Preparing for the future
Smarter steels for people and planet
About this report

Our Integrated Annual Review 2023 describes our progress and performance in operating as and building a sustainable business. Sustainability and responsibility are at the heart of our purpose – smarter steels for people and planet – and this review reflects this by outlining our key challenges and opportunities, in creating value for our stakeholders, both financially and in environmental and social terms.

This review covers the 12 months from 1 January 2023 to 31 December 2023. It reflects scope and segmentation as reported by the company until 31 December, 2023. In March 2024, ArcelorMittal announced new segmental reporting applied from 1 January, 2024.

In this year’s review, we have purposefully continued to evolve our reporting to be more factual and structured, in line with the Corporate Sustainability Reporting Directive (CSRD) requirements.

We do cover our achievements, but also seek to give an honest account of the challenges we face.

The review aims to report to our stakeholders on the management and governance systems we have in place to monitor and address our performance and compliance (governance); the strategic priorities and actions we are taking to build and protect value (strategy); the ways in which we identify, minimise and mitigate risks as a business (risk management); and the measurable progress we have been making against specific key performance indicators (KPIs) (performance).

We continue to reflect the guiding principles of the most respected and influential third-party organisations and frameworks relating to sustainability, and these are reviewed in the respective chapters.

To read our other reports please use the links below:
- Reporting Index
- Fact Book
- Basis of Reporting

annualreview2023.arcelormittal.com

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Forward-looking statements
This document may contain forward-looking information and statements about ArcelorMittal and its subsidiaries. These statements include financial projections and estimates and their underlying assumptions, statements regarding plans, objectives and expectations with respect to future operations, products and services, and statements regarding future performance. Forward-looking statements may be identified by the words ‘believe’, ‘expect’, ‘anticipate’, ‘target’ or similar expressions. Although ArcelorMittal’s management believes that the expectations reflected in such forward-looking statements are reasonable, investors and holders of ArcelorMittal’s securities are cautioned that forward-looking information and statements are subject to numerous risks and uncertainties, many of which are difficult to predict and generally beyond the control of ArcelorMittal, that could cause actual results and developments to differ materially and adversely from those expressed in, or implied or projected by, the forward-looking information and statements. These risks and uncertainties include those discussed or identified in the filings with the Luxembourg Stock Market Authority for the Financial Markets (Commission de Surveillance du Secteur Financier) and the United States Securities and Exchange Commission (the ‘SEC’) made or to be made by ArcelorMittal, including ArcelorMittal’s latest Annual Report on Form 20-F on file with the SEC. ArcelorMittal undertakes no obligation to publicly update its forward-looking statements, whether as a result of new information, future events, or otherwise.

Non-GAAP/Alternative performance measures
This document includes supplemental financial measures that are or may be non-GAAP financial/alternative performance measures, as defined in the rules of the SEC or the guidelines of the European Securities and Market Authority (ESMA). They may exclude or include amounts that are included or excluded, as applicable, in the calculation of the most directly comparable financial measures calculated in accordance with IFRS. Accordingly, they should be considered in conjunction with ArcelorMittal’s consolidated financial statements prepared in accordance with IFRS, including in its annual report on Form 20-F, its interim financial reports and earnings releases. Comparable IFRS measures and reconciliations of non-GAAP/alternative performance measures thereto are presented in such documents, in particular the earnings release to which this presentation relates.
Overview and highlights
ArcelorMittal at a glance

Performance highlights

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<th>Ebitda1</th>
<th>Steel shipments2</th>
<th>Free cash flow3</th>
<th>Adjusted net income4</th>
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Net debt

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Non-financial results in 2023

<table>
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<th>CO2e intensity (steel Scope 1+2+limited Scope 3)7</th>
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<th>Women in management (managers and above)</th>
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1. Ebitda definition applied until Dec 31, 2023 – operating results plus depreciation, impairment items and exceptional items. In March 2024, ArcelorMittal has announced a new definition of Ebitda and new segmental reporting applied from Jan 1, 2024. For more details see the press release.
2. Based on the ArcelorMittal portfolio in the reporting year.
3. Free cash flow (FCF) refers to net cash provided by operating activities less capex less dividends paid to minority shareholders.
4. Adjusted net income(loss) refers to reported net income/(loss) excluding impairment charges and exceptional items (including with respect to the income from associates, JV and other investments), and impact on disposal of Kazakhstan operations.
5. For the definition see the Basis of Reporting.
6. Each year health and safety data we publish is provisional with the best available data at the time of publication.
7. CO2e intensity (Steel) – the same boundary as figures in the Fact Book, for details on how it is calculated see the Basis of Reporting.
8. The same boundary as figures in the Fact Book, for details how it is calculated see the Basis of Reporting.

Full performance data in our Fact Book
Welcome to ArcelorMittal’s 2023 Integrated Annual Review

Dear stakeholders,

Our Integrated Annual Review aims to provide our stakeholders with a clear understanding of how we manage our business, and how we seek to build and protect value in a sustainable and responsible way. We provide an overview of the company’s performance, against our broader strategic objectives and against our sustainability goals. We seek to highlight the most material issues to our stakeholders, and how we are addressing the risks and opportunities presented to us, both now and in the longer term. The review takes account of our focus on safety, our progress on decarbonisation, our people values, how we aim to work with our local communities, our engagement with our value chain, and our growing efforts to work sustainably within the natural environment.

2023 has been a year of progress for the company in its transitioning objectives to achieve its emission reduction targets for 2030 and 2050 and in its preparation for reporting against new sustainability legislations. We have also been advancing on our diversity and inclusion (D&I) roadmap, aimed at building mutual engagement, delivering a flow of new ideas, and increasing productivity to enable a high-performing organisation.

Fundamental safety review
The safety of our people is one of our core values, and I must therefore start by referring to the tragic disaster which took place at the Kostenko mine in Kazakhstan. We have been shocked by the loss of so many colleagues, and the impact this has had on their families, friends and local communities. We have made every effort to support the affected employees and families. Following the accident, the Executive Office, supported by the Board, decided to commission a comprehensive third-party audit of our safety policies and practices worldwide. We are striving towards being free from fatalities and serious injuries across the group. Outside of Kazakhstan we have made positive progress, and our move towards a ‘predict and prevent’ culture, and implementing tailored risk control and mitigation strategies, is starting to show promising results. I look forward to being able to report further progress towards our safety objectives this time next year. We anticipate the conclusions of the review will provide clear steps that we need to take.

Decarbonisation and moving towards circularity
We have continued to progress with developing and investing in the breakthrough technologies for our sector and with our decarbonisation programme this year, with several of our major projects moving from their pre-FEED (preliminary phase of the front-end engineering design) stages to their detailed design and costing stages (FEED). We look forward to advancing these to completion, as they will make a major contribution to our carbon reduction targets.

This year our teams have also worked closely to better understand our Scope 3 emissions in more detail, and I am pleased to share that we are now starting to engage more closely with our suppliers and customers on how we jointly reduce Scope 3 impacts, in line with our 2030 and 2050 carbon emissions targets.

We are also increasing our low-carbon emission steel offerings through our XCarb® branded products in response to the increased demand for low-carbon solutions from major sectors such as automotive and construction. We are undertaking several initiatives towards building strong circularity business models and solutions for our customers.

To support our decarbonisation journey, we have made some exciting investments in steel and other metals recycling businesses to increase our access to scrap, and are reusing or recycling our own waste products such as waste steel gas, slags and dusts where practically possible.

R&D and innovation
Developing smarter steels sits at the heart of our purpose. In 2023, we invested $299m in our R&D activities – maintaining our position at the forefront of steel innovation is critical to our future, not only for the energy transition. This includes a lot of work on decarbonisation, environmental abatement technologies, business optimisation...
through AI, digitalisation and fast-growth steel technologies such as additive manufacturing. Our XCarb® Innovation Fund has built up an impressive portfolio of breakthrough technologies aimed at the transition to carbon neutral steelmaking, with key investments such as Boston Metal, focused on steel electrolysis, showing real potential to transform the industry.

**Diversity, talent and the Just Transition**

Building the diversity of our people, and the talents and skills they hold is very important to the future of the company. In 2023, we made good progress in advancing our Diversity & Inclusion (D&I) roadmap, and we are making progress on a number of our diversity KPIs. We are putting in place the structures and systems for improved gender diversity, and we now need to make it happen in practice at all levels of the company. We report here on the various schemes and initiatives we have in place to promote this change.

In a very competitive job market, we have continued our campaigns to promote the exciting career opportunities within the company, together with the structures and resources we have in place, such as the ArcelorMittal University, to develop the talents and opportunities of our existing employees.

The energy transition will require a fundamental change in how we work, in the nature of our assets, and the skills and know-how we employ. From where we stand now, we will increasingly become a technology-led company. We need to build those capabilities amongst our people, and in our communities, minimising and mitigating any inequalities along the way, such that it is a constructive and positive future for them, in which no-one is left behind. Our new Just Transition Framework and strategy, based on the EU’s Green Deal, seek to achieve this balanced way forward.

**Strong financial performance and platform for transformational growth**

Despite a year of continuing global economic and geopolitical challenges, including the substantial impact of conflict on our people and assets in Ukraine, we have nevertheless reported a strong financial performance and a good level of profitability. We have a robust balance sheet and liquidity providing us with considerable protection and flexibility for value accretive investment opportunities and M&A.

Following a period of asset optimisation and strategic investment, the company is on the verge of a transformative change in profitability, with a range of new strategic projects expected to come on stream by the end of 2026.

As we complete the second year after the invasion of Ukraine, we once more express our admiration for the courage and resilience of our colleagues there, in what has become a much longer conflict than was anticipated. We are continuing to help our people and their families in whatever way we can, and we hope for a swift resolution.

In conclusion, I would like to thank the Board of Directors, the Management Committee and all our employees for your contributions and commitment during 2023. Despite the external challenges we have faced and those that we are addressing internally, most critically safety, I am confident that we are well placed, as we enter 2024, for a period of sustained growth, as our long-term investment plans in decarbonisation and low-carbon steel start to deliver returns.

Lakshmi N. Mittal
Executive chairman

Sinter plant waste gas recycling, Ghent
Overview and highlights continued
Chief executive officer’s statement

Welcome from the chief executive officer

Dear stakeholders,

Although there is much positive to report about the activities of the group, these developments were unfortunately completely overshadowed by our safety performance – and in particular the accident that occurred on 28th October in our Kostenko mine, in Kazakhstan. I recognise that for most people reading this report, safety is likely the most important issue on the agenda. I want you to know that I share this focus.

Mobilising the organisation to deliver zero accidents

In December 2023, we launched a comprehensive independent safety audit that is expected to deliver findings in the latter part of the year. While we carry out audits on a regular basis, none have been as exhaustive or ambitious in their scope and reach. By the end of September 2024, we expect to have audited our fatality prevention standards across more than 170 sites, assessed the effectiveness of our process risk management systems across a range of installations, and tested the resilience of our policies, processes and governance framework, underpinned by interviews with hundreds of employees from the shop floor to leadership.

Combined, this will provide us with a substantial amount of information as well as specific recommendations on how to tighten and intensify our actions to improve results.

We recently published a first interim update on the work completed in the independent audit so far. We have also added new safety disclosures to this IAR, including the Fatality Frequency Rate (FFR) of our own employees and contractors. Following the sale of ArcelorMittal Temirtau, we also no longer operate any underground coal mines.

Ultimately, of course, it is the result that matters. I do want to highlight that there is evidence of encouraging improvement in several segments, including NAFTA, Brazil and Mining. Excluding Kazakhstan, our FFR was 30% lower than the World Steel Association industry average for 2014 to 2022. I sincerely hope that this year we will be able to demonstrate to you through our results that we have turned the corner in a meaningful and sustainable way. Across the organisation from shop floor to leadership, our people are galvanised to believe in and strive for zero fatalities.

Safety underpins excellent performance generally

The benefits of running assets safely are widespread. The safest assets reflect not only an excellent safety culture, but more broadly a culture of care and attention to every detail, where employees speak up, support each other and work together as a team to embrace opportunities and successfully confront challenges. This is the culture we need across all our operations if we are to deliver on our purpose of ‘smarter steels for people and planet.’

It is a purpose and responsibility we take very seriously. The long-term outlook for steel is incredibly positive. The world will need more steel, not less, as it continues to both grow and decarbonise. Steel has a comparatively low-carbon footprint compared with other materials. It is nearly 100% recyclable, and it will be used to build much of the infrastructure for the low-carbon economy.

At ArcelorMittal this future inspires us. But we also recognise that we need to evolve and continually enhance our business operations to ensure we meet the ever-evolving expectations from our stakeholders. And that means investment.

Maintaining world-class steel and mining assets is capital intensive. Therefore, our ability to continue to invest not only to maintain our assets but to transform them for the future, relies on being a healthy, profitable business, generating consistently strong levels of free cash and maintaining a strong balance sheet. In 2023, Ebitda1 was lower at $7.6bn but we consider this a good performance in market conditions that became increasingly challenging as the year progressed. This is also reflected in the Ebitda per tonne of $136, reflecting structurally improved profitability. Importantly cash flow remained strong at $2.9bn, and we continue to have a very low level of net debt at $2.9bn. Our adjusted net income2 was $4.9bn.

1. Ebitda definition applied until Dec 31, 2023 – operating results plus depreciation, impairment items and exceptional items. In March 2024, ArcelorMittal has announced a new definition of Ebitda and new segmental reporting applied from Jan 1, 2024.

2. Adjusted net income(loss) refers to reported net income(loss) excluding impairment charges and exceptional items (including with respect to the income from associates, JV and other investments), and impact on disposal of Kazakhstan operations.
In 2023, we invested US$1.4bn out of a total US$4.6bn capital expenditure in strategic growth initiatives.

We have a lot of exciting growth opportunities ahead of us. This year there will be a further investment of approximately the same, e.g. $1.4bn out of an expected total capital expenditure of $4.5 – $5.0bn. These growth projects are expected to support an estimated additional $1.8bn to Ebitda by the end of 2026.

This year we will see some major projects coming online. In the steel side of the business these include the cold rolling mill complex at Vega in Brazil, the first phase of new electrical steels capacity in Europe and the new Electric Arc Furnace at AM/NS Calvert in Alabama. In our mining operations, we will have additional capacity at the Serra Azul and Barra Mansa mines in Brazil, as well as the first iron-ore concentrate in Liberia. In India, 2024 is expected to see 1GW of renewable power capacity commissioned from our strategic energy partnership with Greenko Group.

Also in India, our joint venture with Nippon Steel, AM/NS India, is progressing very well. The expansion to ~15Mt capacity is on track for completion in 2026, with planning completed for a further expansion to 20 million tonnes and under preparation for 24 million tonnes.

Growing responsibly

We are mindful as we grow that we must do so responsibly, and this starts with reducing our CO₂ emissions in-line with our 2030 and 2050 targets to ultimately achieve net-zero. For hard to abate sectors like steel, this will not be a linear decline. You will see only a marginal decrease in our CO₂ emissions this year compared with last year. In 2023, our adjusted group intensity target KPI was 197tCO₂e/tcs compared with 204tCO₂e/tcs in 2022. The significant reductions will come when alternative technologies become economically viable. Accelerating when we reach that point is what we must collectively work towards.

Fundamentally low-carbon steel-making requires clean energy and low-carbon metallics as well as alternative steel-making technologies. ArcelorMittal is not an energy company but we have now made a series of investments into renewable projects which both support the decarbonisation of our steelmaking assets and offer an attractive return on investment. Simultaneously we are also investing in securing the low-carbon metallics we will require as the technology continues to switch towards DRI-EAF. We have purchased three scrap companies, an HBI plant in Texas and are investing significantly in transforming the product of our Mines Canada operations towards DRI pellets.

Important progress has also been made in the execution of our planned investments in 2023. Our DRI/EAF projects are progressing through front end engineering and design. We have signed contracts for a new 1.1Mt EAF at Gijón which will decarbonise the long business in Spain. We have also signed a letter of intent with EDF for a long-term agreement to supply low-carbon emissions power for our key French operations.

I must also highlight the very positive evolution of our low-carbon steel offerings through our XCarb® brand. Sales of our XCarb® products, which can have a carbon footprint of as low as 300kgCO₂/t, reached 229,000 tonnes in 2023. While this is still a tiny percentage of our overall volumes produced, we believe it is more than any other steel company. Our ability to make these steels available now is supported by the fact that we benefit from a very broad portfolio of technologies across our group encompassing electric arc furnaces, DRI plants as well as integrated steel assets.

At ArcelorMittal, we are determined to ultimately achieve net-zero. But we are also determined to ensuring that our business is profitable with a good return on investment. Given the reality that low-carbon steelmaking is more expensive, and likely to remain more expensive for some time, policy support is absolutely critical to enable the industry to invest confidently for a low-carbon profitable future. And this is not moving quickly enough.

We are continually asked to set targets that are aligned with 1.5°C, and yet the stated government policies as of today imply a 2.9°C increase (reference: United Nations Emissions Gap Assessment Report, 2023). We have spent a considerable amount of time in the last few years engaging with the Science Based Targets Initiative (SBTi) as they developed a steel sector methodology. We appreciate the work that SBTi has done to model a 1.5°C trajectory for steel. After much discussion and consideration, we have concluded that in the absence of an appropriate global policy, we are not in a position to credibly set a science-based aligned group target at this point in time. We will provide a more detailed update on all climate-related matters in our Climate Action Report 3, which we hope to publish before the end of this year. In the meantime, we continue to partner with all our stakeholders to drive forward the potential to accelerate low-carbon steelmaking globally.

Climate is our most material environmental issue

Climate is our most material environmental issue, but not our only one. We continue to work towards improving the environmental performance of all our plants. The environmental footprint of our group has improved quite considerably following the exit from Kazakhstan, as this was our most challenging asset. But there are opportunities for improvement everywhere. To complement broader environmental plans, five-year improvement plans are now being designed which define improvement actions compared with benchmarks for existing environmental criteria. In 2023, the Investment Allocation Committee approved expected capital expenditure totalling $291m for 26 projects with environmental benefits.

In preparation for the enhanced CSRD reporting, we also published an updated environmental policy, which provides the environmental framework within which all parts of the business are expected to operate.
Environmental performance is one of the many areas in the group that will be heavily impacted by Artificial Intelligence in the coming decades. We have started applying advanced artificial intelligence tools to analyse environmental data captured at our Tubarao plant in Brazil. This should enable us to have a better understanding of emission sources and factors that can have an impact both in generation and mitigation including meteorological conditions. Particular advances are being made in diffuse dust detection through our I-See emissions assessment programme, using visual camera and LiDAR, with the intention of rolling out the technology across the group by 2025.

We have also made progress with our tailings management framework, which is based on the leading industry guidelines from the Mining Association of Canada (MAC), the Canadian Dam Association (CDA) and the Global Industry Standard for Tailings Management (GISTM). Our aim is to ensure that all group tailings facilities are structurally sound and safe, with all efforts directed at minimising risk, including independent audits benchmarked against these international guidelines and independent reviews.

People: at the heart of our success
Nothing is possible without our people – the 150,000 employed directly in our operations and the additional contractors who join them for specific projects. We have to work purposefully to ensure that we continue to attract the best and brightest engineers and talent into our company. The workplace, and employees’ expectations of the workplace, continue to change. We need to have a people strategy that understands and reflects this. We continue to make good progress at embedding our people strategy that was launched in 2022 and is founded on three pillars: developing leadership that inspires excellence; attracting and developing talent to thrive for the future; and engaging all our workforce through implementing our D&I roadmap. Underpinning all three is a culture that motivates and inspires people to make a difference, where they can grow both professionally and personally, and where they can develop new ideas and succeed. This culture also needs to be demonstrably caring and look after the well-being of individuals, embracing diversity and inclusion and creating leaders that are role models for all employees living our values of safety, sustainability, quality and leadership in everything they do.

In closing, I would also like to take this opportunity to thank our Board of Directors for their advice, wisdom and counsel which is invaluable in helping us develop, shape and execute our strategy on all fronts, and all employees of ArcelorMittal for the role you all play in keeping us at the forefront of our industry.

As this review makes clear, there is a great deal of activity underway as ArcelorMittal continues to evolve, adapt and progress to ensure future success. I look forward to a productive and successful year as we continue to pursue the many opportunities to grow and improve the company.

Aditya Mittal
Chief executive officer

Inspecting production line, Liège, Belgium
A message from the chief financial officer

Dear stakeholders,

Despite a year of ongoing challenges from regional conflicts, inflationary pressures and subdued apparent demand due to customer destocking, we delivered a robust financial performance and strong levels of cash flow. The substantial investment programme we have put in place is set to deliver sustainable growth over the next few years, which will provide a strong platform for the onward development of our company.

Solid financial performance in a cyclical market

Our financial results for the full year 2023 reflect the benefits of the structural improvements we have made to our cost base, asset portfolio and balance sheet in recent years. Despite the operating environment becoming increasingly challenging as the year progressed, our profitability per tonne was healthy and well above long-term averages. This highlights the enhanced sustainability we have built into the business, enabling us to generate healthy cash flow to invest for future growth, and return attractive levels of capital to our shareholders.

Sales for the 12 months to the end of 2023 decreased by 14.5% to $68.3bn as compared with $79.8bn for 2022, primarily due to 13.5% lower average steel selling prices internationally, whilst shipments were relatively stable. Full year Ebitda1 was $7.6bn. Our Ebitda/tonne of $136/t, reflects structural improvements to our profitability when compared with our 10-year, long-term average. This is an important reference as it demonstrates the progress we have made in recent years to enhance the inherent strength of our business.

Net income of $0.9bn includes a negative $2.4bn impact related to the disposal of the Kazakhstan operations and a $1.4bn impairment of Acciaierie d’Italia (ADI) in Italy. Adjusted net income therefore was $4.9bn – which includes a $1.2bn contribution from joint ventures (JVs), most notably from our Indian joint venture which continues to perform well and is on track to increase its capacity to 15m tonnes by early 2026.

We are protecting our performance through the Value Plan programme that we commenced in 2022. We still have around $600m of efficiencies to capture, with the main objective of heading off the impact of inflationary pressures on fixed and maintenance costs.

Our financial strength is evidenced in our balance sheet: net debt of $2.9bn at the end of 2023 (gross debt of $10.7bn, and cash and cash equivalents of $7.8bn) as compared with $2.2bn at the end of 2022. As of December 31, 2023, the company had liquidity of $13.2bn consisting of cash and cash equivalents of $7.8bn and $5.4bn of available credit lines. This gives us considerable flexibility for value-accretive investment opportunities and supports our shareholder returns programme.

Well positioned for transformative growth

Following a period of asset optimisation and strategic investment, the company is on the cusp of a period of enhanced and sustainable growth in profitability.

Our strategic investments are estimated to add approximately $1.8bn to Ebitda growth by the end of 2026. New projects expected to be commissioned in 2024 include: the cold rolling mill complex at Vega, additional capacity at Serra Azul mine and new section mill at Barra Mansa (all in Brazil); the first phase of new Electrical Steels capacity in Europe; the first iron ore concentrate in Liberia; 1GW of renewable power capacity in India; and the new EAF at AM/NS Calvert (US). In addition, the expansion of the AM/NS India Hazira plant to circa 15Mt capacity (Phase 1A) is progressing well and on track for completion in 2026, with phase 1B expansion capacity to 20Mt planned, and ambitions to grow further in the long-term.

The combination of our existing robust financial performance, and this additional injection of earnings capacity, provide a strong platform for moving into a sustained period of growth.

1 Ebitda definition applied until Dec 31, 2023 – operating results plus depreciation, impairment items and exceptional items. In March 2024, ArcelorMittal has announced a new definition of Ebitda and new segmental reporting applied from Jan 1, 2024.
Ongoing progress with decarbonisation

We continue to make progress in our decarbonisation programme. In Europe and Canada, we are well into the front-end engineering design (FEED) stage of our DRI/EAF transition projects and expect this to complete towards the latter stage of this year. After completing the FEED stage, we will have clarity on the total capex, industrial layout and installation schedule for these projects. While FEED is ongoing, we are continuing our discussions with host governments over energy cost and availability, which is critical to ensure these projects are sustainable long-term. Recently, we have signed a Letter of Intent with EDF for a long-term agreement to supply low-carbon emissions power for our key French operations.

Over the course of 2023, we have also progressed renewable projects in Argentina, India, Brazil and South Africa. We have also announced plans to build an industrial-scale direct electrolysis plant (Volteron™) and we have been advancing smart carbon projects in Ghent and Dunkirk (Carbon Capture and Storage pilots and the Steelanol and Torero plants).

To better reflect the profile of our business, we have made changes to our new reporting segmentation which includes creating a new ‘Sustainable Solutions’ segment. It will be composed of a number of high-growth, niche, capital-light businesses playing an important role in supporting climate action (including renewables, special projects and the construction business), which have previously been reported within the Europe segment, and which will now report separately. We have also been working to ensure compliance with the new regulations which are transforming the way global multinational companies listed in the EU (and potentially the US) disclose the environmental and social impacts on their business and value chains. This includes climate change. During the year, we developed methodologies to move from our previous qualitative assessment to a quantitative and financial assessment of the impacts of the climate-related risks and opportunities. This has included looking at both physical and transition risks, and the screening of our assets, and key joint ventures using best-available climate models against a more comprehensive list of climate hazards, to implement the EU Taxonomy requirements and CSRD.

We expect to publish our next Climate Action Report (CAR 3) later this year which will provide a more comprehensive update on our decarbonisation progress, challenges and next steps.

Progressive capital allocation and shareholder returns

The company’s defined capital allocation and return policy is working well, and is allowing us to develop and significantly grow earnings capacity whilst consistently rewarding shareholders.

In addition to this year’s proposed dividend increase, the company will continue to return a minimum 50% of post-dividend free cash flow to shareholders through its share buyback programme. 48.5m (as of 25 March, 2024) of the planned 85m shares have already been bought back and we expect to complete the buyback programme by May 2025.

Outlook

Apparent demand conditions internationally are now showing signs of improvement as the destocking phase reaches maturity. Despite continued headwinds to real demand, world ex-China steel consumption in 2024 is expected to grow by 3 to 4% as compared with 2023. We are anticipating some degree of market recovery in the US, supported by the Inflation Reduction Act programme. Elsewhere, India is expected to show another strong year of consumption growth, with a gradual rebound in Brazil and an end to destocking in Europe, allowing some improvement in the market backdrop.

The company is positive on the medium to long-term steel outlook and, supported by its strong financial position, is focused on delivering on its transformative investment projects on time and on budget.

Genuino M. Christino
Executive vice president – Chief financial officer
Our business and material issues

In this year’s review we have continued to evolve our reporting to be more factual and structured, presenting a more balanced approach to our reporting, in line with the new disclosure requirements.

We do cover our achievements, but also give an honest account of the challenges ahead and the significant strides we need to take to deliver our part in creating a more sustainable future.

Integrated reporting ensures that we track our performance in detail on key aspects of social, environmental and governance behaviour and compliance. Identifying the issues that are most material to our stakeholders is critical to our strategic thinking and planning, and our engagement with these groups. This approach and discipline keeps the business focused on delivering not just financial value, but wider benefits to our people, the communities within which we work, and the environment of which we are a part.

Nicola Davidson
Vice President, communications and sustainable development
Chapter 1 – Our business and material issues

Our approach to reporting

Moving towards the new disclosure requirements
In January 2023, the Corporate Sustainability Reporting Directive (CSRD) entered into force. And this is the second review in which we have sought to reflect the guidance and direction of the CSRD. We have mapped our own material issues against CSRD topics and reported on governance, strategy, risk management and performance in each chapter to explain and highlight our progress during the year. This approach is intended to bring more transparency and consistency to our reporting, that of our peers, and across all industries and sectors, for the benefit of stakeholders and the wider public.

EU Taxonomy
Since 2023, companies need to report on the proportion of their turnover, capex and opex that is EU Taxonomy aligned for climate change mitigation and climate change adaptation. We have undertaken more work on this during the year, and we outline our progress in the EU Taxonomy report in the Annex to this publication.

Mapping the approaches
The new disclosure requirements demand a highly structured, data-led approach, which involves developing the capabilities, resources, expertise and systems to track large volumes of critical data.

To help readers navigate our current approach and make referencing to previous reports easier, at the start of each chapter, we have created a device that summarises how the content for that chapter broadly relates to (a) CSRD’s disclosure requirements, and (b) the UN SDGs (Sustainable Development Goals).

Chapter focus areas

Governance
How we govern issues, management’s role in assessing and managing the issue, policies we have in place and their objectives.

Strategy
Setting out our ambition and the strategic actions to achieve our ambition.

Risk management
Explaining the key challenges to deliver our strategy and strategic actions, and how we will mitigate identified risks.

Performance & targets
Progress in 2023 in delivering our strategic actions, how we have performed against the targets, including KPIs we use to measure our performance.

Continuing to reference the UN SDGs
The UN SDGs were launched to address the major sustainability challenges the world faces, and to fast-track progress towards a better and more sustainable future for communities, the environment and the planet. We have identified which of the SDGs relate most sensibly to our business, and these are noted at the start of each chapter.

Alignment example:

<table>
<thead>
<tr>
<th>CSRD alignment</th>
<th>UN SDG alignment</th>
</tr>
</thead>
<tbody>
<tr>
<td>E2: Pollution</td>
<td>Material topic 5: Climate</td>
</tr>
<tr>
<td>E3: Water and marine resources</td>
<td>6: Nature</td>
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<td>E4: Biodiversity and ecosystems</td>
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Read more about EU Taxonomy on page 78.

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Read more about EU Taxonomy on page 78.
Chapter 1 – Our business and material issues continued

### Materiality

#### Materiality overview

The starting point for our sustainability reporting and planning is to assess the issues that are most material in their impacts for external and internal stakeholders, against the issues that are seen by the company as having the most actual or potential impact on its business and value. This allows us to identify priority issues, and those that are increasing or decreasing in importance. It provides the basis for our sustainability planning and programmes, and serves as a benchmark to assess our progress. We identify and rank material issues from our intensive engagement with stakeholders throughout the year, from investor feedback to liaison with lobby groups and local community forums. We last undertook this material assessment process in 2021, using a ‘double materiality’ approach – this plots the potential impact of each material issue on society and the environment, against the potential impact of this issue on ArcelorMittal. The issues are grouped under three core pillars of People, Planet and Products & Supply Chain. Within these pillars are eight themes which are aligned with our sustainable development outcomes, as follows:

**People**
- Safety: the physical safety of our employees
- Work and life: the health and fulfilment of our employees
- Gender: the equal representation, development and remuneration of women
- Community: the approval of our communities and our perception as a welcomed member of the community

**Planet**
- Climate: the extent to which we strive to play a leading role in the steel sector’s decarbonisation, and the drive to a more stable climate and reduction in global warming in line with the Paris Agreement
- Nature: steward of air, land, water, biodiversity and ecosystems

**Products and supply chain**
- Products: the value of our products to a circular economy
- Customer reassurance: supply chains that meet customer expectations

The findings from the materiality matrix in 2021 were that climate strategy; employee health and well-being; listening to, respecting and protecting communities and reducing air emissions, represented the highest potential impacts on both stakeholders and the company.

These findings and the other key challenges and opportunities identified from the materiality assessment are raised and discussed by the Board-level Sustainability Committee (BSC), and by the Climate Change Panel (CCP) and the Sustainable Development Panel (SDP) at the executive level. The matrix also enables us to identify ‘watchlist’ issues that require particular monitoring or action, and ‘hidden value creators’ that represent opportunities for the group.

A new double materiality assessment following CSRD is being undertaken in the first half of 2024.

#### Our materiality matrix

<table>
<thead>
<tr>
<th>Potential impact on society and environment</th>
<th>Potential impact on ArcelorMittal</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>Medium</td>
<td>Medium</td>
</tr>
<tr>
<td>Low</td>
<td>Low</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Our material issues</th>
<th>Five steps in materiality assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety: the physical safety of our employees</td>
<td>1. Mapping and prioritisation of stakeholders</td>
</tr>
<tr>
<td>Work and life: the health and fulfilment of our employees</td>
<td>2. Mapping and selection of materiality issues based on internal and external research, stakeholder trends and peer group monitoring</td>
</tr>
<tr>
<td>Gender: the equal representation, development and remuneration of women</td>
<td>3. ‘Double’ assessment of the selected issues on the basis of risk and opportunity to society and environment, and to the company</td>
</tr>
<tr>
<td>Community: the approval of our communities and our perception as a welcomed member of the community</td>
<td>4. Plotting the issues on the materiality matrix</td>
</tr>
<tr>
<td>Climate: the extent to which we strive to play a leading role in the steel sector’s competitive decarbonisation, and the drive to a more stable climate/reduction in global warming in line with the Paris Agreement</td>
<td>5. Conducting a strategic assessment of the ranking of each material issue and its place in our sustainable development framework and programmes – and developing new goals, targets and action plans accordingly</td>
</tr>
<tr>
<td>Nature: steward of air, land, water, biodiversity and ecosystems</td>
<td></td>
</tr>
<tr>
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<td></td>
</tr>
<tr>
<td>Customer reassurance: supply chains that meet customer expectations</td>
<td></td>
</tr>
</tbody>
</table>
Our business model

We are transforming how steels are made and used. While the world needs more steel, a sustainable world needs smarter and decarbonised steels. ArcelorMittal is using innovative processes to make cleaner and stronger steels that use less energy and emit significantly less carbon. We are driven by an entrepreneurial spirit, a passion for excellence, with R&D at the heart of our operations.

Our material issues

Creating a sustainable future

- Continuous improvement
- Embedding sustainability

Sustainable future

Key enablers

- Transforming our sustainability performance and culture
- Securing world-class operations and performance
- Fostering innovation through world-class R&D, M&A, learning, talent development and diversity

Guiding principles

- Governance
- Strategy
- Risk management
- Performance and metrics

Creating long-term value

- Financial stability
- Implementing our strategy
- Building stakeholder trust

Long term value

Key outcomes

People

- LTIFR – 0.92
- To improve safety performance we have moved to a predict and prevent culture, implementing tailored risk control and mitigation strategies
- Company-wide audit of safety practices by dss+

- Remuneration linked to H&S strengthened
- 2030 target: double women in management to 25%
- Women in management positions – 17%
- $22.5m total community investment spend
- Estimated direct economic contribution – $67.6bn.

Planet

- 25% reduction in CO2e emissions intensity by 2030
- DRI/ EAF projects across Europe and Canada progressing through FEED
- Carbon Capture and Usage, Ghent: first industrial production of ethanol and bio-coal (from waste wood) successfully used in the blast furnace.
- 1700MW renewable energy projects: Argentina (130MW), India (10GW; completion 1H'24) and Brazil (554MW; completion 2025)
- Three scrap recycling businesses acquired in UK/Europe with combined collection capacity of ~1.0Mt
- Accessing high-quality DRI through acquisition of Texas HBI and organic investments (Canada DRI pellet conversion project, Sierra Azul pellet feed).

Mining

- Delivering integrated value

Operational excellence

- Continuous improvement delivering transformational initiatives

Products and supply chain

- XCarb® products gaining an established market presence
- Investment in R&D – $299m
- By end of 2023, 33 of our sites have been certified under ResponsibleSteel™

- Products and solutions to accelerate sustainable lifestyles launched – 14
- Products and solutions to support sustainable construction, infrastructure and energy generation – 24
- LCA’s – 63, EPDs – 24.
Chapter 1 – Our business and material issues continued

Our strategy

Our strategy aims to maintain our long-term position as the world’s leading steel and mining business, meet rising global demand for steel in a competitive way, while supporting the broader transition to a more circular, decarbonised economy. In so doing, we aim to deliver value to our wide range of stakeholders and make a positive contribution to our communities and society at large.

Our strategic priorities are key to achieving our strategic aims and driving sustainable value creation.

Deliver long-term strategic growth in attractive markets and attractive parts of the steel value chain

- ArcelorMittal has a unique global presence, with market-leading operations in each of the markets where we operate. We are active in all parts of the steel value chain, from the raw materials we need, to creating sophisticated, high-value steel products. We are present in developed markets – which benefit from higher per capita steel demand – and developing markets – which offer strong long-term growth potential. We intend to deliver group-wide strategic growth through organic growth investments, technology leadership, building our portfolio of the higher value and lower-carbon products that customers are demanding, and through value accretive acquisitions.

- Global steel demand is expected to increase by around 37% to 2.6bn tonnes in 2050, from 2022 levels, and our growth plans are designed to ensure we capture the most attractive opportunities, tapping the strong growth in developing markets such as India (through our joint venture with Nippon Steel). Key projects include: the expansion of the AM/NS India Hazira plant to ~15Mt capacity in phase 1, which is on track for completion in 2026; growth in Brazil through projects including the Monlevade expansion, the cold rolling mill complex at Vega, and additional capacity at Barra Mansa; and further growth in Mexico through the ramp-up of the new hot strip mill.

- The US Inflation Reduction Act and EU Green Deal Industrial Plan both demonstrate the requirements of the transition, and present clear opportunities for us to target growth in transitioning markets. This, together with attractive growth dynamics, makes North America a strategic priority for us. We will be increasing our steel making footprint in North America through the EAF at AM/NS Calvert, currently under construction, and will assess further opportunities to expand in this market.

- We are also strengthening our world-class mining business through growth in low-cost assets, as well as optimising our product mix to better support the transition to low-carbon emissions steel making: key initiatives include additional capacity at Serra Azul in Brazil, Las Truchas in Mexico, as well as exporting the first iron ore concentrate in Liberia.

- Following a period of asset and business optimisation, and the strategic initiatives currently under way, we are expecting to add approximately $1.8bn of Ebitda through the cycle by the end of 2026. We intend to use this transformative position to deliver a strong and stable platform for onward expansion.
Continue to strengthen our world-class automotive franchise
• We are leaders in the attractive automotive markets in our core markets, and are strengthening our position further, through delivering advanced solutions to customers – via new product development (e.g. Usibor®) and leveraging our downstream Tailored Welded Blanks (TWB) business and our Multi-Part Integration (MPI) programme. Additionally, we see a significant opportunity to grow in electrical steels due to the transition to EVs. The new electrical steel project in Mardyck under construction is a good example. Read more in chapter 5.

Achieve competitive decarbonisation
• Decarbonisation and the impacts of climate change are our most material sustainability issues after safety, and we are determined to achieve the targets we have set ourselves, including our medium-term 2030 GHG intensity (Scope 1 and 2) reduction targets, and our goal to achieve net-zero steelmaking globally by 2050.

While we are determined to decarbonise our asset base, we are taking a robust and measured approach to ensure that our technological choices in each asset maximise our competitive advantage, and deliver the best return on investment. This means that, while we are progressing with specific projects (e.g. the new EAFs in Asturias, Spain, the growth of the existing EAF facility in Sestao, Spain, and the transition to DRI-EAF in Hamilton, Canada) to ensure we meet near-term market demand for low-carbon emissions steel, we are developing feasibility and engineering studies for a range of potential decarbonisation solutions (e.g. DRI-EAF, CCUS and direct electrolysis) to get full clarity on capital expenditure, potential operating costs and timeline to scalability to ensure we have the best intelligence before the next phase of decarbonising our footprint. Key elements include:
  - A major part of our decarbonisation programme is our investment in direct reduction of iron in a DRI plant with steelmaking subsequently in an electric arc furnace (EAF), where our projects in Europe and Canada are progressing through the front-end engineering design (FEED) stage and we expect these to complete towards the latter part of 2024. This is an important part of the process as only after completing the FEED stage will we have clarity on the total capital expenditure, industrial layout and installation schedule for these projects, as well as the overall return on investment.
  - We are advancing our smart carbon technologies with a smart carbon project underway in Ghent, Belgium and the first industrial ethanol was produced in 2023. We are developing strategies and technologies to harness carbon capture, utilisation, and storage (CCUS) through pilots/demonstrations e.g., 3D EMX™ pilot (Dunkirk, France); capture and store blast furnace gas CO2; and Mitsubishi Heavy Industries Engineering (MHI) Carbon Capture pilot (Phase 1 ongoing at Ghent). We have also announced plans between ArcelorMittal and John Cockerill to construct an industrial scale low-temperature, direct electrolysis plant – known as Volteron™.

Invest selectively in the decarbonisation value chain, while also delivering attractive returns as standalone investments
• Our 1,700 MW renewable projects in Argentina (130 MW), India (1GW with expected completion in H1 2024) and Brazil (554 MW with completion in 2025), are progressing well.
• We have been investing in infrastructure outside of renewables to support transformation, and this includes acquisition of a hot briquetted iron (HBI) plant (a type of DRI) in Texas, organic investments such as the Canada DRI pellet conversion project, Serra Azul pellet feed, and three scrap metal processing companies.
Chapter 1 – Our business and material issues continued

Our key enablers to effectively realise our strategy ambitions include:

**Transforming our sustainability performance and culture**
- Our wider sustainability strategy is reflected in our purpose statement, ‘smarter steels for people and planet’ and our core values of safety, sustainability, quality and leadership, which together guide our policy development and decision-making.
- The safety of our people is a core value and our number one priority. The Kostenko disaster showed us that we still have much further to go in truly delivering a workplace free from serious injuries and fatalities and, in December 2023, we commissioned a comprehensive independent audit of our safety policies and practices worldwide to help us transform our safety performance and culture.
- Steel is an ideal material for a circular, low-carbon future because it is the most recycled material globally. We are targeting greater access to scrap steel for our operations and developing circular business models that provide valuable low-carbon solutions for our customers.
- Our people and the communities within which we work, represent our most important resource, and we are strategically dedicated to enhancing our policies and performance related to our people and communities; with a particular focus on fostering diversity, inclusion and equality of opportunity.
- We continue to work closely with ResponsibleSteel™, an industry leading multi-stakeholder sustainability standard, to achieve third party certification of our sustainability management systems at our sites. At the end of 2023, a total of 33 sites were certified across Europe and Brazil.

**Securing world-class operations and performance**
- Within a very competitive global steel market, we need to ensure we operate our facilities to the highest quality standards, with the greatest levels of safety and efficiency, and that we are constantly at the cutting edge of technology, delivering premium steel solutions.
- No other steel company has the scale, geographic footprint and end-market diversity that we have. We must use this unique asset base wisely and efficiently to achieve optimum productivity. We are also finding that our scale and in-house expertise is a valuable competitive advantage in winning contracts and business in the fast-evolving markets in low-carbon emissions steel, notably automotive and construction. Our scale allows us to benchmark between units and regions and quickly learn from, and deploy, best practice where it is competitive and practicable to do so.
- With our productivity gains, footprint optimisation and other measures, we are two years into our three-year $1.5bn Value Plan which targets savings of $1.4bn (reduced from $1.5bn due to Kazakhstan sale) and we have achieved $0.8bn so far.

**Fostering innovation through world-class R&D, M&A, learning, talent development and diversity**
- R&D sits at the heart of our operations, and we are using our R&D leadership to leverage the unique advantages of steel – such as its ability to be completely reusable and recyclable – to create new products, solutions, business models and develop production processes that use less energy, emit less carbon and reduce costs.
- Through the ArcelorMittal XCarb® Innovation Fund, we invest in companies developing cutting edge technologies with the potential to support and accelerate the transition to net-zero carbon steelmaking.
- Ultimately, our world-class operations are built on world-class people, and we are committed to building our skills and know-how, expanding opportunities, providing a career path for talented minds, and supporting them with a broad and deep range of educational and training resources and platforms.
- Implementing our D&I roadmap has been our major focus – the aim is to ensure that everyone in the company understands the real business benefits of diversity, building mutual engagement, delivering a flow of new ideas, and increasing productivity to enable a high-performing organisation.
Chapter 2

Driving change in our safety performance

The safety of our people and communities is a fundamental priority for the company, so the tragic accident at the Kostenko mine in Kazakhstan, and the loss of so many colleagues, friends and family members, has been a devastating shock for all of us.

We are determined to be not only a safer company but a truly safe company, and are putting in place a fundamental review of our standards, policies, governance and culture to deliver our way forward to achieve this. The recommendations will be published, and we anticipate they will provide a strong basis for transforming our safety performance for the long-term.

KPI highlights

<table>
<thead>
<tr>
<th>KPI</th>
<th>2023</th>
<th>2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>LTIFR</td>
<td>↑ 0.92</td>
<td>0.70</td>
</tr>
<tr>
<td>Fatalities</td>
<td>↑ 61</td>
<td>22</td>
</tr>
<tr>
<td>Frequency rate</td>
<td>↑ 16.64</td>
<td>12.76</td>
</tr>
</tbody>
</table>

CSRD alignment

ESRS 5: Own workforce

Material topic

1. Safety

UN SDG alignment
In December 2023, we launched a comprehensive independent safety audit that is expected to deliver findings in the latter part of the year. While we carry out audits on a regular basis, none have been as exhaustive or ambitious in their scale and reach. By the end of September 2024, we expect to have audited our fatality prevention standards across more than 170 sites, assessed the effectiveness of our process risk management systems across a range of installations, and tested the resilience of our policies, processes and governance framework, underpinned by interviews with hundreds of employees from the shop floor to leadership.

Combined, this will provide us with a substantial amount of information as well as specific recommendations on how to tighten and intensify our actions to improve results.

Aditya Mittal
Chief executive officer

2023 was the worst year in the company’s safety performance history, with 61 people dying while at work. 54 of these occurred in Kazakhstan, 46 of them in a single accident on 28 October. While there is evidence of the significant efforts being made to address safety translating into improved results in several segments, that must be achieved consistently everywhere. That’s why, although we no longer own the Kazakhstan steel and mining complex or indeed any underground coal mines, we launched a comprehensive group-wide independent audit at the end of 2023.

Governance of safety is overseen at the most senior level by the CEO, supported by the Board Sustainability Committee (BSC). The BSC reviews safety performance on a quarterly basis, with additional safety focused meetings scheduled between regular meetings as required. Every fatality is discussed in depth at the BSC. Following Kostenko accident in Kazakhstan, a special meeting was convened to discuss the accident and the response.

The head of corporate safety, who is also a member of the Management Committee, reports to the EVP, head of corporate business optimisation, who in turn reports to the group CEO. Further oversight is provided by the Global Health & Safety Committee (GHSC), chaired by head of health and safety and a member of the group Management Committee. Safety representatives from segments and countries attend the Committee meetings. The Committee is responsible for reviewing all fatalities and identifying learnings for the group, sharing safety plans and best practices to enhance learning across the company, identifying common improvement actions that should be initiated across the group, and tracking progress of specific group-wide safety initiatives that have been collectively agreed.

ArcelorMittal business unit CEOs, full leadership teams, and safety departments are fully empowered to implement the group’s best practices, procedures and standards within their business perimeters. They are also responsible for developing site specific improvement plans based on their local strengths, weaknesses and challenges. These teams receive support from corporate teams and through benchmarking are also fully supported by the best performing business units in the group. ArcelorMittal’s corporate teams provide further support by encouraging and enabling local teams to bring in external experts to support and drive their safety improvements.

The group’s health and safety policy, standards and lifesaving golden rules were refreshed and implemented across the group in 2022 and 2023.
Chapter 2 – Driving change in our safety performance continued

We are strengthening our quarantining procedure across the group, which requires management’s shop floor presence at a plant to be doubled for a specified amount of time, whenever a seriously unsafe incident takes place that could have resulted in a serious injury or fatality.

In line with the group’s move to focus more on leading KPI indicators, the executive Short-Term Incentive Plan (STIP) changed in June 2022 to be linked to the frequency of proactive reporting of cases with potential for serious injuries or fatalities (PSIFs), rather than lost time injury frequency rate (LTIFR) which is a lagging KPI. The proportion of bonuses linked under this scheme to safety was increased from 10% to 15% in 2021. Safety also represents 10% of the Long-Term Incentive Plan.

**Strategy**

The Kostenko accident led to a decision by the Executive Office to commission a comprehensive independent audit of our safety policies and practices worldwide. A competitive tender of leading safety consultants was launched in November 2023 with dss+ being commissioned in December 2023. dss+ is a leading provider of sustainable operations management consulting services internationally. Few firms have the capabilities to carry out work of this complexity and scale, and the appointment was made based on dss+’s deep expertise, and its ability to operate across the full breadth of ArcelorMittal’s international footprint, which comprises more than 350 sites.

Work started immediately and includes:
- Conducting comprehensive audits of the Fatality Prevention Standards for the three main occupational risks leading to Serious Injuries and Fatalities: injured by a machine that was not properly isolated or turned off, crushed by vehicle or moving machine, and falling from height
- Providing expert input into the company’s process risk management safety audits at its highest priority assets/processes
- Conducting an in-depth assessment of all health and safety systems, processes, structures and capabilities; governance and assurance processes at all levels; and systems and data management.

All of our locations with a workforce above 150 FTEs (own employees + contractors), will be audited. For smaller sites which have a lower risk profile, a sample will be audited.

The audit is expected to take up to nine months with the key recommendations expected to be published in September 2024.

It should be noted that we commenced a programme to strengthen our safety performance in 2022, focusing on moving to a ‘predict and prevent’ culture and implementing tailored risk control and mitigation strategies, with positive progress being achieved in several parts of the business. When not including the challenges in improving safety in Kazakhstan, we have made positive progress in improving our safety performance (see performance section for details).

We have only reiterated our commitment to striving towards being fatality and serious injury free across the group. The independent dss+ global safety audit will be an important tool in supporting us towards our goal of becoming a world-class safety company. While the global audit takes place, we are continuing to accelerate and intensify all aspects of the existing safety improvement programme focusing on enhancing...
Chapter 2 – Driving change in our safety performance continued

Organisations need a strong safety culture and proper risk control strategies to thrive

Integrated safety culture and risk management framework

Strategy continued

our safety culture and changing our approach to risk management and prevention. A key element of this has been the move from a ‘find-and-fix’ culture to a ‘predict-and-prevent’ culture, where the working practices and assessment of risk identify and mitigate potentially harmful events before they happen. To support this, we have been transitioning to use the identification of Potential Serious Injury and Fatality events or situations (PSIFs) as its key safety KPI, as well as the more reactive KPI of Lost Time Injury Frequency Rate (LTIFR).

Key strategic actions taken in 2023 included:
• Continued implementation of our updated safety policy, standards and lifesaving golden rules
• Launch of a group-wide safety perception audit
• Focus on top causes of fatalities and fatality prevention standards (FPS)
• Increasing the amount of leadership safety supervision on the shop floor
• Tightened quarantining programme
• Gaining a better understanding of risk events and mitigation strategies
• Intensified coaching and training programmes.

Risk management

Mining and steelmaking activities are inherently exposed to a higher degree of health and safety hazards than many other lighter industries. While these heavy industries are subject to strict health and safety legislation, we are also determined to improve our safety performance beyond compliance. We recognise that managing these risks for our people and local communities is fundamental to our licence to operate.

Our biggest challenges lie in improving the safety culture across the group. In units where our safety performance is strongest – for example in Brazil – we see that a strong safety culture is part of a broader strong organisational culture that places the respect and dignity of people (not just employees) at the heart of the organisation. This is clearly independent of the broader country culture and the age of the assets and should therefore be achievable no matter the location. A key focus for us is to clearly understand the culture where we see strong performance and transfer this to less well performing locations. To date this has included the following objectives:
• Better monitoring and assurance of safety performance, and improvement of risk awareness
• Securing leadership and all levels of employee commitment to ultimately achieve and maintain a fatality and serious injury free safety culture
• Ensuring personnel stop work where potential unsafe conditions or acts are identified
• Ensuring a high level of asset integrity through strong maintenance regimes
• Increasing the level of engagement and dialogue with workers, communities and regulators
• Maintaining compliance with regulatory requirements and corporate health and safety management approaches
• Quarantining of work areas or assets where potential or actual unsafe acts or conditions have been identified.

We look forward to receiving the results of the independent global safety audit and will develop an action plan to implement the findings. We will take the opportunity to learn from each site visit as they occur to implement the identified findings both at the asset being audited as well as sharing the findings across the group.
Chapter 2 – Driving change in our safety performance

The following KPIs are used to measure and monitor our progress.

### LTIFR

**For the year ended Dec 31** | LTIFR 2022 | Own employees | Contractors | LTIFR 2023 | Own employees | Contractors
---|---|---|---|---|---|---
Mining* | 0.84 | 0.84 | 0.85 | 0.10 | 0.19 | 0.00
NAFTA | 0.25 | 0.22 | 0.32 | 0.22 | 0.28 | 0.07
Brazil | 0.10 | 0.08 | 0.12 | 0.26 | 0.31 | 0.22
Europe | 1.11 | 1.11 | 1.12 | 1.30 | 1.18 | 1.64
ACIS | 0.34 | 0.85 | 0.51 | 1.43 | 1.62 | 0.53
Kazakhstan | 0.10 | 0.14 | 0.75 | 2.27 | 2.58 | 0.87
Ukraine | 0.42 | 0.63 | 0.71 | 0.50 | 0.77 | 0.12
South Africa | 0.84 | 0.86 | 0.80 | 0.77 | 0.72 | 0.94
Total | 0.70 | 0.79 | 0.55 | 0.92 | 1.12 | 0.59
TOTAL (excl. Kazakhstan) | 0.68 | 0.77 | 0.53 | 0.70 | 0.79 | 0.57

### FFR

**For the year ended Dec 31** | FFR 2022 | Own employees | Contractors | FFR 2023 | Own employees | Contractors
---|---|---|---|---|---|---
Mining* | 0.15 | 0.10 | 0.28 | 0.00 | 0.00 | 0.00
NAFTA | 0.00 | 0 | 0 | 0.02 | 0.03 | 0
Brazil | 0.01 | 0 | 0.01 | 0.00 | 0 | 0
Europe | 0.01 | 0.01 | 0.03 | 0.01 | 0 | 0.05
ACIS | 0.12 | 0.12 | 0.12 | 0.45 | 0.41 | 0.06
Kazakhstan | 0.20 | 0.20 | 0.22 | 0.85 | 1.01 | 0.09
Ukraine | 0.02 | 0.04 | 0 | 0.08 | 0.09 | 0.06
South Africa | 0.04 | 0 | 0.16 | 0.04 | 0 | 0.09
Total | 0.05 | 0.05 | 0.05 | 0.13 | 0.20 | 0.03
TOTAL (excl. Kazakhstan) | 0.02 | 0.07 | 0.04 | 0.02 | 0.01 | 0.03

### Fatalities

**For the year ended Dec 31** | Fatalities 2022 | Own employees | Contractors | Fatalities 2023 | Own employees | Contractors
---|---|---|---|---|---|---
Mining* | 2.00 | 1 | 1 | 0.00 | 0 | 0
NAFTA | 0.00 | 0 | 0 | 1.00 | 1 | 0
Brazil | 1.00 | 0 | 1 | 0.00 | 0 | 0
Europe | 2.00 | 1 | 1 | 2.00 | 0 | 2
ACIS | 17.00 | 12 | 5 | 58.00 | 55 | 3
Kazakhstan | 14.00 | 17 | 3 | 54.00 | 53 | 7
Ukraine | 1.00 | 1 | 0 | 3.00 | 2 | 1
South Africa | 2.00 | 0 | 2 | 10.00 | 0 | 1
Total | 22.00 | 14 | 8 | 61.00 | 56 | 5
TOTAL (excl. Kazakhstan) | 8.00 | 3 | 5 | 7.00 | 3 | 4

### PSIF**

**For the year ended Dec 31** | **PSIFs 2022** | **PSIFs 2023**
---|---|---
Mining* | 12.06 | 13.17
NAFTA | 13.86 | 16.76
Brazil | 18.19 | 22.02
Europe | 14.02 | 16.28
ACIS | 11.44 | 18.76
TOTAL | 12.76 | 16.64

* Mining – Liberia and ArcelorMittal Mining Canada
** Frequency Rate = Proactive PSIF / Number of proactive PSIF × 1000000

We are reinforcing any of safety actions we have underway which we know support better performance, as we must improve our safety performance this year.

There are indicators that the actions we are taking are working. Overall, excluding Kazakhstan, our Fatality Frequency Rate (i.e., fatalities per 1,000,000 hours worked) was 60% lower compared with 2021, 20% lower compared with 2022 and 30% lower than the WSA industry average for 2014 to 2022. Excluding CIS locations, there were no fatalities in the group’s steel operations amongst our own employees in 2023. Including Kazakhstan, the LTIFR was 0.92 (0.70 excluding Kazakhstan) compared with 0.70 in 2022 (0.68 excluding Kazakhstan). NAFTA and Mining (Liberia, AMMC) have reached lowest ever levels of LTIFR in 2023, 0.22 and 0.10 respectively.

In the context of the business’ new focus on PSIFs as a key leading indicator, we proactively detected and addressed (before anyone being injured) 6,995 of these events in 2023 compared with 5,519 in 2022.

**Intensified implementation of our updated safety policy, standards and lifesaving golden rules**

The application of the group’s updated health and safety policy, standards and lifesaving golden rules has been intensified across the group in 2023. Key elements of the policy are as follows:

- Absolute focus on the role management must play in genuinely demonstrating their respect and care for all workers, while at the same time reinforcing how all employees need to be actively involved in contributing to creating a safe working environment.
Chapter 2 – Driving change in our safety performance

Performance & targets continued

- Making clear that working safely is a condition of employment for everybody at ArcelorMittal and that it is part of everyone’s performance feedback, both positive and improvement.
- Explicitly stating that everyone is empowered to act and stop work if they see a situation which they deem to be unsafe.
- Reinforcing that workers must take care of their colleagues and allow their colleagues to take care of them.
- Stressing the need to report and analyse all incidents, so that employees and management learn from them across the company.
- Highlighting the role effective systems management and sharing of best practices have in driving continuous improvements.

Group-wide safety perception audit

In April 2023, we launched a group-wide safety perception survey covering 220,000 employees and contractors. The survey assessed all operations against the dss+ safety culture maturity model known as the Bradley Curve, which has led to bespoke action plans and strategies for the different parts of the business.

There were 156,768 responses to the survey, representing 71% of employees and 45% of contractors. The survey identified some quick win opportunities that can build greater trust and inter-dependency, notably: building competence in safety meetings; inclusion in safety audits; more focus on practical training and coaching; off-the-job high impact sessions for all roles. dss+ is applying the findings of the survey to its ongoing safety coaching programme. Across the board, 94-100% of employees who have attended sessions believe them to be valuable. 91-100% of managers have participated in the programme. This is allowing good identification of gaps in the application of FPS at a site level, even where RCS scores are higher.

Focus on top causes of fatalities and FPSs

The updated safety policy renewed the emphasis on addressing the top causes of fatalities. Separate to the circumstances surrounding the underground coal mine explosion in Kazakhstan, the top three causes of work-related deaths within the group, which represent more than half the deaths between 2017 and 2023, include:

- Crushed or rolled by vehicle
- Crushed or rolled by vehicle
- Crushed or rolled by vehicle
- Falling from height.

Top causes of fatality 2017-2023 Measures to address these

1. Crushed or rolled by vehicle
   - Focus on proactive PSIF detection
   - Strengthening the effectiveness of controls as part of the company’s risk management
   - Modification and update of the FPS relating to vehicles and driving
   - Mandatory alarms for safety belts and parking brakes
   - Mandatory proximity detectors for specified industrial vehicles

2. Crushed by moving machinery or other mobile equipment
   - Focus on proactive PSIF detection
   - Focus on isolation FPS, strengthening the effectiveness of controls as part of the risk management
   - Review of the global Hazard Identification and Risk Assessment (HIRA) tool on an annual basis
   - With adaptation at site level for local conditions and mandatory ‘Stop, Think & Act’ measures
   - Implementing control measures before any unusual/routine task or job

3. Failing from height
   - Focus on proactive PSIF detection
   - Strengthening the effectiveness of the controls as part of risk management
   - Modification and update of FPS relating to working at height strengthening requirements for roofing activities
   - Reinforced rules on fixed ladders, banned rope ladders
   - Aligned rules related to floor installation and repairs at the same level as the ones concerning roof repairs.

Case study

Key actions in ArcelorMittal Europe to improve safety performance in 2023

- Accelerated the Safety Coaching Programme in more than 17 departments in seven Flat Europe clusters, ten departments in eight Long Europe sites, and 22 sites of AMDS
- Leaders have been coached to perform a more proactive safety engagement with their shopfloor teams, encouraging and supporting them to improve and sustain a proactive H&S culture, based on risk elimination and shared vigilance
- ‘Take Care’ Training #2, focused on the shopfloor teams, was concluded in all Flat Europe sites. A new Take Care Training #3 framework, focused on risk management and a proactive H&S culture, has been designed and is ready to be rolled out in 2024
- In Long Europe, leaders are training their teams on the shopfloor, targeting observed gaps and aiming to reach the Independent Level on the Bradley Curve
- Fatality Prevention Standards (FPS). In Flat, Long and AMDS, we undertook the self-evaluation of the five FPSs (working at height, isolation, vehicles and driving, rail and cranes and lifting) and covering the top three risks. All Flat clusters are committed to reaching Level 3 in the FPS guidelines to eliminate and/or effectively control them.
- All Flat clusters worked hard to increase safety regarding their moving machinery/equipment. In 2023, more than 1000 projects were developed and put in place across the sites, focusing on eliminating the risk of being caught or crushed by this kind of equipment.
- Auditor tool was deployed and operational across AMDS business divisions for shopfloor audits.
Together we reduce the risk level in our organisation by being on the shop floor, talking to each other, listening to each other, solving problems together.

My daily interactions in the plant: I spend a lot of time with leadership and especially our junior leadership to see what they see as barriers and how do we address those barriers to get to zero. And I’m not talking about barriers in terms of operating procedures but how do we change the culture.

Jorge Oliveira
Chief executive officer, ArcelorMittal Brazil Flat

Putting in place greater safety leadership on the shop floor
Leaders have been required to demonstrate more progress in safety culture maturity, with greater mandatory leadership shop floor presence. We have intensified management training/coaching programmes with regard to safety, including with external support, to improve the quality of leadership’s safety routines (i.e. shop floor interactions) as well as increased cross training to benchmark and align best practices.

An example of the senior operational management training has been integrating the managers from the Ukraine business into the Brazil operations for three weeks during 2023, to experience the Brazil business’ approach to safety, safety culture and implementation. Visits by management of other geographies, including Europe and South Africa to the Brazil operations have also taken place.

Together we reduce the risk level in our organisation by being on the shop floor, talking to each other, listening to each other, solving problems together.

Manfred van Vlierberghe
Chief executive officer, ArcelorMittal Ghent

Tightened quarantining programme
We have also enforced and tightened our quarantining programme across the group, whereby the occurrence of PSIF injuries trigger a quarantining process, requiring management’s shop floor presence to be doubled, a detailed assessment and response to the event, and an increase in the number of management shop floor interactions. Quarantines will now be a minimum of 40 days for larger sites and 15 days for small sites.

Case study
Safety Alert (quarantine), example from ArcelorMittal Poland

A Safety Alert is launched following a Serious Occurrence (SO): Fatality, Lost Time Injury, or Restricted Work, with high potential of gravity, or severe consequences.

Here is an example of actions taken to protect our people during the 40 days of a quarantine period, following SO.

1. Increased supervision:
   - 10 Safety audits led by cluster Management Committee (MC) members or ArcelorMittal Flat Europe, head of Health and Safety (H&S) with focus on fatality prevention standards (FPS)
   - Weekly safety audit of CEO/H&S Director (5 visits)
   - Weekly safety audit of other cluster MC members (CEO/CTO) (4 visits)
   - Audit led by ArcelorMittal Flat Europe H&S team (1 visit)
   - Audits supported by FPS leaders and H&S experts.

2. Increased safety awareness:
   - Daily participation of plant senior leaders in the pre-shift briefings (plant director, line managers, exempt, senior foreman)
   - Evaluation of safety awareness of all employees by specific survey. Survey includes coaching element.

3. Fine-tuning of plant safety action plan based on audits and survey:
   - The cycle of special supervision ends with the preparation of a joint common report, including:
     - Strengths/weaknesses
     - Areas for improvement
     - Recommendations/suggestions of actions to be implemented
   - This report is the basis for plant management to optimise the safety plan which is to be implanted within a maximum of 6 months.
Chapter 2 – Driving change in our safety performance continued

Gaining a better understanding of risk events and mitigation strategies

Risks and risk events vary across the group according to the nature of local operations, assets and working culture. We are working on gaining a better understanding of the interaction of risks arising from behaviour, working with machinery and from asset integrity, in terms of their respective contributions to serious injuries and fatalities, so that it can develop better controls and mitigation actions.

Intensified coaching and training programme

We have been rolling out intensive training and coaching programmes in the regions with poorer safety performance. Working with external safety consultants, we conducted pilot studies at selected plants where their personnel are assisting and coaching management and teams for periods of six months, and then these sessions are repeated across all relevant personnel. These programmes, comprising highly focused on-the-job coaching, cover integrated risk and culture governance, management accountability, shop floor interactions, effective implementation of the FPSs and other management routines fundamental to improve safety performance. These are supported through the developed leading KPIs.

Performance & targets continued

Following the sale of the Kazakhstan operations, Ukraine represents our highest risk country with regard to safety. We are focused on ensuring that the same safety programmes and training is available for our Ukrainian personnel as elsewhere in the group. However, with the challenges and limitations of the war there, training is almost exclusively being undertaken by video call since site visits are not currently possible.

The situation in Ukraine necessitates that our people are always hyper-vigilant on safety. Yet when in the steel plant and mine, we aim to ensure the safety mindset and approach is the same as anywhere around the world at ArcelorMittal. The operation and health and safety team’s visit to seven facilities across Brazil has enabled us to bring back many of their good practices. Just one example is that we are now upgrading our training and induction exercises to mirror Brazil.

Mauro Longobardo
Chief executive officer, ArcelorMittal Kryvyi Rih

Case study

iRedZone system

Alongside training and asset related safety initiatives, the company is rolling out its iRedZone system. It is an AI system capable of identifying members of our workforce who are straying into dangerous, high-risk situations. The system provides immediate alerts to operators, and can interrupt the operation or movement of equipment.

The pilot system has been thoroughly evaluated across a range of parameters. The concept is scalable and can be integrated with conventional control systems. It is being rolled out for further testing in Pecém, Mexico, South Africa, Tubarao and Canada.

Case study

Key actions at ArcelorMittal South Africa to improve safety performance

South Africa has had a renewed focus on health and safety, and since early 2023 has resulted in over 400 days with no fatalities. Key actions that have been implemented include:

• An enhanced safety training schedule including a workshop focused on identifying safety risks on the shopfloor to support ‘hunting for hazards’ and identification of proactive potential serious injuries and fatalities (PSIFs)
• Restoring safety pride programme with deep dives into problem areas
• Changing the way leadership interact on safety from militaristic focus on safety rules being applied correctly and looking out for the negatives on the shop floor, to having positive safety interactions that focus on safety successes
• Regular family days where we bring families into the plant to show them the environment that their family members work in and to support a connection to the business and their co-workers with the aim of reducing health and safety accidents
• Empowering workers to stop their colleagues from doing something that is unsafe
• Skills uplift with the appointment of additional safety technicians.

Mauro Longobardo
Chief executive officer, ArcelorMittal Kryvyi Rih
Chapter 3

Responsible energy use and lower-carbon futures

One of our biggest challenges as a business is to deliver on decarbonisation and hit our targets on the road to net-zero. Steel is recognised as a hard to abate sector, with heavy inputs of energy, traditionally from carbon-intensive fuels. Against that context, we have set out achievable milestones on how we endeavour to transition our company and achieve net-zero carbon emissions globally by 2050. We have much to do ourselves in developing and investing in the breakthrough technologies for our sector. But we also need the support of governments and other stakeholders in facilitating the rapid transition that the world needs. And we must also bring our entire value chain with us in driving down emissions, from our suppliers through to our end customers.

KPI highlights

Group carbon reduction target: 25% reduction in carbon emissions intensity by 2030 (Scope 1 and 2 steel and mining) tCO₂e/tonne of steel*

↓ 1.97
2022: 2.04
2021: 2.09

Group carbon reduction target: 25% reduction in carbon emissions intensity by 2030 (Scope 1 and 2 steel and mining) tCO₂e/tonne of steel*, excluding ArcelorMittal Temirtau

↓ 1.78
2022: 1.82
2021: 1.88

Europe carbon reduction target: 35% reduction in carbon emissions intensity by 2030 (Scope 1 and 2) tCO₂e/tonne of steel*

↓ 1.68
2022: 1.71
2021: 1.71

* These figures have been adjusted for structural changes to the ArcelorMittal portfolio in the previous 12 months to enable a like-for-like annual comparison.

CSRD alignment
ESRS E1: Climate change

Material topic
5. Climate
6. Nature

UN SDG alignment

Steelanol, Ghent
Chapter 3 – Responsible energy use and lower-carbon futures

As a global industrial company working in the steel and mining sectors, decarbonisation and the road to net-zero represent our most material challenge as a business, alongside safety. Our stakeholders expect that we demonstrate our efforts to achieve net-zero while continuing to deliver economic value. Developing a deeper understanding of the physical and transition risks and opportunities of climate change is a key part of how we will remain resilient in the face of the uncertainty between now and 2050.

Brad Davey
Executive vice president, business optimisation

ArcelorMittal’s climate-related activity and progress is overseen by the Executive Office (Executive chairman Mr Lakshmi N. Mittal and Chief executive officer Aditya Mittal) supported by the Board Sustainability Committee (BSC) which reviews the company’s climate change strategy and makes recommendations to the main Board.

An executive-level climate change panel (CCP) is typically convened on a quarterly basis to gauge the business’ views in relation to all climate change related matters such as stakeholder engagement, advocacy, customer demand for low-carbon emission steels, competition monitoring, target setting, etc.

Having set a 2030 group target on carbon emissions intensity reduction in 2021, the Board decided to link executive remuneration to the achievement of this objective. Decarbonisation now forms part of the performance criteria for vesting of the performance share units in the Long-Term Incentive Plan.

In terms of investment decision-making, each major capital expenditure project proposal is required to demonstrate its carbon impact to the Investment Allocation Committee (IAC). The IAC makes all necessary considerations to maximise the business’ chances of achieving its targets while ensuring each project is economically justifiable and earns its cost of capital.

In 2022, ArcelorMittal updated its environmental policy, which sets out the company’s key environmental principles, including implementing a long-term GHG emissions reduction strategy with the goal of achieving absolute net-zero carbon emissions by 2050. In 2024, we will be issuing our third Climate Action Report, which will review our targets, progress and planned actions on climate change, decarbonisation and the transition.

Strategy

As a global steel and mining company, we have very substantial challenges in transitioning to a decarbonised business. We operate multiple assets in multiple geographies with entirely different economic, social and environmental policy contexts, which are moving at different speeds and under varying steel demand trajectories. Bringing all these assets to the same reporting standards, levels of carbon performance, complying with evolving legislation, together with offering our customers increasingly low-carbon emissions solutions, represents a huge and complex transition for the business.

We have nevertheless set out what are ambitious decarbonisation targets. In 2021, we set out a target to reduce carbon emissions intensity by 25% globally by 2030, and by 35% in Europe, across Scopes 1 and 2. During 2023 we have undertaken substantial work to better understand our Scope 3 emissions, improving our accounting methodology, identifying value chain emissions hotspots, and prioritising stakeholders’ engagement, so we can in due course set realistic Scope 3 targets as well.

To deliver on our targets, we have developed a roadmap based around the following key strategic actions:

- Driving demand for low-carbon emission steel
- Evaluating the physical and transition climate risk and opportunities to our assets and across our business, based on the requirements of different sustainability disclosure standards and frameworks
- Developing a robust, verifiable offset strategy for residual emissions.

As the regulatory backdrop becomes more stringent and reporting requirements increase, it is important that our reporting complies with disclosure requirements like the EU CSRD, EU Taxonomy and the SEC Climate Disclosure Rules, where applicable.

Putting in place assets and technology capable of taking the industry to net-zero

The steel industry is largely based around (1) ore-based, or primary, steelmaking which uses a BF-BOF (Blast Furnace-Basic Oxygen Furnace) production route, and (2) scrap-based, or secondary, steelmaking which uses an EAF (Electric Arc Furnace). While ore-based steelmaking has a substantially higher carbon emissions profile compared with scrap-based steelmaking, there are various ways of reducing the carbon impact of both BF and EAF routes.

We are implementing clear steps in addressing our asset base, technologies and processes with the aim to achieve our net-zero targets:

- Transforming our steelmaking assets
- Transforming the energy used in the steelmaking process
- Increasing the proportion of scrap used in the steelmaking process
- Investing in clean electricity used in the steelmaking process.
Chapter 3 – Responsible energy use and lower-carbon futures continued

Transforming our steelmaking assets

The global steel industry faces a total transformation of its asset base and the technology used to make steel. This includes switching ironmaking from the BF-BOF route to the DRI route, and from iron ore preparation in the sinter plant (using heat or pressure to compact a material) to the pellet plant (which compresses or moulds the iron material into the shape of a pallet). Ironmaking with pellets in the DRI is usually coupled with an EAF. These changes can include exploiting carbon capture and utilisation (CCU) or carbon storage technologies (CCS).

High gas prices have previously limited the adoption of DRI-EAF operations, but with the increasing cost of carbon and the requirement to reduce emissions, transitioning to natural-gas based DRI-EAF can be a first step towards, in due course, green hydrogen technology solutions.

The company is seeking to further ensure it has access to high-quality ore-based metallics through the development of DRI-ready pellet plants and DRI modules including Hot Briquetted Iron (HBI) and is looking at a combination of options including building its own facilities, acquiring facilities and working in partnership with iron ore suppliers, to develop new facilities, including through joint ventures.

The introduction of new methods of steelmaking typically depends on the age of the assets and the economic, environmental, and social policy environments in which they operate. Where assets are nearing the end of their useful life, or the policy environment is conducive, traditional BF-BOF operations are more likely to be replaced by an EAF which can be fed with a combination of DRI and scrap. Where BF-BOF assets still have a significant useful life or the policy environment is not conducive, it may be more appropriate to ensure any new blast furnaces are best-in-class technology with the potential for CCU or CCS.

Transferring the energy used in the steelmaking process

Despite advances in the energy efficiency of BF-BOF steelmaking, it still relies heavily on fossil fuels, and the industry faces a shift to cleaner forms of energy supply. The three main alternative routes for making this shift are:

- **Clean electricity** (which could be in the form of green hydrogen)
- **Continued use of fossil carbon coupled with CCS to ensure no carbon is emitted**
- **Use of circular carbon either through natural or synthetic carbon cycles – using sustainable forestry and agriculture residues, or waste plastics captured from waste gases**

Increasing the proportion of scrap used in the steelmaking process

In addition to using scrap in EAF operations, the business can increase the use of low-quality scrap in the BF-BOF steelmaking process by improving steel scrap sorting and classification, installing scrap pre-melting technology and adjusting the steel making process to accommodate scrap. It is expected that scrap availability globally will increase as the amount of steel in circulation increases, thereby demonstrating the inherent circularity of steel. The acquisition of John Lawrie (Scotland, 2022), Alba International Recycling (Germany, 2022) and Riwald Recycling (Netherlands, 2023) are good examples of how the company is working to increase its access to scrap steel to lower carbon emissions from steelmaking.

Investing in clean electricity used in the steelmaking process

Reducing the business’s Scope 2 emissions means mainly focusing on sourcing low-carbon electricity. The company is looking for more and wider sources of clean energy at affordable prices, purchasing Guarantees of Origin (GOOs) and Renewable Energy Certificates (RECs) as well as making more use of direct power purchase agreements (PPA) with suppliers from renewables projects.

We have made significant investments in renewable energy projects in India (TGW) and Brazil (SS4MW), from solar power, wind power and pumped hydropower projects to participate in a green hydrogen hub.

Setting ambitious but achievable targets, depend on the backing of supportive policy

Our 2030 group carbon emissions intensity reduction targets reflect the unequal pace of change of the world’s decarbonisation journey and across our assets. In Europe and Canada, where the promise of supportive policy is more advanced, we can be more ambitious. In other regions, the pace of change is likely to be slower as the regulatory system is less evolved. Policymaking has a crucial role to play, and we will continue to advocate for policies that support the acceleration of this transition.

To achieve its 2030 global carbon emissions intensity reduction target of 25%, ArcelorMittal has estimated the gross capital cost required to be approximately $10bn, with the expectation that public funding covers 50% of the total cost of decarbonisation, addressing both capital expenditures and the higher operating expenditures so that the industry is not rendered uncompetitive during this transition period. The lack, delay or insufficiency of public funding for projects relevant to our decarbonisation objectives could call into question our ability to meet the above targets.

In 2021, we joined the Science Based Targets Initiative (SBTI), which defines and promotes best practice in emissions reduction pathways and targets in line with a 1.5°C future and engaged in developing a steel sector target-setting guidance through a multi-stakeholder Expert Advisory Group comprised of steel producers and civil society groups; a process that took 18 months. After the official publication of the SBTI steel sector guidance in September 2023, we devoted considerable resources to understand how to apply the methodology to our complex operational boundary, under the allocated 1.5°C -aligned carbon budget. This included evaluating different scenarios, considering among other factors, the future availability at scale and cost-competitiveness of key decarbonisation technologies necessary for the transition of the steel sector and our planned strategic growth to meet the rising demand in emerging economies and key end-uses. The engagement process itself and the internal analysis conducted have been very valuable and insightful, helping us to understand the gaps between the individual and collective ambition level to align to an increasingly challenging 1.5°C pathway and the actions we need to implement to ensure a credible delivery, while remaining competitive in the market.

At this time, it remains difficult for us to submit a group target that both satisfies SBTI requirements relating to the sector, and that we can realistically deliver, without faster progress internationally and by governments on delivering sufficient scaled-up renewable energy, green hydrogen and carbon capture and storage (CCS) infrastructure and resources.
Chapter 3 – Responsible energy use and lower-carbon futures

Strategy continued

In planning for setting appropriate targets and the changes required, our funding and capital expenditure objectives contain the following key assumptions:

- The cost and availability of clean energy and innovations such as green hydrogen should become increasingly competitive over the next decade, but this will take time and we still require government support in ArcelorMittal’s countries of operation
- CCUS infrastructure will take time to be built at scale. While Europe is expected to take the lead, other regions will be 5-10 years behind Europe and the US.

Engaging constructively with stakeholders on standards, targets, impacts and solutions

A supportive climate policy framework is critical for facilitating the transition to net-zero. New steelmaking technologies require substantial capital investment and structurally higher operating expenditures, certainly in the shorter term. There is a need for governments to facilitate this investment through incentivisation of markets and through funding and economic support. There are also significant considerations around achieving a Just Transition that does not unfairly impact certain social groups or geographies.

This means that constructive engagement is required across industry, and with governments, policymakers, NGO’s and other key stakeholder groups, such as investors, trade associations, trade unions, communities, customers, and the value chain, to facilitate a smooth transition to a low-carbon economy in a way that brings environmental, social and economic benefit for all.

We believe policy instruments need to deliver five market conditions to ensure that low- and zero-carbon emissions steelmaking is at least as competitive as higher carbon-emissions steel:

1. Measures to incentivise the transition to low and zero carbon-emissions steelmaking
2. A fair competitive landscape that accounts for the global nature of the steel market, ensuring domestic production and imports are subject to equivalent GHG reduction regulations and incentives, such as a fairly and internationally applied Emissions Trading Scheme (ETS)
3. Financial support to innovate and make long-term investments and neutralise the higher operating costs of low- and zero-carbon emissions steelmaking
4. Access to sufficient clean energies at affordable price levels
5. Incentives to encourage the consumption of low- and zero-carbon emissions steel over higher carbon emissions steel.

We periodically publish the results of our engagements through our climate advocacy reports on our website.
Investing in low-carbon emissions products, solutions and innovative technologies

Alongside our investment programme in large decarbonisation capital projects, we are also engaged in investing in our own R&D and external technologies targeting low-carbon, clean energy and circular products and solutions for the steel industry. We are making considerable progress in commercialising direct electrolysis technology. In June 2023, ArcelorMittal and John Cockerill announced plans to construct the world’s first industrial scale low temperature iron electrolysis plant. The Volteron™ plant, which in its first phase is expected to produce between 40,000 and 80,000 tonnes per year of iron plates, is targeted to start production in 2027.

Our low-carbon emissions products programme is led by the XCarb™ branded initiative which covers the XCarb™ recycled and renewably produced (RRP) product portfolio, XCarb™ green steel certificates provided to customers to enable them to buy the feedstocks or intermediate products (e.g., sinter, pellets, coke, DRI, HBI, pig iron etc.) from the processes. This will ensure that stakeholders (e.g., policymakers, customers, end users, civil society groups) have access to transparent measurement methods, any approach must continue to ensure customers are able to do this irrespective of whether a steelmaker makes or produces the finished product.

Driving demand for low-carbon emission steel

Demand for low-carbon emission steel is critical for steelmakers to have confidence in making the investments necessary to transform their assets. Given the currently higher costs of producing lower carbon emission steel, to compensate for this it is important that low-carbon steelmakers receive a price premium when compared to steel with higher embedded carbon emissions.

While we see an increase in demand for low-carbon emission steel, there is currently no commonly agreed definitions of what constitutes low-carbon emission steel. In anticipation of legislation being introduced on this topic in some home markets, we are engaging with several different initiatives being led by organisations including ResponsibleSteel™, the German Steel Federation, Eurofer, AISI, OECD and the WTO, amongst others.

The Steel Standards Principles were launched at COP28 in December 2023, supported by 35 steelmakers including ArcelorMittal, industry associations, standard setting bodies and international organisations, to establish a common framework on definitions, which is expected to provide a significant step forward for the evolving low-carbon steel market. The principles include:

- Standard emission measurement methodologies, data collection and disclosure which should be interoperable
- Standards should be consistent with the WTO Technical Barriers to Trade (TBT) Agreement Code of Good Practice and its Six Principles for the Development of International Standards with regard to transparency, openness, impartiality and consensus, effectiveness and relevance, coherence and the development dimension
- Standards should be consistent with the IEA Net Zero Principles for emissions measurement and data collection.

Defining a consistent steelmaking system boundary

Not all steelmakers operate all the same production steps involved in the steelmaking process with some being more vertically integrated than others. As a result, traditional carbon accounting methods such as the World Resources Institute’s Greenhouse Gas Protocol – measuring direct (Scope 1) and indirect (Scope 2 and 3) emissions – are not directly suitable for comparing products or levels of decarbonisation progress. It is essential that a clearly defined steelmaking boundary is used to capture all the steelmaking processes generating material carbon emissions, irrespective of whether a steelmaker makes or buys the feedstocks or intermediate products (e.g., sinter, pellets, coke, DRI, HBI, pig iron etc.) from these processes. This will ensure that stakeholders (e.g., policymakers, customers, end users, civil society groups) have access to transparent measurement methods for comparability, and provide a level playing field for all steelmakers, irrespective of production route. During this year, ArcelorMittal engaged with organisations like ResponsibleSteel™ and the Rocky Mountain Institute to focus on bringing more consistency and accuracy to product carbon footprint accounting.[see here].

Measuring the embedded carbon emissions of finished products

Increasing numbers of customers now prefer to buy steel based primarily on the embedded carbon emissions of finished products from cradle-to-gate using a Life Cycle Assessment (LCA) value, or Environmental Product Declaration (EPD) value for construction products, undertaken in accordance with internationally recognised methodologies. Any approach must continue to ensure customers are able to do this irrespective of which steelmaking route has been used to produce the finished product.

Our own XCarb™ range of reduced, low- and near-zero carbon emission products in the form of XCarb™ green steel certificates and XCarb™ RRP products, were launched to test the appetite for near-zero carbon emission steel with our customer base, particularly in the automotive and construction sectors. Although initially developed in Europe, we continue to develop our offerings to support our customers’ net-zero ambitions and expand our approach into other geographies.
Evaluating physical and transition climate-related risks and opportunities

As set out in the EU Taxonomy climate change adaptation requirements, physical climate hazards may be either acute or chronic and related to temperature, wind, water or solid mass. Understanding our exposure to these hazards in the short-, medium- and long-term is important for us to build operational resilience in our assets and to protect workers and communities from the most material adverse climate-related physical impacts.

Transition risks are those associated with the pace and extent at which a company manages and adapts its business strategy to the transition to a low-carbon or net zero economy. Typical risks may entail extensive policy, compliance and reporting requirements, potential for legal and litigation exposure, technological inadequacies or failure, and changes in market demand, supply and dynamics.

The analysis of both physical and transition climate-related risks and opportunities, under different climate scenarios, helps to build a more robust understanding of the potential material impacts to the business, allowing us to better inform strategic and operational decisions and their timing.

Our initial physical climate risk analysis was informed by the TCFD recommendations and has subsequently been updated to reflect the more recent requirements introduced by EU CSRD, EU Taxonomy, and the US SEC climate disclosures.

Complying with climate change legislation

The regulatory environment is developing rapidly to implement the Paris Agreement and to incorporate the voluntary TCFD recommendations into mandatory requirements. This legislation will transform the way global multinational companies disclose the impacts that climate change has on their business, and how they are responding to decarbonise their operations and value chains. We are working to ensure compliance with all these regulations, which include:

- The EU CSRD, which came into force in January 2023, includes disclosure on climate change such as a 1.5°C-aligned transition plan, and the financial impact of climate-related risks and opportunities on the business
- From 2023, EU corporates must report on the activities that are aligned with the EU Taxonomy Regulation, a classification system that clarifies the degree to which investments can be considered environmentally sustainable in the context of the European Green Deal. In particular, corporates are required to disclose the share of their turnover, capital and operational expenditure associated with environmentally sustainable economic activities (as defined in the EU Taxonomy Regulation)
- In the US, the SEC Climate Disclosure Rules will require companies to report on climate-related material risks and strategic implications including risks from physical climate-related hazards.

Developing a robust, verifiable offset strategy for residual emissions

While ArcelorMittal aims ultimately to achieve net-zero carbon emissions from its operations by 2050, residual emissions may remain for which either there will be no feasible technological solution, or the solution involves excessively high economic or social costs. For these residual emissions, which today we estimate will be around 10% of our baseline emissions, we are working towards developing a diverse and robust offset carbon removals portfolio based on high-quality and high integrity principles. The basis of this portfolio is a better understanding of the timeframe and volumes of our needs in the next decades, and we are currently analysing options we may have by either developing ourselves, purchasing or investing in, to ensure that we have access to the sufficient carbon credits from ecosystem restoration, nature-based and technology-based solutions.
Chapter 3 – Responsible energy use and lower-carbon futures continued

Risk management

Potential risks to implementing our decarbonisation roadmap

Our business faces considerable risks and opportunities arising from addressing the transition to net-zero, not least regarding ensuring the durability and performance of its product offering and business models. Equally, we regard it as a counter-balancing opportunity to strategically construct a more resilient business that delivers low- or zero-carbon solutions to our customers into the longer term. The main risks may be summarised as follows:

• Unequal pace of regional decarbonisation
• Failure to secure sufficient and timely funding for decarbonisation projects
• Clean energy (renewable electricity, green hydrogen and its related infrastructure) is not timely available or affordable
• Lack of scrap availability affects decarbonisation rate
• Inability to secure the skills we need for the transition
• Existing assets, supply chains, logistic routes, and planned decarbonisation projects do not evaluate and implement adaptation to meet acute and/or chronic physical risks of climate change
• Significant stakeholder opposition to decarbonisation projects
• CCUS cannot be built at scale within a reasonable timeframe
• Breakthrough technologies take longer to become available
• Decarbonisation delayed, for example for economic reasons
• Customers unwilling to pay price premium for low-carbon steel

- Insufficient availability and affordability of raw material feedstocks, clean electricity, green hydrogen, OEM equipment or contractors.

Climate-related risks and opportunities

We have used a scenario analysis approach to test the resilience of our organisation’s preparedness against different climate-related physical and transition risks and identify business opportunities, together with understanding how to best quantify their financial impacts, taking in consideration the uncertainties and assumptions behind these calculations. In 2023, we have gone further in our analysis incorporating new requirements set by new climate regulation and standards, using as reference publicly available scenarios (IPCC, IEA, among others), and considering our current operational landscape (technology mix and geographical distribution), the steel demand breakdown by region and end-use and future cost of critical raw materials.

From our recent assessments, the climate-related transition risks of highest strategic importance were identified as follows:

- Decrease of steel demand compared to business as usual, due to increased material efficiency and product lifetimes, and increased circularity. This is of high relevance in the European market. In contrast, a transition to a low-carbon economy brings opportunities for growth in emerging economies like India, due to the expansion of their infrastructure, and in key markets associated with clean technologies (e.g. wind turbines, solar panels and electric vehicles);
- Restrictions on clean energy scalability, which can have significant impacts on our decarbonisation costs in some regions
- Climate and industrial policies between regions not being aligned may lead to carbon leakage, with a risk of being further exacerbated by global excess steel capacities and differences in trade policies
- Inability to meet stakeholder expectations either due to delayed decarbonisation or lack of commitment to climate justice, eroding trust of customers, regulators, governments and investors.

Regarding physical climate risks, in 2023 we expanded the scope of our previous analysis to include more downstream assets and additional joint ventures, and cover all 28 climate hazards listed by the EU Taxonomy, within the possibilities current climate science allows to do with a reasonable level of confidence. The screening was undertaken against different emissions scenarios and different timeframes, but results are shown only for a high-emission scenario by 2050, aligned with international best practice to review ‘stressed exposure’ to impacts over a time horizon relevant to the asset lifetimes and the business.

Across the business, the hazards with the largest number of sites at risk are:

- Flooding, with inherent risk (i.e., prior to implementation of risk controls) concentrated in northern Europe, where a higher proportion of sites are in proximity to rivers or coastal areas. However, the inherent risk is not expected to increase significantly out to 2050
- Extreme heat (heatwaves and heat stress), mainly in sites located in equatorial and tropical regions. Climate models show that there is an increased likelihood of these sites experiencing widespread increases in the inherent risk of extreme heat out to 2050
- Water stress, caused by a combination of high heat and low precipitation. Sites with higher inherent risk are more likely to be concentrated in Northern Europe, North America and Southern Africa.

In terms of opportunities, improving the resiliency of key infrastructure to cope with a higher frequency and severity of extreme weather events could drive an increase in steel demand. For example, steel sheet piles are an adequate solution to build flood defences and coastal erosion protection schemes and have been used in dike reinforcement, river embankment protection or groins to avoid further damaging consequences for households, agriculture, infrastructure and industrial assets.


In 2023, we also focused on developing methodologies to move from this expanded qualitative assessment of inherent risk to be able to quantify the potential financial impacts of the residual risk, taking into consideration adaptation measures in place. The approach for physical risks has been to establish suitable materiality thresholds and conduct site-level assessments of potential financial impacts due to business disruption, asset damage and productivity loss.

For transition risks, ArcelorMittal is developing a site-level financial model to test its business resilience against market, policy and technology-related climate risks, like changes in steel demand from increased circularity, changes in raw material costs, timely introduction of favourable climate policies and availability of breakthrough technologies.
Chapter 3 – Responsible energy use and lower-carbon futures

Performance & targets

Commentary on carbon performance in 2023
We are working towards achieving our group level GHG emissions reduction target i.e. reducing the CO₂e intensity of our steel and mining operations (Scopes 1 and 2 only) by 25% by 2030 based on our 2018 reference year. In 2023, our adjusted group intensity target KPI was 1.97tCO₂e/tcs based on our 2018 reference year. Like the group level target, this data is also adjusted for structural changes to enable a like-for-like annual comparison. In 2023, we saw a 1.7% improvement from the 2018 baseline of 1.71tCO₂e/tcs, down to 1.68tCO₂e/tcs.

We also report the CO₂e intensity of steel only to better understand the trend of our steelmaking assets. This data is adjusted for structural changes to our portfolio to enable a like-for-like annual comparison. This shows a reduction of 5.3% since 2018, from 2.07tCO₂e/tcs to 1.96tCO₂e/tcs. The corresponding adjusted annual absolute emissions (Scope 1 and 2, steel and mining) decreased by 28% compared with our 2018 baseline.

Our European business also has a 35% CO₂e emissions intensity reduction target (Scopes 1 and 2) based on 2018 reference year. Like the group level target, this data is also adjusted for structural changes to enable a like-for-like annual comparison. In 2023, we saw a 1.7% improvement from the 2018 baseline of 1.71tCO₂e/tcs, down to 1.68tCO₂e/tcs.

While we are pleased with these annual reductions in intensity and absolute emissions, it is important to note that significant reductions are only likely to be made with the successful deployment of projects that will transform our steelmaking and energy generation assets, which are heavily dependent on cost-effective technologies and clean energy being available to deploy at scale. This in turn is heavily dependent on the policy framework and clean energy infrastructure in the locations where our assets are located. We are committed to work with governments and other bodies to create the enabling environment we need to transform the business.

The following KPIs are used to measure and monitor our progress.

<table>
<thead>
<tr>
<th>Metric</th>
<th>Unit</th>
<th>Scope + perimeter</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>Target % improvement 2018-2030</th>
<th>2030 equivalent</th>
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<tbody>
<tr>
<td>Adjusted absolute CO₂e footprint</td>
<td>Million tonnes</td>
<td>ArcelorMittal Scope 1+2</td>
<td>158.8</td>
<td>151.8</td>
<td>130.5</td>
<td>148.1</td>
<td>125.7</td>
<td>114.3</td>
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<tr>
<td>Adjusted absolute CO₂e footprint</td>
<td>Million tonnes</td>
<td>Europe Scope 1+2</td>
<td>67.6</td>
<td>64.2</td>
<td>51.7</td>
<td>61.0</td>
<td>54.5</td>
<td>48.4</td>
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<td>Adjusted crude steel production¹</td>
<td>Mt</td>
<td>ArcelorMittal</td>
<td>77.4</td>
<td>73.3</td>
<td>60.9</td>
<td>70.7</td>
<td>61.8</td>
<td>51.8</td>
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<td>–</td>
</tr>
<tr>
<td>Adjusted Group CO₂e intensity target KPI (steel and mining)</td>
<td>CO₂e/tonne of steel</td>
<td>ArcelorMittal Scope 1+2</td>
<td>2.06</td>
<td>2.07</td>
<td>2.14</td>
<td>2.09</td>
<td>2.04</td>
<td>1.97</td>
<td>25%</td>
<td>1.52</td>
</tr>
<tr>
<td>Adjusted Europe CO₂e intensity target KPI (steel)</td>
<td>CO₂e/tonne of steel</td>
<td>Europe Scope 1+2</td>
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<td>1.69</td>
<td>1.71</td>
<td>1.71</td>
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<tr>
<td>CO₂e intensity steel only</td>
<td>CO₂e/tonne of steel</td>
<td>Steel Scope 1+2</td>
<td>2.09</td>
<td>2.06</td>
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<td>Adjusted CO₂e intensity² steel only</td>
<td>CO₂e/tonne of steel</td>
<td>Steel Scope 1+2</td>
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<td>2.03</td>
<td>1.99</td>
<td>1.96</td>
<td>–</td>
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</tr>
</tbody>
</table>

¹ These figures have been adjusted for structural changes to the ArcelorMittal portfolio in the previous 12 months to enable a like-for-like annual comparison, and include ArcelorMittal Temirtau.

² This indicator includes those emissions from purchased goods that a steelmaker would normally be expected to produce, such as coke, slabs, burnt lime in order to maintain a consistent system boundary and so a like for like comparison – see the Basis of Reporting for more explanation.

Note: for illustrative purposes only, excluding ArcelorMittal Temirtau, in 2023, the adjusted absolute CO₂e footprint (scope 1+2) was 98.5 million tonnes.

Putting in place assets and technology capable of taking the industry to net-zero DRI-EAF projects
Considerable progress was made during 2023 on the company’s largest decarbonisation projects with pre-FEED (front-end engineering design) being completed for DRI/EAF operations in Canada, Spain, France, Belgium and Germany, and these projects have advanced to their FEED stages ahead of final investment decisions. During 2023 and early 2024, we received European Commission approval for the funding of four of our projects in Spain, Hamburg, France, Germany and Belgium. We welcome the support to date and we are engaging with the relevant country governments on energy costs and to provide clarity on the pathway towards clean energy that will enable these projects to move to the next phase of development. More than 200 dedicated employees are currently working intensively on the decarbonisation projects.

Hamilton, Canada
We are progressing with the decarbonisation project at ArcelorMittal Dofasco site in Hamilton, Ontario. The governments of Canada and Ontario have committed CAD$400m and CAD$500m respectively to the overall project cost. The project is planning to transition the site to DRI-EAF steelmaking. A new 2.5Mt per annum capacity DRI furnace will initially operate on natural gas but will be constructed ‘hydrogen ready’ so it can transition to green hydrogen when a sufficient and cost-effective supply becomes available.
Chapter 3 – Responsible energy use and lower-carbon futures

Performance & targets continued

Contrecoeur, Canada
Our existing DRI plant in Quebec produces 1.7Mt of DRI each year. In 2022, we successfully tested the use of green hydrogen in the production of DRI. The objective of the test was to assess the ability to replace the use of natural gas with green hydrogen in the iron ore reduction process. The green hydrogen used in the test was produced by a third-party owned electrolyser (device that produces green hydrogen from electricity and water) and was then transported to Contrecoeur. This is a major step forward since the iron ore reduction process alone contributes to more than 75% of ArcelorMittal Long Products Canada (“AMLPC”) overall CO₂ emissions. AMLPC is evaluating the possibility of carrying out further tests by increasing the use of green hydrogen at the DRI plant, which could eventually reduce CO₂ emissions in Contrecoeur by several hundred thousand tonnes per year. The potential use of electrolyzers to produce green hydrogen in Contrecoeur will depend on certain criteria, particularly the availability of sufficient electricity to power the units.

ArcelorMittal Texas HBI, USA
In 2022, we secured high-quality metallic feedstock and purchased a majority shareholding in a world-class HBI plant in Texas. HBI is a high-quality feedstock made through the direct reduction of iron ore which is used to produce high-quality steel grades in an EAF, but which can also be used in blast furnaces, resulting in lower coke consumption.

Gijón and Sestao, Spain
We are planning to invest €1bn in the plant in Gijón including the construction of a 2.3Mt hydrogen DRI plant. In February 2023, we received the European Commission’s approval of €650m in state aid for the DRI plant. This was followed in November 2023 with the signing of a contract with industrial engineering company Sarralle to build a new EAF in Gijón for the Longs business. New DRI and EAF installations in Gijón are expected to reduce carbon emissions at ArcelorMittal’s Spanish operations by approximately 50%. Around 3Mt per year of DRI would be supplied to Sestao to be used as feedstock for the plant’s two EAFs.

Back in February 2022, ArcelorMittal had already formed an industrial joint venture with Enagas, Grupo Fertiberia and DH2 Energy so that competitive renewable hydrogen can be delivered to an industrial complex in Asturias from facilities based in northern Spain.

Hamburg H2 project, Germany
In Germany, we already operate Europe’s only DRI-EAF plant in Hamburg. We are planning to test the ability of hydrogen DRI on an industrial scale, as well as testing carbon-free DRI in the EAF steelmaking process. The European Commission approved €55m of funding support from the German Federal Government towards the plant’s construction, which is half of the estimated €110m total capital expenditure required.

Bremen and Eisenhüttenstadt, Germany
We are developing a project to build a large-scale industrial plant for the DRI-based steelmaking at our site in Bremen, as well as EAFs in Bremen and in Eisenhüttenstadt, following the announcement of the planned expansion of Germany’s hydrogen infrastructure and alongside its existing H2 Hamburg project. In February 2024, the company received the European Commission’s approval of €1.3bn in state aid.

In April 2023, the construction, by EWE, of a 10-megawatt hydrogen generation plant was commenced in Bremen. It is scheduled to go into operation this year. In January 2024, ArcelorMittal Bremen and EWE signed a declaration of intent to supply green hydrogen on an industrial scale. The aim is to significantly reduce CO₂ emissions during steel production. The project represents another milestone on the path to decarbonised steel in Bremen. Green hydrogen is expected to be delivered to Bremen from a 320 megawatt generation plant in Emden from 2028.

Dunkirk, France
We intend to build a 2.5Mt per year DRI unit and two EAFs in Dunkirk. On July 20, 2023, approval of €850m in state aid for this project was received from the European Commission.

Our decarbonisation objectives in France have also received a boost through a letter of intent, signed in January 2024, with French state-owned energy supplier EDF Energy for the long-term supply of low-carbon electricity to its French steelmaking sites in Dunkirk and Fos-sur-Mer. ArcelorMittal and quarried materials group SigmaRoc have entered into a strategic joint venture agreement to create a new company that will produce lime, an essential purifying addictive

Case study
Belval, Luxembourg

In June 2023, ArcelorMittal announced plans to invest in new electric arc furnace (EAF) production capacity at its Belval site, located in Luxembourg. The investment is part of a series of projects that were the subject of a memorandum of understanding (MoU) signed in September 2022 with the Luxembourg Ministry of the Economy. The investment will offer improved energy efficiency and an increase in steel production capacity in Luxembourg of almost 15%, reaching 2.5Mt per year of steel.

The installation of the new EAF began in the fourth quarter of 2023, with commissioning expected in 2025. This project is the first concrete expression of the MoU that we signed in September, 2022 to develop initiatives aimed at enabling ArcelorMittal’s Luxembourg sites to embark on the road to carbon-neutral steel production.

Geert van Poelvoorde, CEO of ArcelorMittal Europe

The realisation of this project is tangible proof that we are capable, in Luxembourg, of sustaining and developing our industry through a project that fits perfectly into the roadmap set by Europe to combat climate change.

Franz Fayot, Luxembourg’s Minister
Chapter 3 – Responsible energy use and lower-carbon futures continued

Performance & targets continued

Ghent, Belgium

We are developing plans for a 2.5Mt per year DRI plant and 2 EAF facilities at our Ghent site. The DRI plant and EAF facilities would operate alongside Ghent’s state-of-the-art blast furnace that is ready to take waste wood and plastic as a substitute for fossil carbon. On June 22, 2023, approval of €280m in state aid for this project was received from the European Commission. We have also started a feasibility study for the Ghent Carbon Hub project in partnership with North Sea Port and energy infrastructure group Fluys.

Transforming the energy used in steelmaking and reducing and capturing carbon emissions

Torero

We have built an industrial-scale demonstration plant that converts waste wood into renewable energy through a process called torrefaction. This source of waste wood is considered hazardous material if burned in an incinerator as it emits harmful gasses. However, in a blast furnace no such pollutants can be formed. At the Ghent plant, two reactors are expected to each produce 40,000 tonnes of bio-coal annually that can be used in the blast furnace as a substitute for coal. Construction of the €55m project started in 2018.

First reactor started production in 2023.

Steelanol CCU plant

In June 2023, we commenced ethanol production from the CCU project at our steel plant in Ghent, Belgium. We announced the first industrial production of ethanol in November 2023. The “Steelanol” project is a first of its kind for the European steel industry. Utilising cutting-edge carbon recycling technology developed by project partner LanzaTech, the CCU plant uses biocatalysts to transform carbon-rich waste gases from the steelmaking process and from waste biomass into advanced ethanol, which can then be used as a building block to produce a variety of chemical products, to produce a variety of products, including sustainable transport fuels, packaging materials, apparel, and even cosmetic fragrances, supporting the decarbonisation efforts of the chemical sector.

Case study

ArcelorMittal Dunkirk decarbonisation programme

We are planning to implement €1.8bn of investments by 2030 to accelerate decarbonisation of our steelmaking sites in Dunkirk while maintaining equivalent production capacities. We intend to build a 2.4Mt per year DRI unit and 2.0Mt per year EAF. In July 2023, we received the European Commission’s approval of €850m for the funding of this project.

The intention is to reduce by 35% ArcelorMittal’s carbon emissions in Europe.

In order to deliver a bankable project and reach the final investment decision (FID), such a large capital project goes through a detailed FEED study to determine the full industrial scope and specification of the project, the implementation schedule and final budget.

The process is divided into a preliminary phase, pre-FEED, and then the detailed FEED phase.

The company has appointed engineering, procurement and construction management (EPCM) and project management consultancy (PMC) contractors to support with the project management and execution of the construction programme.

We will be developing a comprehensive change management programme, largely focused on successfully transitioning our employees to the skill base and know-how required for the different needs of DRI and EAF operations.

Pre-FEED was completed in July 2023. Completion of the FEED stage, expected later this year, will determine the industrial layout for the project, the implementation schedule and final budget, and confirm the viability of the project.

Our Dunkirk operations are set to undergo a dramatic transformation over the next three years, as part of the group’s decarbonisation programme. The new DRI and EAF plants will deliver low-carbon steel for our customers, increase our circularity through using a greater proportion of scrap, and substantially participate in reducing our overall carbon emissions by 35% in Europe. We are grateful to the French government and the EU for their support, and are delighted to be partnering with EDF to secure renewable electricity supplies for the project.

Matthieu Jehl,
CEO of ArcelorMittal France
Chapter 3 – Responsible energy use and lower-carbon futures continued

Performance & targets continued

The Steelanol plant has the annual capacity to produce 80m litres of ethanol, around half of the total current demand in Belgium. It expects to reduce carbon emissions from the Ghent plant by 125,000 tonnes annually.

3D

A pilot project in Dunkirk aims to capture CO₂ off-gases at a rate of 0.5 metric tonnes of CO₂ per hour for transport and storage. The process uses low-temperature heat available across the plant to separate CO₂ from other off-gases from the blast furnace to create a pure low-pressure CO₂ gas stream suitable for internal reuse or piping for storage. This process could significantly lower CO₂ capture costs versus alternative technologies.

Regional infrastructure investment would be required for local industrial companies in order to optimise usage and efficiency of the solution. Parametric tests have been performed. A steady operating level with high capture rates has been demonstrated during 2023, and a detailed long-term test run associated with gas analysis is being undertaken in 2024.

MHIENG carbon capture collaboration

ArcelorMittal, Mitsubishi Heavy Industries Engineering (MHIENG), a pioneer in carbon capture technology, leading global resources company, BHP, along with Mitsubishi Development Pty Ltd are collaborating on a multi-year trial of MHIENG’s carbon capture technology with ArcelorMittal, following the signing of a funding agreement between the parties. The companies will also conduct a feasibility and design study to investigate the commercial application of MHIENG’s technology in separating and capturing CO₂ top gas from the Ghent blast furnace.

Partnering with SEKISUI CHEMICAL

We have been partnering with SEKISUI CHEMICAL’s on a project to capture and reuse CO₂ emitted during steelmaking, and we achieved target ahead of schedule. As part of this partnership, we have been supported by the New Energy and Industrial Technology Development Organization (NEDO), Japan’s national research and development agency, and have launched an ‘international collaboration on CCU for circular carbon in Steelmaking’ (hereafter, the NEDO project), scheduled for three years from 2021. One of the research topics is to develop a fundamental technology for Synthesis Gas (carbon monoxide and hydrogen) production using SEKISUI CHEMICAL’s unique chemical looping technology.

Volertron TM

We are making considerable progress in commercialising direct electrolysis technology. In June 2023, ArcelorMittal and John Cockerill announced plans to construct the world’s first industrial scale low temperature iron electrolysis plant. The Volteron™ plant, which in a first phase is expected to produce between 40,000 and 80,000 tonnes per year of iron plates, is targeted to start production in 2027. Once the technology has been proven at this scale, the intention is to increase the plant’s annual capacity to between 300,000 and one million tonnes.

ArcelorMittal and John Cockerill have been working together on an innovative electrochemical process to transform iron oxide into iron plates for the last few years. The successfully completed project, formerly known as SIDERWIN, has to date been publicly funded through the EU’s Horizon 2020 programme. In addition to ArcelorMittal and John Cockerill, project partners have included EDF, Tecnalia, Qantis, University of Aveira, the National Technical University of Athens, the Norwegian University of Science and Technology, Dynegie, Recay, CFD Numerics and Mytilineos. The next phase of the project will be carried forward as an exclusive partnership between ArcelorMittal and John Cockerill.

Investing in clean electricity

We are building our portfolio of renewable electricity assets and access with the 2022 $0.6bn investment in the 975MW green electricity project between ArcelorMittal and Greenko Group combining solar, wind and pumped hydropower technology. The project is owned and funded by ArcelorMittal. AM/NS India will enter into a 25 year off-take agreement with ArcelorMittal to purchase 250MW of renewable electricity annually from the project, resulting in over 20% of the electricity requirement at AM/NS India’s Hazira plant coming from renewable sources, reducing carbon emissions by approximately 1.5Mt per year.

The necessary allotment of land has been received from the government of Andhra Pradesh. Private land acquisition is in progress and key contracts for the wind projects have been executed and civil works have commenced. The project commissioning is expected in the first half of 2024.

Separately, in May 2023, ArcelorMittal Brazil formed a joint venture partnership with Casa dos Ventos, one of Brazil’s largest developers and producers of renewable energy, to develop a 554MW wind power project. The circa $0.8bn project aims to secure and decarbonise a considerable proportion of ArcelorMittal Brazil’s future electricity needs. It is estimated it will provide 38% of ArcelorMittal’s Brazil’s total electricity needs in 2030.

In March 2023, ArcelorMittal acquired Companhia Siderúrgica do Pecém (“CSP”), an operation producing high-quality slab at a globally competitive cost in the state of Ceará in north-east Brazil.

The acquisition brings several strategic benefits to ArcelorMittal, including the potential to capitalize on the significant planned third-party investment to form a clean electricity and green hydrogen hub in Pecém.

The Pecém Green Hydrogen Hub, a partnership between the Pecém Complex and Linde, is a large-scale green hydrogen project at the Port of Pecém which is targeting to produce up to 5GW of renewable energy and 900,000 tonnes per year of green hydrogen in a series of phases. The first phase, which the partnership currently expects to be completed over the course of the next five years, targets the construction of 100-150MW of renewable energy capacity.

Investing in low-carbon products, solutions and innovative technologies

Through the ArcelorMittal XCarb® Innovation Fund, we invest in companies developing technologies with the potential to support and accelerate the transition to net-zero carbon steelmaking.

Since its launch in March 2021, the Fund has invested a total of $188.5m in seven different companies developing technologies that range from carbon capture to long-term battery storage solutions and hydrogen production. Through the fund we have also become a founding partner of the Bill Gates-led Breakthrough Energy Catalyst Programme, to which we have committed $100m over five years, seeking to accelerate the adoption of decarbonisation technologies by investing in early stage projects.

The fund has also launched two successful Accelerator Programmes, one global and one focused on India, providing mentorship and development opportunities for businesses that are typically viewed as being too early stage for the XCarb® Innovation Fund.
In 2023, the fund made three new investments totalling $66m. In January, we invested $36m in Boston Metal, which is commercialising a molten oxide electrolysis (MOE) technology that transforms iron ore into iron, using clean electricity, thereby removing carbon from the steelmaking process.

In June, the fund invested a further $25m into nuclear innovation company, TerraPower, originally founded by Bill Gates in 2008, bringing its total investment to $50m and making it the fund’s single largest investment.

In July, we announced CHAR Technologies, based in Ontario, as the inaugural winner of the Accelerator programme, and invested $5m in the company. CHAR has already been collaborating with our Canadian flat steel-making operation, ArcelorMittal Dofasco, to test the use of its bio-carbon solutions as a partial replacement for fossil coal in the steelmaking process. In addition, we established strategic partnerships with runners up – Carbon Upcycling and D-CRBN.

Some of the other milestones achieved by our portfolio companies during 2023 included:

- Form Energy progressed construction at its flagship production factory in Weirton, West Virginia; and secured a $30m grant from the California Energy Commission to build its first project in California, a 5MW/500MWh iron–air battery capable of discharging energy to the grid for 100 hours
- H2Pro and ArcelorMittal advanced their study of the implementation of a 12MW electrolyser in Sestao, Spain. H2Pro also partnered respectively with Doral and Gaia Energy on green hydrogen projects in Europe, the United States and Israel, and in Morocco
- LanzaTech, which is not only one of the Fund’s portfolio companies but with whom we have also partnered to construct a carbon capture and utilisation plant at our steelmaking facility in Ghent, Belgium, has built on its commercial projects, now operating four plants in China, each producing between 46,000 and 60,000 tonnes of ethanol per year from carbon-rich waste gases; and started its first facility in India with partner India Oil last year, producing 33,500 tonnes of ethanol per year from its Panipat Refinery
- TerraPower advanced its plans to build its Natrium™ Reactor Demonstration Project in Kemmerer, Wyoming, purchasing land and announcing contracts for suppliers which will support the development of the Natrium™ reactor. In a further boost, in December, it signed an MoU with the UAE’s nuclear energy development organisation, Emirates Nuclear Energy Corporation (ENEC) to explore opportunities for the commercialisation and global deployment of its Natrium™ technology

Furthermore, to support the Fund’s ambitions, last year we joined Launchpad, an initiative from the Earthshot Prize, that will connect funders to current and former finalists and nominees and support their funding needs and growth journey. In recognition of our growing fund activities we were delighted to be named the Impact Fund of the Year by Investing in Green Hydrogen, for our strong commitment to supporting clean technologies, advancing the growth of the hydrogen economy and promoting sustainable development.
Chapter 3 – Responsible energy use and lower-carbon futures continued

Performance & targets continued

Quantifying the impacts of material physical and transition climate-related risk to our business

In addition to expanding the screening of our assets and using best-available climate models against a more comprehensive list of climate hazards, in 2023 we also carried out an assessment to understand the degree to which sites are already experiencing physical impacts from climate change. This was done through questionnaires to better understand the nature of the increased risk, perceived changes in frequency, the operational impact (asset and workers) and any mitigation measures that are being put in place.

Using suitable materiality and hazard thresholds, we have identified sites at material gross risk, and are conducting site-level assessments to have more accurate data to determine the net risk, considering local adaptation solutions in place.

The result of this work has enabled us to develop a Physical Risk Map dashboard for the group. We are now working to better understand potential financial impacts on key metrics (revenue, capex, etc.) due to extreme weather events and/or chronic climate changes from:

• Business disruption, caused by the cessation of revenue-generating activity
• Asset damage or infrastructure loss
• Production loss, resulting in reducing the generation of revenue.

The combination of these three categories of loss will account for the financial impact of a specific climate hazard to our business. The process of developing this advanced approach to assess climate physical risks is providing valuable insight into prioritising actions and embedding climate physical risks into our broader risk management process.

For transition risks, initially we have used five key assets representing our business segments to understand our resilience against specific changes in regional steel demand, changes in raw material costs, timely introduction of favourable climate policies and availability of breakthrough technologies. The analysis is being done through the development of site-level financial models and the results will be extrapolated at segment- and group-level to better understand the financial impacts of transition risks in a low-carbon emission scenario.

The next step is to expand the assessments to other key sites in 2024 and fine-tune assumptions behind the financial modelling.

The transition risk assessment is a valuable contributor to our strategic thinking for the company, in assessing not just where the geographical risks lie, but also where the real opportunities for growth are globally.

Scope 3 assessment

In 2023, we conducted a screening of all Scope 3 emissions categories, with the purpose of identifying material categories and key value chain stakeholders to prioritise our engagement, both internal and external. The accounting was done following the principles of relevance, completeness, transparency, accuracy and consistency, using the best data sources available at the moment, minimising uncertainties as far as practicable.

As a result of this work, we have identified five material Scope 3 emissions categories:

• Category 1: Purchased Goods
• Category 3: Fuel and energy-related activities
• Category 4: Upstream transportation
• Category 10: Processing of sold products
• Category 15: Investments.

To determine materiality, we have used two thresholds: the total contribution of a specific Scope 3 category should be less than 5% of total Scope 3 emissions and the sum of all immaterial categories should be less than 20% of total Scope 3 emissions.

We have used the results of this screening to develop a supplier engagement strategy, aimed at structuring and accelerating collaboration with suppliers on value chain emissions. This strategy includes:

• In-depth analysis of important purchased goods, like iron ore, solid fuels, ferroalloys, and base metals. In 2024, we plan to expand the analysis to other industrial products
• Supplier classification into three main groups: strategic, high impact and transactional suppliers. We have identified 40 prioritised key value chain suppliers with whom we are exploring collaboration on decarbonisation plans, emission reduction targets and product carbon footprint data
• Create a pilot tool to report suppliers’ emissions for selected products. Currently, the tool is in testing phase and in 2024 we are planning to create a supplier performance-tracking data base.

We are collaborating with ArcelorMittal on improving supply chain CO₂ emissions standardisation and introducing our Valutrax tool to share the information across our material flows.

Anesan Naidoo
Head of sustainability, marketing, Anglo American

The strategic partnership between Vale and ArcelorMittal fosters the construction of a new steel industry, more conscious and less carbon-intensive throughout its life cycle. Vale, on the one hand, providing new iron ore products and solutions with a lower carbon footprint, and ArcelorMittal, in turn, testing and proving these lower impact alternatives for the development of ‘smarter steels for people and planet.’

Malu Paiva
Vice president, sustainability, Vale
About our internal Climate Knowledge Sharing Forum

Our internal Climate Knowledge Sharing Forum was held in Asturias from 14-16th November, 2023. It was a joint initiative between our government affairs, group’s chief technology office, and corporate sustainability functions. The event had around 30 participants, including VPs, GMs, managers, researchers and project leaders from across our corporate teams and segments in Brazil, Canada, South Africa, Argentina, Mexico, Ukraine, Spain, Germany, France, China and NAFTA. There were representatives from corporate, government affairs, environment, SCTO, corporate sustainability, global R&D, legal & compliance, XCarb Innovation Fund, business development, corporate strategy, investor relations, institutional affairs, Europe’s climate action market intelligence and regional CMOs.

The agenda covered the following topics:
1. The road to Climate Action Report 3
2. Transition to a Science-based target 1.5 degrees aligned pathway
3. Threats: greenwashing, litigation, compliance claims
4. Decarbonisation roadmap and decarbonising steel
5. Low-carbon emission premium steel demand
6. Understanding the landscape (ResponsibleSteel™, Steel Breakthrough Agenda, IEA, etc.) and working towards a common standard
7. Contribution to climate solutions
8. Embedding Just Transition principles in our climate strategy
9. Key principles to build a robust carbon removal strategy
10. Decarbonisation plans from our competitors
11. Enabling policy conditions
12. Regional policies and roadblocks
13. Financing the transition to net-zero.

EU Taxonomy alignment
The EU Taxonomy Regulation requires ArcelorMittal to report on the Taxonomy-alignment of its activities. The EU Taxonomy-eligible activities identified can be classified as Taxonomy-aligned if they make a substantial contribution to climate change mitigation and do no significant harm (DNSH) to other environmental objectives and, at the same time, ensure minimum social safeguards. ArcelorMittal has identified a substantial contribution to climate change mitigation for the manufacture of iron and steel under the technical screening criteria. Read more in the EU Taxonomy report in the annex, page 78.

In terms of carbon offset removals solutions, we have identified three main groups:
• Restoration of ecosystems that serve as natural carbon sinks. Restoring these natural habitats is necessary to sustain population as well as local flora and fauna
• Nature-based solutions, based on actions to protect sustainably, manage and restore natural and modified ecosystems, simultaneously benefiting people and nature
• Technology-based solutions, based on innovative or adaptive technologies.

We conducted a preliminary assessment of these solutions based on criteria such as cost, carbon storage capacity and availability in different timeframes. Based on this work, we envisage an offset strategy that focuses on nature-based solutions in the shorter term into the 2030s and then increasingly moves into technology-based solutions.

In order to deliver a robust, verifiable, trackable, long-term supply of offset credits, we are considering a range of strategic options when it comes to ownership models:
• Purchase of carbon credits from third parties
• Develop carbon credits in partnership with other stakeholders
• Develop offset projects by ourselves.

The latter two options reflect the opportunity ArcelorMittal has as a global landholder. How we move forward will depend on specific needs and opportunities and it is part of the work we will continue to do in 2024, focusing our actions in three main areas:
• Understand our needs: Volume, timeframe and solutions available to meet our future offset removals demand
• Establish a robust and clear governance on carbon offsets
• Develop a corporate high-quality/high-integrity offset assessment framework.

Performance & targets continued

Developing a robust approach to neutralise residual emissions
As aforementioned, we plan to buy high-quality offsets or launch projects to generate high-quality carbon credits to neutralise our residual emissions. We have based our understanding of quality and integrity of carbon credits in five fundamental elements:
• Be additional credits that would not have happened without the company’s intervention
• Not be overestimated – credits based on a realistic and credible baseline, and that are quantified, monitored, reported, and verified
• Be permanent – credits shall represent a permanent removal of CO2 from the atmosphere
• Not be claimed by another entity, and
• Not be associated with significant social or environmental harm.
Air, water, land, biodiversity and ecosystems

We seek to be a trusted user of resources and the natural environment, and to be a responsible steward of the land and ecosystems around our operations. We recognise that our environmental reporting has not previously provided the depth and breadth of data required by the new disclosure requirements and the onset of TNFD.

2023 has seen substantial advances in addressing these requirements, through putting in place the methodology, definitions and systems to collate and centrally report a wide range of new KPIs. We believe this will provide a much better understanding of our real impacts, and appropriate avoidance and mitigation measures in our environmental management plans.

KPI highlights

- **Dust intensity (steel)**
  - kg/tonne of steel
  - 2022: 0.54
  - ↓ 0.48

- **NO\textsubscript{x} intensity (steel)**
  - kg/tonne of steel
  - 2022: 1.10
  - ↓ 1.07

- **SO\textsubscript{x} intensity (steel)**
  - kg/tonne of steel
  - 2022: 1.82
  - ↓ 1.79

- **Net water use (steel)**
  - m\textsuperscript{3}/tonne of steel
  - 2022: 3.6
  - ↓ 3.4

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**CSRD alignment**

- ESRS E2: Pollution
- ESRS E3: Water and marine resources
- ESRS E4: Biodiversity and ecosystems

**Material topic**

- 5. Climate
- 6. Nature

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**UN SDG alignment**

- 14. Life below water
- 17. Partnerships for the goals
Chapter 4 – Air, water, land, biodiversity and ecosystems

Our focus this year has been on the detailed preparation of our data requirements, policies, systems and protocols for the new disclosure requirements across the company. We have selected the relevant KPIs that we will be reporting against the new requirements, and are seeking to standardise the quality of data coming from our multiple sites. Valuable guidance has been provided by running pilot studies, which will enable more streamlined approaches to be rolled out across the business.

Anne van Ysendyck
Vice President, head of government affairs and environment

Governance

Board oversight of environmental matters is provided by a dedicated Board Sustainability Committee devoted to sustainable development issues including environmental matters. The executive level Sustainable Development Panel also devotes considerable attention to this material issue. Segment environmental performance is also discussed with the Executive Office during quarterly Business Area Reviews.

The group environmental policy which sets out all our environmental governance for management and employees was revised in 2022. This will be further reviewed to align with the European Sustainability Reporting Standards (ESRS) as part of our CSRD preparations.

The company has an environmental expert network that covers a diverse range of fields. It meets quarterly to share best practice and discuss matters related to environmental governance. Each quarter the network focuses on a particular issue for deeper discussion and analysis.

Environmental governance is further supported through the ResponsibleSteel™, IMFA and ISO 14001 certification processes, which enables our key steel and iron ore mining sites to verify the robustness of their environmental and stakeholder management systems.

The company has implemented a tailings management framework and standard based on the leading industry guidelines from the Mining Association of Canada (MAC), the Canadian Dam Association (CDA) and the Global Industry Standard for Tailings Management (GISTM).

Strategy

Our overarching aim in relation to the environment is to be a trusted user of resources and the natural environment, and to be responsible stewards of the land and ecosystems around our operations. We seek to minimise environmental impacts, and mitigate any residual effects.

The strategic actions we are taking to achieve our environmental aim includes:

• Preparing for the new disclosure requirements
• Understanding and integrating the TNFD recommendations and Locate, Evaluate, Assess, Prepare (LEAP) approach
• Upgrading the company’s environmental data management systems and defining KPIs
• Making progress with the five-year environmental improvement plans
• Reducing and mitigating our impacts on air, water and land
• Developing our policies, standards and tools for biodiversity and ecosystems reporting and management
• Remaining vigilant on tailings dam safety
• Building greater expertise in Life Cycle Assessment (LCA) and Environmental Product Declaration (EPD).

Updated environmental policy

As part of its environmental goals and preparation for new reporting regulations, the executive management of the company approved an updated environmental policy at the end of 2022, which was launched in February 2023.

The policy provides the environmental framework by which all parts of the business are expected to abide.

The key principles are:

• Compliance with all relevant environmental laws and regulations
• Implementation of environmental management systems including ISO 14001 certification for all production facilities
• Conducting environmental impact assessments for all major capital projects in accordance with good international industry practice
• Continuous improvement in environmental performance, taking advantage of systematic monitoring and aiming at pollution prevention, and use of Best Available Techniques (BAT)
• Implementing a long-term greenhouse gas (GHG) emissions reduction strategy towards net-zero
• Development of low-impact, environmental production methods and local sourcing
• Development and manufacture of products that are not harmful to the environment with a focus on end-of-life recycling or reuse
• Supplier and contractor awareness and respect for the company’s policy
• Employee commitment and responsibility in environmental performance
• Respect protected areas and manage adverse impacts on biodiversity and ecosystem services in accordance with good international industry practice
• Efficient use of natural resources, raw materials, energy, land and water
• Open communication and dialogue with all affected stakeholders.
The policy is applicable to all operations.

We have also established an environmental compliance methodology that covers the identification, investigation and mitigation of environmental non-compliances and associated risks. It is based on ISO 14001 and covers environmental compliance at all steel and mining operations across the company, relating to air, water, soil, residues, noise, permits, landfills, monitoring and reporting, among others. At each site, the segment CEO is responsible for ensuring that the site environmental manager or designated person implements the methodology correctly. At the group level, the corporate environment team handles environmental compliance reporting and is responsible for regularly reviewing and updating the methodology as needed.

In 2024, we will make further amendments to the policy to align with the CSRD.

Preparing for the new disclosure requirements
The CSRD came into force in January 2023. It transforms corporate sustainability reporting for large companies from 2025, reporting on the 2024 financial year, by requiring a higher degree of disclosure by affected companies of dependencies and impacts on all aspects of the natural environment as well as the financial effects this will have on the companies themselves.

In preparation, we are developing our nature-based reporting systems and protocols at both group and local level. We have also undertaken pilot studies to address both CSRD and TNFD needs and considerations within selected mining and steel operations. The findings are being taken to refine the roll-out of standards and methodology across the group.

Updating our environmental data management systems
The company’s existing environmental data management system has been reviewed to address the significantly increased KPI and the new reporting requirements. Enhanced systems and tools are required to put the appropriate monitoring and action plans in place. A new technology partner and platform have been selected to provide our ongoing environmental data reporting requirements, and we are laying out the integration requirements with local reporting systems. We are considering other advancements and partnerships to enhance data acquisition, provide greater quality control, enable automated data gathering and drive more timely reporting.

Understanding and integrating the TNFD recommendations and LEAP approach
The final TNFD framework was launched in September 2023, to provide disclosure recommendations and guidance for companies to report and act on evolving nature-related dependencies, impacts, risks and opportunities. As part of our strategic planning we have been building our understanding of the TNFD reporting requirements and their implications for how we assess and manage biodiversity-related risks and opportunities at our sites. A major part of this was piloting a TNFD assessment at Bremen, one of our steel sites, and Liberia, one of our mining sites.

Making progress with the five-year environmental improvement plans
Our five-year environmental improvement plans are designed to complement our broader environmental programmes, through defining benchmarks for existing environmental criteria at our sites and then defining improvement actions over realistic timeframes. The plans include reporting on ducted dust, SOx and NOx, are required to include actions, projects, timelines and expected emission reductions to be achieved by 2025 and then subsequently 2030.

Reducing and mitigating our impacts on air, water and land
As a major industrial company, avoiding, reducing and mitigating our impacts on air, water and land are major components of our environmental and sustainability objectives. Concerns over impacts on air were the most highly ranked environmental issue for both stakeholders and the company in our most recent saliency assessment. We want to be a trusted user of these natural resources, and are dedicating significant resources to tackle them in our site plans and the five-year environmental improvement plans for each business unit and site, particularly around ducted dust, SOx and NOx, and water usage and quality.

Industrial use and degradation of land are becoming areas of increasing environmental concern. ArcelorMittal is determined to reduce its impacts in these areas. This includes reducing unnecessary non-beneficial land use such as waste storage, and finding innovative uses for waste materials such as slags, dust and sludges.

Building our biodiversity and ecosystem management capabilities
We are working to build our capabilities and resources for managing and enhancing biodiversity and ecosystems around our assets including the use of global datasets (e.g., Integrated Biodiversity Assessment Tool), improved monitoring on-site, continuous tracking of emerging best practice, and collaboration with relevant stakeholders, including civil society, government bodies and communities to manage biodiversity and ecosystems effectively in and around our operations.

Remaining vigilant on tailings dam safety
Our governance model aims to ensure that our tailings storage facilities (TSFs) are structurally sound and safe in accordance with the latest internationally accepted guidance, with all efforts directed at maximising dam integrity and minimising the risks of dam failure. Read more on page 46.

Building greater expertise in LCAs and EPDs
LCAs and EPDs are increasingly necessary for the specification and validation of our products, particularly for key industries such as automotive and construction as they provide transparent and objective evaluations of the potential impact of products on people and planet. Our expertise is an important asset and differentiator for us, and we aim to continue building greater experience and capabilities in LCA and EPD.
Risk management

ArcelorMittal’s environmental-related risks primarily relate to compliance with evolving environmental legislation, potential changes to that legislation, impacts on the company’s licence to operate and its reputation, and reducing GHG emissions.

Key challenges for the company over the next few years revolve around transformational changes in legislation and reporting, most notably relating to CSRD and the Industrial Emissions Directive (IED). The CSRD is one of the most complex and extensive sustainability reporting requirements to date. ArcelorMittal already reports against some of its requirements, but there remains a lot to be done. In addition to its complexity, the CSRD will require data tagging, whereby companies mark sustainability information in financial statements and management reports with a digital tag so that it is machine-readable. The scale of the changes in the number of KPIs required reporting is further compounded by the global geographic scale of our operations and the unprecedented pace at which the EU expects companies to be able to report on these.

Given these factors, ArcelorMittal began evaluating new systems to automate and expand the processes of data collection during 2022 and 2023. Once these systems are in place, it is expected that we will be able to improve efficiency, reliability and visibility of reporting. While we have been developing our thinking on climate in accordance with the CSRD recommendations, one of the challenges of preparing for CSRD will be alignment with the newly proposed TNFD approach. This will require the development of natural capital measurement, valuation, accounting and disclosure systems that reflect the impact that we potentially have on species and ecosystems, and our real dependency as a company on them.

In December 2023 the EU Council and Parliament provisionally agreed the revised directive on industrial emissions (IED). As with CSRD, the new IED will require significant changes in assets, systems and monitoring to ensure compliance.

During 2021 and 2022 risk assessments were undertaken on all our TSFs, from which we have implemented a range of priority action plans and developed a risk reduction programme.

Minimising and mitigating risk

The company’s approach to environmental risk management is to regularly assess risks at a local, segment and group strategic level, and put in place measures to prevent risk events from occurring and mitigate their effects.

Key measures include:

• Regularly reviewing our responses and compliance with evolving legislation such as CSRD, SEC Climate Disclosure Rules and IED
• Constantly improving our environmental performance and strengthening our governance, including critically evaluating and aligning with best practice guidance where it makes sense
• Ensuring we have the right skills and capabilities in the company
• Revising our range of KPIs, data monitoring, collection and reporting systems
• Remaining vigilant on tailings dam safety.

Preparing for the new disclosure requirements. Understanding and integrating the TNFD recommendations and LEAP approach

Our environmental and biodiversity priorities this year have been around improving standards, processes and tools for CSRD reporting. This has involved assessing the ESRS data requirements and the applicability of them to our different operations in steel and mining, identifying gaps and weaknesses in our current data gathering, and then defining the full range of KPIs that our sites and operations will need to monitor going forward. In preparation, specifically in relation to the natural environment, we are developing the capacity to collect information on our interface with nature and developing methodologies for the assessment of nature-related impacts, dependencies, risks and opportunities, with the aim of proactively managing nature-related issues.

This includes the development of a methodology for the assessment of nature-related risks and opportunities, in line with the Locate, Evaluate, Assess and Prepare (LEAP) approach of the TNFD, as captured in the CSRD. We developed and tested our methodology in conjunction with our Bremen steel plant and Liberian mining operation. The objective was to develop a methodology for site-level assessment which could then be applied across the group more widely, at priority sites where impacts, dependencies, risks and opportunities are material.

Whilst Bremen was already quite advanced in its environmental reporting due to local requirements and ResponsibleSteel certification, the pilot has enabled the refinement of our methodology for rolling out across all our steel operations in 2024.

Chapter 4 – Air, water, land, biodiversity and ecosystems continued
Chapter 4 – Air, water, land, biodiversity and ecosystems continued

The pilots have provided valuable input into the onward management, resourcing and compliance of our operations, together with guidance for roll-out of our TNFD preparations across the rest of our steel and mining operations.

**Performance & targets continued**

We recognise that the quality of reporting results will depend on the levels of environmental and biodiversity knowledge and literacy at each site and we are factoring this into our local guidance plans.

The pilot study in Liberia encompassed three mine sites and facilities, railway and port and Biodiversity Conservation Programme.

We assessed the various ecosystem classifications neighbouring and surrounding our different assets, and identified their current states of integrity, the impacts upon them, the ecosystem services they provide us with (e.g., basic minerals, fresh water, flood retention), our dependencies on them, as well as related risks and opportunities. From this, we compiled a materiality assessment that rated well as related risks and opportunities. From this, we can see that they are significant to us. We are factoring this into our local guidance plans.

For the complex demands of biodiversity and ecosystem monitoring, we are, where possible, preparing an inventory of our sites, mapping them digitally, logging proximity to protected areas and species, and the integrity of neighbouring land (natural habitats, rehabilitated, developed etc).

To achieve this, we have committed to using the Integrated Biodiversity Assessment Tool (IBAT) endorsed by the United Nations Environmental Programme (UNEP). Furthermore, ArcelorMittal Mining has entered into a partnership with Proteus, the initiative of the UNEP World Conservation Monitoring Centre, to support the monitoring of environmental information through providing integrated access to spatial data on threatened species and other biodiversity indicators. This will be of great value in developing our biodiversity tracking.

Reducing and mitigating our impacts on air, water and land

In 2023, the Investment Allocation Committee approved expected capital expenditure totalling $291m for 26 projects with environmental benefits.

Reducing emissions to air

In 2023, the average emissions intensity levels of dust emissions from our steel operations improved from 0.34 kg/tonne of steel in 2022 to 0.48 kg/tonne of steel in 2023. Our average NOx emissions intensity also improved from 1.10 kg/per tonne of steel to 1.07 kg/tonne of steel over the same period, while average SO2 emissions intensity levels also improved from 1.82 kg/tonne of steel in 2022 to 1.79 kg/tonne of steel in 2023.

Note: For illustrative purposes only, excluding ArcelorMittal Temirtau, in 2023 (site and mining), our absolute dust emissions were 13.5 thousand tonnes, absolute NOx emissions were 56.1 thousand tonnes, absolute SO2 emissions were 67.9 thousand tonnes. See more in the Fact Book.

We have a programme of group-wide initiatives to improve our performance on emissions.

For example, at Fos-sur-Mer, France, we have been investing in an extensive programme to reduce emissions from steelmaking operations since 2010. Dust emissions consequently were reduced by 70% between 2010 and 2020. An additional €50m investment in environmental improvements between 2021 and 2023 with a specific focus on water and dust emissions will further increase environmental improvement. The projects include an air emissions filter installed at the Fos sinter plant with a filtration area of 20,000m², aimed at reducing dust emissions by 60% and overall channelled dust emissions by 15%. Since their installation, dust emission levels have significantly been reduced to lower than 10mg/m³, below the current 30mg/m³ requirement. A de-dusting system was also commissioned in 2023. In addition, the construction of a ladle furnace with dust removal and a water treatment station is scheduled for commissioning in 2024.

In June 2023, the Labour Inspectorate of the French government ordered the temporary administrative closure of part of the Fos-sur-Mer site due to dust and crystalline silica at the steelworks. The decision was subsequently suspended after being reviewed by the Marseille Administrative Court. Our action plan to strengthen health protection measures has been accelerated, in consultation with the Labour Inspectorate and trade unions. The plan contains more than 80 actions including the search for a product to replace crystalline silica used in continuous casting with the support of our R&D team, an intensive industrial cleaning campaign. All dust collection, ventilation and capture systems are being reviewed and improved where necessary.
Chapter 4 – Air, water, land, biodiversity and ecosystems continued

In addition, intensive awareness-raising and training initiatives are continuing, in particular as part of the accelerated introduction of ventilated breathing masks. Progress and results are shared and assessed on a monthly basis with employee representatives and Labour Inspector.

During the year, we have been applying advanced artificial intelligence (AI) tools at Tubarao, Brazil to analyse all the data captured from the extensive network of sensors installed in 2022. This is providing a better understanding of emission sources and factors that can have an impact both in generation and mitigation including meteorological conditions.

Particular advances are being made in diffuse dust detection through our I-See emissions assessment programme, using visual camera and LIDAR, with the intention of rolling out the technology across the group by 2025. At the same time, global R&D has been progressing with the development of calculation tools, aimed at enabling estimated quantification of annual diffuse emissions of suspended fine particulate matter (PM10) from processes such as sinter plants, blast furnaces, EAFs, open-air sources and roads. In 2024 the tools will be tested prior to full validation, with the aim of using them widely from 2025.

Protecting and conserving water resources
In 2023, net water use per tonne of steel was at 3.4 m³/t compared with 3.6 m³/t in 2022. Water management programme at ArcelorMittal Saint Chely d’Apcher, France

Safeguarding water resources is essential to maintain the service level and ensure the long-term viability of ArcelorMittal Saint Chely d’Apcher site.

Established in Lozère in 1917, the Saint Chély site benefits from the proximity of water resources such as the Cros and Malagazagne rivers.

Water is used in the production process for coil cooling and process cooling (TAR). 75% of the water withdrawn is discharged into the river at the end of the industrial process and after retreatment. The remaining 25% is evaporated. Following the reduction of its annual water consumption by 60% in the last 15 years, to further improve management of water resources and to better deal with more frequent drought episodes, ArcelorMittal Saint Chély d’Apcher has set an additional objective of 10% water consumption reduction by 2030 vs 2021. The site has introduced the water management action plan based on three levers:

- Controlling consumption and reducing water withdrawals
- Recycling of process water
- Rainwater collection

More specific actions include:

Optimising on-site water management
- Continued progress in reducing water consumption and reuse water during the industrial process
- Continuous adaptation of plant operations to reduce water consumption based on its availability
- In summer 2023 an investment of €1.5m was committed for an intermediate water storage project to manage the TAR on the continuous annealing line.

Water cooling tower

During the year, we have been applying advanced artificial intelligence (AI) tools at Tubarao, Brazil to analyse all the data captured from the extensive network of sensors installed in 2022. This is providing a better understanding of emission sources and factors that can have an impact both in generation and mitigation including meteorological conditions.

Particular advances are being made in diffuse dust detection through our I-See emissions assessment programme, using visual camera and LIDAR, with the intention of rolling out the technology across the group by 2025. At the same time, global R&D has been progressing with the development of calculation tools, aimed at enabling estimated quantification of annual diffuse emissions of suspended fine particulate matter (PM10) from processes such as sinter plants, blast furnaces, EAFs, open-air sources and roads. In 2024 the tools will be tested prior to full validation, with the aim of using them widely from 2025.

Protecting and conserving water resources
In 2023, net water use per tonne of steel was at 3.4 m³/t compared with 3.6 m³/t in 2022. Water quality and access are of crucial importance to the communities around our operations, and the company is investing significantly in a range of innovative techniques for water recovery, water treatment, establishing alternative water sources and reduced energy usage.

In our Etxebarri site in Spain an advanced on-site water management programme was developed to meet three key objectives: avoid environmental pollution, bring freshwater use to zero, and limit the plant’s river water intake. A Total Water Management programme was implemented that included managing, operating and optimising the whole water cycle 24/7 with on-site resources and automation, and designing, building and operating state-of-the-art solutions, such as a fully automated recycling plant. The optimisation of water processes and implementation of water recycling solutions resulted in a reduction of freshwater and energy use.

Case study

R&D AIRLAB, Spain

Our global R&D team have developed a semi-industrial lab, known as ARLAB, based at our R&D Laboratory in Asturias, Spain to fast and upscale air filtration technologies before industrialisation and roll out across our sites. It can test de-dusting solutions at up to 12,600 m³ per hour. During 2023 we have tested a ‘hybrid filter’ concept from the cement and power industries for sinter fume cleaning in our steel operations. It has been successfully industrialised so far in four sites. The main advantages are particulate matter (PM) removal efficiency, reduced capital and operating costs as well as footprint. We have also been testing innovative bags to increase the capacity of existing fabric filters to adapt them to new applications.

More specific actions include:

Optimising on-site water management
- Continued progress in reducing water consumption and recycling water during the industrial process
- Continuous adaptation of plant operations to reduce water consumption based on its availability
- In summer 2023 an investment of €1.5m was committed for an intermediate water storage project to manage the TAR on the continuous annealing line.

An additional investment of €2.6m is planned during 2024 to replace one cooling tower by dry cooling on the rolling mill and optimisation of the consumption of the TAR on the continuous annealing line.

Performance & targets continued

Water management programme at ArcelorMittal Saint Chely d’Apcher, France

Safeguarding water resources is essential to maintain the service level and ensure the long-term viability of ArcelorMittal Saint Chely d’Apcher site.

Established in Lozère in 1917, the Saint Chély site benefits from the proximity of water resources such as the Cros and Malagazagne rivers.

Water is used in the production process for coil cooling and process cooling (TAR). 75% of the water withdrawn is discharged into the river at the end of the industrial process and after retreatment. The remaining 25% is evaporated. Following the reduction of its annual water consumption by 60% in the last 15 years, to further improve management of water resources and to better deal with more frequent drought episodes, ArcelorMittal Saint Chély d’Apcher has set an additional objective of 10% water consumption reduction by 2030 vs 2021. The site has introduced the water management action plan based on three levers:

- Controlling consumption and reducing water withdrawals
- Recycling of process water
- Rainwater collection

More specific actions include:

Optimising on-site water management
- Continued progress in reducing water consumption and recycling water during the industrial process
- Continuous adaptation of plant operations to reduce water consumption based on its availability
- In summer 2023 an investment of €1.5m was committed for an intermediate water storage implementation with sufficient volume on the plant perimeter. The tanks will be filled by the rainwater collection starting in 2024.
- An additional investment of €2.6m is planned during 2024 to replace one cooling tower by dry cooling on the rolling mill and optimisation of the consumption of the TAR on the continuous annealing line.

Water cooling tower

Preserving water resources with local communities
- Regular follow-up with local authorities and stakeholders to adapt plant operation during drought periods
- Setting up collective water storage solutions with local authorities and key economic partners, considering the needs of all stakeholders. This storage solution will be used as a relay tank for emergencies.
Chapter 4 – Air, water, land, biodiversity and ecosystems continued

Performance & targets continued

Protecting land, reducing waste and using by-products in the circular economy

We are seeking where possible to reduce waste storage and detrimental land use, whilst increasingly finding circular or alternative uses for by-products from our operations. In 2023, we reused 12.7 million tonnes of blast furnace slag as a raw material in cement production, saving 71 million tonnes of CO₂ emissions. We currently recycle most dust and sludges internally. Our aim is to eliminate all unnecessary landfilling of residues.

A good example, is ArcelorMittal Tubarão, which has achieved a residues recovery index of 91.8% in 2023 (45.5% from co-products sales, 24.3% from co-products public donations and 22.0% internally recycled in the steel production). The aim is to achieve zero internal storage by 2030 and zero landfilling by 2035. This will be done through implementing various initiatives including New Paths which is a collaborative socio-environmental programme held by ArcelorMittal Tubarão and public agencies in order to contribute to the improvement of urban and rural mobility. Through agreements with state and city governments, the company donates REVOL® and REVOL Plus®, by-products originated from processed slags that can be used as primary coating for streets, roads and yards.

‘New Paths’ combines environmental benefits, using a by-product originated from ArcelorMittal Tubarão’s industrial process as a substitute for natural resources. Recognised with national and international awards (Steelie Award for excellence in sustainability by the World Steel Association in 2017), the New Paths Programme is present in more than 68 municipalities of Espirito Santo state and has already donated approximately 5Mt of by-products, used to improve over 5 thousand roads and pathways. In 2023 the programme reached an annual record of 1.2Mt of by-product donated.

Where we cannot immediately reduce our land impacts, we look for offsetting local projects where we can assist communities in protecting, maintaining or extending their nearby habitats and ecosystems, particularly where they are under threat. In 2023, our Canadian Dofasco business partnered with the Hamilton Naturalist Club (HNC) to protect and steward the ecologically important, 21.4ha Sheelah Dunn Dooley Nature Sanctuary, outside Hamilton. Our own volunteer corps, Team Orange, has volunteered with the HNC in protecting native plants and managing invasive species. The sanctuary provides an important north–south corridor that helps species move from Cootes Paradise to the Niagara Escarpment.

Building our biodiversity and ecosystem management capabilities

Alongside the TNFD pilot study in Liberia, we are already involved in a number of community-based initiatives to minimise our or community-related degradation of ecosystems around or near to our mines. We have been supporting the ArcelorMittal Liberia Biodiversity Conservation Program (BCP) since 2011, designed to address threats to the integrity of the natural ecosystems and species of the Nimba mountain range. The BCP utilises a comprehensive multi-stakeholder consultation approach, ensuring engagement at various levels in order to develop and implement sustainable mitigation plans. In early 2023, we endorsed our ongoing support by signing an MoU with the Co-Management Committee on further conservation of the East Nimba Nature Reserve, including support for local farmers’ cooperative groups aimed at reducing encroaching pressures on native forests.

Remainig vigilant on tailings dam safety

Tailings dam safety and structural integrity is a critical issue for all mining companies, in order to protect the safety of local communities and employees, and to protect the environment from pollution and flooding.

We have implemented a tailings management framework and standard based on the leading industry guidelines from the Mining Association of Canada (MAC), the Canadian Dam Association (CDA) and the Global Industry Standard for Tailings Management (GISTM). Our aim is to ensure that all group tailings facilities are structurally sound and safe, with all efforts directed at minimising risk, including independent audits benchmarked against these international guidelines and independent reviews.

Following a revised approach to cataloguing the tailings storage facilities (TSFs), we have 23 tailings storage facilities including conventional, paste, dry and in-pit facilities, of which:

- 14 are active
- 4 are inactive
- 2 are in the closure phase
- 2 are being constructed
- 1 is in design.

Biodiversity work at ArcelorMittal Bremen

The evolving regulatory framework and ResponsibleSteel™ have played an important role in helping ArcelorMittal Bremen to limit its impacts on the natural environment and mitigate those that cannot be avoided. ArcelorMittal Bremen achieved ResponsibleSteel™ certification in 2021, thanks partly to the measures it has put in place to assess and manage biodiversity in and around the site. Measures include the surveying of fauna (bird and amphibians) and flora; assessment of the biotopes that exist on site; mapping the site’s interface with the surrounding environment (e.g. protected areas); cooperating with local stakeholders; and taking actions to bolster biodiversity on site (e.g. tree planting and habitat management).

The site follows a mitigation hierarchy, which means avoidance of impacts, always preferred over more mitigatory measures, such as offsetting. With the prospect of a decarbonisation project in the pipeline, we will need to allocate more of our local land bank for construction. To mitigate this, ArcelorMittal Bremen has adopted a proactive and localised approach by offsetting the impacts of construction in advance and on-site. Most recently, it has done so by restoring a 32ha area to compensate for its planned projects. This has included restoration of similar habitats (e.g. shallow water zones, reed beds) and buffer zones with neighbouring protected areas, and the relocation of bird species, notably reed breeding birds, such as the Reed Warbler and Sav’s Warbler.

Restored area at ArcelorMittal Bremen
Performance & targets continued

To ensure their ongoing safety, a strong governance framework and formal three-level assurance process is in place that includes internal and external audits. Tailings specialists are also embedded within the operations. All of our TSFs have emergency response plans in place which are activated in line with the facility specific Trigger Action Response Plan (TARP). This is supported by a continuous improvement programme that reduces the risk of our existing conventional operations by promoting reduced moisture disposal methodologies (e.g. high-density thickened tailings or filtered tailings where appropriate) and proven new technologies.

Tailings thickening steps have been implemented in assets in Mexico, reduced moisture disposal methodologies in Brazil, Canada and Mexico. Pena Colorada will commission a dry stock facility during 2024. Further studies are ongoing across a range of operations on how tailings can be dewatered.

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During 2021 and 2022, risk assessments were undertaken on all our TSFs, from which we have implemented a range of priority action plans and developed a risk reduction programme, including operational and monitoring improvements.

We are also working towards certifying our mining operations to IRMA, third-party industry-leading multi-stakeholder standard. Read more on page 57.

Building greater expertise in LCAs and EPDs

LCAs and EPDs are becoming increasingly critical to our product offerings and sales success, particularly for key customer sectors, such as automotive and construction, as these assessments are regarded as transparent and objective evaluations of the potential impact of products on people and planet.

The business’ expertise in these areas is an important asset and we intend to continue building greater knowledge and experience in, LCA and EPD. In 2023, we undertook a total of 63 LCA studies related to steel products and the processes used to produce them, all guided by the relevant standards (ISO 14040–44). We issued 24 EPDs in 2023, and expect this to continue to build over the coming years.

An update on our LCA and EPD progress can be found in Chapter 5.

ArcelorMittal Serra Azul, Brazil

In February 2019, ArcelorMittal decided to implement the evacuation plan related to its dormant Serra Azul tailing dam. The community situated downstream of the dam was evacuated as a precautionary measure based on an updated stability report following incidents in the Brazilian mining sector. This was done to enable further testing and implementation of any additional mitigating measures. These include: implementation of a world-class monitoring system has been implemented with piezometers, accelerometers, seepage flowmeters, inclinometers, radar and satellite monitoring. The instrumentation is fed to a control centre which is manned 24/7 by trained technicians with open communications to operations and management. Clarity defined Trigger Action Response Plans (TARP) are in place with instrumentation directly connected to the community alarm system. A robust emergency response plan is in place with community drills performed annually.

We have executed an agreement with the Federal and State Public Prosecutors Offices and affected families to provide temporary assistance to the families and set technical measures required to re-establish factor of safety standards. Such agreement was extended in February 2020 and negotiations regarding compensation continued in 2021, during which a Supplementary Agreement Term was signed with new guidelines for compensation parameters for the impacts caused by preventive evacuation. As of December 31, 2023, ArcelorMittal had entered into 864 indemnification agreements with the affected families. The agreement contemplates the construction of a check dam structure by 2025 and the tailing dam deconstruction by 2032.

Case study

Caiman Project by ArcelorMittal Tubarão

Caiman Project is a Marcos Daniel Institute initiative in partnership with ArcelorMittal Tubarão. It aims at researching and conserving the Caiman species, generating technical-scientific health and ecology data of Caiman latirostris in Brazil.

It carries out activities in the protected lagoon region within the company’s green belt and in other areas of the State. Occupying more than seven thousand m², Tubarão’s green belt has about 2.6 million trees and bushes and eight different Permanent Preservation Areas, with lagoons, swamps, mangroves and beaches.

Started in 2014, the project has already identified a population of around 600 individuals living in the company’s lagoons, being the largest preserved population in the state. The project also includes a series of environmental education activities, including:

- Environmental Education in public and private schools
- Cultural events and events
- Awareness through images
- Scientific tourism
- Training of teachers and environmental educators to use alligators as a flagship species in environmental education actions in schools
- Social media
- Free environmental education at the Projeto Caiman Ecological Center.

In 2024, ArcelorMittal, Marcos Daniel Institute, and the Government and Public Attorney are aiming to establish a technical cooperation agreement, with the purpose of recovering and repopulating alligator populations in the Conservation Units of Espírito Santo, using individuals preserved in the company’s area.

This action will promote the conservation of natural heritage and improve the environmental quality of natural areas in the state.

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Chapter 5

Delivering a circular economy through innovation

Our future as a business will be determined by the ambition of innovation we bring to our steel solutions for customers, and our ability to create and defend unique intellectual property (IP) on a range of technologies. It is this that will set us apart from our competition.

Our R&D teams are working on delivering solutions across the many challenges of decarbonisation and the development of low-carbon steel, together with other breakthrough technologies, such as additive manufacturing. AI and digitalisation are increasingly playing a defining role in enabling pivotal steps forward in technology, and in enhancing our day-to-day operations and efficiencies. Building a lead in how we use AI in our sector will be critical to our success.

KPI highlights

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<th>2022: $286m</th>
<th>2022: 12</th>
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CSRD alignment
ESRS E5: Resource use and circular economy

Material topic
7. Products

UN SDG alignment

Steel roof of the Forum des Halles, Paris
Chapter 5 – Delivering a circular economy through innovation

Innovation and IP are critical to our future success. We are becoming increasingly strategic in our product and process development, in order to deliver a strong portfolio of intellectual property rights that secure our strategic plans. The impact of AI is already considerable in the industry, and it presents both a huge opportunity and threat for us – it will become the biggest differentiator in the global steel market, and we must use our existing leadership position and know-how to continue securing our advantage.

Greg Ludkovsky 
Vice president, Head of research and development

Governance

R&D activities are governed through the Corporate Research Strategic Panel (CRSP). Special panels are also in place to steer strategic initiatives such as decarbonisation and automotive.

A Digital Panel consisting of the chief technology office (CTO), R&D, IT and heads of digital segments, coordinates and drives progress in digitalisation and AI projects.

Tactical steering is undertaken at the operational level in dedicated process and product panels.

Governance of our policies related to innovation is also covered under our existing sustainability protocols. Reporting and disclosure are primarily through the corporate website and the company’s sustainable development publications, including the Integrated Annual Review and Climate Action Reports.

Strategy

The company’s global R&D division provides the technical foundation for the sustainability and commercial success of the company, by stimulating innovative thinking and the continuous improvement of products and processes.

To support this objective, the company operates 14 cutting-edge R&D sites around the world, employing some 1,700 staff and spending $299m in 2023 (2022: $286m).

Our strategic focus is on: creating a robust and diverse portfolio of products and intellectual property (IP), addressing the transformations taking place in critical sectors of the economy, including mobility, construction, infrastructure and energy; delivering decarbonising solutions for the energy transition both for our own operations and our customers; minimising broader emissions and particulates; reducing material and resource use in industry and manufacturing; enabling the circular economy; and making the most of digitalisation and artificial intelligence to optimise sustainability and efficiency.

The strategic actions we are taking to address these objectives, largely through the application of our R&D and innovation expertise, include:

- Reducing carbon emissions and energy use
- Developing innovative low-carbon steel solutions for key industries
- Developing a leadership position in additive manufacturing technology and materials
- Exploiting digitalisation and AI to transform our business
- Building our position in recycling and processing
- Leveraging our capabilities in Life Cycle Assessment (LCA) and Environmental Product Declarations (EPDs)
- Building technology and solutions for reducing and mitigating our environmental impacts and contributing to a circular economy
- Innovating and advancing our world-class process technology.

Reducing carbon emissions and energy use

Our global R&D is playing a major part in the group’s roadmap towards carbon neutrality by 2050. R&D’s role is to bring significant advances in our decarbonisation technologies, especially for the medium and long-term, while supporting the key short-term decisions.

This extends to many areas of our business from building our DRI-EAF steel production routes, sourcing enhanced raw materials, renewable energy, building expertise in hydrogen, developing low-carbon products, and transforming our business models to more circular processes.

Developing low-carbon steel solutions for key industries

The automotive industry is undergoing transformative change as it transitions from the internal combustion engine to battery electric vehicles (BEVs). This means addressing the diverse needs of both the legacy manufacturers and nimble start-ups. The predominant requirement has moved away from weight reduction to cost reduction and manufacturing efficiency. One of our key areas of focus is Multi-Part Integration (MPI), seeking to consolidate multiple parts into single parts, through laser welding and hot stamping, that can be delivered ready-finished for integration into a vehicle.

Buildings and construction account for some 40% of global energy-related carbon emissions, and the industry is increasingly looking for low-carbon steel solutions for key industries. As part of the global energy transition, there is also a huge and growing demand for renewables infrastructure such as solar arrays, wind turbine units and hydrogen infrastructure, which require new forms of high-strength steel. We are developing a series of new steel products and specifications to address these markets.
Strategy continued

Developing a leadership position in additive manufacturing technology and materials

Additive manufacturing (AdM) technologies offer the potential to totally transform industrial efficiency and revolutionise the supply chain, whilst significantly reducing material intensity. ArcelorMittal aims to achieve a similar level of leadership in the development and supply of steel-based inputs – powders and wires – as it has in the conventional steel market. In 2023, we built an inert-gas atomiser to allow us to enter the AdM market as a steel powder supplier in 2024.

Exploiting digitalisation and AI to transform our business

We believe that digitalisation and Artificial Intelligence (AI) will have a significant impact on everything we do as a business. We are pursuing a total digital transformation of our business and progressively becoming a data-driven company. We see this as an opportunity to create a competitive advantage.

Building our position in recycling and processing

We recognise that to become a more circular business, we must be able to source more scrap to feed into our operations and build our capacity to handle both our own industrial waste and that of our customers.

Our strategy involves acquisitions in the recycling market, gaining expertise in processing waste or by-product materials, and researching solutions in the production process to enable more use of recycled feed.

Leveraging our capabilities in LCAs and EPDs

Increasingly, customers in a range of sectors, including construction, are requiring Life Cycle Assessments (LCAs) and Environmental Product Declarations (EPDs) for our products prior to placing orders and signing contracts. LCAs evaluate the effects that a product will have on the environment and carbon emissions from cradle to gate i.e., from raw material extraction to disposal or reuse. We have built up more than 15 years of expertise in LCA, and believe this is an important asset and differentiator for the company which we intend to develop and expand. An EPD is a third-party verified document effectively summarising life-cycle impacts, enabling comparisons between products, and facilitating sustainable and responsible purchasing. We are similarly building our expertise in the provision of EPDs with parts of our product portfolio, and expect this requirement to expand considerably.

Building technology and solutions for reducing and mitigating our environmental impacts and contributing to a circular economy

Reducing and mitigating emissions of dust from both point sources and diffuse sources and gases such as NOx, SOx, and methane continues to be a major priority for us as a mining and steelmaking company. We are making significant progress in understanding sources of emissions, characterising them, predicting their appearance and movement, and creating mitigating solutions. We continue to research solutions for making constructive use of our waste products in both steel and mining and minimise detrimental land use.

Risk management

From an R&D perspective, the key risk is that we fail to achieve the level of innovation that is necessary to keep us at the forefront of our industry. This could be due to ongoing rapid changes in technologies and legislations. There is significant growth in patent filing globally, and we are strengthening our strategic approach to building and protecting our own intellectual property (IP). At the same time, we are working to continuously adapt our products and customer solutions to meet their expectations with lower carbon emissions intensities; reduce the intensity of energy and materials used in our operations, products and supply chain; and develop circular models of business that provide creative and constructive solutions for our key industry sectors and partners.

Minimising and mitigating risk

The measures we are putting in place to reduce and mitigate risks include:

- Strengthening our strategic and forensic approach to our IP development and its protection
- Identifying and filing the gaps in our data and reporting that will be required to fulfil regulatory requirements
- Assessing the areas of resource use where we can have most impact in reductions and efficiency
- Identifying viable and achievable circular models that will be beneficial to our customers
- Pursuing even greater engagement with customers and other industry partners to fully understand their needs and work with them in facilitating these
- Assessing the areas of our R&D expertise, and those skills that we are missing, that will deliver most return for us in the short, medium and long-term.

See chapter 4 for more detail

Additive manufacturing
In 2023, R&D launched 14 new products and solutions to accelerate sustainable lifestyles, while also progressing further on 15 such product development programmes.

In addition, R&D launched 24 products and solutions to support sustainable construction, infrastructure, and energy generation, while also progressing further on 16 such product development programmes.

Reducing carbon emissions and energy use
In 2023, our R&D teams continued developing the hydrogen-based DRI-EAF steel production route. Progress was made both in the DRI modelling (energy and mass balance when using hydrogen for reduction and the behaviour of hydrogen DRI pellets in the EAF). Work has also been undertaken on developing the technology roadmap for decarbonising our blast furnace operations.

In 2023, solutions were industrialised to reduce natural gas consumption through models to reduce energy needs and replace natural gas with steelmaking gases. In 2024, R&D will continue with the development of solutions to replace natural gas consumption, replacing it with steelmaking gases and testing burners capable of replacing 70–90% of natural gas with blast furnace gas, reducing NOx emissions at the same time by 50%.

Also in the year, the SIDERWIN funded research project focused on low-temperature, iron electrolysise, was successfully concluded and taken on to the next phase of its industrialisation, under its new name VOLTERONSM. We signed an agreement with John Cockerill to construct a first-phase plant aimed to produce between 40,000 and 80,000 tonnes of iron plates, targeted to start production in 2027.

R&D is running a Sekisui carbon recycling pilot at Aviles.

We have continued working on the decarbonisation of finishing operations. ArcelorMittal has therefore launched several research initiatives to prepare for future industrial investments focusing on reheating and annealing furnaces which are the main sources of CO2 emissions in finishing. Technologies specifically related to hydrogen burners, induction heating and electrical resistance heating are being tested, including in laboratory pilots and testing installations to determine the impact on steel products.

Our decarbonisation activity and related innovation in 2023 is covered in more detail in the ‘Responsible energy use and lower carbon futures’ chapter 3.

Developing innovative low-carbon steel solutions for key industries
During 2023 we have been continuing to build our XCarbSM RRP solutions, which now extend across a wide range of our different sector solutions.

Our WireSolutions business has made considerable progress with the launch of the following products: the first RRP ropes and cables have been ordered for cable cars in France; the first trials of XCarbSM RRP window fasteners and wiper arms for automotive; and initial contracts for XCarbSM RRP cable armouring wire.

Automotive remains one of our dominant industrial sectors of critical importance to us, and a key focus is continued innovation of our product portfolio for the fast-evolving battery electric vehicle (BEV) market. Our R&D and product development is focused on delivering efficient, low-carbon and low-weight solutions for key automotive components, not least in Multi Part IntegrationSM (MPI) for door rings, battery boxes and floor reinforcements for new generation electric vehicles. We have seen significant growth in the number of MPRITM projects, from 23 to 64 in the US and 30 to 100 in China. It is worth noting that MPI™ combined with our XCarbSM steel can bring down carbon emissions by some 45%, through both light-weight and the use of low-carbon emissions steel.

In 2023, the MPI™ has received the prestigious ‘The Best Innovation’ award at the 3rd Lightweight Conference organised by Seres, a pioneer New Energy Vehicle (NEV) manufacturer. This recognition was granted to VAMA, ArcelorMittal’s joint venture in China.

The new solutions offered by our recently released S-in MotionSM ArcelorMittal Multi Part IntegrationSM, in addition to further light weighing opportunities, seek to simplify manufacturing for customers by reducing the number of robots needed, by reducing the shop floor size required, and by cutting the hours of labour per vehicle in the assembly shop by up to 30%. These achievements were mainly made possible through the combination of extra-large laser welded blanks and the second generation of our Press Hardening steels, Usibor® 2000 and Ductibor® 1000.

We are taking several initiatives towards building strong circularity business models and solutions for our customers. For example, in 2023, we agreed with Gestamp to jointly design and implement a circularity scheme to enhance recycling of steel, to enable automotive customers to fulfil their carbon emissions goals. In 2022, we trialled with Gestamp use of low-carbon steel with high scrap content for use in car parts. The agreement involves the integration of scrap management into Gestamp’s strategy, with traceability of scrap collections, sorting and reuse.

Strong collaboration
In 2023, we have signed the MoU with KIRCHHOFF Automotive, which focuses on developing low-carbon emissions steel for cars and trucks. The agreement covers a number of different areas of development and steel solutions, but its principal focus is to strengthen the two companies’ collaboration on sustainability topics. This includes a project to develop and test the use of ArcelorMittal’s XCarb™ recycled and renewably produced Usibor®500D™ (which is made with recycled steel and 100% renewable electricity) in the high-strength parts that KIRCHHOFF Automotive supplies to leading OEMs in Europe, Asia, and North America.
Finding ways to decarbonise the emissions produced during the raw material extraction and refinement of steel is vital for us and the industry in general. Vestas sees the partnership with ArcelorMittal and the adoption of low-emission steel as a significant lever in reducing CO₂ emissions within the wind industry. Commitment from our customers is vital to drive the transition so we are very happy that we can provide value to our customers with this solution. The Baltic Power project stands as a solid example of this progress, having secured the first order and affirming the delivery of substantial value to our customers.

Dieter Dehoorne,
Head of Global Procurement at Vestas.

A low carbon–emissions steel production partnership between Vestas and ArcelorMittal

A low carbon–emissions steel production partnership between Vestas and ArcelorMittal will make its first delivery of XCarb® recycled and renewably produced heavy plate steel to an offshore wind farm, built by Baltic Power in Poland.

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Head of Global Procurement at Vestas.

Agreement with General Motors

Since 2023, ArcelorMittal Dofasco has had an agreement with General Motors and has been supplying XCarb® RRP steel, offering significantly reduced CO₂ emissions.

This agreement provides another example of how we are innovating with our suppliers to reduce emissions throughout the supply chain. It also highlights how strong supplier relationships can help build a better, more sustainable future.

Jeff Morrison,
Vice president of global purchasing and supply chain, General Motors

Solutions for the global energy transition are also high up on the list of our priorities. The company has developed and patented corrosion resistant steels for use in wind towers and solar mounting systems. Notably, Magnelis® advanced coating combined with Hyper® high strength steels, up to 700MPa yield strength, has become a material of choice for light–weight solar structures. This steel solution has been recently developed under XCarb® brand, in order to offer mounting system with the lowest carbon footprint.

Extension of the solutions to heavy coating weights (ZM800) is now being industrialised over a large range of sizes (thin and thick gauges), and even heavier weights are in trial phase. These solar steel solutions are being deployed in Europe, Americas and Asia. Additionally, we are working on the development of solutions suitable for the hydrogen economy, electricity grids, carbon capture, storage and use and bioenergy.

Our Hymatch® steel offer is being developed in order to provide steel grades suitable for H2-pipelines to support the roll-out of hydrogen gas infrastructure. Construction is one of the key sectors for ArcelorMittal. Our R&D effort is focused on providing higher–added value products that meet customer needs, and contribute to helping them achieve their Scope 3 carbon emissions reduction objectives.
The Steligence® portfolio of products, including our offerings such as Angelina cellular beams, Cofraplus floordecks, and HISTAR® beams, highlights the innovations that we are offering. The portfolio helps investors, real estate companies, architects and structural engineers meet the increasing demand for lower-cost sustainable building design through steel’s recyclability and lower environmental impact when compared with other materials such as concrete.

We are in a strong position with our global presence and reach, and with in-house engineers who can help major customers configure their designs and projects to best effect.

A key concept within Steligence® is to make buildings easier to assemble and dismantle. As a result, buildings become quicker to construct, leading to significant efficiencies and cost savings while also creating the potential for re-use. This reflects ArcelorMittal’s wider research into modularisation solutions and the potential re-use of steel components – a field it is discussing with customers, particularly in relationship to LCA assessments.

Due to XCarb® recycled and renewably produced steels, we are able to offer steel produced with a CO₂ footprint as low as 0.33 tonnes of CO₂ per tonne of sections and merchant bars, 0.37 tonnes of CO₂ per tonne of the EcoSheetPile™ Plus brand and 0.53 tonnes of CO₂ per tonne of hot rolled coils. With these EPDs, we can support the construction industry to meet tougher requirements to reduce the carbon footprint of buildings and infrastructure.

New steel coil coating

Thanks to the joint work between global R&D, the CRM (Metalurgical Research Centre) in Liège and ArcelorMittal Construction, a new steel coil coating technology was brought into production operation in Contrisson (France) in 2023. Its strengths: enhanced environmental, energy and health performance, and improved productivity.

Case study

World’s first stadium use of XCarb® RRP steel

The new 15 000-seat SC Cambuur stadium in Leeuwarden in the Netherlands is the first stadium in the world to use XCarb® RRP steel.
Chapter 5 – Delivering a circular economy through innovation

We have become an official partner of the Paris 2024 Olympic and Paralympic Games

Drawing on our know-how and innovative power, we will manufacture some of the key symbols of the Paris 2024 Games – the Olympic and Paralympic torches and cauldrons and the large rings and agitos which will be installed in the host city – in steel with a low CO₂ footprint, for instance through the use of recycled steel or low-carbon energy, thus contributing to the Paris 2024 Olympic and Paralympic Games environmental ambition. We will draw on our expertise in the decarbonisation of steelmaking, using our strong track record in R&D, our technological edge, and the skills of our teams.

To manufacture the Torch for the Paris 2024 Games, we are mobilising our global R&D department and three of our French sites to represent the expertise of our workforce. These sites have been carefully selected for their ability to produce steel with a reduced carbon footprint that meets the design requirements of the torch. At Châteauneuf, we are casting 100% recycled steel from scrap steel. This chosen route produces steel with a reduced carbon footprint. The steel is then rolled at Florange, on lines that are usually used for the most demanding products in the automotive and food packaging industries. Finally, our site at Woippy cuts the steel sheet into blanks ready for shaping.

Developing a leadership position in additive manufacturing technology and materials

We expect significant potential in the development of additive manufacturing (AdM) or 3D printing, particularly in the automotive industry. In November, we announced our pending entry into the AdM market as a steel powder supplier. The company is building an industrial-scale inert gas atomiser in Aviles, Spain, to produce steel powders for AdM technologies such as laser powder bed fusion (LPBF), binder jetting (BJ) and direct energy deposition (DED).

The atomiser, which will start production in 2024, will have a large batch-size production capability, from 200kg to three tonnes, and an initial annual capacity of 1,000 tonnes. This will enable us to supply significant volumes of steel powders with consistent quality, reliability and traceability through our new ArcelorMittal Powders company, meeting the high standards and specifications of the AdM industry.

The aim of our research in this area is to develop a portfolio of unique powders and applications, to provide solutions for our customers, from selecting and customising materials, to designing of parts and printing optimisation.

Exploiting digitalisation and AI to transform our business

Digitalisation and AI present one of the most exciting opportunities for the company in its R&D programmes, ultimately enabling more efficient, safer and productive operations.

Performance & targets continued

Our Digital Panel is providing the framework for how we configure our digitalisation and AI projects. The aim is to move towards a fully digital enterprise where everything is connected.

In 2023, we commenced of roll-out of our iRedZone AI system designed to identify the presence of human operatives in safety-critical ‘red zones’, using AI sensors and CCTV cameras, such that operations can be brought to a stop if safety is compromised.

Ongoing initiatives during 2023 included:

• Complete design and development of ArcelorMittal Primary Portal – a single entry point to access many of our primary facilities for process supervision and action recommendation. In addition to Blast Furnaces, we successfully connected the first DRI facilities
• Application of new advanced models for scrap management aligned with our decarbonisation efforts, including: multi-plant data-driven machine learning models to mitigate the impact of scrap residuals on the quality of several high-added value products; scrap density monitoring models for systematic inspection and control of scrap deliveries; automatic scrap classification at our Dunkirk plant
• Pilot roll-out of our in-house Global Product Quality System (GPQS) in Saint-Chély, with full machine-learning to enhance product quality management
• Adoption of the new Collaborative Digital Product Development platform for the faster design of new steel products
• Building technology and solutions for reducing and mitigating environmental impacts.
Building our position in recycling and processing
In 2022 and 2023, we completed several targeted acquisitions in recycling and waste processing, with a total of 1.2m tonnes of combined annual scrap processing capacity. These acquisitions are fully complementary taking in conventional iron and steel structures through to non-ferrous metals, white goods, appliances and electronics. The last 12 months have been a year of consolidating the acquisitions, building knowledge and becoming known in the recycling sector. We are conducting R&D projects to further improve the recycling efficiency of these plants, and our operations more broadly. We are also researching the business models, logistics and technology requirements of providing robust circular services for key sectors, such as facilitating the automotive OEMs’ needs.

We recycle most of our dust and sludge waste internally. With the help of an EU-funded project that started in 2020, R&D is working on agglomeration solutions that are expected to enable further use of these materials as alternatives to currently used raw materials.

In 2023, tests at laboratory scale were successfully validated to meet industrial requirements for valorisation in the blast furnace. In 2024, industrial trials of these new recipes will be conducted to validate their industrial feasibility.

Leveraging our capabilities in Life Cycle Assessment (LCA) and Environmental Product Declarations (EPDs)
LCAs are a requirement for EPDs for construction products in Europe, Brazil and North America, and our capabilities in this regard contribute to our competitiveness in the sector. Similarly, in automotive, customers are increasingly scrutinising their supply chain and the role that steel can play in their LCA performance.

In 2023, we undertook a total of 63 LCA studies related to steel products and the processes used to produce them, in line with ISO 14040-44. We issued 24 EPDs including nine EPDs for our XCarb® RRP steel, covering a wide range of solutions such as Magnelis®, heavy plates and sheet piles.

Building technology and solutions for reducing and mitigating our environmental impacts and contributing to a circular economy
In 2023, R&D completed the development of an algorithm calculation tool to identify and track particulate matter (PM) diffuse dust emissions. The calculation tools are being deployed at all ArcelorMittal plants. In 2024, plants will start using these tools and R&D will continue to enhance their application to monitor and then mitigate emissions. Particular advances are being made in detection through laser and AI-powered video surveillance, with the ultimate goal of defining what emissions are being released, in what volumes, from where and with what trajectory and diffusion, so that they can be stopped, removed or mitigated.

We continue to research solutions for making constructive use of our waste and minimising detrimental land use. The company is making innovative re-use of slag in the following applications: cement, civil construction (e.g. roads and asphalt), a fertiliser source for agriculture and as ballast in offshore wind turbine foundations to replace natural ballast; a construction material for building protection walls to reduce noise and dust; and its potential re-use in water filtration and greenhouse gas capture.

In 2023, Global R&D started a pioneering research programme to find alternative uses for our mining tailings, exploring, for example, innovative applications in industries such as construction.

Each tailing is very site-specific, depending on the geology and mineral processing route used to extract the iron. Our global R&D teams, together with our mining sites, assess each opportunity to create value from our tailings in our nearby communities. Some potential applications include the use of recycled tailings for cement, concrete, bricks or floor tiles.

Our researchers are co-innovating with different companies, universities, and technological centres to give a second life to this material that traditionally had no use. With this research, we aim to increase the circularity of our mining operations.

Our goal is the 100% efficient use of raw materials, zero waste and increased availability of the critical minerals needed for the net-zero transformation.
Chapter 6

Value chains our stakeholders trust

Engaging with our value chain is critical to the delivery of a sustainable business. Achieving decarbonisation goals means bringing our suppliers, partners and customers along with us in our decarbonisation journey. Equally, committing to our stakeholders that we strive to act sustainably, and deliver products that have not negatively impacted the environment, communities or workers, along the way means applying high standards certified by globally recognised third parties such as ResponsibleSteel™. 2023 has seen significant steps in addressing responsible sourcing across our upstream value chain.

KPI highlights

<table>
<thead>
<tr>
<th>KPI/target</th>
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</tr>
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<tbody>
<tr>
<td>Steelmaking sites in &gt;50% of ArcelorMittal’s operating countries being ResponsibleSteel™ certified by 2025</td>
<td>↑ 50%</td>
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<tr>
<td>First achievement level towards IRMA certification (Transparency level) by iron ore mines in Canada, Liberia, Brazil and Mexico by end of 2025</td>
<td></td>
</tr>
</tbody>
</table>

Progress in 2023

- All mining sites completed IRMA self-assessment

CSR alignment

- ESR S2: Workers in the value chain
- ESR S4: Consumers and end-users

Material topic

- 8. Customer reassurance

UN SDG alignment

- SDG 8: Decent Work and Economic Growth
- SDG 11: Sustainable Cities and Communities
- SDG 13: Climate Action
- SDG 17: Partnerships for the Goals

Locomotive, Quebec, Canada
Considerable efforts have been made over recent years towards preparing our own operations for certification with key third-party standard-setting bodies such as ResponsibleSteel™ and IRMA. This year, in preparation for the new disclosure requirements, we have made significant progress in addressing responsibility and sustainability due diligence across the upstream value chain, amongst suppliers; the strengthened approach will be rolled out across some 100,000 suppliers during 2024. And we are preparing to follow this up with virtually identical procedures for the downstream value chain, notably our customers – ensuring that they and their usage of our products is compliant with the emerging due diligence regulation.

Brad Dovey
EVP Business Optimisation

Governance

The Executive-level Sustainable Development Panel discusses our management approach to our engagement with value chains. The Board Sustainability Committee is kept informed of the Group’s progress in addressing value chain issues. A major aspect of our value chain assurance is focused around compliance and risk assessment with regard to the evolving range of due diligence legislation including German Supply Chain Act, French Duty of Vigilance Law, CSRD and the CSSD. Various corporate functions are working on addressing the requirements for own workers, workers in the value chain and affected communities to provide every business unit with clear guidelines to comply with legal requirements.

We continue to pursue engagement with and certification by ResponsibleSteel™ and the Initiative for Responsible Mining Assurance (IRMA) as part of our governance approach. See more on this in the performance section.

Strategy

We strive to operate responsibly across the value chain to meet our stakeholders and civil society’s expectations and maintain our licence to operate.

The strategy includes:

- Strengthening our Human Rights policy
- Continuing to certify our operations to third-party industry-leading multi-stakeholder standards
- Encouraging our value chain to certify to industry-leading ESG standards
- Preparing for sustainability due diligence legislation.

Strengthening our policy

We have strengthened our Human Rights policy to better align with best practice, and increase our focus on the areas that have been identified as priorities for the business. We are determined to respect all internationally recognised human rights, including, but not limited to, those covered under the International Bill of Human Rights, the ILO Declaration on Fundamental Rights at Work, and implementing the UN Guiding Principles on Business and Human Rights (UNGPs). In addition, we seek to voluntarily uphold and align with other international standards including the OECD Guidelines for Multinational Enterprises, the International Finance Corporation’s Environmental and Social Performance Standards, the Voluntary Principles on Security and Human Rights, and other relevant voluntary conventions and standards applicable to its operations.

Continuing to certify our operations to third-party industry-leading multi-stakeholder standards

We believe that compliance and certification with leading industry-specific third-party value chain standards help us make better, long-term decisions and thereby build and protect value for the future.

Consequently, we are seeking to provide assurance to our customers and stakeholders by continuing to align our business operations with the leading industry standard-setting bodies in the steel and mining sectors, namely ResponsibleSteel™ and IRMA.

We were a founding member of ResponsibleSteel™ and have a seat on the Board representing business members. We also have a board seat at IRMA. The values and missions of both correspond closely to our own purpose and our desire to minimise risk, improve performance and meet stakeholders’ expectations. There is also an alignment with the increasing legislative developments to assure our stakeholders that we operate responsibly.

Our strategic actions on this include:

- Continuing to self-assess and certify our major steelmaking sites to ResponsibleSteel™
- Completing IRMA self-assessments at our iron ore mining operations, and moving on to the third-party audit stage of certification.

We remain committed to the Mining Association of Canada’s Towards Sustainable Mining (TSM) initiative at our mines in Canada. ArcelorMittal Mining Canada has implemented TSM protocols since 2004 and is both TSM-assured and five-star rated.
Strategy continued

The IRMA and TSM initiatives give the business high-quality, rigorous assessment tools, that help demonstrate how it is managing social and environmental performance at its mines. Both IRMA and TSM have been formally recognised by ResponsibleSteel™ as meeting the criteria for its ‘Certified Steel’ responsible sourcing requirements.

Encouraging our value chain to certify to industry-leading ESG standards

Although we supply much of our own iron ore, we are also working increasingly closely with our wider suppliers of iron ore and other raw materials to support the adoption of higher sustainability standards – to facilitate their achievement of ResponsibleSteel™, IRMA and TSM standards. We are also engaging with our entire upstream supply chain through our Code of Responsible Sourcing to ensure their compliance with critical responsibility criteria such as Human Rights, Anti-Corruption, Health and Safety and the Environment.

It is anticipated that our attention will increasingly turn from 2025 to addressing due diligence similarly at the downstream end of our value chain through to customers.

Preparing for sustainability due diligence legislation

The Corporate Sustainability Due Diligence (CS3D) aims to ensure that businesses address adverse impacts of their actions, including in the value chain. It follows other legislative developments such as the French Duty of Vigilance Law (2017), and the German Supply Chain Due Diligence Act (2022), which both focus on the supply chain. The CS3D requirements are also reflected in the reporting requirements of the Corporate Sustainability Reporting Directive (CSRD).

In preparation for these legislations, we are strengthening our existing compliance and procurement processes for our value chains, which include:

• Enhancing our policies to respond to the regulatory requirements, and cascading down the expectations to our suppliers
• Establishing an overall management system approach to value chain sustainability due diligence
• Building internal capacity for corporate sustainability due diligence including responsible sourcing
• Enhancing digital ESG risk assessment solutions
• Mapping value chain partners and prioritising high-risk value chains.

Risk management

The risk in our assurance and value chain considerations primarily relates to effective implementation of our plans, and management of actual and potential adverse impacts on human rights and the environment across what is a complex value chain, which comprises over 100,000 direct suppliers across the globe.

Developing and implementing these systems to achieve full coverage, and engaging suppliers to adopt higher standards could take several years to achieve.

We operate in and procure from several higher-risk geographies and sectors, and consequently we are implementing an increasingly sophisticated approach to identifying and addressing ESG issues throughout our value chains.

We expect to implement enhanced due diligence processes in these geographies over the longer term, with the aim of improving labour conditions, environmental management and reducing adverse impacts on affected communities.

In terms of compliance, we also recognise the challenges of resourcing our personnel with the right expertise and training to address these assurance requirements. It is important that all relevant personnel in business leadership, HR, procurement, commercial and community relations roles receive training on applicable legislation, stakeholder expectations and our processes for managing value chain sustainability as appropriate.
## Performance & targets

The following KPIs are used to measure and monitor our progress.

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<td>IRMA certification</td>
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<td>IRMA certification</td>
<td>IRMA certification proceeds with the Andrade mine in Brazil, Liberia, Brazil, Mexico and Canada in January 2024, Canada mines in Q1 2025.</td>
<td>ArcelorMittal Belgium (Geel, Genk, Ghent, and Liège)</td>
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<td>IRMA audit from mines in Canada, Liberia, Brazil, Mexico</td>
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</tbody>
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### Strengthening our policy

During the year our primary actions within the value chain have been as follows:
- Beginning to map the value chain for human rights impacts, risks, and compliance
- Implementing due diligence processes to prevent, avoid, mitigate and remedy human rights impacts
- Enhancing a risk assessment process for identifying human rights risks
- Building capacity and resources for human rights-related training.

### Revising our Code of Responsible Sourcing

Our Code of Responsible Sourcing was updated in 2023. It has included more specific requirements and expectations from our suppliers, and employs responsible sourcing standards from ResponsibleSteel™, ensuring their business activities comply with our standards and relevant regulations around human rights, labour rights, environmental protection, climate change and the circular economy, and ethics and integrity.

The revised Code will be launched in the first half of 2024.

### Continuing to certify our operations to third-party industry-leading multi-stakeholder standards

In 2023, we continued our site certification process with ResponsibleSteel™. By the end of the year, 33 of our sites had been certified under the ResponsibleSteel™ core ESG management standards. These include our facilities in:
- ArcelorMittal Belgium (Geel, Genk, Ghent, and Liège)
- ArcelorMittal Belval and Differdange in Luxembourg (Esch-Belval, Differdange and Rodange)
- ArcelorMittal Bremen and ArcelorMittal Eisenhuttenstadt in Germany
- ArcelorMittal España (Asturias, Etxebarri, Lesaka and Sagunto)
- ArcelorMittal Méditerranée (Fos-sur-Mer and Saint-Chély-d’Apchel) in France
- ArcelorMittal France, Cluster North (Dunkirk, Mardyck, Desvres, Montataire, Florange, Mouzon, Basse Indre)
- ArcelorMittal Poland (Dąbrowa Górnicza, Kraków, Zabrze, Szczecin, Włocławek, Sobiesici, Chorzów)
- ArcelorMittal Warszawa Sp. z o.o., Poland
- ArcelorMittal Tubarão, Monlevade, Vega)
- ArcelorMittal Tailored Blanks Zaragoza S.L.

In addition, ArcelorMittal Dofasco was certified by ResponsibleSteel™ in February 2024.

Further sites in Europe, Brazil and NAFTA have commenced the audit process. Our short-term goal is to see steelmaking sites in half of ArcelorMittal’s operating countries being certified by 2025.

We have made substantial progress with IRMA certification in 2023. All the mining segment sites across Canada, Liberia, Brazil, Mexico and Ukraine have completed the IRMA self-assessment phase. The Canadian and Brazilian sites have been reviewed by a third-party consultancy to interrogate the robustness of our self-assessments across 40 criteria, and Liberia and Mexico will complete the same process in Q1 of 2024.

Our Andrade mine in Brazil has been approved by IRMA to proceed to the formal external audit for IRMA transparency certification, a process that is likely to take around six months starting in January 2024. The Canada sites are due to follow on with their formal audits in Q1 2025. These audits are intensive and comprehensive, reviewing all relevant documentation and interviewing stakeholders to gain their views on the company’s claims.

### Responsible sourcing due diligence procedure

A new due diligence procedure has been developed during 2023, to be undertaken before engaging with new business partners or third-parties. A pilot procedure was launched in Germany in December, before being rolled out across the group in 2024. The procedure includes an internal risk assessment of each supplier, using a risk scoring methodology based on their sector, their country and whether or not they already have their own ESG framework. Suppliers are then assessed as low, medium or high risk. If medium or high risk, they are engaged with a more detailed questionnaire to drill down deeper on their levels of compliance. It is intended that our full supply chain list of circa 100,000 active suppliers (those engaged since 2021) will be assessed by the end of 2024. The procedure follows the steps:
- Economic Sanctions screening
- Adverse media screening
- Onboarding the third party into the company’s Third-Party Risk Management platform and Risk Assessment Questionnaire
- Risk scoring
- Risk-based due diligence
- Mitigation actions
- Due diligence report including proposed mitigation actions
- Approvals
- Ongoing due diligence.

Building on the above measures, we are starting to introduce compliance contractual clauses to meet the legal requirements on due diligence.

The reason for this update is driven by the draft CS3D that mandates to seek contractual assurance to ensure our business partners comply with our Code of Business Conduct, and if they have their own partners involved in our value chain, cascade down similar assurances through their contractual relationships.

Looking to the downstream value chain, a mirror image of the supply chain due diligence procedure will be rolled out to customers once the upstream due diligence has been largely completed. A comprehensive e-learning programme for ArcelorMittal employees has been designed to coincide with the new procedures. The entire company compliance network (60 people) met in November 2023, and received training on the new due diligence procedure.
Chapter 7

Attracting, retaining and developing our people

Our People strategy revolves around encouraging inspirational leadership, attracting talent and enabling it to thrive, and building a safe, diverse and inclusive environment that delivers a more balanced, open and productive work experience. Implementing our D&I roadmap has been a major focus for 2023 – the aim is to ensure that everyone in the company understands the real business benefits of diversity, building mutual engagement, delivering a flow of new ideas, and increasing productivity to enable a high-performing organisation. Another theme has been our continued preparation for the new disclosure requirements, ensuring we have consistent definitions, effective reporting systems and clear responsibilities in place across the whole business.

KPI highlights

| Women on the BoD (%) |  |  
|----------------------|---|---
| 2022: 30             | ↑ 40  | 2022: 40  |
| Women on the Group MC (%) | → 12.5 | 2022: 12.5  |
| Gender diversity leadership positions (%) | ↑ 17  | 2022: 16  |

CSRD alignment

ESRS S1: Own workforce

Material topic

2. Work and life
3. Gender

UN SDG alignment

ArcelorMittal employee, Corpus Christi, Texas
Chapter 7 – Attracting, retaining and developing our people

In 2023 we have continued to embed our revitalised people strategy based around its three pillars of ‘Leadership that inspires excellence’, ‘Talent to thrive for the future’ and ‘Diversity and inclusion that engages everyone’. We have seen considerable success in all three areas of focus although there is much still to do in delivering even stronger leadership, building our skills base for the future, and truly achieving a sustainably safe, inclusive, and diverse environment for all our people. Considering the new disclosure requirements, we have spent considerable time and effort on preparing our reporting capabilities across all our operations and sites, standardising definitions, ensuring we have the right systems in place, and clarifying responsibilities under the new reporting regime.

Stephanie Werner-Dietz
Executive vice president, head of human resources

Governance

Our people governance is primarily overseen by the Appointments, Remuneration and Corporate Governance Committee (ARCGC) and the Board Sustainability Committee (BSC).

Below the ARCGC, the human resources leadership team, composed of heads of HR for each segment, initiates policy, aligns approaches across the business, and follows up on corporate initiatives and strategic priorities. It meets every two months.

Career committees take place in each segment at multiple levels to conduct performance reviews and succession planning and ensure efficient management and development of people at ArcelorMittal.

With 15 members, the D&I Panel itself is diverse in many ways, representing every part of the organisation, as well as comprising both senior and more junior people. When selecting members, we seek to include people who are passionate about diversity and inclusion and who can act as ambassadors in their local constituency. It meets at least once every two months. It is currently chaired by the director of people, health and well-being at ArcelorMittal Long LATAM & Mining Brazil. The D&I Panel is sponsored by the EVP human resources and VP corporate communications and sustainable development.

The company is culturally and geographically diverse. In terms of driving diversity, the company is currently focusing on gender diversity as a key KPI in the ESG component of our Long-Term Incentive Plan, based on achieving progress towards the company’s target of 25% women management positions by 2030 from a baseline of 2020.

Key HR policies governing the business include the Human Resources, Employee Relations and Diversity and Inclusion policies.

Strategy

Our new people strategy was launched in 2022 and is based around our fundamental purpose which is to create ‘smarter steels for people and planet’. It seeks to boost our talent base to create a safety-first, people-driven culture that ensures sustainable performance. It is founded on three pillars:

- Developing leadership that inspires excellence
- Attracting and developing talent to thrive for the future
- Engaging all our workforce through implementing our D&I roadmap.

Whilst pursuing these three pillars, our strategy has focused on improving organisational effectiveness, HR capabilities and preparing for the new disclosure requirements. This year has seen considerable work devoted to ensuring we have the right HR definitions, systems, and responsibilities in place across our whole business.

Stephanie Werner-Dietz
Executive vice president, head of human resources

Our diversity and inclusion (D&I) governance is led by the global Diversity and Inclusion Panel, which was formed in 2021. It acts as an informed representative of the group, to promote D&I through:

- Leading our ambition to be an employer of choice
- Improving inclusion, growth, and trust throughout the employee experience
- Providing guidance, sharing best practices and encouraging segments to develop their own D&I strategies and plans
- Challenging the status quo
- Promoting company-wide communication on D&I achievements
- Discussing and recommending appropriate KPIs and targets, and monitoring progress against these targets.

ArcelorMittal employees working on a railway, Liberia
Chapter 7 – Attracting, retaining and developing our people continued

Engaging all our workforce through our D&I roadmap
We need to engage and include every one of our employees, no matter what their background, to contribute towards a successful and rewarding workplace. We are seeking an environment that is completely free of bias, and promotes collaboration, team spirit, mutual respect, and compassion, and ensures each employee’s safety, health and well-being.

With the importance of D&I to our overall people strategy, we have put in place a detailed roadmap that sets out the changes in processes, policies, and mind-sets that are required to achieve the targets we have set ourselves. This includes engaging senior leaders to embrace D&I with a priority on gender diversity in the first instance; establishing the D&I Panel as a critical driver of change; developing group-wide programmes through to local initiatives; and defining a strategic framework for an inclusive culture compliance.

The aim is to ensure that everyone in the company understands the real business benefits of diversity, leveraging innovation, building mutual engagement, and increasing productivity to enable a high-performing organisation.

Our key strategic actions
Around the three pillars, our key strategic actions during 2023 included:
• Putting safety at the forefront of our HR objectives and communications
• Creating greater transparency of reporting data and enabling our leadership teams to act more effectively
• Providing greater visibility internally and externally of the opportunities available at ArcelorMittal
• Strengthening our diversity promotion and commitments.

D&I roadmap
Our D&I roadmap is based on the premise that a high-performing organisation benefits from diverse perspectives and leverages innovation and engagement, which in turn drives productivity and performance.

- Key actions worldwide focusing on:
  i. Raise awareness, ii. Build an inclusive culture, iii. Increase focus on gender diversity in recruitment and lv. Increase focus on gender balance in leadership positions of the organisation.
- Leverage local initiatives
- Establish global D&I governance
- Engage senior leaders
- Review policies and define minimum standard
- Developing programmes
- Leverage diversity to create business value
- High performing organisation, benefiting from diverse perspective leveraging innovation, engagement, increased productivity and higher social consciousness.
- Review and define minimum standard
- Leverage local initiatives
- Develop group-wide programmes
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- Developing group-wide programmes
- Leverage diversity to create business value
- High performing organisation, benefiting from diverse perspective leveraging innovation, engagement, increased productivity and higher social consciousness.

Progress follow up and continuous improvement

Strategy continued
Developing leadership that inspires excellence
We believe we can enhance our organisational and operational performance through inspirational leadership. We regard good leaders as standard-setting role models: they are our multipliers, our advocates, and our strongest ambassadors, who have the biggest influence on the engagement level of all people. We need to make sure they are trained and best equipped to perform this role effectively. Our strategy involves a strong leadership development programme, building a pipeline of new leaders, and enhancing the skills and engagement of existing leaders.

Attracting and developing talent to thrive for the future
Attracting and developing the right talent is key to successfully delivering our business strategy. In a competitive career market, we need to position ArcelorMittal as the employer of choice, seeking out purpose-driven people whose values align with ours. This means creating a culture that motivates and inspires people to make a difference, where they can grow both professionally and personally, and where they can develop new ideas and succeed.

Our strategy to support this involves communicating a compelling new employee value proposition, launched in early 2023, to existing and potential employees, and creating a learning culture supported by a comprehensive educational and training resource through the ArcelorMittal University (AMU). Attracting a strong and diverse pipeline of professionals to upgrade our technology, engineering and data capabilities is crucial to our future and is a considerable challenge in a competitive recruitment environment.
Chapter 7 – Attracting, retaining and developing our people

Strategy continued

- Preparing comprehensively for the new disclosure requirements
- Strengthening our digitalisation systems and structures
- Building on our well-being campaigns and support
- Ongoing development of our training, leadership and AMU resources.

Risk management

ArcelorMittal’s key human capital risks are based around:
- Maintaining our ability to attract and retain talented people which in turn drives our performance
- Gaining access to and developing the right skills, knowledge, and leadership to succeed as a company in the long-term
- Maintaining and building our performance on D&I to support plurality of thought, skills and perspectives.

Attracting a strong pipeline of talented people into the business within a very competitive career and job market is becoming more challenging, and we accept that this brings with it challenges of countering existing perceptions of both the company and the nature of the steel industry.

We recognise that creating a truly diverse and inclusive culture that engages all our workforce, across all our geographies, could take some time. Our initial focus is on gender diversity, but we recognise that we need to address all forms of diversity and achieve it in a sensitive and culturally appropriate way.

Achieving CSRD reporting compliance requires a higher degree of disclosure across a far wider range of criteria and KPIs than previously. This is challenging both for us and all larger corporations covered by the legislation. It also requires a greater understanding of the associated risks, opportunities and mitigations relating to all the CSR topics, for the company and its many stakeholders.

Our strategic actions for 2023 were designed to address these risks and opportunities.

Performance & targets

The following KPIs are used to measure and monitor our progress.

<table>
<thead>
<tr>
<th>KPI</th>
<th>Target</th>
<th>2022</th>
<th>2023</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employees participation in leadership programmes</td>
<td></td>
<td>190+</td>
<td>688+</td>
</tr>
<tr>
<td>Women on the BOD (%)</td>
<td></td>
<td>30%</td>
<td>40%</td>
</tr>
<tr>
<td>Women on the Group MC (%)</td>
<td></td>
<td>12.5%</td>
<td>12.5%</td>
</tr>
<tr>
<td>Women recruited (exempt population)</td>
<td></td>
<td>29%</td>
<td>19%</td>
</tr>
<tr>
<td>Gender diversity leadership positions</td>
<td></td>
<td>16%</td>
<td>17%</td>
</tr>
</tbody>
</table>

Putting safety at the forefront of our HR objectives and communications

In the light of the Kostenko disaster, we have been reminded in the most painful of ways of the critical importance of safety in our business. We have all been shocked and emotionally impacted by such an event happening within our company and involving our colleagues and friends. Alongside the mourning process and the company-wide opportunities to express our sadness and condolences, we have also ensured that employees better understand the psychological and counselling support that is available for them across the company. As stated elsewhere an extensive independent third-party global audit has been commissioned for all our safety-related practices and actions, which is due to report later in 2024.

Reflecting the importance of the safety of our people, the EVP, HR sponsors and attends the Joint Global Health & Safety Committee (JGHSC), which shares and promotes best practices.

We have gone further in using the ArcelorMittal University (AMU) as a platform for safety training, with 320,000+ course completions across all virtual H&S training courses, with most of these trainings focused on the life-saving golden rules course.

Creating greater transparency of reporting data and enabling our leadership teams to act more effectively

We have high expectations of our leaders at all levels, and they play a critical role in driving progress, delivering our performance, developing our future and inspiring excellence in our people. During the year we have continued to ensure that leaders are gaining necessary transparency of HR data to help them lead, and that they are provided with the right skills and toolkits to translate this into effective and inspiring work.

At the end of 2023, we started to release the first version of a new Leadership Dashboard, which provides managers with valuable data on their teams, latest headcounts, diversity metrics, attrition and engagement levels. Leadership training is being enhanced at all levels, with 9,659 e-learning hours providing guidance on important management topics such as D&I, well-being, teamwork and H&S, together with the expansion of our mentoring initiatives.

The Speak Up + platform has continued to provide for detailed two-way engagement and dialogue about the needs and concerns of employees. We have moved the frequency of the surveys to twice per year to avoid survey fatigue for the respondents, and to allow the organisation to act on the findings and identify the required actions. Out of those invited, 86% of employees participated in the survey and the engagement level and score has remained at the same level as last year.

The Speak Up + survey is the driving force behind our global people initiatives, and its results act as the most important source to capture and understand the needs and concerns of our employees.

Providing greater visibility internally and externally of the opportunities available at ArcelorMittal

Our ‘Talent to thrive for the future’ pillar is driven by the combination of our external talent acquisition and internal career development. We have focused in 2023 on making sure that the many opportunities at the company are easy to find and that they and the company are presented as appealing to the widest universe of potential candidates.

We refreshed our talent attraction and retention materials and messaging to better communicate...
Chapter 7 – Attracting, retaining and developing our people

Continued

Performance & targets

The benefits, value, and impact of working at ArcelorMittal. This resulted in over 725,000 global users of the ArcelorMittal career page. There was a strong positive 36% gain in brand recognition, and positive gains in our Glassdoor rating and in LinkedIn engagements.

Our talent programme is not just about recruitment, it is also about retention of skills and expertise. In 2023 we launched “Thrive”, a programme aimed at helping our employees explore global opportunities that leverage our global size and scale. We are also looking into ways to broaden our mobility initiatives to enhance the expat experiences and further support our international personnel and their families.

Strengthening our diversity promotion and commitments

We have continued in 2023 with our D&I roadmap, where our primary focus has been on gender diversity, and where we believe we had the greatest gap to address. Across most of our gender diversity KPIs, we are making progress. At the end of 2023, we had 17% women in management positions compared with 16% for 2022. And 40% of Board Directors are women. But more progress needs to be made in a number of areas: with just 11% of EVPs and 7.9% of VPs being women currently. Total female representation across the group workforce is now 14.8%, following the departure of ArcelorMittal Temirtau from the group.

Much of the structural work preparing for improved gender diversity is in place. In 2023, 22% of women (general manager and position above) were in key position succession plans. We now have greater confidence in the robustness of the process, with improved validation of the candidates’ preparedness to take on these roles. We are focusing on providing additional career support for our female talent. We are continuing to participate in forums and initiatives internationally such as the Top Women Tech Summit in Europe, and we created many local campaigns to highlight our women in steel.

Following the same principles as the Bradley Curve in H&S, there are several D&I models developed to support the journey towards an inclusive culture, further building on what we have already done and building our onward strategy and actions.

We have, in partnership with Korn Ferry, developed a comprehensive D&I Maturity Assessment process across the group with 90% of the world covered. The process helped us identify where we need improvement in terms of policies, practices, structures and behaviours and assisted us in the prioritisation of key issues and actions.

More broadly on other diversity areas, there are a wide range of initiatives being undertaken across the company on LGBTQ+ promotion and support, together with training programmes on issues such as unconscious bias as part of ArcelorMittal University.

Age-wise, the average employee age is 43 years, and given our desire to diversify our overall personnel base and recruit talent for the future, we have created a LinkedIn campaign called NextGen@ArcelorMittal to showcase our young talent across the company.

In Canada, we have been named as one of the top three companies for diversity by Forbes in their annual list from a survey of 12,000 employees. The survey ranks companies for diversity-related best practice, including efforts to recruit minorities; publication of diversity data; providing an accessible environment for people with disabilities; and the percentage of women in executive positions.
Preparing for the new disclosure requirements
There is a recognition that to date we have not had the necessary cross-company reporting systems required for CSRD, and we did not have total uniform definitions of some of the HR KPIs, for instance around matters like employee data.
During 2023, we have devoted considerable resources to prepare in detail for CSRD disclosure. We undertook a comprehensive gap analysis to assess the areas of disclosure needing most attention. We appointed a leading external consulting partner and compiled an exhaustive KPI Handbook summarising KPI definitions and criteria.
We have also strengthened our reporting systems. A major part of the programme has been dedicated towards providing ongoing training and post-implementation support across the group.
We have been running ‘test runs’ on top priority KPIs at the end of 2023. Supporting this we have put a risk and control matrix in place.

Strengthening our digitalisation systems and structures
We have previously discussed our data-led approach, and this can be seen in the benefits we are seeing from the dashboards we have total uniform definitions of some of the HR KPIs, for instance around matters like employee data.
During 2023, we have devoted considerable resources to prepare in detail for CSRD disclosure. We undertook a comprehensive gap analysis to assess the areas of disclosure needing most attention. We appointed a leading external consulting partner and compiled an exhaustive KPI Handbook summarising KPI definitions and criteria.
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Strengthening our digitalisation systems and structures
We have previously discussed our data-led approach, and this can be seen in the benefits we are seeing from the dashboards we have introduced for leaders. During 2023, we appointed a new head of HR digitalisation, change management and diversity, equity & inclusion (DESI) with the intention of strengthening our digital strategy in HR. Whilst we recognise the company’s devolved structure, and are committed to enabling local management to source and use the systems that they believe to be locally appropriate and effective, we nevertheless operate one master system through SAP at group level, supported by a number of distinct modules provided by Oracle. Regardless of the segment or site platforms, we have laid down consistent means and formats of reporting to the group. We will continuously review our progress and strengthen our data approach over the next few years.

Building on our well-being campaigns and support
Well-being in the workplace is very much part of our People strategy and our employee value proposition. It is recognised that well-being, both in work and at home, delivers better performance and engenders a stronger, more cohesive corporate culture. We ran a global campaign through AMU called Wellness Wednesday that included a series of inspirational speakers, expounding the Seven Dimensions of Wellness (social and cultural, physical, emotional, financial, environmental, occupational, and spiritual).
Supporting the groupwide campaigns, there are many local initiatives on the ground. ArcelorMittal Downstream Solutions (AMDS) has developed golden rules for well-being, which have been promoted across all its employees and based around the following engagement initiatives and challenges:

Case study
‘Women of Steel’ initiative, South Africa
In 2023, the ArcelorMittal South Africa ‘Women of Steel’ initiative included 105 women identified as high potential. The 105 nominated representatives are made up of women in critical positions or those who are successors to critical positions that have been identified as part of human resources succession planning in 2021 and 2022.

‘Women of Steel’ programme includes the following initiatives:
- CEO engagement sessions – The CEO of ArcelorMittal South Africa hosts frequent round tables with the ‘Women of Steel’ population
- Nominated candidates take part in leadership development programmes such as transition to executive, transition to management, transition to professional
- Nominated candidates are given the opportunity to obtain further formal qualifications

- Technical leadership development – in 2023 it included the FFLP (Future Finance Leadership Programme), designed to nurture future finance leaders within ArcelorMittal. This 15-month programme covers managerial, finance, technical, and on-the-job training, with an emphasis on project work and job rotations
- Emotional Intelligence (EQ) sessions – help employees develop empathy, self-awareness, and the ability to regulate their emotions, which can improve their overall well-being and job satisfaction. By investing in emotional intelligence training, ArcelorMittal South Africa can create a more positive and productive work environment, where employees are better equipped to handle the challenges and stresses of the job
- Engagement session with local university – during these networking sessions, employees are given the opportunity to expand their professional circle, learn about new trends and developments, and gain insights and perspectives from others. It can also provide opportunities for mentorship, collaboration, and support. This can play a key role in helping individuals achieve their goals and advance in their careers
- Access to the ‘Women of Steel’ South Africa exclusive team site – The platform is used to provide updates on upcoming events and available sessions and resources, gather feedback, and establish a sense of community

With the focus on performance, targets and continued growth in mind, we operate one master system through SAP at group level, supported by a number of distinct modules provided by Oracle. Regardless of the segment or site platforms, we have laid down consistent means and formats of reporting to the group. We will continuously review our progress and strengthen our data approach over the next few years.
Wellness initiatives at ArcelorMittal Dofasco

There is a strong integration of wellness into the culture of ArcelorMittal Dofasco, Canada. Originating as a grassroots programme in 1993 through Medical Services, it has evolved to deliver evidence-based programmes and education addressing a variety of targeted health and wellness topics organised into pillars: MoveWell, EatWell, and BeWell. The programmes encourage, support and sustain employees in achieving both physical and mental wellbeing.

There are on-site fitness centres with dedicated professionals that deliver exercise programmes, injury and chronic disease rehabilitation, and coaching for improved nutrition, smoking cessation, and mental health and mood management from onboarding to retirement. The programmes are intertwined with health and safety, disability claims management, D&I, human resources, recreation and medical services, which is critical in addressing comprehensively the health, safety and well-being of our people.
Chapter 8

8

Communities and Just Transition

We are committed to being valuable and sensitive contributors to our local economies and communities. They provide our talents and skills, our working environments, our resources, our infrastructure and our cultural settings. We aim to listen to, engage with, respect and protect them, and we are seeking to be better at how we achieve this in all our sites and geographies.

KPI highlights

Community investment spend (including STEM)*

↑ $22.5m
2022: $20m

Estimated direct economic contribution

↓ $67.6bn
2022: $74.8bn

* ArcelorMittal Temirtau’s share of community spend added based on historical performance

CSRD alignment
ESRS S3: Affected communities

Material topic
4. Community

UN SDG alignment

Community engagement, Liberia
Chapter 8 – Communities and just transition

Communities are at the heart of our business because our operations and people are fundamental parts of those communities. It is critical that we contribute to our local communities in ways that add meaningful value to their socio-economic development and by minimising adverse impacts to them. 2023 has been a year of preparing our readiness for the new disclosure requirements on our community engagement and on the Just Transition. Our work has been led by a fundamental focus on regarding all people with dignity and respect, across all our operations and geographies and ensuring that we have the right mechanisms in place to deliver on our commitments.

James Streater
General manager, sustainable development

Governance

The Board Sustainability Committee (BSC) is responsible for reviewing the company’s approach to social sustainability including its ambitions, priorities, compliance and performance related to affected communities in its own operations and across its value chain.

The BSC meets quarterly to review sustainability matters and discusses specific topics such as social issues and performance. It provides its findings to the Board. The current members of the BSC are Clarissa Lins, Tye Burt and Michel Wurth.

The executive-level Sustainable Development Panel (SDP) is a valuable forum that enables us to discuss and review our management of environmental, social and governance (ESG) issues, including those related to communities. Where relevant and appropriate, material issues identified by the SDP are raised with the Executive Office and recommended topics are brought forward for discussion and action with the EVPs and the Group Management Committee.

The industry-leading ESG standards of ResponsibleSteel™ and IRMA place considerable emphasis on interaction with communities and is seeking to provide assurance to stakeholders of our standards and commitments in this regard. We continue to work towards certifying our steel and iron ore mining operations to meet these requirements.

Governance of our policies related to communities and society are covered under the following policies, codes and procedures: Human Rights Policy, Code of Business Conduct, Whistleblowing Procedure, Health and Safety Policy, Environment Policy, Code of Business Conduct, Security Policy as well as various human resources policies and procedures.

Revised policy and saliency assessment

Our reputation and licence to operate with local communities and broader civil society is based on our actions and performance, delivery of our commitments and the engagement we have with these parties. There is growing interest and scrutiny from local communities on sustainable development matters, together with the onset of much more rigorous reporting requirements, such as CSRD and CS3D, to ensure that companies consider and address the impacts they have on the outside world.

Our 2021 materiality assessment identified ‘Listening, respecting and protecting communities’ as one of the highest-ranked issues for its potential impact both externally and internally. Consequently, we have followed that up in 2023 with a corporate-level saliency assessment to identify the key human rights issues impacting our stakeholders, including our affected communities and indigenous peoples around our operations. The findings from these assessments have been fed into our CSRD-compliant double materiality assessment being undertaken in the first half of 2024.

Following eight months of internal and external stakeholder consultation, we published our updated Human Rights policy in November 2023.
Chapter 8 – Communities and just transition continued

Implementing a Just Transition management approach
The transition to a low-carbon, climate-resilient economy can exacerbate the existing inequalities and vulnerabilities in society, which could lead to a greater sense of social injustice and social unrest, and in turn adversely affect companies’ operations and markets. For these reasons, the European Green Deal seeks to achieve a sustainable economy, without leaving those impacted behind or negatively affecting their prospects. To contribute towards this approach, ArcelorMittal has developed a Just Transition strategy and framework. The four main components of our Just Transition strategy include:
• Establishing a climate change strategy including decarbonisation and adaptation activities to address transition and physical risks and opportunities
• Co-creating the steel company of the future, one which is innovative, safe, inclusive, sustainable and remains economically viable
• Identifying and taking adequate measures to avoid causing or contributing to direct and indirect adverse impacts on fundamental human rights of workers, communities and suppliers
• Mitigating, compensating or offsetting actions against such adverse impacts where avoidance is not possible.

As we plan for the transition of the overall business, and each of its steel-making sites, we have developed a Just Transition framework, based on the commitments, principles and indicators set out in the Paris Agreement, the International Labour Organization’s Just Transition Guidelines and which considers key benchmarks such as the World Benchmarking Alliance Just Transition Assessment and the Climate Action 100+ Net Zero Benchmark.

The framework sets out:
• What the Just Transition means to ArcelorMittal
• Our Just Transition principles
• An asset-level methodology to help manage the framework implementation at asset and plant level
• Overarching governance to monitor and measure progress.

A major focus of 2023 has been the definition of the Just Transition Management Plan (JTMP) which provides practical guidance on how to prepare a JTMP for steel assets that may in due course face significant reconfiguring or decommissioning due to net-zero transition programmes.

The guidance is based on emerging best practice and case studies from around the world.

Risk management
It is important to us that we maintain constructive and positive relationships with our affected communities so that we can build trust and have open lines of communication. Failure to do so can lead to highly challenging operating environments that present a significant risk to our licence to operate.

The quality of our community relationships and the processes used to monitor and manage their health will become more transparent through the new disclosure requirements. However, this also represents an opportunity to improve our management and reporting processes in relation to community engagement, to better demonstrate our commitment to this critical stakeholder group.

Risks around the Just Transition are wide-ranging and relate to the need to successfully transition our business to a low-carbon and climate resilient future, by simultaneously decarbonising and adapting our assets, renewing our ways of working while navigating changes in our workforce’s skills and know-how.

These changes will have both positive and negative impacts on affected communities. Positively, the transition should reduce carbon emissions, adapt operations and infrastructure to the most severe physical climate risks, improve safety, improve opportunities for greater inclusivity and improve local environmental quality around our plants. At the same time and depending on the nature of the technology roadmap adopted, there may be a reduction in the number of carbon-intensive activities across the value chain. This is a societal shift and, as a responsible employer and community partner, we must work together with a broad ecosystem of partners at local, national and international levels to transform society in a way that seeks to leave no one behind.
Chapter 8 – Communities and just transition

**Performance & targets**

The following KPIs are used to measure and monitor our progress.

<table>
<thead>
<tr>
<th>KPI/target</th>
<th>2022</th>
<th>2023</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community investment spend (including STEM)</td>
<td>$20.0m</td>
<td>$22.5m</td>
</tr>
<tr>
<td>Estimated direct economic contribution</td>
<td>$76.8bn</td>
<td>$67.4bn</td>
</tr>
<tr>
<td>Spent on STEM projects</td>
<td>$3.6m</td>
<td>$3.5m</td>
</tr>
</tbody>
</table>

**Saliency assessment**

In 2023, we undertook an intensive five-month saliency assessment to identify the most salient issues for the group and our stakeholders. The intention is that this assessment will inform our priorities, strategy, and disclosures.

The assessment involved detailed internal and external stakeholder interviews, document review, an experts’ survey, and workshop discussion. Risks were graded, and those assessed as severe and high in saliency were identified as the company’s prioritised human rights issues. Twelve issues were identified as follows:

- Health and safety (including process safety risk management and occupational health and safety)
- Diversity, inclusion and harassment
- Indigenous peoples’ rights
- Community health and safety
- Community living conditions
- Land access and resettlement
- Human rights in the value chain supply chain
- Use of our products
- Grievance mechanisms and remediation
- Operating and sourcing from conflict-affected and high-risk areas
- The handling of and behaviour of security personnel
- Climate change and Just Transition.

These priorities will be reviewed by senior management and addressing them will serve as some of our next steps for 2024. The findings will also inform the double materiality assessment we will conduct in the first half of 2024.

**Gaining and maintaining trust, acceptance and our SLO**

Our aim is to maintain trusted relationships with local communities. We have a global External Stakeholder Engagement Procedure which guarantees key requirements for engaging with external stakeholders for our operations and subsidiaries. The procedure sets minimum expectations in the areas of stakeholder identification, engagement, culturally sensitive approaches, communication, reporting and grievance mechanisms.

Our aim is to advance in identifying and promoting beneficial opportunities and sustainable development by engaging local communities to understand their context, needs and challenges and advance collaboratively towards greater opportunities.

**Brazil**

A strong example of our more focused approach to needs assessment is the recent community perceptions study undertaken in Brazil. The research was undertaken to better understand the company’s locations and communities in Brazil, some of the characteristics of the demographics and inequalities, the key issues that local people face, and perceptions of the company.

It involved 222 interviews and 892 questionnaires across 12 centres. The results provide valuable insights into issues around education, training and employment, including the impacts of racism and gender inequality. It identified poor waste disposal facilities and lack of facilities for sport as both major concerns, and opportunities for community investment and engagement. It also demonstrated the important role that ArcelorMittal plays in the communities with 93.8% of respondents believing the company to be important to the region.

The results are currently being reviewed and it is planned that they will guide our engagement plans in the various centres over the next few years.

**Liberia**

ArcelorMittal Liberia (AML) has founded and operates a Vocational Training Centre at Yekepa in Nimba County to help local young people to develop skills that will provide them with opportunities that otherwise they would not have.

By the end of 2023, 95 apprentices graduated from the three-year residential programme.

AML also launched a training and development programme for high-potential Liberian employees to gain work experience and knowledge in ArcelorMittal mining operations globally. The employees will receive advanced training in the fields of mining production, operation optimisation, plant maintenance, planning and execution, plant electrical operation systems, and electrical maintenance. More than 100 students are undergoing skills training to become technicians for the Phase 2 expansion project, and there are plans to expand the centre to a second site near the port operations at Buchanan in Grand Bassa County.

There is also a three-year Housing and Accommodation plan to support construction workers at Buchanan and Yekepa. Employees without housing are provided housing allowances at competitive rates; employees’ children and dependents are provided cost-free primary and secondary school education, with free access to recreational and sporting facilities including volleyball, basketball and football fields.

**Ukraine**

Following the Russian invasion of Ukraine in February 2022, the operations at ArcelorMittal Kryvyi Rih (AMKR) have been substantially impacted, and its employees have suffered greatly.

We have continued to support AMKR’s people in whatever way we can, not least through...
channelling donations from our employees worldwide via the United Nations humanitarian effort coordinated by UNICEF, matching the donations made by them. As of December 2023, a total of €5,170,250,76 has been donated in this way.

AMKR have also contributed to initiatives such as the provision ofambulances for evacuation around the city of Kryvyi Rih, donation of food aid, surgical equipment and medical supplies for local hospitals.

Turkey
In February 2023, we donated $5m to support the humanitarian relief programme in Turkey and Syria, following the devastating earthquake there. We have a business presence in Turkey through our sales office and joint-venture partners. We donated $2.5m to the Disasters Emergency Committee (DEC) and a further $2.5m to Médecins Sans Frontières (MSF) to support the relief efforts in both countries.

Preparing for increasing levels of disclosures
Much of the work undertaken in 2023 including the saliency assessment, and due diligence process, has been formulated to identify and manage risks, impacts, and opportunities but also to align our reporting with CSRD. This work includes a four-step process of:
• Identification and assessment of risks, impacts and opportunities (saliency assessment)
• Integrating the findings into the operations
• Monitoring actions
• Recording and reporting on KPIs

Work is ongoing on the evaluation of the new quantitative and qualitative KPIs that will be needed to report on affected communities for CSRD requirements. We recognise that our different steel, mining and downstream operations have differing fundamental impacts, both by nature and degree, and this needs to be factored into the KPIs that are used to monitor their performance. For example, decarbonisation and Just Transition is more material to steel operations whereas land clearance, resettlement and biodiversity management are likely to be more material at our mining operations.

Under CSRD, a particular focus is the development of core community-related and social KPIs that can be implemented at segment and site level. During 2024 we will be reviewing our social performance standards to identify areas for meaningful improvement. We are also planning to pilot a community perception survey, aligned with CSRD requirements, to establish common KPIs across sites, and measure perceptions, the effectiveness of our mitigation actions, and awareness and trust of our grievance mechanisms, amongst other criteria.

The handling of and behaviour of security personnel
VPSHR training
In January 2024, our Global Assurance – Group Security function launched a Voluntary Principles on Security and Human Rights (VPSHR) online training module. The VPSHR is a multi-stakeholder group of international governments, corporates and NGOs dedicated to sharing the best practices and mutually supporting the Principles.

For companies, the objectives are to minimise security-related impacts on communities and align corporate policies with internationally recognised human rights principles; largely around the roles and responsibilities of security staff, use of force, incident reporting, identifying related risks, and interactions with public and private security.

It is being made available through the company’s 360 learning platform.
Chapter 9

Governance and risk management

Achieving the highest standards of corporate governance, integrity and oversight is core to the management, performance and reputation of the company, and we believe it is fundamental to delivering long-term value and minimising risk. It is one of the key material issues for all our stakeholders, both internally and externally.

Governance measures and structures are constantly evolving, and 2023 has also seen further work on our preparation for greater sustainability scrutiny, reporting and compliance.

City view from Eleanor Tinsley Park, Houston, Texas, USA

CSRD alignment
ESRS G1: Business conduct

Material topic
Our commitment to sustainability requires careful and sensitive governance around the topics of environment, people and society, and the management of these issues.

UN SDG alignment
Chapter 9 – Governance and risk management

Strong governance and risk management are fundamental to maintaining the trust and support of all our stakeholders, from customers, through to local communities, our value chain, investors and our own employees. The new legislative requirements are enforcing even greater transparency as to how we assess risks, impacts, mitigations and opportunities for the business both operationally and strategically. We see alignment and compliance with these standards, and a full understanding of the risks we face, as a positive process to ensure that we have a robust, sustainable business for the long-term.

Henk Scheffer
Company secretary, Group compliance and data protection office

Governance structure
ArcelorMittal S.A., the parent company of the group, is a public limited liability company (Société Anonyme) incorporated in Luxembourg. It is governed by a Board of Directors in accordance with the requirements set out in law and the company’s Articles of Association.

The Board oversees the governance and direction of the business. Responsibility for the implementation of the company’s strategy, the overall management of the business and all operational decision-making is delegated to the Executive Office, which comprises the Executive chairman, Lakshmi N. Mittal, and CEO, Aditya Mittal. The Executive Office is supported by other Executive Officers.

The background and experience of each Board member is described in ArcelorMittal’s Annual Report. The Board is of the view that its members have the appropriate range of skills, knowledge and experience, as well as the degree of diversity, to govern the business efficiently. We are continually reviewing skills required at the Board level and seeking to ensure we have broad coverage across Board members of most relevant skills.

The Board has the appropriate structure to ensure it works independently. A key component of this structure is the presence of a majority of independent directors and a strong Lead Independent Director. In fact, the Board of Directors is composed of 10 directors, of which six are independent directors. Furthermore, both the Audit and Risk Committee and the Appointments, Remuneration and Corporate Governance Committee (ARCG) are comprised entirely of independent directors.

Karyn Ovelmen is the Board’s Lead Independent Director. The agenda of each meeting of the Board of Directors is decided jointly by the Chairman of the Board of Directors and the Lead Independent Director.

The Board’s composition and its members’ skills are reviewed on a regular basis and in line with the expected development of the business. We actively seek to strengthen Board knowledge on key issues, additional skills and experience when appropriate. The Board is also involved in succession planning.

The company secretary, Henk Scheffer, oversees compliance with statutory and regulatory requirements and acts as head of compliance and as secretary of the Board of Directors.

As part of its governance structure, the company is committed to increased gender diversity amongst its senior executives, both executive and non-executive. Following the appointment of Patricia Barbizet in 2023, there are four women out of the 10 Board Directors, compared to three at the end of 2022.

For full details of the composition of the Board of Directors and their remuneration, see the Annual Report.

The Board of Directors committees
Audit and Risk Committee

The members of the Audit and Risk Committee are Karyn Ovelmen, Patricia Barbizet, Xarel de Gucht and Esterine Schneider, all of whom are independent under the company’s corporate governance guidelines, the NYSE standards and the 10 Principles of Corporate Governance of the Luxembourg Stock Exchange. The chairwoman of the Audit and Risk Committee is Karyn Ovelmen who is also the Board’s lead independent director.

As of 28 March 2024, Karyn Ovelmen has stepped down from her position as chair of the Board’s Audit and Risk Committee. The new chair of the company’s Audit and Risk Committee will be appointed at the next Board of Directors meeting and Mrs. Ovelmen will hold the position on a caretaker basis until 30 April 2024. Mrs. Ovelmen will continue to serve as the company’s lead independent director.

The primary function of the Audit and Risk Committee is to assist the Board in fulfilling its oversight responsibilities by reviewing: the integrity of the financial reports and other financial information provided by the company to any governmental body or the public; the company’s compliance with legal and regulatory requirements; the registered public accounting firm’s (Independent Auditor) qualifications and independence; the company’s system of internal control regarding finance, accounting, legal compliance, ethics, and risk management that the Board and the Executive Officers have established; the company’s auditing, accounting, and financial reporting processes generally; the identification and management of risks to which ArcelorMittal is exposed. It also examines the yearly, half-yearly and quarterly financial statements for the parent company and the group, and comments on accounting principles and rules and on the valuation, rules used by the company when compiling these financial statements.

Every year, the Audit and Risk Committee sits as the Risk Committee and reviews the company’s risk assessment process, as well as key risks identified. In addition, the Committee reviews in-depth presentations on key risks identified by the risk assessment process or Committee members.
Chapter 9 – Governance and risk management continued

The Audit and Risk Committee’s meetings are convened by its chairman at least four times per year. It can also meet at the request of at least two of its members.

As part of its role to foster open communication, the Audit and Risk Committee meets at least annually with management, the head of the internal audit department and the company’s independent accountants in separate executive sessions to discuss any matters that the Audit and Risk Committee or each of these persons believe should be discussed privately.

Appointments, Remuneration and Corporate Governance Committee (ARCGC)
The current members of the ARCGC are, Karyn Ovelmen, Tye Burt and Clarissa Lins, all of whom are independent under the company’s corporate governance guidelines, the New York Stock Exchange (NYSE) standards and the 10 Principles of Corporate Governance of the Luxembourg Stock Exchange. The Committee is chaired by Karyn Ovelmen, the Lead Independent Director.

The Committee reviews and approves corporate goals and objectives relevant to the executive officers and senior management’s compensation and evaluates performance considering these goals. It makes recommendations to the Board with respect to trends in Board remuneration, incentive compensation plans and equity-based incentive plans. It also identifies candidates qualified to serve as members of the Board and the executive officers, and recommends candidates to the Board for appointment by the general meeting of shareholders or for appointment by the Board to fulfil interim vacancies at the Board.

The Committee also supports and provides guidance to management in developing and updating policies and procedures relating to safety, environment climate change and community relations. It monitors any current, pending or threatened legal actions with respect to safety, climate change, environment and community relations.

It reviews the adequacy of the reporting on sustainability opportunities, risks and issues in the Annual Report, Sustainability Report, and other relevant public documents. The members have relevant expertise or experience relating to the objectives of the Sustainability Committee. The responsible senior managers pertaining to their respective areas of responsibility – health and safety, environment, climate change, and social – are permanent invitees to the meetings of the Sustainability Committee. The Chair of the Sustainability Committee makes a verbal report of the Committee’s decisions and findings to the Board of Directors after each meeting.

Board Sustainability Committee (BSC)
The Sustainability Committee comprises three members, appointed by the Board of Directors. The current members of the Sustainability Committee are Clarissa Lins, Tye Burt and Michel Wurth. Clarissa Lins and Tye Burt are independent under the company’s corporate governance guidelines, the NYSE standards and the 10 Principles of Corporate Governance of the Luxembourg Stock Exchange. The committee is chaired by Clarissa Lins.

The Committee reviews group-level frameworks, policies, standards and guidelines on sustainability matters. It reviews the company’s sustainable development plans and associated management systems in relation to the evolving expectations of stakeholders, including investors, customers, regulators, employees, and communities. It also reviews the effectiveness of the company’s process for assessing and managing catastrophic risks. It coordinates sustainability-related risk management work with the Audit and Risk Committee in relation to reporting to the Board.
Chapter 9 – Governance and risk management continued

The BSC meets four times per year. Additional meetings are called as required to spend time on specific topics of relevance. For example, following the Kostenko accident in Kazakhstan, a special meeting was convened to discuss the accident and the response. First observations from the dsu+ safety audit will be presented to the BSC in April, 2024.

Executive-level committees

Management Committee
It comprises senior managers with responsibility for various business divisions and functions in ArcelorMittal. It plays an important role in debating and developing the group’s policies and strategy and brings to the table representatives from all major segments, regions and functions to discuss relevant items for the entire company. For more information see the ArcelorMittal website.

Corporate Finance and Tax Committee (CFTC)
It defines the principles for the ArcelorMittal finance community and presents and supports financial and business strategies for the ArcelorMittal group by providing the expertise, excellence in execution and stability for continuous, sustainable and competitive development of the Group while developing and promoting its people. The responsibilities of the CFTC extend across all finance and tax activities and are not limited only to activities at corporate level. CFTC is chaired by CFO, Genuino Christino; the EVP, head of corporate business optimisation, Brad Davey (vice-chairman of IAC), the chief technology officer, Pinakin Chaudal; and the VP, head of corporate strategy, David Clarke.

Global Health and Safety Safety Committee (GHSC)
Also at the executive level, the Global Health and Safety Committee (GHSC) is chaired by Robin Paulmier, General Manager, head of health and safety and a member of the group’s Management Committee. Safety representatives from segments and countries attend the Committee meetings. The Committee is responsible for reviewing all fatalities and identifying learnings for the group, sharing safety plans and best practices to enhance learning across the group, identifying common improvement actions that should be initiated across the group, and tracking the progress of specific group-wide safety initiatives that have been collectively agreed upon.

Group CTO Panel
Chaired by Pinakin Chaudal, it coordinates and oversees progress on the global technology roadmap through regional and project-based committees involving the CTO and R&D. The Panel reports to the IAC.

Investment Allocations Committee (IAC)
The Investment Allocations Committee (IAC) authorises large capex projects, including those designed to deliver safety, GHG emissions reductions and environmental improvements and reviews the carbon emissions impact of all proposals. It is chaired by Aditya Mittal, the chief executive officer.

Committee members include the CFO, Genuino Christino; the EVP, head of corporate business optimisation, Brad Davey (vice-chairman of IAC), the chief technology officer, Pinakin Chaudal; and the VP, head of corporate strategy, David Clarke.

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Group CTO Panel
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Climate Change Panel
The Climate Change Panel consists of senior managers from relevant corporate functions to ensure that their views on climate change are discussed and represented. It is chaired by Nicola Davidson, VP – communications and sustainable development and member of the group management committee.

Its overall mandate is to provide a discussion forum for the company’s planning and response to climate change risks and opportunities, particularly from the perspective of steelmaking, and to provide guidance to achieve an integrated approach across the group and its value chain.

It guides engagement and advocacy with external stakeholders on climate change and decarbonisation and supports the business in understanding the risks and opportunities associated with the transition to a low-carbon economy.

Sustainable Development Panel
To complement the Board Sustainability Committee’s work, ArcelorMittal also has an executive-level Sustainable Development Panel (SDP). It is chaired by James Streeter, general manager of sustainable development, who is a sustainability professional with nearly 30 years of expertise both in-house and as a consultant.

The purpose of the Sustainable Development Panel is to discuss and coordinate the company’s approach to environmental, social and governance (ESG) issues. It reviews and discusses quarterly developments on ESG matters across all operations including performance dashboards and KPI progress reports. It also discusses stakeholder expectations and business performance to help ArcelorMittal understand which ESG issues are most material and require executive oversight.

The Sustainable Development Panel meets on a quarterly basis between each standard Board Sustainability Committee meeting, enabling it to follow up and discuss issues raised there and ensure that the necessary work is undertaken before the next meeting of the Board Committee.

XCarb®Technical Panel
Chaired by Brad Davey, reporting to the IAC, it reviews requests from the network to have their products or projects appear beneath the XCarb® brand.

Group Diversity and Inclusion Panel
It oversees the company’s policies on and governance of diversity and inclusion. It is chaired by Sofia Trombetta Camisasca the director of people, health and well-being at ArcelorMittal Long LATAM & Mining Brazil to coordinate and drive progress in this priority area.

Business ethics
ArcelorMittal encourages its employees to be responsible corporate citizens and act with integrity in everything they do. We strive to create a positive culture in which everyone wants and knows how to do the right thing.

Integrity is embodied in the company’s Code of Business Conduct and supported by a comprehensive framework of policies and procedures in areas such as human rights, anti-corruption and insider dealing. These documents reflect the principles and concepts of the UN Global Compact, the OECD Guidelines on Multinational Enterprises and UN Sustainable Development Goal 16: peace, justice and strong institutions.
Chapter 9 – Governance and risk management continued

Compliance and Code of Business Conduct

In addition to the Code of Business Conduct, ArcelorMittal has developed a number of other compliance policies and procedures in more specific areas, such as anti-corruption facilitation payments, extortion, solicitation, procurement and bidding, mergers and acquisitions, gifts and entertainment, political and trade unions contributions and charitable/corporate responsibility contributions, economic sanctions, insider dealing, data protection and the ArcelorMittal principles of integrity.

Furthermore, ArcelorMittal’s compliance programme also includes a quarterly compliance certification process covering all business segments and entailing reporting to the Audit and Risk Committee.

Confidential reporting of breaches
Our employees and stakeholders can report any breaches of the company’s policies and procedures through a confidential whistleblowing facility on the corporate website. ArcelorMittal also has confidential whistleblowing hotlines in all major countries where it operates and will take the necessary measures to protect employees and stakeholders who have, in good faith, made reports through the whistleblowing process, against any retaliation.

Allegations are referred to and duly investigated by the internal assurance department and/or appropriate management and the results are shared with appropriate senior management. Appropriate actions were taken on the basis of these investigations, including actions to strengthen and improve governance and processes.

ResponsibleSteel™ and IRMA certification
We continued to progress ResponsibleSteel™ certification for our steel operations and IRMA certification programme for our mines. As the certification process is being rolled out, our sites prepare for the rigorous audit against a range of ESG issues, such as human rights, health and safety and stakeholder engagement. This assures our stakeholders that we are striving to operate sustainably, responsibly and to the highest standards.

Our Code of Responsible Sourcing was updated in 2023 and will be launched in the first half of 2024. It includes more specific requirements and expectations from our suppliers, and employs responsible sourcing standards from ResponsibleSteel™, ensuring their business activities comply with our standards and relevant regulations around human rights, labour rights, environmental protection, climate change and the circular economy, and ethics and integrity. You can read more about it in chapter six.

Risk management – overview
ArcelorMittal pursues a rigorous approach to risk management across the business, to identify key threats to its operations, assets and people. It is regarded as part of our wider corporate governance structure to protect and build the value of the company.

Management is responsible for internal control in ArcelorMittal and it has implemented on an ongoing basis a robust short-, medium- and long-term risk – including ESG and climate-related risks – management and control system, which is designed to ensure the business is focused on achieving its objectives and that significant risks are identified and mitigated. The system is also designed to ensure compliance with relevant laws and regulations.

ArcelorMittal’s risk management and internal control system is designed to determine risks in relation to the achievement of business objectives and appropriate risk responses.

The establishment and maintenance of a risk identification and management process is the responsibility of site/segment/ corporate function management. Risks are owned and monitored by management. Risk officers designated by management facilitate the conversations and help monitor the action plans. Critical risks are escalated through existing reporting lines.

The Global Assurance Department facilitates the risk management process and provides support enabling business as well as corporate functions to identify these risks and opportunities to the business based on social, environmental, regulatory, workforce, stakeholder, resource, technological and other trends, and specify mitigation actions.

Stakeholder engagement and transparency
We endeavour to be transparent and honest with all our stakeholders and do our best to disclose actual or potential impacts, address issues and put in place remedial actions. We talk to stakeholders regularly, including through this IAR and other local reports, ResponsibleSteel™ site certification audits, investor relations programmes, forums and engagement meetings.
Chapter 9 – Governance and risk management

The Audit and Risk Committee assists the Board of Directors with the oversight of risks to which ArcelorMittal is exposed and in monitoring and reviewing the risk management framework and process.

A consolidated report is shared on a half-yearly basis with the key stakeholders.

Assurance

ArcelorMittal believes that independent assurance leads to quality and process improvements, as well as reassuring stakeholders that the information that the company publishes is accurate and material.

As such, this contributes to building trust, credibility and our licence to operate. This is the 14th year that our sustainable development reporting has received independent assurance. In 2023, we asked our group non-financial auditors, DNV, to provide limited assurance on the following ESG sustainability performance indicators, in accordance with the International Auditing and Assurance Standards Board’s International Standard on Assurance Engagements – Revised (ISAE 3000 Revised):

- Group carbon reduction target: 25% reduction in carbon emissions intensity by 2030 (Scope 1 and 2; steel and mining); tCO₂e/tonne of steel
- Europe carbon reduction target: 35% reduction in carbon emissions intensity by 2030 (Scope 1 & 2); tCO₂e/tonne of steel
- CO₂ intensity steel; tCO₂e/tonne of steel
- Absolute CO₂ footprint (steel and mining; million tonnes)
- Absolute CO₂ footprint (steel; million tonnes)
- Primary energy consumption (steel; petajoules)
- Dust intensity per tonne of steel (kg/tonne of crude steel)
- NOₓ intensity per tonne of steel (kg/tonne of crude steel)
- SO₂ intensity per tonne of steel (kg/tonne of crude steel)
- Net water use (m³/tonne of steel)
- Waste (non-used residues) landfilled (steel; tonnes)
- Waste (non-used residues) in storage (steel; tonnes)
- Fatalities (steel and mining)
- Lost-time injury frequency rate (steel and mining; per million hours worked)
- Industrial operations (including mining) certified to ISO 45001 (steel and mining; %)
- Women in management positions (percentage), manager and above, steel and mining
- Women in key position succession plans (steel and mining), general manager and above.

DNV provides an independent third-party assurance statement, which covers the selected information outlined above in the Fact Book and on the relevant pages of this report. DNV’s recommendations will be addressed in 2024. See DNV’s assurance statement on page 84.
Annex: EU Taxonomy

Seven activities in the Climate Delegated Act have been identified as eligible for ArcelorMittal:
- 1.3 Forest Management
- 3.5 Manufacture of energy efficient equipment for buildings
- 3.9 Manufacture of iron and steel
- 4.1 & 4.3 Electricity Generation from solar photovoltaic technology and wind power respectively
- 5.9 Material recovery from non-hazardous waste
- 7.1 Construction of new buildings

Substantial contribution

Climate Change Mitigation

ArcelorMittal has assessed and documented whether its taxonomy-eligible activities fulfil the substantial contribution criteria to climate change mitigation. Climate Change Mitigation has the most relevant of the eligible activities identified. As such, Climate Change Adaptation has not been included to avoid double counting.

For activity 1.3 Forest Management, ArcelorMittal Bioflorestas manages eucalyptus forest operations which it uses to produce charcoal as a reductant for blast furnaces at one of its manufacturing facilities in Brazil. Bioflorestas is certified by international standards such as the Forest Stewardship Council (FSC) for planting, forestry development, harvesting and charcoal production. For the purpose of the EU Taxonomy assessment, the company has only considered forest management as an eligible activity under category 1.3. However, it notes that Bioflorestas does not meet the substantial contribution criteria.
because ArcelorMittal’s climate benefit analysis is ongoing. The company started a study in 2022 to build a methodology based on the best practices to account for carbon sequestration. It is now implementing the methodology which will support Bioforests fulfilling the substantial contribution criteria.

For activity 3.5 Manufacture of energy efficient equipment for buildings, ArcelorMittal Construction produces insulation panels which supports the energy efficiency of buildings. The company has assessed these panels against the insulating products criteria requiring a lambda value lower or equal to 0.06 W/mK to identify substantial contribution.

For activity 3.9 Manufacture of iron and steel, the company considers both crude steel production and the associated downstream activities as eligible. In addition, it also includes iron ore pellet production within the scope of manufacture of steel. This is in line with the Climate Delegated Act which provides screening criteria covering pellet production as part of the steel making process.

Technical screening criteria (TSC) are set out in the Climate Delegated Act for the different routes to steelmaking operations which meet the substantial contribution criteria, but its integrated iron-ore based production sites do not.

For activities 4.1 and 4.3 Electricity Generation from wind power and solar photovoltaic (PV) technology, ArcelorMittal’s renewable energy project in India, which includes solar and wind farms, will automatically fulfill the substantial contribution criteria to climate change mitigation as they are being built to generate electricity using solar PV technology and wind power. The wind farms will be complete in the first half of 2024 and therefore, ArcelorMittal has included the capital expenditures related to the build of the solar and wind farms as meeting the substantial contribution requirements.

For activity 5.9 Material recovery from non-hazardous waste, the company has assessed its scrap recovery plants in Europe and the UK to ensure that they are converting at least 50% in terms of weight, of the processed separately collected non-hazardous waste into scrap that can be subsequently used in the steelmaking process.

For activity 7.1, ArcelorMittal is building new headquarters in Luxembourg and some of the floors will be leased externally. The building will be fully aligned with three major environmental labels: BREEAM (outstanding level), DGNB (Platinum level) and WELL (Gold level) which means it meets the requirements related to Primary Energy Demand and life-cycle global warming potential. The company will test the building for air-tightness and thermal integrity. The expected leased portion of the building has been assessed as meeting substantial contribution.

Do no significant harm (DNSH)
ArcelorMittal does not have complete EU Taxonomy alignment in 2023. However, the company has provided further details on its approach and status of its analysis under each heading below.

Climate Change Adaptation
To assess the alignment to the EU Taxonomy requirements on DNSH criteria on climate change adaptation, the company conducted a Climate Risk Vulnerability Assessment (CRVA) for sites in the taxonomy-eligible activities. The comprehensive assessment included a relevancy screening to determine whether each hazard could cause a significant impact to the economic activity performed at sites. To assess risk exposure level, a climate analytics tool was used with data based on the IPCC climate scenarios SSP1-RCP 2.6 (<2 °C), SSP2-RCP 4.5 (2-3 °C) & SSP5-RCP 8.5 (>4 °C). The results used to determine alignment to the DNSH criteria are based on the latter, in order to look at the ‘worst-case scenario’ to ensure that adaptation measures are sufficient, including for long-life assets. It is important to note that for a number of EU Taxonomy hazards, the current data and science behind their change due to climate change is limited and were not considered for this screening. The company is engaging directly with climate data providers to better understand how these hazards can be assessed with an acceptable confidence level. The CRVA results have been consolidated in a company-level georeferenced dashboard – ArcelorMittal Climate Physical Risk Map.

The analysis was completed at the end of 2023. Where climate physical risks were identified, the company is now engaging with the sites to conduct site-specific assessments to further understand the materiality of their risk exposure level and to track their progress towards developing and implementing adaptation action plans, when necessary. Once this process is complete and the relevant adaptation measures have been assessed, ArcelorMittal will progress towards full alignment with the DNSH climate adaptation criteria.

Sustainable use and protection of water and marine resources
The EU Taxonomy is specifically aiming to ensure that the environmental degradation risks related to preserving water quality (including marine waters) and avoiding water stress are identified and addressed.

Performance of an Environmental Impact Assessment (EIA) according to EU rules, or equivalent, which includes an assessment of the impact on water is sufficient to determine alignment with the Do No Significant Harm criteria. However, if risks have been identified they must have been addressed.
Protection and restoration of biodiversity and ecosystems
In terms of biodiversity and ecosystems, the taxonomy requires that an EIA, screening or equivalent has been completed and the required mitigation and compensation measures for protecting the environment are implemented.

ArcelorMittal's environmental policy promotes conducting EIAs for major capital projects in accordance with good international industry practice. However, many of the company's sites pre-dated the need for an EIA or have performed a country specific equivalent. As such, ArcelorMittal has built and carried out a questionnaire for both ‘Sustainable use and protection of water and marine resources’ and ‘Protection and restoration of biodiversity and ecosystems’, supported by an external consultant, with the aim of being able to assess whether any local equivalent EIAs have been performed to the same standard of the European EIA.

Transition to a circular economy
Transition to a circular economy is only relevant for activities – 1.3, 3.5, 4.1/4.3 and 7.1 and focuses on the requirement that circularity is built into the manufacturing process. For example, we incorporate circular economy principles into the manufacturing process of our insulation products. At the end of their life (c50 years), they can easily be dismounted and reused if required technical criteria are met; steel and wool can be recycled and ArcelorMittal is investing in the ability to be able to recycle the polyurethane foam into raw material and use it again to produce sandwich panels.

Pollution prevention and control
For activity 3.9 manufacture of iron and steel, the Climate Delegated Act requires the yearly assessment to ensure that emissions at the company’s global sites are within or lower than the emission levels associated with the European best available techniques (BAT) – associated emission level – (AEL) ranges. For the purpose of the assessment, ArcelorMittal has considered the BAT conclusions for iron and steel production, for surface treatment using organic solvents, ferrous metals processing and large combustion sites (since some of ArcelorMittal’s sites operate boilers).

In addition, the Taxonomy requires that the activity (applicable to 3.9 Manufacturing of steel but also to 3.5 Manufacture of energy efficient equipment for buildings) does not lead to the manufacture, placing on the market or use of a large number of substances that meet certain criteria. It has to be noted that one can be compliant with the EU regulatory regime on chemicals, but still do not align with the relevant Taxonomy criteria.

Minimum Safeguards
We have taken a strict approach to our interpretation of the minimum safeguards criteria under the EU Taxonomy and as a result we are disclosing that we do not have complete alignment with minimum safeguards in 2023. ArcelorMittal is committed to respecting all internationally recognised human rights in its own operations and across its value chain including taxation, fair competition and corruption. By way of example, during 2023, it undertook an intensive five-month human rights Saliency Assessment to identify the most salient issues for the group and its stakeholders. The company also published a new Human Rights Policy, and it is in the process of updating its processes and procedures to align with this new policy, as well as working to improve its grievance mechanisms.

As these processes are underway rather than complete, it has taken the decision to declare zero percent EU Taxonomy alignment for ArcelorMittal for the Financial Year 2023, with the expectation that we will move towards alignment in 2024.

Key EU Taxonomy KPIs
The company’s key EU Taxonomy KPIs correspond to contributive financial information derived from ArcelorMittal’s consolidated financial statements as of December 31, 2023, and for the year ended December 31, 2023, prepared in accordance with International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board (IASB) and as adopted by the European Union.
Turnover
The company’s turnover in 2023 was $68,275m as disclosed in the consolidated statements of operations for the year ended December 31, 2023, of which $60,933m (89%) was taxonomy-eligible. The taxonomy-eligible turnover is primarily captured under the category of ‘Manufacturing of iron and steel’ which relates to ArcelorMittal’s steel sales (see note 3.4 Disaggregated revenue, to the 2023 consolidated financial statements).

ArcelorMittal’s analysis suggests that $9,377m (14% of total group turnover) meets the substantial contribution requirements for climate change mitigation. It notes that it has performed the analysis for substantial contribution at a site level but there are sometimes more than one site which report under one legal entity used for recording revenue. For one legal entity, not all the sites met substantial contribution and accordingly ArcelorMittal has estimated revenue based on crude steel production contribution. The turnover meeting substantial contribution relates to activity ‘manufacturing of iron and steel’ (e.g. ArcelorMittal’s EAFs), which is assessed at a site level, the revenue received from ArcelorMittal Construction’s insulation materials, which is assessed at a product level and the scrap recovery sites, which are assessed at site level.

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<thead>
<tr>
<th>Economic Activities</th>
<th>Code</th>
<th>Proportion of turnover</th>
<th>Climate Change Mitigation</th>
<th>Water and marine resources</th>
<th>Circular Economy</th>
<th>Climate Change Adaptation</th>
<th>Circular Economy</th>
<th>Climate Change Adaptation</th>
<th>Pollution</th>
<th>Biodiversity and ecosystems</th>
<th>Climate Change Mitigation</th>
<th>Pollution</th>
<th>Biodiversity and ecosystems</th>
<th>Cost of Goods Sold</th>
<th>Subsidies and grants</th>
<th>Proportion of turnover</th>
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<td>A. TAXONOMY ELIGIBLE ACTIVITIES</td>
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<td>A.1. Environmentally sustainable activities (Taxonomy-aligned)</td>
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<td>Turnover of environmentally sustainable activities (Taxonomy-aligned (A.1))</td>
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<tr>
<td>Material recovery from non-hazardous waste</td>
<td>CCM 5.9</td>
<td>295</td>
<td>0%</td>
<td>Y</td>
<td>N/EL</td>
<td>N/EL</td>
<td>N/EL</td>
<td>N/EL</td>
<td></td>
<td>0%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Turnover of Taxonomy eligible but not environmentally sustainable activities (not taxonomy-aligned activities) (A.2)</td>
<td></td>
<td>60,933</td>
<td>89%</td>
<td>14%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td></td>
<td>0%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total (A.1 + A.2)</td>
<td></td>
<td>60,933</td>
<td>89%</td>
<td>14%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td></td>
<td>0%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B. TAXONOMY NON-ELIGIBLE ACTIVITIES</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Turnover of Taxonomy non-eligible activities (B)</td>
<td></td>
<td>7,342</td>
<td>11%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total (A + B)</td>
<td></td>
<td>68,275</td>
<td>100%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

N/EL = Not Eligible
Capital expenditure
The company’s capital expenditure in 2023 was $4,613m as disclosed in the consolidated statements of cash flows for the year ended December 31, 2023, of which $3,322m (72%) was taxonomy-eligible.

ArcelorMittal’s analysis suggests that $956m (21% of total group capex) meets the substantial contribution requirements for climate change mitigation. The Capex meeting substantial contribution relates to capex for steel sites that meet the technical screening criteria for manufacture of iron and steel, capex related to the construction of renewables in India and the HQ in Luxembourg.

<table>
<thead>
<tr>
<th>Economic Activities</th>
<th>Code</th>
<th>Capex</th>
<th>Proportion of capex</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$mn</td>
<td>in %</td>
<td>Y/N; N/EL</td>
</tr>
<tr>
<td>Capital expenditure</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manufacturing of iron and steel</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Construction of new buildings</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electricity Generation from wind power</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Material recovery from non-hazardous waste</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Construction of new buildings</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capex of Taxonomy eligible but</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>not environmentally sustainable activities (not taxonomy aligned activities)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

A. TAXONOMY ELIGIBLE ACTIVITIES
A.1. Environmentally sustainable activities (Taxonomy-aligned)
Capex of environmentally sustainable activities (Taxonomy-aligned) (A.1)
- Of which enabling
- Of which transitioning

A.2. Taxonomy-eligible but not environmentally sustainable activities (not Taxonomy-aligned activities)
- Forest Management
- Manufacture of energy efficient equipment for buildings
- Manufacture of Iron and Steel
- Electricity Generation from wind power and solar photovoltaic technology
- Material recovery from non-hazardous waste
- Construction of new buildings
- Capex of Taxonomy eligible but not environmentally sustainable activities (not taxonomy aligned activities) (A.2)

Total (A.1 + A.2)

B. TAXONOMY NON-ELIGIBLE ACTIVITIES
Capex of Taxonomy non-eligible activities (B)

Total (A + B)
Operating expenditure
The company’s definition of operating expenditure (opex) for the purpose of EU Taxonomy reporting includes research and development expenses (not capitalised), low-value and short-term leases, maintenance and repair, and any other direct expenditure relating to day-to-day operational activities necessary for the continued and effective functioning of all the company’s eligible activities. Accordingly, out of $63,538m cost of sales disclosed in the consolidated statements of operations for the year ended December 31, 2023, opex in 2023 was $4,874m of which $4,168m (86%) was taxonomy-eligible.

The company’s analysis suggests that $623m (13% of total group opex) meets the substantial contribution requirements for climate change mitigation. This relates to the opex for sites that already meet the substantial contribution criteria for our steel, scrap recovery and insulation sites.

### Substantial Contribution Criteria

<table>
<thead>
<tr>
<th>Economic Activities</th>
<th>Opex Code</th>
<th>Substantial Contribution Criteria</th>
<th>Do Not Significant Harm criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Opex Proportion of opex Climate Change Mitigation</td>
<td>Climate Change Adaptation Water and marine resources Circular Economy Pollution and ecosystems</td>
<td>Climate Change Adaptation Water and marine resources Circular Economy Pollution and ecosystems</td>
</tr>
<tr>
<td></td>
<td>$mn in %</td>
<td>Y/N</td>
<td>N/EL</td>
</tr>
<tr>
<td><strong>A. TAXONOMY ELIGIBLE ACTIVITIES</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>A.1. Environmentally sustainable activities (Taxonomy-aligned)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opex of environmentally sustainable activities (Taxonomy-aligned)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Of which enabling</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Of which transitional</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>A.2. Taxonomy-eligible but not environmentally sustainable activities (not Taxonomy-aligned activities)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Forest Management CCM 13</td>
<td>8</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Manufacture of energy efficient equipment for buildings CCM 3.5</td>
<td>28</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>Manufacture of Iron and Steel CCM 3.9</td>
<td>4,122</td>
<td>85%</td>
<td>85%</td>
</tr>
<tr>
<td>Material recovery from non-hazardous waste CCM 5.9</td>
<td>10</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Opex of Taxonomy eligible but not environmentally sustainable activities (not taxonomy aligned activities) (A.2)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manufacture of energy efficient equipment for buildings CCM 3.5</td>
<td>28</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>Manufacture of Iron and Steel CCM 3.9</td>
<td>4,122</td>
<td>85%</td>
<td>85%</td>
</tr>
<tr>
<td>Material recovery from non-hazardous waste CCM 5.9</td>
<td>10</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Total (A.1 + A.2)</td>
<td>4,168</td>
<td>86%</td>
<td>86%</td>
</tr>
</tbody>
</table>

### B. TAXONOMY NON-ELIGIBLE ACTIVITIES

<table>
<thead>
<tr>
<th>Economic Activities</th>
<th>Opex Code</th>
<th>Substantial Contribution Criteria</th>
<th>Do Not Significant Harm criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Opex Proportion of opex Climate Change Adaptation Water and marine resources Circular Economy Pollution and ecosystems</td>
<td>Climate Change Adaptation Water and marine resources Circular Economy Pollution and ecosystems</td>
<td></td>
</tr>
<tr>
<td></td>
<td>$mn in %</td>
<td>Y/N</td>
<td>N/EL</td>
</tr>
<tr>
<td><strong>B.1. Environmentally sustainable activities</strong> (not aligned)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opex of Taxonomy non-aligned activities (B)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total (A + B)</td>
<td>4,874</td>
<td>100%</td>
<td>0%</td>
</tr>
</tbody>
</table>

**N/EL = Not Eligible**
Our observations and areas for improvement will be raised in a separate report to ArcelorMittal’s Management. Selected observations are provided below. These observations do not affect our conclusion set out above.

- Data collection and consolidation at Group level have developed positively over the last year, although considerable manual processing is still required that increases the potential for misstatement. We restate our recommendation that ArcelorMittal establishes regular (i.e. quarterly) collection and internal verification, documenting all environmental KPI calculation methodologies, internal control arrangements, and an audit trail of changes to data, in preparation for increasing reporting requirements such as SEC and CSRD. We also recommend undertaking a progressive ‘assurance-readiness’ exercise for the new online data collection system, prior to its full adoption for future reports.

- We note that data from ArcelorMittal’s historical portfolio of sites in Kazakhstan are included in 2023 performance reporting for the period until divestment in early December 2023, and are included in current reporting on progress against the Group CO2 reduction target. Where actual 2023 environmental indicator data for sites in Kazakhstan were not available due to the divestment, these data were estimated based on 11 months of actual production data. We further note that data for the integrated steel site at Pecém in Brazil which was acquired in March 2023, are included in current performance and reporting against the Group CO2 target.

- Data being collected from sites for the metric of ‘net water consumption’ continues to show significant variability between sites, depending on the local arrangements for collecting and measuring water discharge. We recommend that ArcelorMittal considers undertaking additional work on a site-by-site basis to evaluate the most relevant measures of impact in this area. We understand this work is already underway within ArcelorMittal Long Products in Europe, for example.

- We understand ArcelorMittal continues to work to expand the company’s full Scope 3 emissions and we recommend that these should be covered by future assurance engagements.

- ArcelorMittal reports on a wide range of measures at specific sites that contribute towards overall improvements in environmental performance. We recommend that, in future reports, ArcelorMittal should provide additional analysis and commentary on actual changes over time in key performance metrics. This analysis should identify, for example, the main drivers in performance changes; how the inclusion/exclusion of specific sites in the reporting perimeter affects the Group level performance; and where changes to the operations and assets have resulted in effects on metrics at a Group level.

Selected Information

- The scope and boundary of our work is restricted to the metrics included within the Report for reporting year 2023 (the “Selected Information”), listed in the Appendix.

- To assess the Selected Information, which includes an assessment of the risk of material misstatement in the Report, we have used ArcelorMittal’s Basis of Reporting 2023 (the “Criteria”).

- We have not performed any work, and do not express any conclusion, on any other information that may be published in the Report or on ArcelorMittal’s website for the current reporting period or for previous periods.
The procedures performed in a limited assurance engagement vary in nature and are shorter in extent than for a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained if a reasonable assurance engagement had been performed.

Disclaimers

The assurance provided by DNV is limited to the selected indicators and information specified in the scope of the engagement. DNV has not conducted an assessment of the reporting organisation’s overall adherence to reporting principles or the preparation of the report. Therefore, no conclusions should be drawn regarding the reporting organisation’s compliance with reporting principles or the quality of the overall report. The assurance provided by DNV is based on the selected indicators and information made available to us at the time of the engagement. DNV assumes no responsibility for any changes or updates made to the indicators or information after the completion of the assurance engagement.

Use and distribution of our Independent Limited Assurance Report

This report is intended solely for the information and use of the Directors of ArcelorMittal and is not intended to be and should not be used by anyone other than these specified parties. DNV expressly disclaims any liability or co-responsibility for any decision a person or an entity may make based on this Independent Limited Assurance Report.
Basis of our conclusion

We are required to plan and perform our work in order to consider the risk of material misstatement of the Selected Information; our work included, but was not restricted to:

• Conducting interviews with ArcelorMittal’s management to obtain an understanding of the key processes, systems and controls in place to generate, aggregate and report the Selected Information;
• Site visits to the following sites to review process and systems for preparing site level data consolidated at Head Office. DNV were free to choose the sites on the basis of materiality and their contribution to the Group’s overall data.
  - Avilés-Gijón, Spain (steel)
  - Fos-sur-Mer, France (steel)
  - Juiz de Fora, Brazil (steel)
  - Mont-Wright, Canada (mining)
  - Pecém, Brazil (steel)
  - Port-Cartier, Canada (mining)
  - Texas HBI, USA (steel)
  - Tubarão, Brazil (steel)
• Performing limited substantive testing on a selective basis of the Selected Information to check that data had been appropriately measured, recorded, collated and reported;
• Reviewing that the evidence, measurements and their scope provided to us by ArcelorMittal for the Selected Information is prepared in line with the Criteria;
• Assessing the appropriateness of the Criteria for the Selected Information; and
• Reading the Report and narrative accompanying the Selected Information within it with regard to the Criteria.

In performing these activities, we did not come across limitations to the scope of the agreed assurance engagement.

We found a limited number of non-material errors and these were corrected prior to inclusion in the Report.

For and on behalf of DNV Business Assurance Services UK Limited

London, UK
22 April 2024

Shuhaib Maudarbaccus
Lead Verifier
DNV Business Assurance Services UK Limited

Paul O’Hanlon
Technical Reviewer
DNV Business Assurance Services UK Limited

Responsibilities of the Directors of ArcelorMittal and DNV

The Directors of ArcelorMittal have sole responsibility for:

• Preparing and presenting the Selected information in accordance with the Criteria;
• Designing, implementing and maintaining effective internal controls over the information and data, resulting in the preparation of the Selected Information that is free from material misstatements;
• Measuring and reporting the Selected Information based on their established Criteria; and
• Contents and statements contained within the Report and the Criteria.

Our responsibility is to plan and perform our work to obtain limited assurance about whether the Selected Information has been prepared in accordance with the Criteria and to report to ArcelorMittal in the form of an independent limited assurance conclusion, based on the work performed and the evidence obtained. We have not been responsible for the preparation of the Report.

DNV Supply Chain and Product Assurance

DNV Business Assurance Services UK Limited is part of DNV – Supply Chain and Product Assurance, a global provider of certification, verification, assessment and training services, enabling customers and stakeholders to make critical decisions with confidence.

www.dnv.co.uk/BetterAssurance
Appendix: Selected Information

The scope and boundary of our work is restricted to the Selected Information, listed below.

<table>
<thead>
<tr>
<th>Metrics</th>
<th>Reported value</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Target to reduce CO2e emissions intensity in Europe by 35% by 2030 (Scope 1 and 2)</td>
<td>1.68</td>
<td>tCO2e/tonne of steel</td>
</tr>
<tr>
<td>Target to reduce CO2e emissions intensity across the group by 25% by 2030 (Scope 1 and 2)</td>
<td>1.97</td>
<td>tCO2e/tonne of steel</td>
</tr>
<tr>
<td>CO2e intensity (steel) – Scopes 1,2,3 – historical portfolio</td>
<td>1.96</td>
<td>tCO2e/tonne of steel</td>
</tr>
<tr>
<td>CO2e intensity (steel) – Scopes 1,2,3 – adjusted to 2023 portfolio</td>
<td>1.96</td>
<td>tCO2e/tonne of steel</td>
</tr>
<tr>
<td>Absolute CO2e footprint (steel and mining)</td>
<td>120.8</td>
<td>million tonnes</td>
</tr>
<tr>
<td>Absolute CO2e footprint (steel)</td>
<td>114.0</td>
<td>million tonnes</td>
</tr>
<tr>
<td>Absolute CO2e footprint (mining)</td>
<td>6.8</td>
<td>million tonnes</td>
</tr>
<tr>
<td>Primary energy consumption (steel)</td>
<td>1,379</td>
<td>Petajoules</td>
</tr>
<tr>
<td>Dust (ducted) per tonne of steel</td>
<td>0.48</td>
<td>kg/tonne of steel</td>
</tr>
<tr>
<td>NOx (ducted) per tonne of steel</td>
<td>1.07</td>
<td>kg/tonne of steel</td>
</tr>
<tr>
<td>SOx (ducted per tonne of steel)</td>
<td>1.79</td>
<td>kg/tonne of steel</td>
</tr>
<tr>
<td>Net water consumption (steel)</td>
<td>3.4</td>
<td>m³/tonne of steel</td>
</tr>
<tr>
<td>Waste (non-used residues) (landfilled) (steel)</td>
<td>3,244,618</td>
<td>Tonnes</td>
</tr>
<tr>
<td>Waste (non-used residues) in storage (steel)</td>
<td>4,714,596</td>
<td>Tonnes</td>
</tr>
<tr>
<td>Fatalities (total)</td>
<td>61</td>
<td>Number</td>
</tr>
<tr>
<td>Lost-time injury frequency rate (total)</td>
<td>0.92</td>
<td>Per million hours worked</td>
</tr>
<tr>
<td>Industrial operations (including mining) certified to ISO 45001</td>
<td>86</td>
<td>Percentage</td>
</tr>
<tr>
<td>Women in management positions (manager and above positions)</td>
<td>17</td>
<td>Percentage</td>
</tr>
<tr>
<td>Women in key position succession plans (general manager and positions above)</td>
<td>22</td>
<td>Percentage</td>
</tr>
</tbody>
</table>