
Dividend distribution *(in euros)*	253,830,012.40	221,907,138.00	190,660,817.50
Net dividend per share *(in euros)*	3.40 [(1)]	3.00 [(1)]	2.50 [(1)]

(1) Eligible in full for the 40% tax relief available to individual shareholders domiciled for tax purposes in France as provided for in article 158, 3., 2° of the French Tax Code applicable, under certain conditions, in the event of election of taxation on the progressive income tax scale.

The distribution of a dividend of three euros and fifty cents (€3.50) per share for the year ended 31 December 2023 would represent an increase of 3% compared with the previous year.

Statutory auditors' special report on the agreements referred to in articles L. 225-38 *et seq.* of the French Commercial Code (4th resolution)

In accordance with the law, the Board of Directors performed its annual review of agreements entered into and authorized during previous financial years and implemented in the financial year ended 31 December 2023. It noted that (i) the only commitments agreed and already approved by the annual general meeting are the syndicated credit facility of 29 July 2020 and its two amendments dated 5 May 2021 and 28 July 2022, and (ii) no new agreement or commitment that had not already received the approval of the annual general meeting was entered into during the 2023 financial year.

In the **4th resolution**, the Board of Directors invites you to duly note the information relating to the agreements entered into and the commitments made during prior financial years and approved by the annual general meeting, as set out in the statutory auditors' special report in section 7.1 of this chapter.

Reappointment of Thierry Le Hénaff as a member of the Board of Directors (5th resolution)

At its meeting on 8 November 2023, the Board of Directors noted that the term of office as director of Thierry Le Hénaff was due to expire at the close of the annual general meeting of 15 May 2024, and decided to propose his reappointment at the annual general meeting. Accordingly, in the **5th resolution**, the Board of Directors, on the recommendation of the Nominating, Compensation and Corporate Governance Committee, recommends that you reappoint Thierry Le Hénaff as a director for a term of four (4) years expiring at the close of the annual general meeting to be held in 2028 to approve the financial statements for the year ending 31 December 2027.

Information concerning Thierry Le Hénaff, and the factors which led the Board of Directors to propose his reappointment to the annual general meeting, are provided in sections 3.2.1.2 and 3.2.1.3 of this document.

At the close of the annual general meeting, and subject to approval of this resolution, the Board of Directors intends to reappoint Thierry Le Hénaff as Chairman and Chief Executive Officer of Arkema.

Approval of the compensation policy for directors and the Chairman and Chief Executive Officer (6th and 7th resolutions)

In the **6th resolution**, in accordance with article L. 22-10-8 II of the French Commercial Code, the Board of Directors recommends that you approve the compensation policy for directors, other than the Chairman and Chief Executive Officer, as defined by the Board of Directors on 28 February 2024 on the recommendation of the Nominating, Compensation and Corporate Governance Committee and presented in the corporate governance report provided for in article L. 225-37 of said Code, in section 3.4.1.1 of this document.

Furthermore, in the **7th resolution**, the Board of Directors recommends that you approve the compensation policy for the Chairman and Chief Executive Officer, as defined by the Board of Directors at their meeting on 28 February 2024, on the recommendation of the Nominating, Compensation and Corporate Governance Committee. This compensation policy is presented in the corporate governance report provided for in article L. 225-37 of the French Commercial Code, and is set out in section 3.4.2.1 of this document.

Approval of the information on the compensation of directors referred to in article L. 22-10-9 I of the French Commercial Code (8th resolution)

Pursuant to article L. 22-10-34 I of the French Commercial Code, the purpose of the **8th resolution** is to submit to the approval of shareholders the information about the compensation of directors and the Chairman and Chief Executive Officer referred to in article L. 22-10-9 I of the French Commercial Code, presented in the corporate governance report provided for in article L. 225-37 of said Code. This information is provided in sections 3.4.1.2 and 3.4.2.2 of this document.

Approval of the components of compensation paid or awarded to each of the Company's executive directors for the year ended 31 December 2023 (9th resolution)

Pursuant to article L. 22-10-34 II of the French Commercial Code, the purpose of the **9th resolution** is to submit to the approval of shareholders the fixed, variable and exceptional components of the total compensation and benefits of any kind paid in or awarded for the year ended 31 December 2023 to Thierry Le Hénaff, Chairman and Chief Executive Officer and the only executive director of the Company. Payment of the variable compensation due for the financial year is subject to the approval of this resolution. These components are set out in detail in section 3.4.2.2 of this document.

Reappointment of the statutory auditor (10th resolution)

In the **10th resolution**, the Board of Directors invites you to duly note that the term of office of ERNST & YOUNG Audit as statutory auditor is due to expire at the close of the annual general meeting of 15 May 2024 and recommends that you reappoint it for a term of six financial years, *i.e.*, until the close of the ordinary general meeting to be held in 2030 to approve the financial statements for the year ending 31 December 2029.

Appointment of KPMG Audit and Mazars & Associés as joint statutory auditors responsible for certifying sustainability disclosures (11th and 12th resolutions)

In accordance with the provisions of Order no. 2023-1142 of 6 December 2023 on the publication and certification of sustainability disclosures and on the environmental, social and corporate governance obligations of commercial companies, transposing Directive (EU) no. 2022/2464 (the CSRD), the Company will be required to publish the sustainability information required under French and European regulations for the 2024 financial year as from 2025.

Accordingly, on the recommendation of the Audit and Accounts Committee, the Board of Directors proposes, in the **11th and 12th resolutions**, to appoint KPMG Audit and Mazars & Associés as joint statutory auditors responsible for certifying the Company's sustainability disclosures.

In accordance with the provisions of article L. 821-26 of the French Commercial Code, this statutory audit will be carried out on behalf of KPMG Audit and Mazars & Associés by a natural person who is a partner, shareholder or executive of these companies and who is duly registered on the list of statutory auditors authorized to certify sustainability disclosures maintained by the French audit authority (*Haute Autorité de l'Audit*), in accordance with the provisions of article L. 821-13 of the French Commercial Code.

For all intents and purposes, it is specified that in making this recommendation, the Audit and Accounts Committee was not influenced by any third party, and that it was not subject to any contractual clause restricting its choice.

Pursuant to article 38 of Order no. 2023-1142 of 6 December 2023, and notwithstanding the provisions of article L. 821-44 of the French Commercial Code, the term of office of:

- KPMG Audit will be equivalent to its remaining term of office as statutory auditor of the financial statements, *i.e.,* until the annual general meeting called in 2026 to approve the financial statements for the year ending 31 December 2025;
- Mazars & Associés will be for three financial years, until the annual general meeting called in 2027 to approve the financial statements for the year ending 31 December 2026.

Share buyback (13th resolution)

Until 31 January 2024, the Company acquired 208,000 shares in the Company under the authorization to trade in the Company's shares granted by the 13th resolution of the annual general meeting of 11 May 2023. These shares were purchased to cover employee free share plans and ensure that performance shares could be awarded without a dilutive effect on the share capital.

As the authorization granted to the Board of Directors by the annual general meeting of 11 May 2023 is due to expire shortly, in the **13th resolution**, it is proposed that you renew the authorization granted to the Board of Directors to purchase or arrange to have purchased shares in the Company at any time for a period of eighteen (18) months, **except during a takeover bid** in respect of the Company's shares, at a maximum price of **€140 per share**.

This authorization would enable the Board of Directors to acquire a number of shares in the Company **that would under no circumstances represent more than 10% of the Company's share capital**. By way of illustration, based on the share capital at 31 December 2023, the theoretical amount that might be dedicated to this share buyback program would not exceed €1,050,609,196.

These share purchases could be made for any purpose permitted by law and the resolution submitted to the annual general meeting, and in particular to cover performance share plans.

This new authorization would render ineffective, from the date of this annual general meeting, the unused portion of the 13th resolution of the combined annual general meeting of 11 May 2023. Details of share buyback programs in progress or planned can be found in section 6.2.4 of this document.

Resolutions submitted to the extraordinary general meeting

Delegations of authority and authorizations (14th to 20th resolutions)

As the delegations of authority and authorizations granted to the Board of Directors by the annual general meeting of 19 May 2022 are due to expire on 18 July 2024, we propose that you renew them. If you vote in favor of the delegations of authority and authorizations that are submitted to you in the 14th to 20th resolutions, they will render ineffective the current delegations of authority previously granted for the same purpose, from the date of this annual general meeting.

The delegations of authority and authorizations submitted to you would therefore make it possible to carry out, pursuant to a decision of the Board of Directors, issues of shares and/or securities giving access to shares in the Company, with or without preferential subscription rights, in France, in another country and/or on the international markets, depending on the opportunities offered by the financial markets and in the interests of the Company and its shareholders. They would allow the Board of Directors to issue convertible bonds or finance recapitalization operations related to potential external growth transactions in the most appropriate manner.

None of these delegations of authority may be used by the Board of Directors without prior authorization from the annual general meeting from the date a takeover bid for the Company's shares is filed by a third party until the end of the offer period.

These authorizations and delegations of authority would be granted **for a period of twenty-six (26) months** from the date of this annual general meeting.

Issues with preferential subscription rights (14th resolution)

The purpose of the **14th resolution** is to grant the Board of Directors a delegation of authority to carry out capital increases, in the proportions and at the times that it deems appropriate, *via* the issue, **with preferential subscription rights**, in France or any other country, in euros or any other currency, of (i) ordinary shares in the Company, and/or (ii) equity securities in the Company giving immediate and/or future access by any means to other Company equity securities and/or granting entitlement to the award of debt securities, and/or (iii) debt securities giving or potentially giving immediate and/or future access by any means to existing equity securities or equity securities to be issued in the Company, such as, for example, convertible bonds, bonds with equity warrants attached or stock warrants issued on a standalone basis. Your approval would therefore entail the waiver by the shareholders of their preferential rights to subscribe for any shares that may result from the equity securities referred to in paragraphs (ii) and (iii), issued pursuant to this resolution.

The maximum nominal amount of the capital increases that may be carried out pursuant to this delegation of authority is 50% of the share capital on the date of the annual general meeting. This maximum nominal amount would be included in the overall limit of 50% of the share capital proposed in the 20th resolution, and which would include all the issues decided pursuant to the 14th to 19th resolutions submitted to this annual general meeting.

The maximum nominal amount of debt securities giving immediate or future access to shares in the Company that may be issued under this authorization is **one billion five hundred million euros (€1,500,000,000)**, or the euro equivalent of this amount in the event of an issue in other currencies or units of account based on a basket of currencies at the date of the decision to carry out the issue. This amount would apply to all the debt securities that may be issued pursuant to the 14th to 19th resolutions submitted to this annual general meeting. It would, however, be independent of, and separate from, the amount of the debt securities that the Board of Directors may authorize or decide to issue in accordance with article L. 228-40 of the French Commercial Code.

Issues without preferential subscription rights (15th to 18th resolutions)

In order to be able to seize any financial opportunity offered, particularly by the diversity of the financial markets in France and any other country, the Board of Directors may be required to carry out issues that may be placed with investors interested in certain types of financial products. This means that the Board of Directors will have to be able to carry out these issues without preferential subscription rights.

Pursuant to the terms of the **15th resolution**, it is recommended that you grant the Board of Directors a delegation of authority to carry out capital increases, in the proportions and at the times that it deems appropriate, *via* the issue, **without preferential subscription rights, by means of a public offering other than that referred to in article L. 411-2 1° of the French Monetary and Financial Code**, in France or any other country, in euros or any other currency, of (i) ordinary shares in the Company, and/or (ii) equity securities in the Company giving immediate and/or future access by any means to other Company equity securities and/or granting entitlement to the award of debt securities, and/or (iii) debt securities giving or potentially giving immediate and/or future access by any means to existing equity securities or equity securities to be issued in the Company. Your approval would therefore entail the waiver by the shareholders of their preferential rights to subscribe for any shares that may result from the equity securities referred to in paragraphs (ii) and (iii), issued pursuant to this resolution. However, the shareholders would benefit, in accordance with the provisions of articles L. 225-135 and L. 22-10-51 of the French Commercial Code and without giving rise to a negotiable right, from a **priority period** of at least **three (3) days** for subscriptions in proportion to their shareholding and for any additional subscriptions.

The maximum nominal amount of the Company's capital increase resulting immediately or in the future from all the issues carried out pursuant to this delegation of authority would be **10% of the Company's share capital** at the date of the annual general meeting, which would be included in the overall limit of 50% of the share capital at the same date and the 10% limit for issues without preferential subscription rights, both provided for in the 20th resolution.

The maximum nominal amount of debt securities giving immediate or future access to shares in the Company that may be issued under this resolution is **one billion five hundred million euros (€1,500,000,000)**, or the euro equivalent of this amount in the event of an issue in other currencies or units of account based on a basket of currencies at the date of the decision to carry out the issue. This amount would be included in the overall limit of one billion five hundred million euros (€1,500,000,000) for the issue of debt securities pursuant to the 14th to 19th resolutions submitted to this annual general meeting. It would, however, be independent of, and separate from, the amount of the debt securities that the Board of Directors may authorize or decide to issue in accordance with article L. 228-40 of the French Commercial Code.

The issue price of shares issued or resulting from securities issued pursuant to this delegation of authority would be set on the basis of the conversion or exchange rate to ensure that the issue price of the shares that may be created by conversion, exchange or in any other manner, shall be at least equal to the minimum amount provided for by the laws and regulations in force at the time of use of this delegation of authority (at this date, the weighted average Arkema share price for the three trading days prior to the opening date of the offering, within the meaning of regulation (EU) no. 2017/1129 of 14 June 2017, less a potential **maximum discount of 10%**), after correction, if any, of this amount to take into account the difference in the dividend entitlement date. The Board of Directors may also use this delegation of authority, in whole or in part, for the purpose of paying for securities tendered to a public exchange offering initiated by the Company, within the limits and under the conditions provided for in article L. 22-10-54 of the French Commercial Code.

Pursuant to the terms of the **16th resolution**, it is recommended that you grant the Board of Directors a delegation of authority to carry out capital increases, in the proportions and at the times that it deems appropriate, *via* the issue, **without preferential subscription rights, by means of a public offering referred to in article L. 411-2 1° of the French Monetary and Financial Code**, in France or any other country, in euros or any other currency, of (i) ordinary shares in the Company, and/or (ii) equity securities in the Company giving immediate and/or future access by any means to other Company equity securities and/or granting entitlement to the award of debt securities, and/or (iii) debt securities giving or potentially giving immediate and/or future access by any means to existing equity securities or equity securities to be issued in the Company.

These issues may only be carried out in order to directly or indirectly finance an external growth transaction, issue convertible bonds, or repay an external financing arrangement put in place by the Company.

The maximum nominal amount of the Company's capital increase resulting immediately or in the future from all the issues carried out pursuant to this delegation of authority would be **10% of the Company's share capital** at the date of the annual general meeting, which would be included in the overall limit of 50% of the share capital at the same date and the 10% limit for issues without preferential subscription rights, both provided for in the 20th resolution.

The maximum nominal amount of debt securities giving immediate or future access to shares in the Company that may be issued under this resolution is **one billion five hundred million euros (€1,500,000,000)**, or the euro equivalent of this amount in the event of an issue in other currencies or units of account based on a basket of currencies at the date of the decision to carry out the issue. This amount would be included in the overall limit of one billion five hundred million euros (€1,500,000,000) for the issue of debt securities pursuant to the 14th to 19th resolutions submitted to this annual general meeting. It would, however, be independent of, and separate from, the amount of the debt securities that the Board of Directors may authorize or decide to issue in accordance with article L. 228-40 of the French Commercial Code.

The issue price of shares issued or resulting from securities issued pursuant to this delegation of authority would be set on the basis of the conversion or exchange rate to ensure that the issue price of the shares that may be created by conversion, exchange or in any other manner, shall be at least equal to the minimum amount provided for by the laws and regulations in force at the time of use of this delegation of authority (at this date, the weighted average Arkema share price for the three trading days prior to the opening date of the offering, within the meaning of regulation (EU) no. 2017/1129 of 14 June 2017, less a potential **maximum discount of 10%**), after correction, if any, of this amount to take into account the difference in the dividend entitlement date.

Pursuant to the terms of the **17th resolution**, it is recommended that, in the event of an issue of shares or securities giving immediate or future access to existing shares or shares to be issued in the Company **under the aforementioned 15th and 16th resolutions**, you authorize the Board of Directors to deviate from the terms for setting the issue price for the shares provided for in the aforementioned resolutions and to set the price based on the following terms:

- the issue price of shares to be issued or resulting from securities to be issued under the aforementioned resolutions would, at the Board of Directors' discretion, be equal to (i) the volume weighted average price on the Euronext Paris regulated market on the last trading day preceding the day the issue price was set, or (ii) the volume weighted average price on the Euronext Paris regulated market determined during the trading session when the issue price was set, less, in either case as appropriate, a maximum discount of 10%; and
- the issue price of securities giving immediate or future access to shares in the Company should be set to ensure that the amount received immediately by the Company, increased where applicable by the amount that it is likely to receive at a later date for each share issued as a result of the securities issued, shall be at least equal to the amount mentioned in the bullet point above.

The maximum nominal amount of capital increases resulting from the implementation of this resolution would be **10% of the share capital over a 12-month period**, and would be included in the limit provided for in the 15th or 16th resolution, as applicable, and in the overall limits provided for in the 20th resolution below.

Finally, pursuant to the terms of the **18th resolution**, it is recommended that you grant the Board of Directors a delegation of authority to carry out one or more capital increases, **as compensation for contributions in kind** granted to the Company in the form of shares or securities giving access to shares in other companies, *via* the issue of (i) ordinary shares in the Company, and/or (ii) equity securities in the Company giving immediate and/or future access by any means to other Company equity securities and/or granting entitlement to the award of debt securities, and/or (iii) debt securities giving or potentially giving immediate and/or future access by any means to existing equity securities or equity securities to be issued in the Company, when the provisions of article L. 22-10-54 of the French Commercial Code do not apply.

This delegation of authority would automatically entail a **waiver** by the Company's shareholders of **their preferential right to subscribe** for the Company shares that result from the securities giving access to shares in the Company that could be issued pursuant to this delegation of authority.

The maximum nominal amount of the capital increases that may be carried out, immediately or in the future, pursuant to this delegation of authority would be **10% of the Company's share capital** at the date of this annual general meeting, which would be included in the overall limit on the nominal amount provided for in the 16th resolution of this annual general meeting.

Authorization granted to the Board of Directors to increase the number of shares to be issued in the event of excess demand (19th resolution)

In the **19th resolution**, it is recommended that you delegate to the Board of Directors the authority to decide, for each of the issues carried out pursuant to the 14th to 18th resolutions described above, to increase the number of shares to be issued, at the same price as that used for the initial issue, **within the limit of 15%** of the issue and within thirty days of the close of the subscription period for the initial issue, subject to compliance with the limits provided for in the 20th resolution.

This delegation of authority would be granted for a period of **twenty-six (26) months** from the date of this annual general meeting.

Overall limit on authorization amounts (20th resolution)

The purpose of the **20th resolution** is to set an overall limit on the nominal amount of the capital increases that may be carried out with or without preferential subscription rights, immediately or in the future, by the Board of Directors pursuant to the 14th to 19th resolutions.

The maximum nominal amount of capital increases mentioned in the 14th to 19th resolutions would be **50% of the Company's share capital at the date of the annual general meeting**.

The maximum nominal amount of capital increases mentioned in the 15th, 16th and 18th resolutions would be **10% of the Company's share capital at the date of the annual general meeting.**

Note that these amounts may be increased by the additional nominal amount of shares to be issued to preserve the rights of holders of securities giving access to shares in the Company in accordance with the legal provisions.

Delegation of authority to carry out capital increases reserved for members of a company savings plan *(Plan d'Épargne d'Entreprise)* (21st resolution)

Finally, in the **21st resolution**, the Board of Directors recommends that you delegate to the Board of Directors the authority to carry out issues **without preferential subscription rights** of shares and/or securities giving access to shares in the Company, reserved for employees and former employees of the Company and of any French or foreign related companies or groups within the meaning of article L. 225-180 of the French Commercial Code and article L. 3344-1 of the French Labor Code *(Code du travail)*, who are members of a company savings plan in place in the Company or in its Group.

The maximum nominal amount of the capital increase resulting immediately or in future from all the issues carried out pursuant to this delegation of authority would be **thirteen million five hundred thousand euros (€13,500,000)**, *i.e.*, less than 2% of the Company's share capital at the date of the annual general meeting.

The issue price would be equal to the average Arkema share price on Euronext Paris for the twenty (20) trading days prior to the date of the decision setting the subscription period opening date, less the maximum discount provided for by law on the date of the Board of Directors' decision. The Board of Directors may, however, if it considers it appropriate, reduce or eliminate the abovementioned discount, in order to take into account, in particular, the local legal requirements applicable in the event of a share offering to members of a company savings plan on the international market or in a foreign country.

This delegation of authority would be granted for a period of **twenty-six (26) months** from the date of the annual general meeting. This new delegation of authority would render ineffective, from the date of this annual general meeting, the 14th resolution of the combined annual general meeting of 11 May 2023.

Powers to carry out formalities (22nd resolution)

In the **22nd resolution**, the Board of Directors recommends that you grant full powers to the bearer of a copy or an excerpt of the minutes of this annual general meeting for the purpose of performing all formalities that may be required.

This report contains the main provisions of the proposed resolutions. We ask that you consider issuing a favorable vote on these proposed resolutions.

The Board of Directors

7.4 Statutory auditors' report on the issuance of ordinary shares and/or marketable securities with or without preferential subscription rights

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Membre de la compagnie
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Commissaire aux Comptes
Membre de la compagnie
régionale de Versailles et du Centre

This is a translation into English of a report issued in French and it is provided solely for the convenience of English-speaking users.

This report should be read in conjunction with, and construed in accordance with, French law and professional standards applicable in France.

Arkema

General Meeting of May 15, 2024

Fourteenth to nineteenth resolutions

Statutory auditors' report on the issue of shares and/or various securities with or without cancellation of preferential subscription rights

To the Annual General Meeting of Arkema,

In our capacity as statutory auditors of your Company and in compliance with Articles L. 228-92 and L. 225-135 et seq. of the French Commercial Code *(Code de commerce)* and with article L.22-10-52 of the French Commercial Code *(Code de commerce)*, we hereby report on the proposed authorization allowing your Board of Directors to decide whether to proceed with various issues of shares and/or various securities, and the delegation of powers to implement their practical conditions, operation upon which you are called to vote.

Your Board of Directors proposes, on the basis of its report, that :

- it be authorized, with the option to sub-delegate, for a period of twenty-six months to decide on whether to proceed with the following operations and to determine the final conditions of these issues, in France and abroad, and proposes, where applicable, to cancel your preferential subscription rights:
  - the issue, with maintaining preferential subscription rights, of shares and/or securities that give access, immediately or in the future, to existing shares or shares to be issued of your Company, (fourteenth resolution) ;
  - the issue, with cancellation of your preferential subscription rights and mandatory priority period for the benefit of shareholders, through public offering other than those referred to in Article L. 411-2 1° of the French Financial and Monetary Code (Code monétaire et financier), of shares and/or securities that give access by all means, immediately or in the future, to existing shares or shares to be issued of your Company, (Fifteenth resolution);
  - the issue, with cancellation of your preferential subscription rights, of shares and/or securities through offerings in accordance with Article L. 411-2 1° of the French Financial and Monetary Code (Code monétaire et financier) of your Company's shares and/or securities giving access, immediately or in the future, to shares of your Company (sixteenth resolution).
- it be authorized, under the seventeenth resolution, within the scope of the implementation of the delegation of authorization referred to in the fifteenth and sixteenth resolutions, to determine the issue price within the legal annual limit of 10% of share capital per twelve months period ;
- it be delegated, with the option to sub-delegate, for a period of twenty-six months, the powers necessary to issue, in one or more instalments, ordinary shares and/or securities that give access, immediately or in the future, to existing shares or shares to be issued of your Company within the limit of 10% of share capital in consideration for the contributions in kind granted to the Company and consisting of capital securities or securities that give access to the capital of other companies (eighteenth resolution).

The total nominal amount of the increases in capital that may be implemented immediately or at a later date may not exceed 50% of the Company's share capital under the fourteenth to nineteenth resolutions. In particular, capital increases that may be implemented immediately or in the future may not exceed 10% of the amount of your Company's share capital as at the date of this Shareholders' Meeting under the fifteenth, sixteenth and eighteenth resolutions.

The total nominal amount of the securities representing debt securities likely to be issued, giving access immediately or in the future to your Company's capital, may not exceed one billion and five hundred million euros or the equivalent value of this amount in the event of an issue in a different currency or in a unit of account on the date of the issue decision, under the fourteenth to nineteenth resolutions.

These limits reflect the additional number of shares to be created, within the limit of 15% of the initial issue, within the scope of the implementation of the delegations referred in the fourteenth to eighteenth resolutions, in accordance with Article L.225-135-1 of the French Commercial Code *(Code de commerce)*, if you adopt the nineteenth resolution.

It is the responsibility of the Board of Directors to prepare a report in accordance with Articles R. 225-113 et seq. of the French Commercial Code *(Code de commerce)*. Our role is to report on the fairness of the financial information taken from the accounts, on the proposed cancellation of preferential subscription rights and on other information relating to these operations provided in the report.

We have performed those procedures which we considered necessary to comply with the professional guidance issued by the French Institute of Statutory Auditors *(Compagnie nationale des commissaires aux comptes)* for this type of engagement. These procedures consisted in verifying the information provided in the Board of Directors' report relating to these operations and the methods used to determine the issue price of the capital securities to be issued.

Subject to a subsequent examination of the conditions for the issue that may be decided, we have no matters to report as to the methods used to determine the issue price of the capital securities to be issued provided in the Board of Directors' report with regard to the fifteenth, sixteenth and seventeenth resolutions.

Moreover, as the methods used to determine the issue price of the capital securities to be issued, in accordance with the eighteenth resolution, are not specified in that report, we cannot report on the choice of constituent elements used to determine this issue price.

As the final conditions in which the issues would be performed have not yet been determined, we cannot report on these conditions and, accordingly, on the proposed cancellation of preferential subscription rights for the fifteenth, sixteenth and seventeenth resolutions.

In accordance with article R. 225-116 of the French Commercial Code *(Code de commerce)*, we will issue an additional report, if necessary, when your Board of Directors has exercised these authorizations in the event of the issue of ordinary shares and/or securities, giving access immediately or in the future to shares of your Company, with or without cancellation of preferential subscription rights.

Paris La Défense, March 7, 2024

The Statutory Auditors

French original signed by

KPMG S.A.		**ERNST & YOUNG Audit**
François Quédiniac	Éric Dupré	Christine Vitrac

7.5 Statutory auditors' report on the issuance of ordinary shares and/or marketable securities reserved for employees subscribing to a company savings plan

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Commissaire aux Comptes
Membre de la compagnie
régionale de Versailles et du Centre

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This report should be read in conjunction with, and construed in accordance with, French law and professional standards applicable in France.

Arkema

Combined General Meeting of May 15, 2024

Twenty-first resolution

Statutory auditors' report on the issue of shares and/or marketable securities reserved for members of a company savings scheme

To the Annual General Meeting of Arkema,

In our capacity as statutory auditors of your Company and in accordance with Articles L. 228-92 and L. 225-135 *et seq.* of the French Commercial Code *(Code de commerce)*, we hereby report on the proposal to authorize your Board of Directors to decide whether to proceed with an issue, in one or more occasions, of shares or marketable securities i with cancellation of preferential subscription rights, reserved for employees and former employees of your Company and companies or French and foreign groups connected thereto within the meaning of Article L. 225-180 of the French Commercial Code *(Code de commerce)* and Article L. 3344-1 of the French Labor Code *(Code du travail)*, who are members a company savings scheme, an operation upon which you are called to vote. The increase in capital that could result from this issue is a maximum amount of € 13,500,000.

This capital increase is submitted to your approval in accordance with Articles L. 225-129-6 of the French Commercial Code *(Code de commerce)* and L. 3332-18 and seq. of the French Labor Code *(Code du travail)*.

Your Board of Directors proposes that, on the basis of its report, it be authorized, for a period of twenty-six months to determine the conditions of this operation and proposes to cancel your preferential subscription rights to the shares or marketable securities to be issued.

It is the Board of Directors' responsibility to prepare a report in accordance with Articles R. 225-113 *et seq.* of the French Commercial Code *(Code de commerce)*. Our role is to report on the fairness of the financial information taken from the accounts, on the proposed cancellation of preferential subscription rights and on other information relating to the share issue provided in this report.

We have performed those procedures which we considered necessary to comply with the professional guidance issued by the French Institute of Statutory Auditors *(Compagnie Nationale des Commissaires aux Comptes)* for this type of engagement. These procedures consisted in verifying the information provided in the Board of Directors' report relating to this operation and the methods used to determine the issue price of the capital securities.

Subject to a subsequent examination of the conditions of the proposed increase in capital, we have no matters to report as to the methods used to determine the issue price for the ordinary shares or marketable securities to be issued provided in the Board of Directors' report.

As the final conditions for the increase in capital have not yet been determined, we cannot report on these conditions and, consequently, on the proposed cancellation of preferential subscription rights.

In accordance with Article R. 225-116 of the French commercial Code (Code de commerce), we will issue a supplementary report, if necessary, when your Board of Directors has exercised this authorization in the event of an issue of ordinary shares or marketable securities that are equity securities giving access to other equity securities, or marketable securities giving access to Company equity securities to be issued.

Paris-La Défense, March 7, 2024

The Statutory Auditors French original signed by

KPMG S.A.		ERNST & YOUNG Audit
Eric Dupré	François Quédiniac	Christine Vitrac

INFORMATIONS ABOUT THE UNIVERSAL REGISTRATION DOCUMENT

8

The different parts constituting the annual financial report are identified in the table of contents by the pictogram |AFR|

8.1 Person responsible for the Universal Registration Document and persons responsible for auditing the financial statements

8.1.1 Person responsible for the Universal Registration Document

Thierry Le Hénaff, Chairman and Chief Executive Officer of Arkema.

8.1.2 Declaration by the person responsible for the Universal Registration Document

"I hereby declare that, to the best of my knowledge, the information contained in this Universal Registration Document is in accordance with the facts and that this Universal Registration Document makes no omission likely to affect its import.

I further declare that, to the best of my knowledge, the financial statements have been prepared in accordance with the applicable accounting standards and give a true and fair view of the assets, liabilities, financial position and results of the Company and all of the companies included in the scope of consolidation, and the management report, consisting of the sections of this Universal Registration Document listed in the cross-reference table on pages 426 and 427 of this Universal Registration Document, includes a fair review of the development of the business, the results and the financial position of the Company and all of the companies included in the consolidation and describes the main risks and uncertainties to which they are exposed."

Colombes, 28 March 2024.

Thierry Le Hénaff

Chairman and Chief Executive Officer

8.1.3 Persons responsible for auditing the financial statements

Statutory auditor	Statutory auditor
KPMG Audit Department of KPMG S.A.	**Ernst & Young Audit**
Represented by François Quédiniac and Eric Dupré	Represented by Christine Vitrac
Tour EQHO, 2, avenue Gambetta, CS 60055 92066 Paris-La Défense Cedex – France	Tour First, TSA 14444 92037 Paris-La Défense Cedex – France
Appointed at the annual general meeting of 19 May 2020. Current term expires following the annual general meeting to be held to approve the financial statements for the year ended 31 December 2025.	Appointed at the annual general meeting of 18 May 2018. Current term expires following the annual general meeting to be held to approve the financial statements for the year ending 31 December 2023.
Substitute statutory auditor	Substitute statutory auditor
None	None

8.2 Person responsible for the information

Questions concerning Arkema and its activities should be addressed to:

Béatrice Zilm, Vice-President, Investor Relations

Arkema

420, rue d'Estienne d'Orves 92700 Colombes (France)

Telephone: +33 (0)1 49 00 74 63

8.3 Concordance and cross-reference tables

8.3.1 Incorporation by reference

Pursuant to article 19 of regulation (EU) 2017/1129 of the European Parliament and of the Council, this Universal Registration Document incorporates by reference the following information:

- the consolidated financial statements and the statutory auditors' report related thereto, the annual financial statements and the statutory auditors' report related thereto, as well as the financial information included in the management report appearing respectively on page 283 *et seq.*, 346 *et seq.*, and 418 of the Universal Registration Document for the year ended 31 December 2022 granted visa number D. 23-0171 by the *Autorité des marchés financiers* on 28 March 2023; and
- the consolidated financial statements and the statutory auditors' report related thereto, the annual financial statements and the statutory auditors' report related thereto, as well as the financial information included in the management report appearing respectively on page 258 *et seq.*, 316 *et seq.*, and 390 of the Universal Registration Document for the year ended 31 December 2021 granted visa number D. 22-0185 by the *Autorité des marchés financiers* on 29 March 2022.

8.3.2 Concordance table

Commission Delegated regulation (EU) 2019/980 of 14 March 2019 supplementing regulation (EU) 2017/1129 – Annex 1		Universal Registration Document	
No.	Heading	Reference	Page(s)
1	**Persons responsible, third party information, experts' reports and competent authority approval**	**Chapter 8**	**420**
1.1	Persons responsible for the information given in the Universal Registration Document	8.1.1	420
1.2	Declaration by those responsible for the Universal Registration Document	8.1.2	420
1.3	Person acting as an expert	None	
1.4	Confirmation regarding information sourced from a third party	None	
1.5	Statement concerning approval of the Universal Registration Document by the competent authority	None	
2	**Statutory auditors**	**8.1.3**	**420**
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2.2	Statutory auditors having resigned, having been removed, or having not been reappointed during the period covered by the historical financial information	None	
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10.2	Trends, uncertainties, demands, commitments or events that the Company is aware of and are reasonably likely to have a material effect on the Company's prospects for at least the current financial year	5.2.1 and 5.2.2	291 and 292
11	**Profit forecasts or estimates**	**None**	

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No.	Heading	Reference	Page(s)
12	**Administrative, management and supervisory bodies and executive management**	**3.2**	**96-115**
12.1	Names, business addresses and functions within the Company of the following persons and an indication of the principal activities performed by them outside of the Company: (a) members of the administrative, management or supervisory bodies; (b) partners with unlimited liability, in the case of a limited partnership with a share capital; (c) founders, if the Company has been established for fewer than five years; (d) any senior manager who is relevant to establishing that the Company has the appropriate expertise and experience for the management of its business. The nature of any family relationship between any of those persons. In the case of each member of the administrative, management or supervisory bodies of the Company and of each person referred to in points (b) and (d) of the first subparagraph, details of that person's relevant management expertise and experience and the following information: (a) the names of all companies and partnerships where those persons have been a member of the administrative, management or supervisory bodies or partner at any time in the previous five years; (b) details of any convictions in relation to fraudulent offenses for at least the previous five years; (c) details of any bankruptcies, receiverships, liquidations or companies put into administration for at least the previous five years; (d) details of any official public incrimination and/or sanctions involving such persons by statutory or regulatory authorities (including designated professional bodies) and whether they have ever been disqualified by a court from acting as a member of the administrative, management or supervisory bodies of an issuer or from acting in the management or conduct of the affairs of any issuer for at least the previous five years.	3.2.1.2, 3.2.1.3 and 3.2.3	101, 103 and 114
12.2	Conflicts of interests, commitments related to appointments, restrictions on the transfer of the Company's securities	3.2.1.1, 3.2.1.2 and 3.2.3	96, 101 and 114
13	**Compensation and benefits**	**3.4**	**129-150**
13.1	Compensation paid and benefits in kind granted by the Company and its subsidiaries	3.4	129
13.2	Total amounts set aside or accrued by the Company or its subsidiaries to provide pension, retirement or similar benefits	3.4.1, 3.4.2, 3.4.3 and note 11 to the consolidated financial statements	130, 132, 149 and 335
14	**Board practices**	**3.2 and 3.3**	**96 and 115**
14.1	Expiration date of the current term of office and the period during which the person has served in that office	3.2.1.2	101
14.2	Information about members of the administrative, management or supervisory bodies' service contracts with the Company or any of its subsidiaries providing for benefits upon termination of employment, or an appropriate statement to the effect that no such benefits exist	3.2.3.4	114
14.3	Information about the Company's Audit committee and Compensation committee	3.3.4.1 and 3.3.4.2	124 and 126
14.4	Statement as to whether or not the Company complies with the corporate governance regime(s) applicable to the Company	3.1	96
14.5	Potential material impacts on corporate governance, including future changes in the Board and committees composition	3.2 and 3.3	96 and 115
15	**Employees**	**4.6.1**	**221-235**
15.1	Number of employees at the end of the period covered by the historical financial information and breakdown of persons employed by main category of activity and geographic location	4.6.1	221
15.2	Shareholdings and stock-options	4.6.1.6 and 6.2.6	231 and 384
15.3	Arrangements for involving employees in the capital of the Company	4.6.1.6 and 6.3.4	231 and 386
16	**Major shareholders**	**6.3**	**385-387**
16.1	The name of any person other than a member of the administrative, management or supervisory bodies who, directly or indirectly, has an interest in the Company's capital or voting rights which is notifiable under the Company's national law, together with the amount of each such person's interest, or, if there are no such persons, an appropriate statement to that effect that no such person exists	6.3.1	385
16.2	Different voting rights or an appropriate statement to the effect that no such voting rights exist	6.3.3	385
16.3	Direct or indirect ownership or control over the Company	6.3.2	385
16.4	Any arrangements, known to the Company, the operation of which may at a subsequent date result in a change in control of the Company	6.3.2	385

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No.	Heading	Reference	Page(s)
17	**Related party transactions**	**6.1.3**	**380**
18	**Financial information concerning the Company's assets and liabilities, financial position and profits and losses**	**5.3 and 5.4**	**293 and 354**
18.1	Historical financial information	Profile, ambition and strategy and 8.3.1	8 and 421
18.1.1	Audited historical financial information covering the latest three financial years and the audit report in respect of each year	5.3, 5.4 and 8.3.1	293, 354 and 421
18.1.2	Change of accounting reference date	None	
18.1.3	Accounting standards	5.3.3 and 5.4.3	301 and 361
18.1.4	Change of accounting framework	None	
18.1.5	Audited financial information including the balance sheet, the income statement, a statement showing changes in equity, the cash flow statement, the accounting policies and explanatory notes	5.3, 5.4 and 8.3.1	233, 354 and 421
18.1.6	Consolidated financial statements	5.3.2	297
18.1.7	Date of latest financial information	5.3.2 and 5.4.2	297 and 358
18.2	Interim and other financial information	None	
18.3	Audit of historical annual financial information	5.3.1 and 5.4.1	293 and 354
18.3.1	Independent audit of historical annual financial information	5.3.1 and 5.4.1	293 and 354
18.3.2	Other information in the Universal Registration Document audited by the statutory auditors	None	
18.3.3	State the source and state that financial information in the Universal Registration Document not extracted from the Company's audited financial statements is not audited	None	
18.4	*Pro forma* financial information	None	
18.5	Dividend policy	6.4.7	390
18.5.1	Policy on dividend distributions or an appropriate negative statement	6.4.7	390
18.5.2	Dividend per share	6.4.7	390
18.6	Legal and arbitration proceedings	2.1.2 and note 11.2.2 to the consolidated financial statements	75 and 338
18.7	Significant change in the Company's financial position	None	
19	**Additional information**	**Chapter 6**	**378-393**
19.1	Share capital	6.2	380
19.1.1	The amount of issued capital, the total of the Company's authorized share capital, the number of shares issued and fully paid and issued but not fully paid, the par value per share and a reconciliation of the number of shares outstanding at the beginning and end of the year	6.2.1	380
19.1.2	The number and main characteristics of any shares not representing capital	None	
19.1.3	The number, book value and par value of shares held by the Company, on behalf of the Company or by subsidiaries of the Company	6.2.4	381
19.1.4	Convertible securities, exchangeable securities or securities with warrants	6.2.6	384
19.1.5	Information about and terms of any acquisition rights or obligations over authorized but unissued capital or an undertaking to increase the capital	None	
19.1.6	Information about the capital of any member of the Group which is under option or agreed conditionally or unconditionally to be put under option	None	
19.1.7	History of share capital for the period covered by the historical financial information	6.2.2	380

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		Universal Registration Document	
No.	Heading	Reference	Page(s)
19.2	Memorandum and Articles of Association	6.1.1 and 6.5	378 and 391
19.2.1	Register and entry number therein; Company's objects and purposes	6.1.1	378
19.2.2	Rights, preferential rights and restrictions attaching to each class of existing shares	6.5.3	392
19.2.3	Any provision of the Company's Articles of Association, statutes, charter or bylaws that would have an effect of delaying, deferring or preventing a change in control of the Company	6.5.2	392
20	**Material contracts**	**1.4**	**69**
21	**Documents available**	**6.1.1**	**378**

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		Universal Registration Document	
No.	Heading	Reference	Page(s)
1	**Information to be disclosed about the Company**		
1.1	Information in accordance with the disclosure requirements for the registration document for equity securities laid down in Annex 1	8.3.2	421-425
1.2	Statement that the Universal Registration Document may be used for the purposes of an offer to the public of securities or admission of securities to trading on a regulated market if completed by amendments, if applicable, and an approved securities note and summary and stating, if applicable, that the Universal Registration Document has been filed with the competent authority without prior approval	-	1

8.3.3 Cross-reference table

This Universal Registration Document includes all the items of the Company and Group management report as required by articles L. 225-100, L. 225-100-1 and L. 22-10-35 of the French Commercial Code *(Code de commerce)*, as created by Order no. 2020-1142 of 16 September 2020, establishing a specific division within the French Commercial Code for companies whose securities are admitted to trading on a regulated market (the "Order"), articles L. 232-1 II, L. 233-16, L. 233-26 and R. 225-102, as well as articles L. 225-102-1, and articles L. 225-102-2, R. 225-105, R. 225-105-1 and L. 225-102-4 providing for the creation and deployment of a duty of care plan (I). It also contains all the information in the annual financial report referred to in article L. 451-1-2 of the French Monetary and Financial Code *(Code monétaire et financier)* and article 222-3 of the AMF general regulations (II).

In order to facilitate the reading of the management report and the annual financial report mentioned above, the following cross-reference table has been prepared to identify the sections constituting these reports.

The cross-reference table also helps to identify the information that must be included in the Board of Directors' report on corporate governance pursuant to articles L. 225-37, L. 22-10-8 and L. 22-10-9, L. 225-37-4, L. 22-10-10, L. 22-10-11, L. 225-197-1 and L. 22-10-59 of the French Commercial Code (III).

Finally, the cross-reference table lists the other reports prepared by the Board of Directors and the statutory auditors (IV).

No.	Information	Reference
I	MANAGEMENT REPORT	
1	Position and activity of the Company and, where applicable, its subsidiaries and companies under its control, over the past financial year	1.2
2	Results of operations of the Company, its subsidiaries and companies under its control	5.1.5
3	Key financial and non-financial performance indicators relating to the Company's and the Group's specific businesses	Profile, ambition and strategy
4	Review of the business, results of operations and financial position (notably debt)	5.1, 5.2.1 and 5.2.2
5	Description of main risks and uncertainties (including the Company's exposure to financial and market risks)	2.1
6	Notes on the use of financial instruments and the Company's financial and market risk management policies and objectives	2.1.6
7	Significant events that have occurred since the end of the reporting period	Note 15 to the consolidated financial statements
8	Foreseeable developments	5.2.1 and 5.2.2
9	Research and development activities	1.1
10	Existing branches	Not applicable
11	Review of employee shareholding, share issues reserved for employees and of stock options and free shares granted to employees	6.3.4
12	Transactions by executives and related parties in the Company's securities	6.2.7
13	Non-financial performance reporting pursuant to the provisions of article L. 225-102-1 of the French Commercial Code	4.1.5
14	Shareholdings in companies with registered offices in France and representing over 1/20, 1/10, 1/5, 1/3, 1/2 or 2/3 of these companies' capital or voting rights	6.1.2, note 16 to the consolidated financial statements and note 1 (1.1) to the parent company financial statements
15	Transfer or disposal of shares undertaken to regularize cross shareholdings	Not applicable
16	Individual persons or corporate bodies holding directly or indirectly over 1/20, 1/10, 3/20, 1/5, 1/4, 1/3, 1/2, 2/3, 18/20 or 19/20 of the Company's share capital or voting rights at general shareholders' meetings/legal threshold disclosures	6.3.1, 6.3.2, 6.3.5 and 6.3.6
17	Injunctions or fines for antitrust practices	2.1 and note 11.2.2 to the consolidated financial statements
18	Calculation and results of adjustment of conversion bases or of exercising of securities giving access to capital and stock subscription or purchase options	3.5.2 and 6.2.6
19	Information on share buyback programs	6.2.4
20	Five-year financial summary	5.4.5

No.	Information	Reference
21	Dividends paid during the last three financial years and dividends eligible for the 40% tax rebate	6.4.7
22	Loans of less than three years granted by the Company, outside the scope of its main business activities, to micro-enterprises, SMEs or intermediate-sized enterprises and justified by the economic relations it has with the entities	Not applicable
23	Information on non-tax-deductible sumptuary expenses (article 223 *quater* of the French General Tax Code [*Code général des impôts*])	7.2.2
24	Details of trade payables and receivables (article D. 441-4 of the French Commercial Code)	5.4.4
25	Information on financial risks linked to climate change and measures taken by the Company to reduce them	2.1.3
26	Internal control and risk management procedures put in place by the Company, in particular those relating to the preparation and processing of accounting and financial information	2.2
27	Information on the Company's technological accident risk prevention policy, its ability to insure its civil liability in terms of property and people due to its operations in classified facilities, and resources provided to oversee the processing of victim compensation in the event of a technological accident for which the Company can be held liable	2.1.1 and 2.2.6
28	Anti-corruption system	4.6.2
29	*Plan de vigilance* (duty of care plan) pursuant to article L. 225-102-4 of the French Commercial Code	4.1.6
II	**ANNUAL FINANCIAL REPORT**	
1	Company financial statements	5.4.2 and 5.4.3
2	Consolidated financial statements	5.3.2 and 5.3.3
3	Statutory auditors' report on the parent Company financial statements	5.4.1
4	Statutory auditors' report on the consolidated financial statements	5.3.1
5	Management report	See I of this cross-reference table, and in particular sections 4, 5, 6, 7, 13, 16, 17 and III, 13 of this table
6	Board of Directors' report on corporate governance prepared in accordance with article L. 225-37, last paragraph of the French Commercial Code	See III of this cross-reference table
7	Declarations by the persons responsible for the annual financial report	8.1.2
8	Statutory auditors' fees	Note 14 to the consolidated financial statements
9	Statutory auditors' report on corporate governance prepared in accordance with article L. 225-235 of the French Commercial Code	5.4.1
III	**BOARD OF DIRECTORS' REPORT ON CORPORATE GOVERNANCE**	
1	Composition of the Board of Directors and diversity policy implemented including the principle of gender balance	3.2.1.1, 3.2.1.2 and 3.2.2.3
2	Conditions for the preparation and organization of the work of the Board of Directors	3.3.2 to 3.3.4
3	List of positions held and duties performed by each executive Director in all companies during the reporting period	3.2.1.3
4	Potential limitations imposed by the Board on the powers of the CEO	3.3.1
5	Agreements entered into between an executive Director or a significant shareholder and a Company subsidiary	Not applicable
6	Description and implementation of the procedure provided for in the second paragraph of article L. 22-10-12 of the French Commercial Code on assessing, on a regular basis, whether the agreements relating to ordinary operations entered into under arm's length conditions meet such conditions	3.2.3.5
7	Summary table showing the authorizations to increase the share capital currently in force	6.2.5
8	Company's management structure (only in the event of changes)	Not applicable
9	Where a Company voluntarily refers to a corporate governance code drawn up by business organizations: provisions that were disregarded and the reasons, as well as how the code may be consulted	3.1
10	Where applicable, the reasons for the Company disregarding all the provisions of a corporate governance code and rules respected in addition to legal requirements	Not applicable

No.	Information	Reference
11	Specific conditions for shareholder participation in general shareholders' meetings or referral to the provisions of the Articles of Association that provide for these conditions	6.5.1 and 6.5.2
12	Compensation policy for executive Directors as provided for in article R. 22-10-14 of the French Commercial Code	3.4.1.1 and 3.4.2.1
13	Information, as provided for in article L. 22-10-9 of the French Commercial Code, about each executive Director, including those whose term of office has expired and those who have been appointed during the last financial year	3.4.1.2 and 3.4.2.2
14	Factors likely to have an impact in the event of a public offering	
	Structure of the Company's capital	6.2.1 and 6.3.1
	Restrictions under the Articles of Association on the exercise of voting rights and share transfers, clauses of agreements brought to the Company's attention pursuant to article L. 233-11 of the French Commercial Code	6.5.2
	Direct or indirect interests in the Company's share capital, of which it is aware pursuant to articles L. 233-7 and L. 233-12 of the French Commercial Code	6.3.1, 6.3.2 and 6.3.4
	List and description of bearers of securities with special controlling rights	Not applicable
	Control mechanisms in place for an employee shareholding scheme where controlling rights are not exercised by the employees	Not applicable
	Agreements between shareholders of which the Company is aware and which can entail restrictions on the exercise of voting rights and share transfers	Not applicable
	Rules applicable to the appointment and replacement of members of the Board of Directors, and to amendments to the Company's Articles of Association	3.2.1.1, 3.2.3 and 3.3.2.2
	Powers of the Board of Directors, in particular regarding share issues and buybacks	3.3.1, 3.3.2.1, 6.2.4 and 6.2.5
	Company agreements which are amended or lapse in the event of a change of control (1)	1.4 and note 6.3 to the consolidated financial statements
	Compensation agreements for members of the Board of Directors or employees who resign or are made redundant without just cause or who are terminated as a result of a public offering	3.4.2.1 and 3.4.2.2
15	Free share allocation and holding requirements for executive directors	3.4.2
IV	OTHER DOCUMENTS	
1	Statutory auditors' special report on related-party agreements	7.1
2	Proposed agenda for the annual general meeting of 15 May 2024	7.2.1
3	Proposed resolutions submitted to the annual general meeting of 15 May 2024	7.2.2
4	Board of Directors' report to the combined annual general meeting of 15 May 2024	7.3
5	Statutory auditors' report on the issue of shares and/or various securities with or without cancellation of preferential subscription rights	7.4
6	Statutory auditors' report on the issuance of ordinary shares and/or marketable securities reserved for employees subscribing to a company savings plan	7.5
7	Declaration that the social and environmental information required in the management report has been properly disclosed in accordance with legal and regulatory commitments	4.7.8

(1) *Except if this disclosure, other than where required by law, would have a significant negative impact on the Company's interests.*

Glossary

Term	Definition
Acrylic acid	An acid derived from propylene and mainly used as an intermediate in the preparation of superabsorbents and derivatives used in the manufacture of paints, inks or adhesives.
AIMS	Arkema Integrated Management System, an audit system that includes the Group's own requirements as well as those featured in standards endorsed by the Group, such as ISO 9001, ISO 14001 and OHSAS 18001. In order to obtain external certifications, AIMS audits are conducted by mixed teams made up of Group auditors and auditors from a third-party accreditation body.
CEFIC	The European Chemical Industry Council.
CO_2	Carbon dioxide.
CoRAP	The European Union's Community Rolling Action Plan, part of REACH.
VOC	Volatile organic compound.
COD	Chemical oxygen demand, a parameter for measuring water pollution by organic materials, the decomposition of which consumes oxygen.
Debottlenecking	A modification made to an industrial facility in order to increase production capacity.
Seveso III Directive	European directive no. 2012/18/EU of 4 July 2012 on the control of major-accident hazards involving dangerous substances.
EBITDA	Recurring operating income (REBIT) plus recurring depreciation and amortization of property, plant and equipment and intangible assets, the computation of which is detailed in note 4 to the consolidated financial statements in this document.
ECHA	The European Chemicals Agency, which is responsible for overseeing the REACH system.
EFPI (Environmental Footprint Performance Indicator)	The intensive indicator used by the Group to offset the impact of changes in production scope or volume and to monitor changes in its environmental performance with respect to the Group's 2030 targets compared with 2012.
Emulsions	Binders for paints, adhesives and varnishes produced by polymerization of monomers (acrylic, vinyl and other) and forming a stable dispersion in water of polymer particles which, coated and dried, form a continuous film.
SDS	Safety Data Sheet.
Recurring cash flow	Free cash flow excluding exceptional items (non-recurring cash flow and exceptional capital expenditure).
Free cash flow	Cash flow from operations and net investing activities excluding the impact of portfolio management, the computation of which is detailed in note 4 to the consolidated financial statements in this document.
Non-recurring cash flow	Cash flow from other income and expenses as described in note 5.1.5 to the consolidated financial statements in this document.
GHG	Greenhouse gas.
GHS	The Globally Harmonized System of Classification and Labeling of Chemicals, a major United Nations initiative designed to harmonize the various chemical classification and labeling standards used in different countries.
HCFCs	Hydrochlorofluorocarbons.
HF	Hydrofluoric acid.
HFCs	Hydrofluorocarbons; hydrogen-, carbon- and fluorine-based products that are mainly used in refrigeration as substitutes to chlorofluorocarbons (CFCs), following the introduction of the Montreal Protocol.
HFOs	Hydrofluoorolefins, refrigerants with lower global warming potential. They are distinguished from HFCs by the presence of at least one carbon-carbon double bond and constitute the new generation of fluorogases.
Hydrazine hydrate	A nitrogen-, hydrogen- and water-based product used as an intermediate in agrochemicals, pharmaceuticals, chemical synthesis, water treatment and blowing agents for plastics and elastomers.
ICCA	The International Council of Chemical Associations.
Absolute indicator	An indicator expressed in absolute value (in tonnes of emissions, in millions of cubic meters or terawatt hours of consumption).
Intensive indicator	An indicator of intensity relative to production volumes.
Initiators	Products used to initiate chemical reactions.

Term	Definition
Incentive scheme in France	A scheme set up to complement the profit-sharing plans required under French law in all of the Group's companies in France. It gives all employees a share of Group profits and provides incentives to meet certain performance objectives that promote the Group's growth. Schemes vary from subsidiary to subsidiary but most are based on the same principles. Incentives consist of (i) a bonus based on economic results, and (ii) a performance bonus defined by each facility in line with its specific objectives.
Exceptional capital expenditure	A very limited number of investments that the Group presents separately in its financial reporting due to their unusual size or nature, the amounts of which are detailed in note 4 to the consolidated financial statements in this document.
IRT	*Institut de recherche technologique*, a French technological research institute.
ISO 14001	An international standard that defines the criteria for introducing an environmental management system in companies.
REBIT margin	Recurring operating income as a percentage of sales.
Mercaptans	Thio-alcohols and phenols.
SPOM	Suspended particulate organic matter present in water that can be recovered by physical or mechanical means, such as filtration and sedimentation.
Methyl methacrylate	An essential raw material in the manufacture of polymethyl methacrylate (PMMA) sheets and pellets. Methyl methacrylate is also used in the fields of acrylic emulsions and plastic additives.
Impact modifiers	Additives introduced into certain products, in particular PVC, to make them more impact-resistant.
Non-woven	Textiles whose fibers are aligned in a random fashion.
NOx	Nitrogen oxides.
OECD	Organization for Economic Co-operation and Development.
SDGs	The Sustainable Development Goals, also known as the Global Goals, a United Nations worldwide initiative to end poverty, protect the planet and ensure peace and prosperity for all (UN definition).
ODP (Ozone Depletion Potential)	An index measuring the impact of a given mass of gas in terms of contribution to the depletion of the ozone layer, expressed in relation to the impact of a chlorofluorocarbon.
Organic peroxides	Oxidizing organic products used as initiators for polymerization and as crosslinking agents.
PMMA	The ISO code for polymethyl methacrylate.
Polyamide	A polymer obtained by the reaction of a diacid on a diamine, or from the polymerization of a monomer with both an acid and an amine function.
Polyamide 11 (PA 11) and polyamide 12 (PA 12)	Thermoplastic polyamides, whose monomers have 11 and 12 carbon atoms, respectively.
Polyethylene	A plastic obtained by the polymerization of ethylene.
Polymers	Products made by polymerization.
Polymerization	The union of several molecules of one or more compounds (monomers) to form a large molecule.
Polyphthalamide (PPA)	A thermoplastic material from the polyamide family, obtained by polymerization of aromatic diacids and aliphatic diamines, and characterized by a high melting point and high mechanical rigidity.
PPRT	Technological Risk Prevention Plan (*plan de prévention des risques technologiques*), a government designed and implemented plan introduced by French Law no. 2003-699 of 30 July 2003 and the relevant implementing decrees, which strengthened the obligations imposed on companies operating Seveso sites in France. PPRTs aim to control urban development around potentially dangerous sites and to limit the impact of potential accidents.
Kyoto Protocol	An international agreement, entered into by 84 countries on 11 December 1997 in Kyoto (Japan), which was intended to supplement the May 1992 United Nations Framework Convention on Climate Change (UNFCCC). The Kyoto Protocol entered into effect on 16 February 2005.
PSE	Process safety event.
PVC	The ISO code for vinyl polychloride or polyvinyl chloride.
PVDF	The ISO code for polyvinylidene fluoride.

Term	Definition
REACH (Registration, Evaluation and Authorization of Chemicals)	Regulation (EC) no. 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the registration, evaluation, authorization and restriction of chemicals.
RCMS	The Responsible Care® Management System.
REBIT	Recurring operating income, the computation of which is detailed in note 4 to the consolidated financial statements in this document.
Responsible Care®	A voluntary initiative by the world chemical industry to achieve continuous progress in safety, health and environment, managed in France by the UIC under the name *Engagement de progrès®* (Commitment to progress).
Photocure resins	Synthetic resins that harden under the effect of ultraviolet light.
Crosslinking	The process by which transverse bonds are created to change a linear polymer into a tridimensional polymer.
Return on average capital employed (ROACE)	Recurring operating income (REBIT) of year Y over average capital employed at the end of years Y and Y-1.
ROCE	Recurring operating income (REBIT) of year Y over capital employed at the end of year Y, the computation of which is detailed in note 4 to the consolidated financial statements in this document.
Spin-Off of Arkema's Businesses	The transaction that is the subject of the prospectus received from the French financial markets authority (*Autorité des marchés financiers* – AMF), visa no. 06-106 on 5 April 2006.
SO_2	Sulfur dioxide.
SOx	Sulfur oxides.
SVHC	Substance of Very High Concern, a chemical substance that has been placed on the candidate list for authorization under REACH.
EBITDA to cash conversion rate	Recurring cash flow divided by EBITDA, the computation of which is detailed in note 4 to the consolidated financial statements in this document.
Payout ratio	Dividend per share over adjusted net income per share.
Molecular sieves	Synthesized mineral products used to purify liquids and gases due to their ability to selectively retain molecules of a gas or of a substance in solution or suspension.
Surfactants	Compounds that increase the spreading and wetting properties of a liquid by lowering its surface tension.
UIC	*Union des industries chimiques* (Union of Chemical Industries). The professional body of the chemical industry in France.

Design and production

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