



**RESILIENT  
FUTURE-FOCUSED  
DELIVERING  
SOCIETAL VALUE**

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### About this report

This annual Sustainable Development Report covers ERG's sustainability performance during the 2023 calendar year. This includes ERG's mining, processing, power generation, project development and transportation activities.

This report has been prepared with reference to the GRI Standards and is focused on our most material Sustainable Development issues (p. 12). Its content has not been subject to third-party assurance, but has been subject to internal validation and verification.

Please note that this report is produced in English, Kazakh, Russian and Chinese. In the event of any inconsistencies, the English language version shall take precedence.

### Notes on the preparation of this report

All references to 'ERG' or the 'Group' refer to Eurasian Resources Group S.à r.l. and / or its subsidiaries.

This document includes forward-looking statements. For more information, please refer to the inside back cover.

Please note that the scales / borders of any maps in this report are indicative only.

We welcome feedback on this report. Please forward any comments or requests for additional information to [sd.report@erg.net](mailto:sd.report@erg.net)

### How to use this report

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For more information visit [eurasianresources.lu](http://eurasianresources.lu)

## OUR VISION

An international, sustainable, socially responsible and efficient natural resources company.

## OUR MISSION

Be the best at what we do. Navigate global change, while holding true to our values. Responsibly unlock the potential of the Earth and its people, ensuring the prosperity of those who rely on us.

## WHAT MAKES US DIFFERENT



A diversified portfolio, with low-cost operations and significant growth potential



Integrated mining, processing, energy, logistics and marketing operations



One of the world's largest suppliers of responsibly produced cobalt



A diverse and long-standing global customer base



Participation in China's Belt and Road Initiative – strategically positioned in the heart of Eurasia



An enduring presence in Kazakhstan, with a global operational footprint

## GROUP FIGURES

### Financial

**\$1,530<sub>M</sub>**

**Underlying EBITDA**  
(2022: \$3,392M)

**\$6,509<sub>M</sub>**

**Revenue**  
(2022: \$7,924M)

**\$1,440<sub>M</sub>**

**Capex**  
(2022: \$1,135M)

### Operational

**1,471<sub>kt</sub>**

**Ferroalloys production**  
(2022: 1,553kt)

**163<sub>kt</sub>**

**Saleable copper metal and concentrate production**  
(2022: 191kt)<sup>1</sup>

**20<sub>kt</sub>**

**Saleable cobalt hydroxide production**  
(2022: 23kt)

### Sustainability

**0.71**

**Lost time injury frequency rate (LTIFR)**  
(2022: 0.91)

**29.4<sub>Mt CO<sub>2</sub>e</sub>**

**GHG emissions**  
(2022: 29.8Mt CO<sub>2</sub>e)<sup>2</sup>

**\$7,283<sub>M</sub>**

**Economic value distributed**  
(2022: \$7,254M)

<sup>1</sup> Includes copper produced at Metalkol and Frontier.

<sup>2</sup> Restatement; see page 42.

# A diversified resources group, positioned for the energy transition

Eurasian Resources Group (ERG) is a global metals and mining company, with a workforce of around 68,000<sup>1</sup> and integrated exploration, mining, processing, energy and logistics operations in Kazakhstan, Africa and Brazil. We are a major supplier of critical minerals that are enabling the global energy transition.

ERG is one of the world's leaders in ferrochrome and cobalt production and a major producer of copper. We are also the only producer of primary aluminium in Kazakhstan, as well as the only supplier of alumina in Central Asia and the largest supplier of iron ore in the region.

## OUR KEY PRODUCTS

Ferroalloys



Iron ore



Alumina and aluminium



Cobalt, copper and other non-ferrous



Energy



📍 Brazil



📍 Kazakhstan



📍 Africa



📍 Corporate offices

• Amsterdam  
• Luxembourg

• Dubai

• Beijing

• Mauritius

● Production countries:  
Brazil, DRC, Kazakhstan, Zambia<sup>2</sup>

● Development countries:  
Mozambique, South Africa, Zimbabwe

● Corporate offices

<sup>1</sup> Excluding contractors.  
<sup>2</sup> Our Chambishi Metals operation in Zambia is currently on care and maintenance.

## REGIONAL OVERVIEW

# Kazakhstan

ERG is a pillar of economic growth and social development in Kazakhstan. The country is home to more than 90% of our workforce, as well as to the majority of our operations.



### Strategic overview

ERG represents one quarter of the metals and mining industry in Kazakhstan, and is one of the key power suppliers as well as a large railway operator in Central Asia.

Our key enterprises include Kazchrome, SSGPO, Kachary Ruda, Kazakhstan Aluminium Smelter (KAS), Aluminium of Kazakhstan, Eurasian Energy Corporation (EEC), Shubarkol Komir, 3-Energoortalyk, Transcom and ERG Service.

We are the only supplier of alumina in Central Asia and Kazakhstan's only producer of primary aluminium, with aluminium playing an important role in the global energy transition. We are also a significant producer of ferroalloys, helping to meet growing demand for the development of new gas, wind and nuclear power generation infrastructure.

### Key products

Ferroalloys	Aluminium
Iron ore	Energy
Alumina	

### Employees

62,033

### Sustainability context

We play an important socio-economic role in Kazakhstan. In 2022, 2.55% of the country's GDP was generated by ERG.<sup>1</sup> In addition, our wide-ranging CSI efforts support socio-economic development at the local and regional levels.

In 2023, we finalised our Decarbonisation Strategy for the region (the main source of our GHG emissions). The strategy aims to achieve Net Zero by 2050 and includes a credible roadmap to reduce the carbon footprint of our key products (p. 40). Our broader Environmental Strategy in the country is highly focused on improving our air quality performance, including in and around the city of Pavlodar (p. 36).

We are implementing a range of strategic safety measures to reduce the risk of fatal incidents and to further enhance our safety management practices (p. 46).

### Key material issues

**Business:** Growth and asset maintenance; Technology, efficiency and digitalisation

**Environment:** Managing impacts on air and water; Energy and climate change

**Social:** Health and safety; Talent attraction, development and retention; Employee relations; Community social investment

**Governance:** Ethics and compliance; Government relations and policy; Geopolitics

➔ See p. 13 for our material issues.

\$4,781<sub>M</sub>

Economic value distributed

0.81

LTIFR

<sup>1</sup> Percentage taken from a 2021-2022 impact assessment study conducted by EY in October 2023.

# Africa

Our active operations in the DRC are major producers of the minerals needed to support the global energy transition, while we enjoy additional growth opportunities across the continent.



## Strategic overview

In Africa, ERG mines and processes copper and cobalt ore, and produces copper metal and cobalt hydroxide. Metalkol reprocesses historic tailings in the DRC and is one of the world's largest producers of cobalt, as well as a significant producer of copper. Our Frontier operation in the DRC also plays a key role in our copper business. Our operations are supported by our SABOT logistics business, which also services third-party customers.

Beyond this, we have a pipeline of development projects across the continent, including in the DRC, South Africa and Zimbabwe.

In June 2023, operations at our Boss Mining cobalt and copper operation in the DRC were temporarily suspended. The suspension was lifted in May 2024 (p. 60).<sup>1</sup>

## Key products

Cobalt

Copper

## Employees

5,143

## Sustainability context

Many of our local communities in the DRC live in conditions of extreme poverty. In this context, our significant support for local development priorities has the potential to make a lasting difference.

None of our production comes from artisanal and small-scale mining (ASM). Nonetheless, ASM activity is present in the vicinity of some of our operations in the DRC, and we place significant emphasis on helping to improve socio-economic conditions for ASM communities (p. 60).

Beyond this, our production of cobalt and copper is helping to support the global energy transition. Metalkol is also reducing the environmental impact of historical third-party tailings deposits by reprocessing them and storing them safely (p. 44). In 2023, the operation successfully completed its second RMI RMAP assessment (p. 76).

We are implementing a range of measures to further enhance employee and contractor safety. This includes targeted measures to address the findings of an independent report into the fatal helicopter crash that occurred near Boss Mining (p. 46).

## Key material issues

**Business:** Growth and asset maintenance

**Environment:** Managing our impacts on air and water; Tailings and broader waste management

**Social:** Health and safety; Community impacts; Community social investment

**Governance:** Ethics and compliance; Responsible value chains; Government relations and policy

➔ See p. 13 for our material issues.

\$1,898<sub>M</sub>

Economic value distributed

0.06

LTIFR

<sup>1</sup> Our COMIDE operation in the DRC and our Chambishi Metals operation in Zambia are currently on care and maintenance.

# Brazil

Our world-class BAMIN operation represents one of the largest infrastructure development projects in Brazil, offering a major growth opportunity.



## Strategic overview

We are developing our integrated BAMIN operation in the state of Bahia, Brazil. This consists of the Pedra de Ferro mine (which is focused on the production of high-grade, low-impurity iron ore), the Porto Sul deep-water port development and the first stretch of the FIOL railway ('FIOL 1'), a 537km railway connecting the mine to the port. BAMIN is expected to produce up to 26 million tonnes of iron ore by 2028.

In 2023, we started the construction of FIOL 1. This will have a total carrying capacity of 60 million tonnes per year and will run from the west to the east of the state.

We started the construction of Porto Sul in 2021, and have now completed all the necessary infrastructure to commence onshore and offshore work.

We are in the process of seeking financing and / or investment partners for the project.

## Key products

Iron ore

## Employees

257

## Sustainability context

BAMIN is expected to generate significant economic benefits for the state of Bahia. This includes the establishment of a major shared logistical corridor for the potential transportation of millions of tonnes of iron ore, agricultural products and other goods (p. 23).

At the same time, the scale of the operation necessitates the close management of its potential and / or actual environmental and social impacts. Our mandatory environmental plans (Projeto Básico Ambiental, PBAs) establish the programmes that are required to mitigate such impacts and to generate positive outcomes for local communities (p. 61).

BAMIN has recorded more than 10.5 million consecutive LTI-free hours (employees and contractors) since October 2019.

## Key material issues

**Business:** Growth and asset maintenance

**Environment:** Managing our impacts on air and water; Tailings and broader waste management

**Social:** Health and safety; Community impacts; Community social investment

**Governance:** Government relations and policy

➔ See p. 13 for our material issues.

\$248M

Economic value distributed

0

LTIFR

## CEO STATEMENT

# Resilient and ready for the future

In 2023, our business continued to demonstrate its resilience against a challenging geopolitical and economic backdrop and lower market prices across most of our commodities.

Despite these short-term challenges, our medium- and long-term fundamentals remain strong in the context of the global energy transition and evolving efforts by the major economies to secure reliable supplies of critical minerals. This is particularly the case given our responsible production of cobalt, copper, aluminium and ferroalloys. At the same time, ERG is playing a key role in driving collaborative mineral value chain assurance to help ensure that the energy transition does not create other negative impacts in the value chain.

We are continuing to pursue resilience and invest in the future of our business by enhancing and developing our operations across our regions.

Similarly, ERG is continuing to integrate sustainability into its business. This includes the development of a Decarbonisation Strategy for Kazakhstan (where most of our emissions occur), including a commitment to achieving Net Zero by 2050. The business is also working to ensure it is ready to meet the requirements of the European Sustainability Reporting Standards as well as other requirements in this area.

Our efforts were overshadowed, however, by the tragic loss of three employees and seven contractors in fatal workplace incidents. I offer my sincere condolences to all of those affected by these tragic events. We are reinforcing our efforts to achieve Zero Harm. This includes the development of a range of immediate measures to help reduce the risk of such incidents reoccurring. For example, we have developed enhanced critical risk assessment and mitigation processes and strengthened our production controls in Kazakhstan – and we are now outsourcing all aviation services in Africa to third-party service providers. Beyond this, we have launched a major workplace risk management programme in Kazakhstan and a range of additional physical, management, technological and training controls across our operations.

### Business performance

In 2023, our underlying EBITDA decreased to US\$1,530 million. This reflected an 18% fall in revenue, primarily due to lower prices across the majority of our portfolio. Nonetheless, we benefitted from the diversified nature of our portfolio, and these adverse dynamics were partially mitigated by higher sales of some commodities, particularly iron ore and aluminium.



## CEO STATEMENT CONTINUED

We proactively adapted to these short-term challenges by launching our 2023-2025 transformation programme, which will enable us to significantly improve our efficiency through the enhancement of our operational model and operational efficiency. This is focused on, among other measures, increasing our production of key commodities; reaching new iron ore customers and markets; and optimising our procurement processes and reducing our overheads.

In this context, ERG is continuing to invest in its established operations in Kazakhstan and in Africa. In Kazakhstan, this includes an ongoing 10-year, US\$480 million programme to reduce emissions to air, as well as continued investment in technology to enhance our metallurgical processes, automate our operations and connect our workforce.

### Sustainability performance Planning for a lower-carbon future

The setting of a Net Zero climate target by 2050 in Kazakhstan defines the challenge ahead of the business. While the region is currently dependent on coal-fired power generation, we know we need to reduce our carbon footprint. Given our current infrastructure and external energy demands in Kazakhstan, this is going to take time – but it is a journey ERG is committed to making.

In 2024, we commenced the construction of our 150 MW Khromtau-1 wind power project near Donskoy GOK. We are investigating further wind power projects, the use of off-gas and ferroalloy gas power generation, and a small pilot solar power plant. In 2023, we also continued the work to establish the carbon footprint of our key products in Kazakhstan.

In the medium term, ERG will look at broader opportunities to increase the proportion of energy we get from non-coal sources.

### Driving value chain assurance

ERG seeks to demonstrate that customers and end-users can use its products with confidence. This includes the promotion of robust environmental, social and governance (ESG) standards, which are vital if the sector is to attract the massive investment it needs to support the world's decarbonisation goals.

In 2023, I was pleased to see Kazchrome maintain its International Chromium Development Association 'Responsible Chromium' status and receive a strong assessment score from EcoVadis. Similarly, our Responsible Aluminium Framework demonstrates our commitment to sustainable practices.

In the DRC, Metalkol continued to deliver the highest levels of traceability and assurance to downstream stakeholders, through our Clean Cobalt and Copper Framework – with associated third-party assured performance reports published in June 2023 and July 2024. Similarly, the operation was found to be in conformance with the RMI Responsible Minerals Assurance Process standards, following the assessment in March 2023.

We also continued to work with our partners at the Global Battery Alliance (GBA) to help develop and implement the world's first global Battery Passport. This is in the context of increasing regulations around battery value chain assurance, including the EU's 2023 Battery Regulation. The outcomes of the first pilot application of the Battery Passport were published in January 2023 and new associated 'rulebooks' are expected in 2024. This is in addition to ERG's participation in the GBA's new Critical Minerals Advisory Group, which will engage sector stakeholders on the risks and opportunities that could be generated by a major ramp-up in transition metal supply to meet increased demand.

### Delivering shared value for our host countries and communities

During the year, we distributed US\$7,283 million to our stakeholders (2022: US\$7,254 million), which benefitted our employees, suppliers, communities, and host governments, among others. The true scale of our economic impact (including indirect and induced impacts) extends far beyond this (p. 16).

During the year, our global community social investment (CSI) totalled US\$52 million (2022: US\$95.2 million). This decrease primarily reflects the donation of US\$65 million to support the establishment of the Kazakhstan Khalkyna public social fund in 2022 (p. 64). In Kazakhstan, ERG is supporting economic development and diversification across its operating regions, with a focus on improving urban environments, education and healthcare, as well as facilitating collaboration between regional governments and citizens. In combination with ERG's national-level contributions, these efforts support the Government's broader development agenda. In 2024, ERG provided support to help communities in Kazakhstan address the consequences of heavy flooding. As of end of July 2024, this amounted to around US\$42 million, with further support to be allocated during the remainder of the year.

In the DRC, ERG is helping to address the most pressing needs of local communities, with the long-term aim of creating economic ecosystems that can thrive independently of its operations. This includes investment to support alternative livelihoods, infrastructure, access to clean water and healthcare. We also make significant investments in primary and secondary education, while providing internships to help young Congolese nationals build promising careers.

In Brazil, the construction of the FIO1 railway concession will help create a major new logistical corridor between the west and east of the country. In parallel with our CSI efforts, this will deliver lasting positive impacts for communities living near to BAMIN, as well as across the Bahia region.

### Developing a future-fit workforce

ERG is working to ensure that its workforce of around 68,000 people is fully equipped to drive the long-term success of the business. In Kazakhstan, we launched our ERG Corporate University to deliver advanced skills training, drive cultural change and support our ongoing organisational transformation process.

At our operations in the DRC, we continued to embed talent management systems and deliver advanced skills training. We also continued to implement a localisation and succession management programme to support the development of our Congolese colleagues (who make up the vast majority of our workforce in the country).

In Brazil, we further enhanced our performance management, professional development and recruitment programmes to support the development of our BAMIN operation.

### A positive future

ERG can look to the future with confidence. While the global energy transition brings both opportunities and challenges, the business is well placed to benefit from a significant ramp-up in demand for its products, as well as massive investment into the sector. At the same time, we have been putting in place the building blocks that will help ERG successfully navigate the challenges – including a credible route towards Net Zero. I am pleased to have contributed to this process and look forward to the business continuing to prosper under the leadership of my successor, Shukhrat Ibragimov.

**Benedikt Sobotka**  
Chief Executive Officer

## OUR BUSINESS MODEL

# Generating shared value

### INPUTS

Financial capital

Human capital

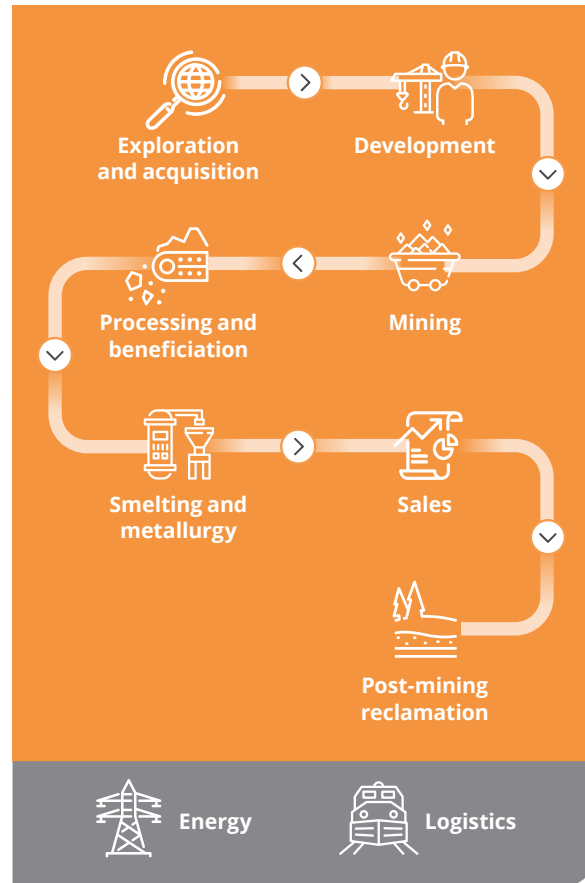
Social and relationship capital

Natural capital

Manufactured capital

Intellectual capital

### AN INTEGRATED BUSINESS



### OUR PRODUCTS AND HOW THEY ARE USED

#### Future / transition metals



##### Cobalt

Lithium-ion batteries



##### Copper

Infrastructure, transport and electronics



##### Alumina and aluminium

Infrastructure, construction and transportation

#### Other metals / products



##### Ferroalloys

Steel industry



##### Iron ore

Steel industry



##### Coal

Power generation

### OUR PERFORMANCE INDICATORS

\$1,530M

Underlying EBITDA

\$6,509M

Revenue

0.71

LTIFR

67,612<sup>1</sup>

Employees

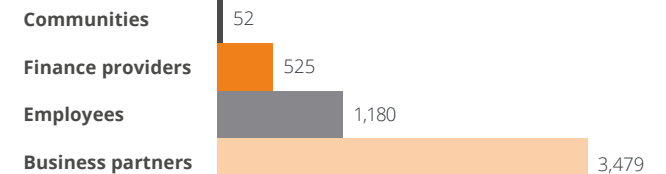
29.4Mt CO<sub>2</sub>e

GHG emissions

1,947Mm<sup>3</sup>

Water consumption

### ECONOMIC VALUE DISTRIBUTION (US\$m)



Total

\$7,283M<sup>2</sup>

➔ For more information on our generation and distribution of value, see p. 29.

➔ For more information on our broader societal impact, see p. 16.

<sup>1</sup> Excluding contractors.

<sup>2</sup> For the full breakdown of this figure, see table on p. 31.

Values

➔ See p. 85

Strategy

➔ See p. 10

Governance

➔ See p. 80

Stakeholders

➔ See p. 92

Risks

➔ See p. 82

Material issues

➔ See p. 13

## OUR STRATEGY

# Building a sustainable business

### Our approach

We believe that sustainable development is about more than the responsible management of our environmental, social and governance impacts.

It is also about:

- Ensuring our business is resilient, fit for the future and able to generate long-term value
- Achieving the ongoing delivery of value to our stakeholders – including employees, shareholders, customers, business partners, local communities and host governments
- Playing our role in the global energy transition by meeting growing demand for key metals such as cobalt, copper and aluminium, as well as ferroalloys (i.e. in the context of new gas, wind and nuclear power generation infrastructure development)

This approach is demonstrated in our 2025 Strategy, which is ultimately aimed at achieving business sustainability.

Furthermore, we support the UN Sustainable Development Goals (SDGs). We have identified relevant SDGs for ERG<sup>1</sup>, selected on the basis of:

- Potential synergies between the achievement of the relevant SDGs and our own performance
- Our ability to impact the achievement of the relevant SDGs
- The degree to which the achievement of each SDG is relevant to our areas of operation

### Embedding sustainability

In 2023, we continued to evolve and enhance our sustainability management approach and supporting governance structures. This included commencing the development of targeted regional sustainability strategies and related action plans to address the specific circumstances in each of our regions.

In 2023, we also established dedicated regional sustainability committees to support the implementation of region-specific sustainability initiatives across the Group. These committees include representation from senior region-level management and relevant functions (p. 80).

In Kazakhstan, we adopted a new Climate Change Impact and Adaptation Management Policy and finalised a Decarbonisation Strategy for the region (where the majority of our GHG emissions occur), which commits us to achieving Net Zero by 2050 (p. 40).

Our Decarbonisation Think Tank in Kazakhstan<sup>2</sup>, which we established in 2021, acts as a decarbonisation centre of excellence, guides efforts to reduce our carbon intensity and carries out external stakeholder engagement on decarbonisation and sustainability issues. We continue to participate, via the Think Tank, in the development of evidence-based government policies on climate change. This includes the provision of expert input and proactive proposals to help ensure predictable long-term conditions that incentivise GHG emissions reductions in Kazakhstan.

➔ For more information, see: [www.ERG.kz](http://www.ERG.kz)

### OUR RELEVANT SDGs



➔ See p. 97 in the Appendix for more information on the mapping of our material issues against relevant UN SDGs.

### SUSTAINABLE DEVELOPMENT PRINCIPLES



Zero harm



Leadership



Accountability



Balance



Integrity



Innovation

<sup>1</sup> Note that all references to associated UN Targets are for the contextualisation of our impacts, risks, opportunities and performance only – and do not represent formal corporate targets.

<sup>2</sup> Renamed to Sustainable Development Centre in early 2024.

## OUR STRATEGY CONTINUED

### OUR VALUES



Safety



Unity



Efficiency



Development



Responsibility

➔ For further details on our Values see p. 85.

STRATEGIC PRIORITIES	STRATEGIC GOALS	KEY STAKEHOLDERS
<p><b>Financial stability</b> The maintenance of financial resilience, whilst delivering sustainable shareholder returns</p>	<ul style="list-style-type: none"> <li>Maintain a sustainable level of dividend yield for shareholders</li> <li>Maintain high returns on invested capital</li> </ul>	<ul style="list-style-type: none"> <li>Achieve and maintain an acceptable level of debt</li> <li>Maintain high levels of liquidity to support resilience in the face of changing market conditions</li> </ul>
<p><b>Balanced portfolio growth</b> Steady growth and development of the asset portfolio in Kazakhstan and beyond</p>	<ul style="list-style-type: none"> <li>Further develop existing assets in Kazakhstan</li> <li>Increase returns on the existing portfolio of international assets</li> <li>Optimise our portfolio through new natural resource opportunities and / or divestment</li> </ul>	<ul style="list-style-type: none"> <li>Shareholders</li> <li>Finance providers</li> <li>Employees</li> <li>Suppliers / contractors</li> <li>Host governments</li> <li>Local communities</li> </ul>
<p><b>A happy and professional team</b> Creation of opportunities for the professional and personal growth of our employees and the maintenance of their safety and well-being</p>	<ul style="list-style-type: none"> <li>Deliver safe working conditions and improve employee health and well-being</li> <li>Deliver comfortable workplaces</li> <li>Improve ERG's employee proposition, including enhanced employee benefits</li> </ul>	<ul style="list-style-type: none"> <li>Shareholders</li> <li>Host governments</li> <li>Local communities</li> <li>Customers</li> <li>Suppliers / contractors</li> <li>Finance providers</li> </ul>
<p><b>Sustainable development of our host regions</b> Contribution to the socio-economic development and well-being of communities in our regions of operation</p>	<ul style="list-style-type: none"> <li>Improve the well-being and prosperity of communities in our regions of operation</li> <li>Maintain international environmental standards – including those relating to water, air and soil</li> </ul>	<ul style="list-style-type: none"> <li>Shareholders</li> <li>Host governments</li> <li>Regulators</li> <li>Local communities</li> </ul>
<p><b>Efficiency in all that we do</b> A strong focus on pursuing efficiency across the Group</p>	<ul style="list-style-type: none"> <li>Reduce unit costs by eliminating bottlenecks and improving productivity</li> <li>Improve organisational effectiveness</li> </ul>	<ul style="list-style-type: none"> <li>Shareholders</li> <li>Customers</li> <li>Employees</li> </ul>

## OUR MATERIAL ISSUES

# Focusing on what matters

During 2023 and early 2024, we updated and enhanced our materiality assessment. This was an internal exercise, following a more extensive update in the previous reporting cycle that was informed by external stakeholder engagement.

Our 2023 / 24 assessment continued to be informed by evolving best practice, including the requirements of the EU Corporate Sustainability Reporting Directive (CSRD) and the associated European Sustainability Reporting Standards (ESRS).

Our material issues are prioritised using a quantitative scoring system. This is based on a 'double materiality' concept focused on:

- **Impact materiality** i.e. ERG's actual or potential, positive or negative, direct or indirect impacts on people or the environment over the short, medium and long term
- **Financial materiality** i.e. sustainability matters that trigger or could trigger material financial effects on ERG

If an issue does not appear as material, it does not mean it is not relevant or is not being managed, but only that it is not of sufficient significance to be addressed in detail in this report.

### Assessment outcomes

The assessment resulted in the higher prioritisation of a number of our most material issues, including:

- **Ethics and compliance:** This reflects an increased external stakeholder focus on human rights risks and impacts in the DRC
- **Geopolitics:** This reflects the ongoing impact of international sanctions on global commodity markets, as well as the potential for tightened sanctions in future
- **Government relations and policy:** This reflects regulatory developments focused on water use and mine closure in Kazakhstan, as well as a more challenging political backdrop in the DRC

## Overview of our materiality assessment process



## RISK MANAGEMENT

Our risk management framework helps us identify and understand potential threats to our business sustainability, as well as related opportunities. Its outputs have helped inform – in the context of our broader materiality assessment process – the identification of our most material sustainable development issues (including insight into potential financial impacts).

- For further information on how we manage our risks, as well as a list of our principal risks, see p. 81 of the Appendix.

## OUR MATERIAL ISSUES CONTINUED

### Material issues

The table below sets out our material issues. Please note, as 'Human rights' cuts across multiple themes (e.g. employees, value chains and local communities), we have integrated it into these areas of analysis where relevant – rather than treating it as a separate issue. For an overview of our broader approach to human rights, see p. 72.

#### List of material issues<sup>1</sup>

Full list of issues assessed	Material issues identified	
<b>BUSINESS</b>	<ul style="list-style-type: none"> <li>• Growth and asset maintenance</li> <li>• Technology, efficiency and digitalisation</li> <li>• Financial performance and value distribution</li> <li>• Geopolitics</li> </ul>	<p><b>Growth and asset maintenance</b> Replenishment and growth of our Mineral Resources and Ore Reserves – as well as the acquisition, development, maintenance and / or the disposal of mining and processing assets</p> <p><b>Technology, efficiency and digitalisation</b> Enhanced performance through improved and / or innovative technological and operational practices and processes</p> <p><b>Financial performance and value distribution</b> The generation of economic value by ERG and the distribution of such value to its stakeholders – plus the impact of market conditions on the business</p> <p><b>Geopolitics</b> The impact of international relations, geopolitics and / or conflict, including with respect to sanctions, operational disruption, political risk and market disruption</p>
<b>ENVIRONMENT</b>	<ul style="list-style-type: none"> <li>• Managing impacts on air and water</li> <li>• Energy and climate change</li> <li>• Tailings and broader waste management</li> <li>• Responsible closure and transfer</li> <li>• Water availability</li> <li>• Biodiversity</li> </ul>	<p><b>Managing impacts on air and water</b> Responsible management of emissions to the environment – including particulates, NOx, SOx, process water and runoff</p> <p><b>Energy and climate change</b> The use and / or production of energy in all its forms, as well as the production of associated GHG emissions – plus the impact of climate change on ERG and other stakeholders</p> <p><b>Tailings and broader waste management</b> Responsible tailings management – as well as responsible approaches to broader waste generation, management and disposal</p>
<b>SOCIAL</b>	<ul style="list-style-type: none"> <li>• Health and safety</li> <li>• Talent attraction, development and retention</li> <li>• Employee relations</li> <li>• Diversity and inclusion</li> <li>• Community impacts</li> <li>• Community social investment</li> <li>• Indigenous peoples</li> </ul>	<p><b>Health and safety</b> Delivery of a safe and healthy workplace – and the promotion of safe working practices</p> <p><b>Talent attraction, development and retention</b> The maintenance of a skilled and capable workforce, as well as the development of our employees</p> <p><b>Employee relations</b> Relations with our workforce and their legitimate representatives on salient workplace and non-workplace (e.g. quality of life, family welfare, etc.) issues – and actions to address the same</p> <p><b>Community impacts</b> The positive and negative impacts of ERG, its activities and its business partners on local communities (excluding dedicated social investment, which is dealt with separately)</p> <p><b>Community social investment</b> Voluntary and / or mandatory spending aimed at enhancing socio-economic conditions in our local communities and countries of operation<sup>2</sup></p>
<b>GOVERNANCE</b>	<ul style="list-style-type: none"> <li>• Ethics and compliance</li> <li>• Responsible value chains</li> <li>• Government relations and policy</li> </ul>	<p><b>Ethics and compliance</b> Compliance with regulatory requirements, ERG's compliance commitments and broader business ethics (including human rights)</p> <p><b>Responsible value chains</b> The responsible management of indirect supply chain impacts – and the delivery of responsible mineral supply chain assurance</p> <p><b>Government relations and policy</b> Relations between ERG, host governments and other third-party governments, including mutual impacts and policy developments</p>

<sup>1</sup> As 'Corporate governance' and 'Risk management' are integral to all our business processes, and thus to all the issues in the assessment, they are not treated as standalone issues.

<sup>2</sup> Note that community-focused spending linked to our employees is addressed under 'Employee relations'.



# Resilient

Now and in the long term

**We continued to demonstrate the resilience of our business despite a range of global economic challenges, including slow economic recovery in China and ongoing market disruptions resulting from the Russia-Ukraine conflict.**

These factors had a material impact on all of our commodity prices (other than copper, which remained broadly steady) and, by extension, Group revenue. In combination with heightened global inflation, which resulted in higher operational input costs and labour costs, this drove a significant reduction in EBITDA.

Nonetheless, our financial position proved resilient (partly due to the diversified nature of our portfolio) and we initiated a 2023-2025 transformation programme focused on, among other measures, increasing our production of key commodities; reaching new iron ore customers and markets as well as reducing our overheads.

We also took further steps to bolster our financial resilience. These included the restructuring of specific credit facility agreements and the further diversification of our debt portfolio (p. 18).

Beyond this, we continued to focus on enhancing the medium- and long-term sustainability of our business. This included:

- Further investment in our established operations in Kazakhstan, focused on productivity, product diversification and environmental performance (p. 21)
- The advancement of our renewable energy capabilities in Kazakhstan, including the construction of our Khromtau-1 wind power project (p. 41)
- The ongoing optimisation of our Metalkol operation in the DRC (p. 22)
- The start of construction of the major FIOL 1 railway project at our BAMIN integrated iron ore and logistics operation (p. 23)
- Ongoing exploration activities in Kazakhstan and Africa (p. 20)

We also continued to embed our organisational restructuring programme to support our long-term resilience.



# Future-focused

Adapting to a changing world

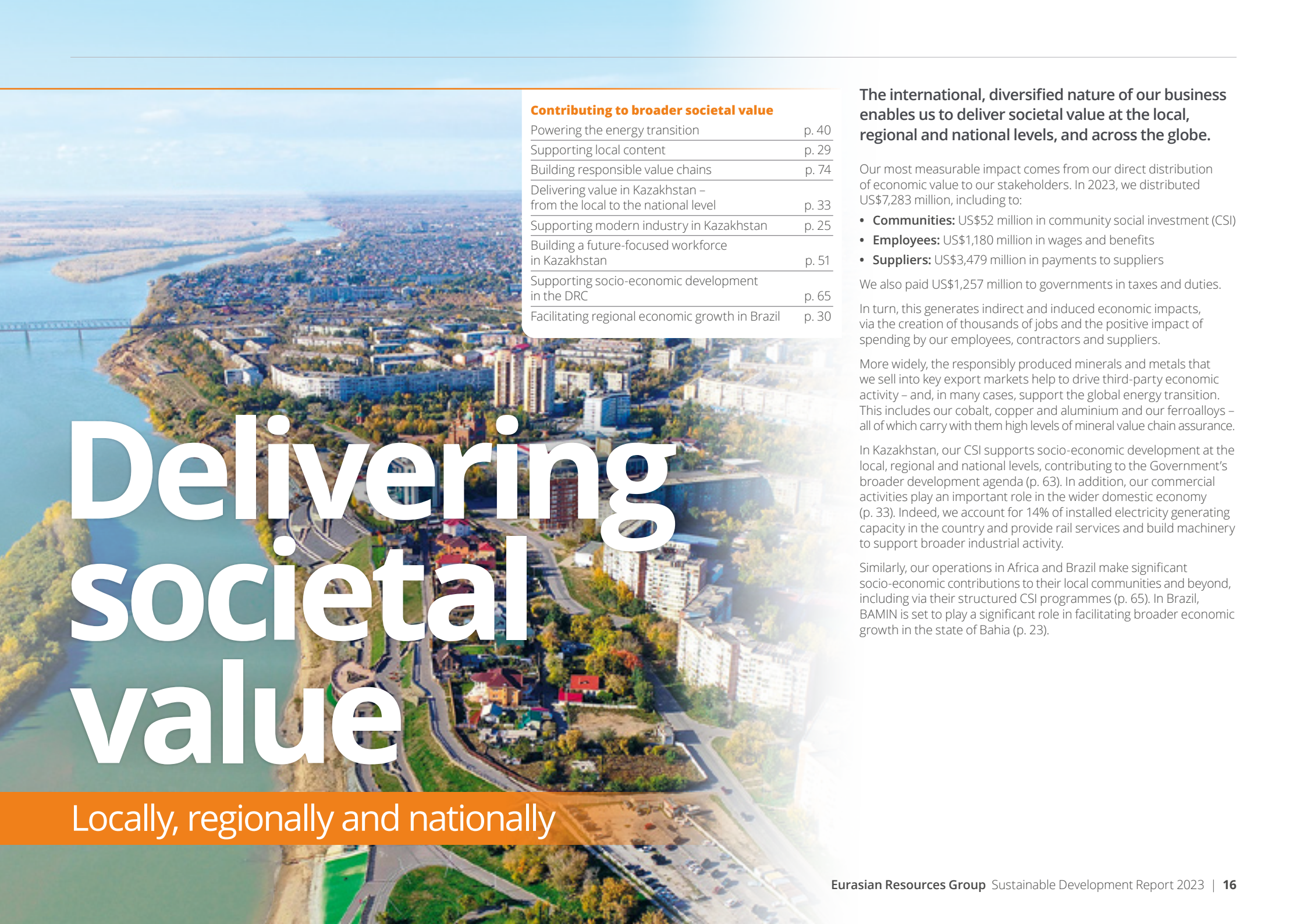
**We continue to position our business to help drive the global energy transition and to ensure we are well-placed to meet and benefit from the projected increase in demand for transition metals. This will also ensure that we capitalise on the geopolitical opportunities presented as major economies increasingly seek to secure their long-term commodity supplies.**

ERG is already well placed in this regard due to our responsible production of cobalt, copper and aluminium, as well as ferroalloys (i.e. in light of new gas, wind and nuclear power generation infrastructure development). We continue to explore new opportunities in existing and frontier markets to further strengthen this position. We are also playing a key role in driving collaborative mineral value chain assurance, helping ensure the global race to decarbonise does not inadvertently create negative social and environmental impacts.

At the same time, adapting our business for the future means taking concrete measures to reduce our own carbon footprint. In 2023, we finalised our new Decarbonisation Strategy in Kazakhstan (p. 40). Importantly, this commits us to achieving Net Zero by 2050.

Beyond this, we are configuring our management practices to build a future-ready business. This includes, among other measures:

- Investing in technological innovation across our operations in Kazakhstan, with a focus on metallurgical innovation, driving Industry 4.0, mine automation and developing a connected workforce (p. 27)
- Leveraging new technologies to transform our exploration efforts
- Building a future-ready workforce through the delivery of cultural change and advanced skills training, including via our ERG Corporate University in Kazakhstan (p. 52)
- Continuing to adapt to hardening sustainability disclosure standards and further enhancing our sustainability governance structures



**Contributing to broader societal value**

Powering the energy transition	p. 40
Supporting local content	p. 29
Building responsible value chains	p. 74
Delivering value in Kazakhstan – from the local to the national level	p. 33
Supporting modern industry in Kazakhstan	p. 25
Building a future-focused workforce in Kazakhstan	p. 51
Supporting socio-economic development in the DRC	p. 65
Facilitating regional economic growth in Brazil	p. 30

# Delivering societal value

Locally, regionally and nationally

The international, diversified nature of our business enables us to deliver societal value at the local, regional and national levels, and across the globe.

Our most measurable impact comes from our direct distribution of economic value to our stakeholders. In 2023, we distributed US\$7,283 million, including to:

- **Communities:** US\$52 million in community social investment (CSI)
- **Employees:** US\$1,180 million in wages and benefits
- **Suppliers:** US\$3,479 million in payments to suppliers

We also paid US\$1,257 million to governments in taxes and duties.

In turn, this generates indirect and induced economic impacts, via the creation of thousands of jobs and the positive impact of spending by our employees, contractors and suppliers.

More widely, the responsibly produced minerals and metals that we sell into key export markets help to drive third-party economic activity – and, in many cases, support the global energy transition. This includes our cobalt, copper and aluminium and our ferroalloys – all of which carry with them high levels of mineral value chain assurance.

In Kazakhstan, our CSI supports socio-economic development at the local, regional and national levels, contributing to the Government’s broader development agenda (p. 63). In addition, our commercial activities play an important role in the wider domestic economy (p. 33). Indeed, we account for 14% of installed electricity generating capacity in the country and provide rail services and build machinery to support broader industrial activity.

Similarly, our operations in Africa and Brazil make significant socio-economic contributions to their local communities and beyond, including via their structured CSI programmes (p. 65). In Brazil, BAMIN is set to play a significant role in facilitating broader economic growth in the state of Bahia (p. 23).



# Our business

Financial stability is a priority under our 2025 Strategy. This includes the maintenance of acceptable leverage and sufficient liquidity.

Two additional strategic priorities are of particular relevance:

- Efficiency in all that we do, through unit cost reductions, organisational effectiveness and a culture of continuous improvement
- Balanced portfolio growth, through the development of our existing assets, improved asset returns and the development of new opportunities

Ultimately, our 2025 Strategy supports our ability to generate current and future value, not only for ERG but also for our stakeholders. This is essential for the long-term sustainability of our business.

## RELEVANT PRIORITIES UNDER OUR 2025 STRATEGY

Balanced portfolio growth

Efficiency in all that we do

Financial stability

## 2023 HIGHLIGHTS

Successful restructuring of debt with key creditors

US\$7,283m of economic value distributed

Ongoing strategic development at Donskoy GOK, including our 10<sup>th</sup> Anniversary Mine and ERG Green project

## MATERIAL ISSUES

**Growth and asset maintenance**

➔ See p. 20

**Technology, efficiency and digitalisation**

➔ See p. 25

**Value distribution**

➔ See p. 29

# Sustained resilience amid short-term challenges

## Operational performance and market conditions

- **Aluminium production**  
+4.8%
- **Saleable copper metal production**  
+2.7%

In 2023, we once again demonstrated the resilience of our business, against the backdrop of a challenging economic and geopolitical environment. In particular, we benefitted from the diversified nature of our portfolio as well as our experience of managing operations during challenging periods in the economic cycle.

During the year, growth in demand for global industrial commodities slowed marginally, reflecting the impact of decelerating economic activity in the major economies. Weak demand for base metals was also partly driven by a declining real estate sector in China, as well as tight monetary policy in the US. In addition, geopolitical tensions related to the conflict in Ukraine negatively affected our logistics, disrupting product delivery, as well as our supply chains.

We continue to invest in the future of our business. In Kazakhstan, this includes the ongoing development of our 10<sup>th</sup> Anniversary mine at Donskoy GOK, the development of our Kacharsky iron ore mine, the construction of our Soft Coke Plant at Shubarkol Komir<sup>1</sup> and the advancement of our ERG Green reprocessing project. In 2023, we also approved plans to construct our Khromtau-1 wind power project near Donskoy GOK (p. 41).

At the same time, we are continuing to optimise our Metalkol cobalt and copper operation in the DRC, while also developing Cut 4 to extend the life of our Frontier mine.<sup>2</sup> In Brazil, we initiated the construction of the FIOL 1 railway, which will form a key part of our world-class BAMIN integrated iron ore mining and logistics operation.

For further details on our ongoing efforts to develop our existing operations and pursue new growth opportunities, see 'Growth and asset maintenance' on p. 20.

## Financial performance

- **Further diversification of our debt portfolio**
- **Increased capex**  
+27%

In 2023, our underlying EBITDA decreased by 55% to US\$1,530 million (2022: US\$3,392 million). This reflected an 18% decrease in revenues to US\$6,509 million (2022: US\$7,924 million), which was primarily driven by a decline in commodity prices across the Group's portfolio (with the exception of copper prices, which remained more or less constant). These negative dynamics were partially offset by higher sales of iron ore and aluminium, as well as marginally higher sales of ferroalloys, cobalt, copper metal and coal.

The Group's operating expenses were significantly impacted by inflationary pressure and higher costs for materials (e.g. reductants, reagents, acid, diesel and mazut), as well as the further indexation of salaries in Kazakhstan. In addition, limited and unstable power supply and electricity shortages in the DRC continued to result in higher power costs and the increased use of relatively expensive backup diesel generators.

We increased capital expenditure by 27% to US\$1,440 million (2022: US\$1,135 million). This primarily reflected our ongoing efforts to realise the full potential of our existing assets and establish the basis for future growth and development, as well as the implementation of new projects focused on environmental protection, and health and safety, among other areas.

See p.14 for information on how we further bolstered our short-term resilience amid this challenging price environment, as well as our ongoing efforts to enhance the medium- and long-term sustainability of our business.

## Debt position and financing arrangements

The Group successfully completed the restructuring of its credit facility agreements with Sberbank of Russia and VTB Bank (PJSC) and expects to meet its payment obligations under its existing financing arrangements in compliance with all applicable laws and regulations. The Group continues to comply with all sanctions applicable to its business activities.

At the same time, we continued to take steps to diversify our debt portfolio. This includes the seeking of new sources of finance from Kazakhstan, Eurasia and beyond. Among other things, we have signed a credit facility with the Eurasian Development Bank for up to US\$150 million (US\$88 million of which was drawn down) and a prepayment facility with Glencore International AG for up to US\$90 million (which was drawn in full).

## Credit ratings

In June 2022, Standard & Poor's upgraded our credit rating to 'B' from 'B-' with a 'Stable' outlook. At the request of the Group, Standard and Poor's withdrew our credit rating in March 2023. The outlook was 'Stable' at the time of the withdrawal. In December 2023, Moody's affirmed our B1 rating as well as our 'Stable' outlook. This outlook was changed to 'Negative' in July 2024 with our credit metrics and volatile commodity prices among the key factors.

<sup>1</sup> In 2023, the plant underwent a successful technical launch, with completion currently planned for the second half of 2024.  
<sup>2</sup> Extraction of Cut 4 ore started in June 2024.

## PERFORMANCE CONTINUED

### Key 2023 production and market dynamics

Key product		2023	2022	Change	Dynamics
<b>Ferroalloys</b>	Ferroalloys	1,471kt (net)	1,553kt (net)	↓ 5.3%	<ul style="list-style-type: none"> <li>Decreased production reflected logistical constraints at the start of the year, as well as lower production volumes at Donskoy GOK</li> <li>European and US ferrochrome prices declined after record highs in 2022, amid a global economic slowdown. While declines in ferrochrome prices were significant on a year-on-year basis, they remained markedly above the five-year average</li> <li>At the same time, Chinese ferrochrome tender prices experienced only a modest decline of 2%</li> </ul>
<b>Iron ore</b>	Saleable iron ore concentrate and pellets	9,744kt	10,499kt <sup>1</sup>	↓ 7.2%	<ul style="list-style-type: none"> <li>Decreased production reflected the suspension of shipments to our largest customer, which is based in Russia. Sales volumes continued to be partially redistributed to alternative markets, including China</li> <li>Global prices remained volatile throughout 2023 – ranging from US\$97 to US\$141 per tonne – amid economic stimulus in China, uncertainty around steelmaking cuts in the country and the gradual recovery of seaborne supply. Nonetheless, prices averaged US\$120 per tonne, almost unchanged from the 2022 average</li> </ul>
<b>Alumina and aluminium</b>	Alumina	1,410kt	1,338kt	↑ 5.4%	<ul style="list-style-type: none"> <li>Alumina production increased, reflecting the implementation of improved production processes (p. 22)</li> <li>Aluminium production increased due to the restoration of plant operations at KAS, following a temporary shutdown of the electrowinning facility in 2022</li> <li>LME aluminium prices fell by around 17%, following China's slow post-Covid-19 recovery, coupled with tepid economic growth in Europe and the US. At the same time, global alumina prices (FOB Australia) experienced a modest decline of 5%</li> <li>Despite this, aluminium prices in China remained relatively robust, outpacing global prices. Despite the country's slow economic rebound, domestic demand proved resilient, fuelled by the growth of green technology sectors</li> </ul>
	Aluminium	261kt	249kt	↑ 4.8%	
<b>Cobalt, copper and other non-ferrous</b>	Saleable copper metal	102.6kt	99.9kt	↑ 2.7%	<ul style="list-style-type: none"> <li>Copper metal production increased while cobalt hydroxide production decreased, primarily due to fluctuations in grade and metal recovery rates across the tailings areas. We continue to focus on enhancing Metalkol's production processes to ensure it achieves planned output levels</li> <li>Saleable copper concentrate production at Frontier decreased due to lower plant feed rates and grades. In 2023, we continued to develop Cut 4 to extend Frontier's life-of-mine (p. 22)<sup>2</sup></li> <li>Copper prices declined by 3.6% year-on-year, due to uncertainties around China's economic recovery and the trajectory of interest rates in the US. However, sentiment became more positive, due to anticipation of a supply deficit – reflecting disruptions to mine supply and increased demand from sectors focused on the manufacturing of green technology</li> <li>Cobalt metal prices declined substantially, averaging US\$15.11/lb (a 50.1% decrease year-on-year). Despite continuously growing demand, the market experienced a significant surplus as the start of a major copper / cobalt operation in the DRC created a temporary oversupply</li> </ul>
	Saleable copper concentrate	60.7kt	90.5kt	↓ 32.9%	
	Saleable cobalt hydroxide	20kt	22.5kt	↓ 11.1%	
<b>Energy</b>	Coal	32,394kt	29,967kt	↑ 8.1%	<ul style="list-style-type: none"> <li>Increased production of thermal coal reflected increased shipments to customers in Europe and Central Asia</li> <li>Electricity production decreased due to planned repairs at the Aksu Power Plant</li> <li>Global thermal coal prices declined by around 55%, although they remained higher than pre-Covid-19 levels (albeit with regional price disparities)</li> </ul>
	Electricity	17,677 GWh	17,778 <sup>3</sup> GWh	↓ 0.6%	

1 Restated.

2 Extraction of Cut 4 ore started in June 2024.

3 Restated.

# GROWTH AND ASSET MAINTENANCE

## Strategic context

**Balanced portfolio growth: Our 2025 Strategy prioritises steady portfolio growth and development. This includes the ongoing development of our assets in Kazakhstan, as well as increased returns on our international assets. We are also focused on optimising our portfolio through new natural resource opportunities and / or divestment, while further developing our energy portfolio.**



### Relevant UN SDGs

➔ See p. 97 for associated UN Targets.

We are pursuing multiple growth projects in Kazakhstan, Africa, and Brazil, and beyond that will support our long-term business sustainability. In addition to developing our existing operations, we are focused on pursuing new growth opportunities, including through exploration. Collectively, this will help replenish our mineral resource pipeline, further position our portfolio to supply the commodities needed to drive the global energy transition and ensure we benefit from the commodity super cycle. Importantly, it will also sustain our ability to deliver long-term societal value.

## Securing our long-term resource base through exploration

### 📍 Kazakhstan

Our ERG Exploration team manages a range of exploration projects in Kazakhstan. It is implementing advanced methodologies and technologies to support our ambition of being the leading exploration organisation in Central Asia. Its current focus is on expanding our resource base, with a core focus on bauxite, chromite, copper, polymetals and other metals. The team applies the KAZRC standards, which are aligned with best practice standards, including CRIRSCO / JORC.

In 2023, key activities included:

- Ongoing drilling operations in the Aktobe and Kostanay regions
- The obtaining of six new licences (focused on copper, gold and polymetals), resulting in additional geophysical work and drilling in the Karaganda region
- The signing of a memoranda of understanding with Uzbekistan's Ministry of Mining and Geology to conduct early exploration activity in promising locations

In addition, we took steps to further enhance our exploration capabilities, including through the establishment of our ERG GeoHub, the largest core storage and processing facility in Kazakhstan, as well as the implementation of specialised software to consolidate all of our geological exploration data into an automated, unified platform.

### 📍 Africa

In 2023, we focused on the identification of brownfield expansion opportunities around our existing operations in Africa, which are historically underexplored. This included the establishment of a three-year programme to assess potential new copper and cobalt resources that can be extracted and processed using our existing infrastructure. Our immediate efforts have been particularly focused on COMIDE and Frontier. These efforts have identified potential large-scale expansion opportunities at Frontier, as well as new oxide ore bodies at COMIDE. At the same time, we are seeking enhanced insight into the local geology around Metalkol.

In addition, we continued to pursue greenfield exploration and development opportunities beyond our existing operating areas, with a focus on:

- The Bokai PGM deposit, a shallow, high-grade deposit located in Zimbabwe's Great Dyke that offers the potential for a significant mining and processing project
- Our Fluorspar project in South Africa, which is focused on the world's largest fluorspar deposit
- Wider, early stage geochemical, geophysical and satellite analysis in the DRC, to develop data sets that will help identify new copper and cobalt opportunities. In particular, we have compiled existing proprietary Copper Belt data into a large-scale data set, which we will analyse using machine learning and Artificial Intelligence. Early-stage examination of this data set has already generated critical insights with respect to Frontier and COMIDE

### 📍 Brazil

Our exploration activities in Brazil are focused on identifying and developing projects that can potentially leverage BAMIN's FIOL 1 railway (which will enjoy significant levels of excess carrying capacity) and contribute to the global energy transition. This includes a focus on:

- Iron ore opportunities close to the Pedra de Ferra mine, which could potentially expand its short- and medium-term production and / or extend its life of mine
- Early-stage projects focused on iron ore, lithium, copper, nickel, zinc, gold and PGMs

## Our approach to capital management

In 2023, we increased our capex by 27% to US\$1,440 million (2022: US\$1,135 million). This reflected investment in our existing operations (with a focus on productivity and lifetime extensions in both Kazakhstan and Africa), the development of our broader growth pipeline (including greenfield exploration, our BAMIN project in Brazil) and new projects to improve operational sustainability in Kazakhstan. Our ongoing investment in this regard will help maintain future production volumes and reduce future costs at our existing assets.

ERG Capital Projects is responsible for methodological and organisational development across all project categories in Kazakhstan, as well as the development and execution of our largest and most critical strategic projects. They are supported by our Capital Projects Academy, which helps ensure the project teams have the skills they need to perform their roles effectively.

All proposed capital projects in Kazakhstan are assessed by our Independent Project Review (IPR) teams, based on technical and economic parameters (including safety, project scope, quality, cost and target schedule). In 2023, the teams audited three projects in Kazakhstan, making 60 recommendations to the project teams.

In Africa, we carry out independent project reviews with third-party specialists.

## Ferroalloys

- **Revenue in 2023:**  
**\$2,330 million**
- **Countries of operation:** Kazakhstan
- **Certifications / assurance:** ICDA 'Responsible Chromium' status (p. 74)

### Preparing for Phase 2 development at Donskoy GOK's 10<sup>th</sup> Anniversary mine<sup>1</sup>

In 2023, we continued to prepare for the Phase 2 development of this major chrome ore body, which will involve sub-level caving and a mechanised block caving system. This included the construction of the ore hoisting complex, exploration work, capital works and preparatory tunnelling and mining operations at a horizon of -480 metres. We plan to start mining the ore in the fourth quarter of 2024. This is with the long-term aim of increasing production at Donskoy GOK by up to 7.5 million tonnes of ore per year, which will more than replace diminishing output from the Phase 1 development and from our Molodezhnaya mine.

### Development of our ERG Green reprocessing project at Donskoy GOK

Our ERG Green project is focused on reprocessing 14 million tonnes of historical tailings at Donskoy GOK. In 2023, we successfully commissioned the gravity beneficiation section, a key stage in the project's development. This is now in operation and is producing high quality chrome concentrate. Work is also underway on the next phase of the project, which includes the development of a floatation enrichment section (with construction having started in July 2024) and the ongoing construction of a new tailings storage facility.

We plan to finalise the implementation of ERG Green and bring it into full operation in the second half of 2026. Once operating at full capacity, the facility is expected to produce more than 500kt of chrome concentrate a year.



### Enhancing our energy infrastructure at Aktobe Ferroalloys Plant and Donskoy GOK

We are working to increase the energy efficiency and environmental performance of our ferroalloys production processes. During the year, this included the completion of the first design stage for a new power plant at Aktobe Ferroalloys Plant, with plans to implement the project between 2024 and 2026. This will use furnace gas from the ferroalloys production process.

We also expanded Donskoy GOK's power supply infrastructure. This included the establishment of new substations, the expansion of existing substations and the installation of high-voltage transmission lines. Collectively, this will ensure adequate and reliable power supply into the future.

### Increasing furnace capacity at Aksu Ferroalloys Plant

In 2023, we commissioned a unique preheater system for charge materials at Furnace No. 64. Preliminary results indicate a significant increase in productivity and a reduction in energy and material consumption, and – by extension – lower production costs.

In addition, we worked to ramp up Furnace No. 64 to its design capacity of 65 MW, achieving 50 MW during 2023. Following the replacement of the furnace lining in 2024, we will continue our efforts to further increase capacity.

We are now considering the application of similar techniques at our other ferroalloy furnaces.

<sup>1</sup> 10<sup>th</sup> Anniversary of Independence of Kazakhstan Mine.

## Copper, cobalt and other non-ferrous

- **Revenue in 2023:**  
**\$1,527 million**
- **Countries of operation:** DRC and Zambia
- **Certifications / assurance:** (Metalkol only)
  - RMAP Cobalt Due Diligence Standard (2018) and Joint Due Diligence Standard for Copper, Lead, Nickel and Zinc (2021) (p. 76)
  - ERG Clean Cobalt and Copper Framework (and third-party assurance) (p. 76)

### Implementing Phase 2 and exploring optimisation at Metalkol

In 2023, we continued to focus on Phase 2 production at Metalkol in the DRC, achieving output of 102.6kt of copper and 20kt of cobalt hydroxide (2022: 99.9kt and 22.5kt, respectively). The operation remains on track to achieve its designed capacity of 105kt of copper and has already met its designed capacity of 20kt of cobalt hydroxide. We continue to focus on improving production quality and infrastructure at the plant.

During 2023 and early 2024, ERG signed memoranda of understanding and binding agreements to supply cobalt to new and established actors in the battery value chain within key Western markets. This included agreements with EVELution and Electra for the North American market, as well as with Mechema and Marubeni for the Japanese market. The diversification of Metalkol's future cobalt supply demonstrates the strategic role that ERG has to play in supporting the development of a Western battery industry as governments pursue their energy transition agendas.

### Cut 3 expansion project and development of Cut 4 at Frontier

In 2023, we continued pre-stripping work on the Cut 4 project, which has the potential to extend the life of our Frontier mine in the DRC by 10 years. This builds on our Cut 3 project, which in 2023 helped support mine production of 60.7kt of copper in concentrate (2022: 90.5kt).<sup>1</sup>

Production continued to be disrupted by the 2022 shift to owner-mining and the establishment of a new mining fleet. While owner-mining is expected to secure sustainable future production at the mine and reduce future operational costs, we are continuing to upskill our operators and supervisors (all of whom are DRC nationals) to help stabilise production.

Based on brownfields exploration drilling carried out in 2023, we are planning a study to understand the potential for a further life of mine extension (Frontier Deeps) that could see mining shift underground.

### Suspension of operations at Boss Mining

In June 2023, the DRC authorities temporarily suspended operations at Boss Mining, following localised flooding affecting the operation and local communities (p. 60). We have used this time to enhance the mine's operations, including the renovation of its leaching tanks and the replacement / refurbishment of old equipment.

The suspension followed the restarting of production at the mine in November 2022. The suspension was lifted in May 2024.

### Consideration of options at Chambishi Metals

We are continuing to evaluate options that could support the commercial sustainability of our Chambishi Metals operation in Zambia, which remains in care and maintenance.

## Alumina and aluminium

- **Revenue in 2023:**  
**\$1,076 million**
- **Countries of operation:** Kazakhstan
- **Certifications / assurance:** (KAS only)
  - ERG's Responsible Aluminium Framework (p. 76)
  - Compliance with London Metal Exchange (LME) sourcing requirements (p. 76)

### Scaling up production within the aluminium division

In 2023, we completed the commissioning of KAS's anode roasting furnace (which had been subject to a major overhaul) ahead of schedule. The upgrading of the furnace involved the replacement of 12,300 tonnes of refractory lining and the replacement of four gas exhaust collectors. It will enable the production of up to 138,300 tonnes of anodes per year, while improving the operation's energy efficiency and emissions to air. Under current plans, this figure will be increased to 153,000 tonnes, as a result of a second phase of modernisation. We are also considering a potential expansion of KAS's production capacity through the introduction of 16 new electrolyzers. These are expected to increase production by around 15,000 tonnes.

In addition, we:

- Constructed a new causticisation unit to manage the alkaline balance when using high-carbonate bauxites at Pavlodar Aluminium Plant with the aim to minimise costs
- Commenced the construction of a lime extinguishing section, which will reduce costs by replacing purchased extinguished limestone with our own limestone. We also started to modernise the operation's leaching tanks, with the replacement of their agitation devices expected to increase productivity and reduce costs
- Started to explore the use of:
  - Tricalcium hydro-aluminate to improve productivity and reduce costs
  - Bauxite desilication technologies with the aim to improve the bauxite quality. This will also allow to reduce the costs and emissions as well as increase the resource base due to the reprocessing of low-grade bauxite
  - Synthesis gas in our calcination furnaces instead of mazut to help reduce costs

We also updated our geological models at Aluminium of Kazakhstan's Krasnooktyabrsky Mine, which helped us optimise our mining volumes and enhance overall operational efficiency.

### Reducing our emissions to air at Aluminium of Kazakhstan

In 2023, we continued to advance a range of major projects to improve Aluminium of Kazakhstan's air quality performance. These are taking place under our broader 10-year, US\$480 million programme<sup>2</sup> to reduce our emissions to air in Pavlodar and other regions (p. 35). Key examples can be found on p. 36.

<sup>1</sup> The Cut 3 project ended in the first half of 2024 and extraction of Cut 4 ore started in June 2024.

<sup>2</sup> The value of the programme was updated in 2022 to reflect variables such as inflation, the integration of new projects, updated prices and engagement with new vendors.

## Iron ore

- **Revenue in 2023:**  
**\$1,091 million**
- **Countries of operation:** Kazakhstan, Brazil

### Upgrading and modernisation at SSGPO

#### Upgrading of iron ore processing facilities

Our iron ore processing facilities at Rudny in Kazakhstan have an annual production capacity of 17 million tonnes of concentrate and 8 million tonnes of pellets. In 2023, we continued to implement a series of upgrades to enhance ore preparation and enrichment, with a focus on technical efficiency, the production of higher quality concentrates and the diversification of our product portfolio. This included the modernisation of three wet magnetic enrichment sections of the plant. The modernisation programme, which will continue over 2024 and 2025 will increase the capacity of the facilities to produce high-grade concentrate and pellets, which will be used for the production of Hot Briquetted Iron.

#### Advancement of Hot Briquetting Iron Production Plant

We also moved the project to construct a Hot Briquetted Iron (HBI) Production Plant to a basic engineering stage. This includes the surveying of the selected site (and related external infrastructure), the development of technical solutions to support decision-making and the placing of orders for equipment. In addition, we carried out planning around its future natural gas supply, which would come from a new pipeline being built by the Government. The project entails the construction of a plant with the capacity to produce 2 million tonnes of HBI a year, which would generate around 500 new employment positions.

### Mine reconstruction project at Kacharsky

We continued to advance the reconstruction of our Kacharsky mine. This will increase extraction volumes at the mine, which continues to be the most cost-effective source of iron ore for SSGPO. In 2023, this included the successful deployment of the third batch of high-performance dump trucks and excavators, along with auxiliary mining equipment. Plans are in place to deliver and commission a fourth batch in 2024.

### Advancement of our BAMIN iron ore operation

In 2023, we took a major step forward in the advancement of our integrated BAMIN iron ore and logistics operation in Brazil, with the start of construction of the FIOL 1 railway. This will connect our Pedra de Ferro mine with our Porto Sul port terminal, supporting the creation of a major new logistical corridor running between the west and east of the state of Bahia and, once FIOL 2 and 3 are implemented, across the country.

We are continuing to seek finance and / or investment partners for the project, including the Brazilian Development Bank (BNDES). As such, we are in the process of ensuring we meet relevant BNDES lending criteria, including those linked to environmental, social and governance (ESG) strategy, land management and loan guarantees.

Each component of the operation is examined in further detail below.

#### Pedra de Ferro mine

The Pedra de Ferro mine currently has an installed capacity to produce up to 1 million tonnes of ore a year, with the potential to increase this to 2 million tonnes (subject to approval from the relevant licensing body). In 2023, the mine produced 319kt of iron ore (2022: 643kt), with the potential to raise its capacity so that it can produce up to 26 million tonnes a year by 2028. It will use a dry-stacked tailings storage facility to minimise associated physical and environmental risks, as well as water use (p. 44).

The nature of the mine's ore (65% iron content and low impurity) will help customers reduce their own carbon emissions significantly, due to its lower transportation and smelting footprint. In March 2023, BAMIN entered into an agreement with Anglo American to supply them with Pedra de Ferro's full output for 2023.

#### FIOL 1 railway

FIOL 1 (which runs 537km from Caetité to Ilhéus) is the first section of Brazil's major West-East Integration Railway (FIOL) project – one of the largest infrastructure projects in the country. BAMIN has, through its wholly owned subsidiary, Bahia Ferrovias S.A., a 35-year concession to construct and operate FIOL 1. This will (as part of the broader FIOL project) carry ore from the Pedra de Ferro mine to the east coast of Brazil for export via Porto Sul.

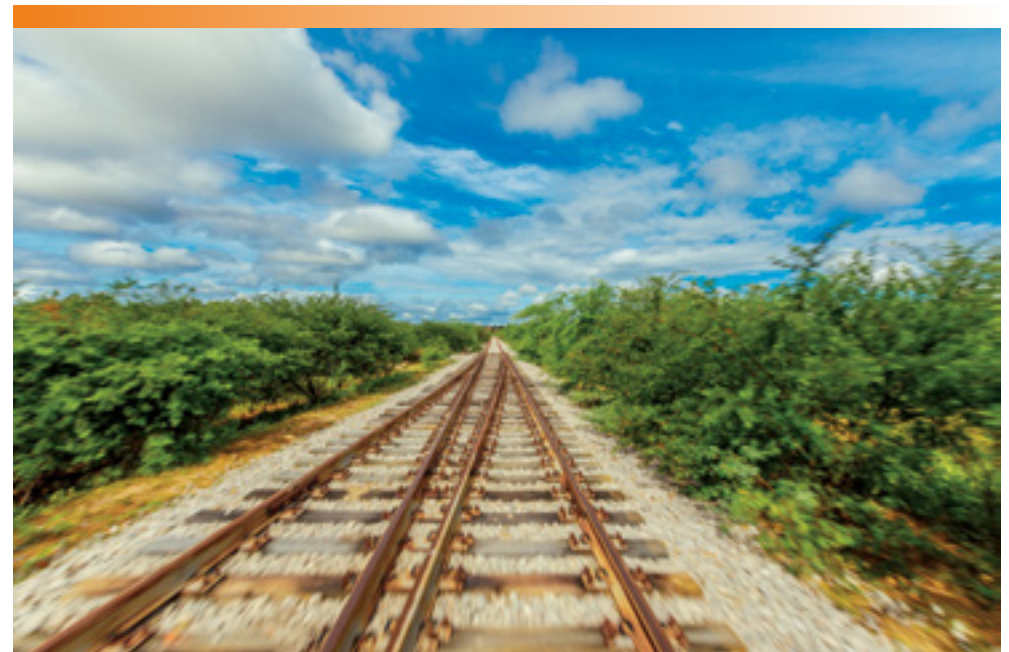
Importantly, approximately 50% of the rail route's 60 million tonnes per year capacity could be used to transport third-party bulk goods to the port, including grain and other products.

This has the potential to help drive the economic development of the 19 municipalities that FIOL 1 crosses, while also taking a significant number of trucks off Bahia's roads and reducing overall carbon emissions.

Construction on FIOL 1 started in July 2023 and is expected (according to BAMIN's latest discussions with the regulatory agency) to be concluded by 2027.

#### Porto Sul port terminal

The Porto Sul port terminal is being developed in the city of Ilhéus in the south-east of Bahia. Under current plans, the port could export its first iron ore cargoes from the Pedra de Ferro mine (via FIOL 1) by 2027. Similar to FIOL 1, the first phase of Porto Sul has been designed to accommodate third-party cargoes, with a capacity of up to 40mt of bulk freight per year. As such, it will also play a key role in helping promote broader economic development in the state of Bahia.





## Energy

- **Revenue in 2023:**  
**\$368 million**
- **Countries of operation:** Kazakhstan

### Managing our carbon intensity

In line with our new Decarbonisation Strategy for the Kazakhstan region (p. 40), we are working to reduce our long-term carbon intensity, while our short-term priority is to ensure a reliable and efficient energy supply to our core business. It is in this context that, in line with national renewable energy targets, we are purchasing defined amounts of renewable energy and we are planning to generate our own renewable power.<sup>1</sup>

In 2023, we approved a project to construct our planned 24-turbine, 150 MW Khromtau-1 wind power project near Donskoy GOK (p. 41), with project implementation to commence in May 2024. Commissioning had previously been planned for 2024, but the schedule had to be adjusted due to financing delays, among other issues. We also continued to assess the wind generation potential of five additional wind farm sites in Kazakhstan (each with potential generating capacity of 1 GW). We are working to identify potential strategic partners (both domestic and international) to implement renewable energy projects based on co-investment and / or Power Purchase Agreements.<sup>2</sup>

In addition, we continued to advance plans to:

- Generate energy using off-gas from our production processes. In 2023, this was with a primary focus on Aktobe Ferroalloys Plant (p. 41), with the utilisation of coke gas at Shubarkol Komir being a secondary area of focus
- Implement a small (4.8 MW) pilot solar power plant project at Shubarkol Komir

We are also considering a potential project to reconstruct EEC's Power Unit No.7, with the potential for the facility to use ferroalloy gas produced during Aksu Ferroalloys Plant's production process.

While we plan to reduce new capex on coal mining and coal-based power generation in the long term, our short-term approach in Kazakhstan is driven by:

- Demand for thermal coal from our clients, including the EU, which seeks to mitigate sanctions restrictions on the import of Russian coal and gas
- Government plans for the modernisation and construction of coal-fired power plants to address supply shortfalls in the national energy system

### Other projects

#### Construction of the new Soft Coke Plant at Shubarkol Komir

In 2023, construction continued on Shubarkol Komir's new 400ktpa Soft Coke Plant in Kazakhstan. The plant underwent a successful technical launch, with completion currently planned for the second half of 2024. The plant will produce cost-effective reductants for use in Kazchrome's smelting workshops (reducing the need for imported reductants) and for external sale. It will also produce more than 70ktpa of coal tar and oil using Shubarkol Komir's coal.

### Next steps

In 2024, we will expand our drilling fleet in Kazakhstan by adding four rigs and will focus our exploration efforts on our 'core metals' in the country, including bauxite and chrome.

Beyond this, we plan to:

- Commence the first stage of Phase 2 mining at Donskoy GOK's 10<sup>th</sup> Anniversary mine
- Commission the first wind turbines at our Khromtau-1 wind power project near Donskoy GOK
- Commence Shubarkol Komir's Soft Coke Plant
- Explore future options for the potential development of a new cobalt beneficiation plant at Metalkol

1 Kazakhstan has committed to reducing national GHG emissions by 1.5% per year between 2022 and 2025, achieving a 15% reduction by 2030, and is seeking carbon neutrality by 2060.

2 I.e. where ERG would act as a buyer based on long-term power purchase contracts.

# TECHNOLOGY, EFFICIENCY AND INNOVATION

## Strategic context

Efficiency in all that we do: Under our 2025 Strategy, we have prioritised the pursuit of efficiency at Group and asset level. This includes reducing our unit costs by eliminating bottlenecks and improving productivity, while developing a culture of continuous improvement.



### Relevant UN SDGs

➔ See p. 97 for associated UN Targets.

We continue to pursue operational efficiency on an ongoing basis, while actively investing in technological innovation. This is with the aim of not only supporting our short-term performance, but also our longer-term business sustainability and ability to generate value.

## What we are doing

### Operational efficiency in Kazakhstan

In Kazakhstan, our Operational Efficiency team takes a systems-based approach to achieving ongoing, incremental improvements in efficiency and productivity. This includes a focus on lean management principles, cross-cutting employee

collaboration and 'bottom-up' identification of improvement opportunities.

In 2023, we continued to pursue a wide range of improvement opportunities identified by employees and third-parties, including those identified through the channels described below.

- **The Ideas Factory** concept is used to actively gather employee-identified improvement ideas at our operations. In 2023, 111,257 ideas were collected (2022: 64,624 ideas).
- **The annual Innovators' Forum** is attended by selected employees and generates innovative initiatives to support our operations. 184 participants attended the Forum in 2023.

- **The Innovation Portal** publishes operational challenges on the company's public site (*erg-innovation.kz/en*) and invites stakeholders to submit potential solutions. If successful, ideas are assessed for approval / implementation using a stage gate approach.

Key projects during the year included:

- Working with external consultants to increase production volumes at Donskoy GOK's 10<sup>th</sup> Anniversary mine and at Aksu Ferroalloys Plant, using a range of organisational and technical measures
- The establishment of a system for calculating Overall Equipment Effectiveness (OEE) indicators across all our operations in Kazakhstan. We plan to apply an OEE indicator as a cross-functional KPI for most of our employees in the country
- The appointment of a Lean Six Sigma trained Process Engineer at our operations to identify, analyse and help address the root causes of production losses, implement discrete efficiency projects, and to enhance business processes.

### Embedding the ERG Way Production System in Kazakhstan

Our ERG Way Production System promotes a more effective working culture and the achievement of efficiencies across the production lifecycle (including through the application of lean management principles).

Key areas of focus include:

- Improvements to equipment productivity, as well as sustainable cost cutting
- The promotion of common management principles and effective employee / team interaction
- Systematic change management in the production process, including through employee empowerment and cross-team collaboration

### Ideas Factory

Ideas accepted for implementation

**61,811**

(2022: 38,030)

Anticipated savings

**\$37.8M**

(2022: US\$ 34M)

Innovators' Forum

Projects proposed

**85**

(2022: 87)

Innovation Portal

Proposals received

**182**

(2022: over 160)

In 2023, we applied the ERG Way Production System at Kazchrome, SSGPO, Aluminium of Kazakhstan, KAS, EEC, ERG Service and Shubarkol Komir – the first year we have applied it on a systematic basis.<sup>1</sup> Similarly, it was also the first full year of operation of our ERG Way Academy<sup>2</sup>, which trained more than 22,000 production employees in Kazakhstan on the approach (2022: 13,000). This was supplemented by the piloting of ERG Way mentorship systems at KAS and Aksu Ferroalloys Plant, as well as the initiation of similar pilots at Aluminium of Kazakhstan and EEC.

During 2023, we assessed each of our operations against our new internal production system assessment standard. This was developed on the basis of the criteria used by Toyota Engineering Corporation to audit the application of the lean principles at Aktobe Ferroalloys Plant in 2022.

<sup>1</sup> With plans to apply ERG Way at 3-Energoortalyk in 2024.

<sup>2</sup> Previously the ERG Way School and now part of the ERG Corporate University.

Our 2023 assessment found that our operations collectively achieved our goal, with positive performance across all three main areas ('active workforce', 'standardised work' and 'ideal processes'). Future improvements will be focused on teamwork and team organisation, enhanced planning around the value creation chain, and implementation of the 'plan, do, check, act' cycle.

In May 2024, Toyota Engineering Corporation conducted two further external audits at KAS and Aksu Ferroalloys Plant.

### Enhancing our MRO capabilities

In addition, we implemented a number of initiatives to enhance how we carry out our maintenance, repair and overhaul (MRO) activities. These included:

- **MRO Transformation Programme:** The initiation of a programme to improve our maintenance processes and develop MRO skills and competencies. This included:
  - Localised pilot initiatives at Donskoy GOK and Aksu Ferroalloys Plant focused on goal-setting, reliability management, maintenance planning and execution management
  - 'Centralised' initiatives focused on the updating of equipment maintenance strategies and the improvement of our materials-ordering systems

- **Improved Repair Efficiency:** The implementation of a programme to enhance the organisation of planned shutdowns for repairs and modernisation. This includes a focus on improved preparation, operational efficiency and analysis of lessons-learned from repair outcomes – including the replacement of the shaft hoisting machine at Donskoy GOK's 10<sup>th</sup> Anniversary Mine, the overhaul of KAS's roasting furnace (p. 22) and the replacement of the charge feed track at Aksu Ferroalloys Plant's Furnace No. 63
- **Skills development:** The launch of the MRO Academy at the ERG Corporate University (p. 52) to provide technical and repair personnel with in-depth knowledge of the MRO system and specialised training materials. In addition, we updated our MRO competency matrix for reliability and planning specialists

## ENHANCING THE EFFICIENCY OF OUR MINING OPERATIONS IN KAZAKHSTAN

We are taking a multi-layered approach to enhancing the efficiency of our mining operations in Kazakhstan, including through:

- The independent optimisation of our mining plans and schedules by our regional Mining Department (in cooperation with external experts). Relevant models are currently under development and implementation will start at Aluminium of Kazakhstan in 2024, before being rolled out to our other operations
- The implementation of integrated, digital mine planning systems and software, with initial implementation at Donskoy GOK, SSGPO and Aluminium of Kazakhstan in 2023. This is helping us optimise our mine plans and improve the efficiency of our mining activities
- The investigation of innovative technologies from other industries that could be applied at our operations, including in relation to tunnelling, mining, electric / hydrogen dump trucks and unmanned dump trucks
- Improved equipment productivity to support more efficient ore streams
- Competency development through our new ERG Corporate University (p. 52), with a focus on our specialists and experts



## Technological innovation

### Kazakhstan

Our R&D Centre in Kazakhstan works on an open system based on interaction with a range of internal and external stakeholders. We develop innovative technical solutions both in our own laboratories and in partnership with third-party research and development institutions.

Key areas of R&D focus include:

- The application of new pyrometallurgy technology to produce low-carbon chromium
- New alumina production technology to reduce the product carbon footprint
- Innovative hydrometallurgy approaches, with a focus on chromium production and tailings processing
- Coal adaptation and processing (including gasification)

In 2023, the R&D team established an external Expert Network, helping us access a wide range of international expertise and organise specialist technological audits of our operations. During the year, the team also advanced the development of a range of innovative technical solutions, key examples of which are set out opposite.

## Key examples of existing R&D projects in Kazakhstan

Project	Focus enterprise	Description
<b>Chrome pre-reduction</b>	Kazchrome	A programme to carry out chrome reduction processes prior to the electric furnace, using natural gas and reductants. This is with the aim of reducing production costs for high carbon ferrochrome and the carbon footprint of our output. This includes the early testing of three different reductants.
<b>Manganese ore processing</b>	Kazchrome	This includes a focus on the enrichment of manganese ore and intermediate products that are otherwise not subject to processing – using roasting and magnetic separation. The project has the potential to significantly increase extraction and yield rates. We are also investigating enhanced sintering methods.
<b>Bauxite calcination and pre-desilicisation</b>	Aluminium of Kazakhstan	This project is focused on enriching our bauxites through calcination and pre-desilicisation. This will help reduce our costs in the result of improving the bauxite quality at Aluminium of Kazakhstan as well as reduce our carbon footprint.
<b>Iron concentrate quality</b>	SSGPO	Laboratory work aimed at enhancing the quality of our iron concentrate to 70% (including through floatation and gravity separation) as part of our Hot Briquetted Iron project (p. 23). This will help us expand our iron products and – by extension – the markets we can sell our concentrate into.
<b>Coal resin processing</b>	Shubarkol Komir	Research into the processing of coal tar and oil by-products to produce a range of products and by-products, including pitch (used in electrode production), fuels and technical carbon. This includes the potential establishment of a technical carbon production facility to serve the tire, rubber, plastic and colouring markets.

## USING DIGITAL TECHNOLOGY AND AUTOMATION TO ENHANCE OUR OPERATIONS

We continue to apply a range of ongoing solutions to enhance our operational performance in Kazakhstan, including:

- Implementation of our Smart Mine programme at SSGPO, Sarbay and Sokolov pits and EEC's Vostochny pit. This uses specialised dispatch systems, advanced software and onsite 4G networks to control the movement of our operational fleet, helping to maximise its efficiency
- Development of an autonomous dump truck system and supporting infrastructure, with plans to test three working trucks at EEC's Vostochny mine in 2024
- Implementation of a 'digital advisor' (which uses automatic image processing and machine learning to support higher levels of productivity within our smelting functions) at Aksu Ferroalloys Plant
- The rollout of our Manufacturing Execution System (MES), which was implemented at Aktobe Ferroalloys Plant, Aksu Ferroalloys Plant, KAS and Aluminium of Kazakhstan's Krasnooktyabrsky Mine in 2023. In 2024, we plan to roll out our MES to additional operations in Kazakhstan

Our efforts are supported by the use of a single Automated Process Control Systems (APCS) Data Warehouse for the storage and processing of APCS data from all our operations in Kazakhstan.



### 📍 Africa

In 2023, we developed a technology roadmap for our active operations in Africa. This included the identification of more than 40 operational initiatives at Metalkol and Frontier. Our initial focus has been on more efficient fleet management at Frontier, including data gathering, the introduction of diesel-electric trucks, immersive simulator training and the introduction of a new fleet management system. We are also implementing reverse-circulation sample drilling to improve grade control at the operation.

At Metalkol, we have implemented multiple technological measures to improve process transparency, increase automation and deliver real-time performance indicators. As we add more data points, we will be able to conduct more advanced analysis (including through the use of Artificial Intelligence) to further optimise processing.

We also continued to use technology to enhance our exploration processes in the region. This includes the leveraging of innovative lithospheric targeting and remote sensing technologies, as well as multi-sensor rock and core scanning platforms that will enhance and standardise data collection. The full rollout of these technologies will be completed in June 2024, with the next phase of work to focus on the effective processing of the resulting data, including the potential application of Artificial Intelligence and machine learning.

In addition, we are leveraging software and computing technology to support the review of previous geophysics, geochemical and geological mapping surveys to generate new insights. This includes the initiation of a project to apply machine learning to this data in 2024.

### 📍 Brazil

BAMIN's Innovation Department is working to ensure that innovative processes, best practices and technologies are built into this world-class operation from the start. Their work has focused on identifying key resources and partnerships to support decarbonisation and the use of cleaner energies, digital engineering, mine-to-port logistics systems and digital modelling, and the development of new 'green iron ore' products.

### Next steps

In 2024 (and beyond), we plan to:

- Broaden our application of advanced exploration techniques across our regions, including remote-sensing, machine learning and Artificial Intelligence-driven data analysis
- Further embed our ERG Way Production System by extending our new mentorship programme to all our operations in Kazakhstan and opening a new Efficient Management faculty to build manager capacity
- Implement a new 'Connected Employee' concept in Kazakhstan (built around a smart helmet, smartphone, and smart bracelet for operational employees) and advance our existing digital projects (including the rollout of our MES and the testing of autonomous dump trucks) in compliance with applicable data protection laws and regulations
- Continue investigating Artificial Intelligence-based platforms to optimise operations, material tracking and reconciliation at Metalkol – and support simulation optimisation
- Consider further optimisation at Frontier

# VALUE DISTRIBUTION

## Strategic context

**Sustainable development of our host regions: All of the strategic priorities under our 2025 Strategy support our ability to generate current and future value, the majority of which is distributed to our stakeholders.**



### Relevant UN SDGs

➔ See p. 97 for associated UN Targets.

Our ability to generate long-term shareholder value is contingent not only on revenue generation, but also on the distribution of economic value to our other stakeholders. This includes employees, local communities (and regions), governments and capital providers.

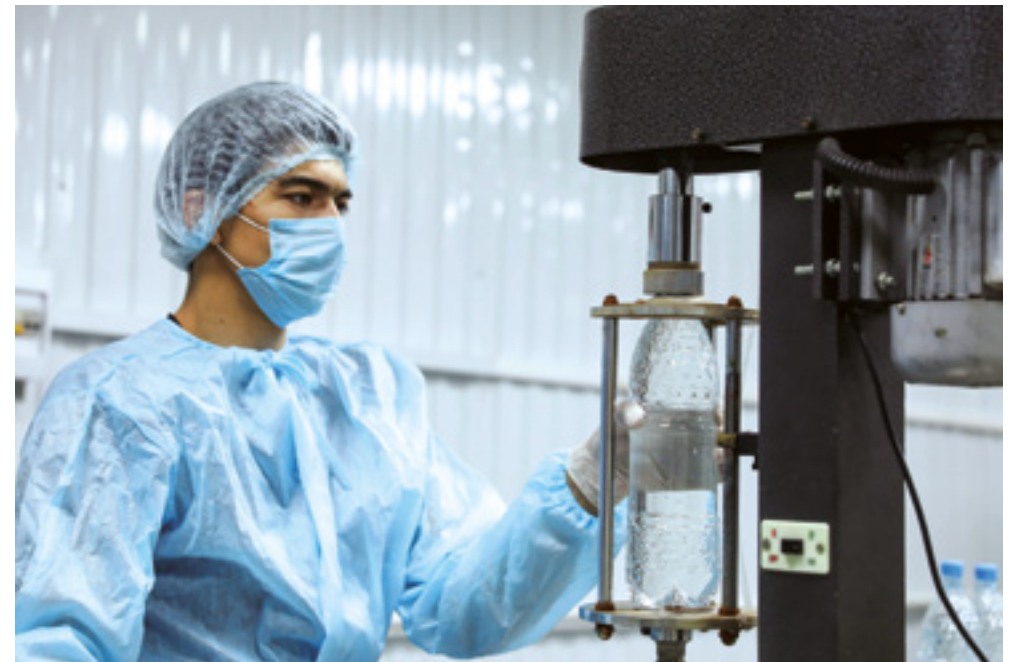
Information on how we distribute value to our employees and communities more broadly can be found on p. 56 and p. 63, respectively. Information regarding our promotion of local content and our payment of taxes to governments is set out in this section.

## What we are doing

### Supporting local content

#### 📍 Kazakhstan

We source, where it is commercially feasible to do so, products, works and services from domestic suppliers. Key categories in this regard include exploration services, stripping services and drilling and blasting services, as well as raw materials, fuel, PPE and industrial clothing.



## SUPPORTING LOCAL SMEs IN THE AKTOBE REGION

In 2023, we invested US\$1.1 million to help launch a programme to develop and support small and medium-sized enterprises (SMEs) in the city of Khromtau, Aktobe region. This is being done in partnership with the Akimat of Aktobe, the DAMU Entrepreneurship Development Fund and National Chamber of Commerce 'Atameken'.

Examples of supported businesses include:

- Auto repairs
- Cargo transportation
- Waste sorting
- Leisure activities
- Food retail

In 2023, we continued our work with the following organisations to promote the development of new local businesses that can service our own needs, as well as the needs of the broader mining and metals sector:

- Ministry of Industry and Construction of the Republic of Kazakhstan
- National Chamber of Entrepreneurs of Kazakhstan 'Atameken'
- National Centre for Industry and Export 'QazIndustry'

This included participation in working groups focused on developing proposals to draft laws relating to subsoil use and improving the investment climate. Discussions were focused on the business environment, stock trading, support for local content, the development of SMEs and efforts to increase the share of in-country local content in domestically produced goods.

We hold regular roundtable discussions on production localisation with participants including QazIndustry, the National Chamber of Entrepreneurs of the Republic of Kazakhstan 'Atameken', regional akimats and local producers.

In addition, we continued to implement an Import Substitution and Localisation Programme to help domestic suppliers meet international standards and attract investment. This includes the offer of long-term or offtake contracts for goods and services. In 2023, we signed contracts for high pressure hoses, pump parts, metal fasteners and lime worth a total of US\$20.3 million.

We also:

- Sign long-term agreements to buy products from domestic producers that are planning to establish the production of goods in Kazakhstan from 2025, including those relating to electric motors, pumps and electrical equipment
- Hold annual ERG Supplier Awards to recognise the efforts of our suppliers, including domestic suppliers (with one of these being a Sustainability Award focused on human rights, anti-corruption and environmental protection)

### Africa

In the DRC, the 2018 Mining Code requires us to prioritise local companies to support our operations. The DRC's Regulatory Authority for Subcontracting in the Private Sector (ARSP) regularly validates that we procure all our consumables and services from DRC licensed companies.<sup>1</sup> There are similar provisions in relation to employees, reflected in the fact that most of our employees in the country are Congolese nationals.

Key categories of products and services that we source from companies in the DRC and other parts of Africa include spare parts for our operational fleet, chemicals, contractor services, mechanical services, and fuel and lubricants.

The nature of the DRC economy means that we have to rely heavily on local companies that import key inputs from abroad, limiting the indirect and induced impact of our local procurement efforts.

Nonetheless, we are working with companies in the DRC to help them achieve the international standards and operational capabilities they need to service our operations directly, as well as the ARSP certification requirements. Once companies are onboarded, we provide monthly performance reviews and advice on how to improve their maturity levels, if needed.

### Brazil

BAMIN's Local Supplier Development Programme is nurturing local companies to help support the development of all parts of this integrated operation, including the Pedra de Ferro mine, FLOL 1 railway and Porto Sul port. This includes the building of their capacity with respect to business management, marketing and quality assurance, as well as sustainability (including health and safety). We aim to ensure they can meet our own standards and are equipped to explore opportunities with other companies. In 2023, key activities included the identification, engagement, assessment and development of local companies involved in construction and facilities services. In addition, selected companies started to participate in training programmes focused on strategic planning, finance and marketing. These activities ran in parallel with our ongoing Projeto Básico Ambiental (PBA, p. 61) programmes aimed at improving the professional capabilities of local people and providing practical guidance to local entrepreneurs and micro-businesses.

### Tax payments and transparency

Our Group Tax Policy commits us to (among other things) complying not only with the letter but also the spirit of all local laws. In terms of transfer pricing, we conduct all internal transactions on an arm's length basis and determine pricing in line with the nature of the economic functions performed and risks taken by each company. In addition, we follow the methods and principles set out in the OECD Transfer Pricing Guidelines and retain relevant documentation relating to our intercompany transactions to demonstrate compliance with the same.<sup>2</sup>

Our Group Tax Code of Conduct includes detailed guidance with respect to tax reporting, transfer pricing, tax dispute resolution and tax risk management (among other issues) – as well as our tax assurance process. We submit Extractive Industries Transparency Initiative (EITI) reports in Kazakhstan, the DRC and Zambia, as required.<sup>3</sup> In addition, we file the following with the Luxembourg authorities:

- Report on Payments to Governments under the EU Accounting Directive (2013/34/EU)<sup>4</sup>
- OECD Country-by-Country Report under OECD BEPS Action 13



1 With exceptions where Congolese expertise is unavailable or inaccessible.

2 In December 2023, the Luxembourg Parliament adopted the bill of law implementing the EU Directive on global minimum taxation rules – Pillar 2. ERG has analysed the impact of Pillar 2 for the Group to ensure full compliance with the Directive.

3 For more information on EITI status in our countries of presence, see p. 88 and [eiti.org](http://eiti.org)

4 EU, Directive 2013/34/EU, see [eur-lex.europa.eu](http://eur-lex.europa.eu)

## Our performance

In 2023, our revenue decreased by 18% primarily due to lower prices across the majority of our portfolio. We distributed US\$7,283 million to our stakeholders (2022: US\$7,254 million) with this slight increase largely reflecting higher operating costs and payments to suppliers as well as capital expenditure.

These increases were, however, partially offset by:

- Lower corporate income tax and royalty payments mostly due to lower prices and increased costs
- Reduced dividend payments to shareholders
- Lower sponsorships and donations in Kazakhstan. This decrease primarily reflects the one-off donation of US\$65 million in 2022 to support the establishment of the Kazakhstan Khalkyna public social fund (p. 64)

## Economic value generated and distributed (US\$M)

Type	Detail	Value in 2023					2022	2021
		Kazakhstan	Africa	Brazil	Other	Total	Total	Total
<b>Economic value generated</b>		<b>4,726</b>	<b>1,529</b>	<b>115</b>	<b>118</b>	<b>6,488</b>	7,750	7,994
<b>Economic value distributed</b>	1) Operating costs / payments to suppliers	(2,145)	(1,176)	(123)	(35)	(3,479)	(2,803)	(2,412)
	2) Employee wages and benefits	(888)	(185)	(15)	(92)	(1,180)	(1,135)	(956)
	3) Payments to providers of capital	(305)	(11)	–	(209)	(525)	(884)	(677)
	4) Tax expenses <sup>1</sup>	(468)	(182)	(6)	(15)	(671)	(1,257)	(1,426)
	5) Community social investment	(42)	(8)	(2)	–	(52)	(95)	(65)
	Other <sup>2</sup>	(933)	(336)	(102)	(5)	(1,376)	(1,080)	(704)
	Total	(4,781)	(1,898)	(248)	(356)	(7,283)	(7,254)	(6,240)
<b>Economic value (released) / retained</b>		<b>(55)</b>	<b>(369)</b>	<b>(133)</b>	<b>(238)</b>	<b>(795)</b>	496	598

## Domestic spending in Kazakhstan (US\$M)

Procurement spend type	2023	2022	2021
Total value of purchases from local producers (including intercompany procurement)	<b>2,593</b>	2,318	1,975
Total value of purchases from local producers (excluding intercompany procurement)	<b>1,240</b>	1,127	908
Share of local procurement in overall procurement <sup>3</sup>	<b>48%</b>	44%	49%

## Key local procurement figures

Kazakhstan		Africa	Brazil	
<b>48%</b>	<b>19%</b> <sup>4</sup>	<b>86%</b>	<b>100%</b>	<b>39%</b>
sourced from within the country (i.e. domestically produced) (2022: 44%)	sourced from companies operating in our local mining towns <sup>5</sup> (2022: 18%)	sourced from domestically registered companies (2022: 86%)	sourced from Brazilian companies (2022: 99%)	sourced from companies located in the state of Bahia (2022: 43%)

<sup>1</sup> Tax expenses are accrued taxes for the year 2023, while tax payments are actually paid taxes in 2023 (p. 32).

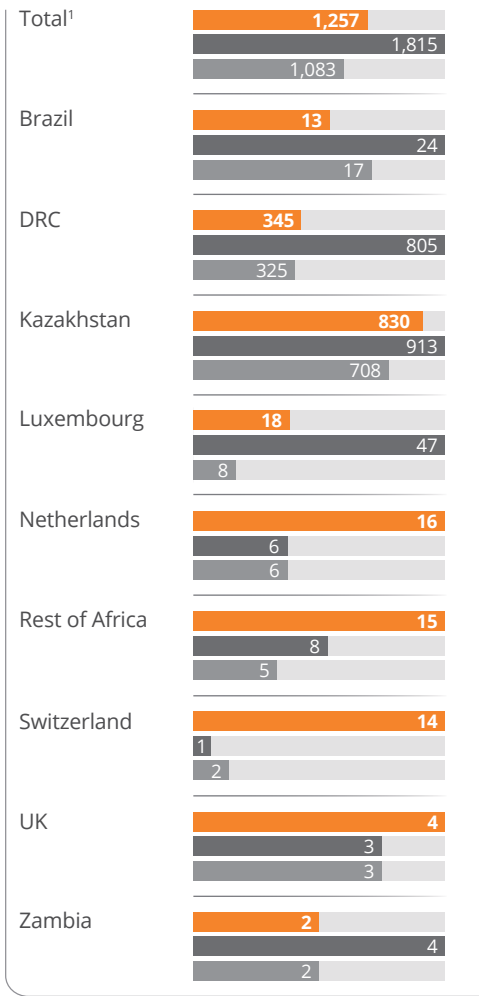
<sup>2</sup> Other includes capex, i.e. capitalised cash outflow for property, plant, equipment and intangible assets, net of capitalised borrowing costs and capitalised salaries. Capex is presented gross before taking into account any disposals of property, plant and equipment.

<sup>3</sup> Excluding intragroup purchases. Includes goods, works and services.

<sup>4</sup> Including intragroup purchases.

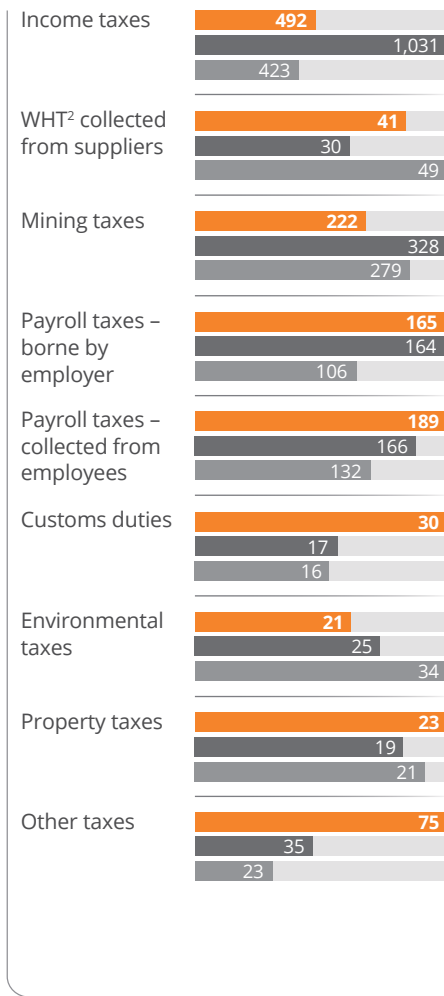
<sup>5</sup> The following mining towns are included in calculations: Aksu, Ekibastuz, Arkalyk, Lisakovsk, Rudnyi and Khromtau.

### Group tax payments by location (US\$m)



■ 2023 ■ 2022 ■ 2021

### Group tax payments by type (US\$m)



### Taxes and duties

We paid US\$1,257 million to governments in taxes and duties (2022: US\$1,815 million), with this reduction primarily reflecting lower corporate income tax and royalty payments. In turn, these lower payments were mainly driven by a decline in cobalt prices and lower cobalt hydroxide production volumes at Metalkol. In addition, the 2022 figure was inflated by the fact that our businesses in Kazakhstan paid some 2021 tax payments in 2022 (i.e. on top of their 2022 tax payments).

### Next steps

For further details on how we plan to maintain and grow the value that we generate and distribute, see the other sections of this chapter.

<sup>1</sup> Please note, the figures for total payments also include taxes paid in other countries (less than US\$150,000 in 2023), which are not listed separately in the graph for rounding reasons.

<sup>2</sup> Withholding tax.

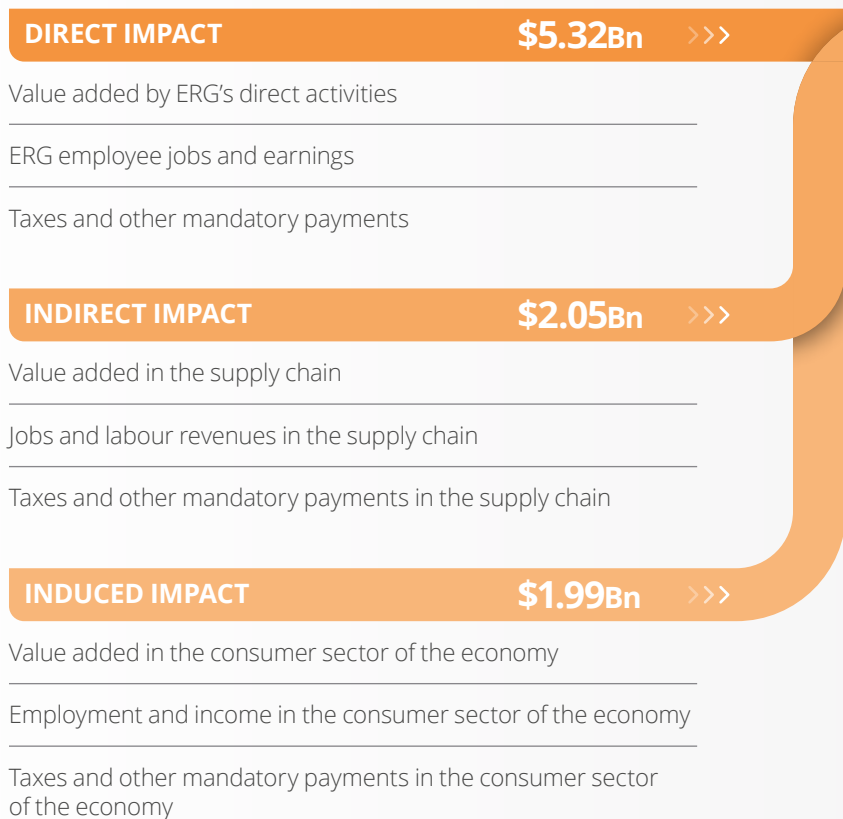
# Our economic impact in Kazakhstan

ERG is making a lasting, positive economic impact in Kazakhstan. This includes the value generated by our direct activities, the jobs we create, the wages we pay and our tax contributions (our direct impact). It also includes the impact of our supplier spending, as well as the jobs our suppliers create, the wages they pay and the tax contributions they make (our indirect impact).

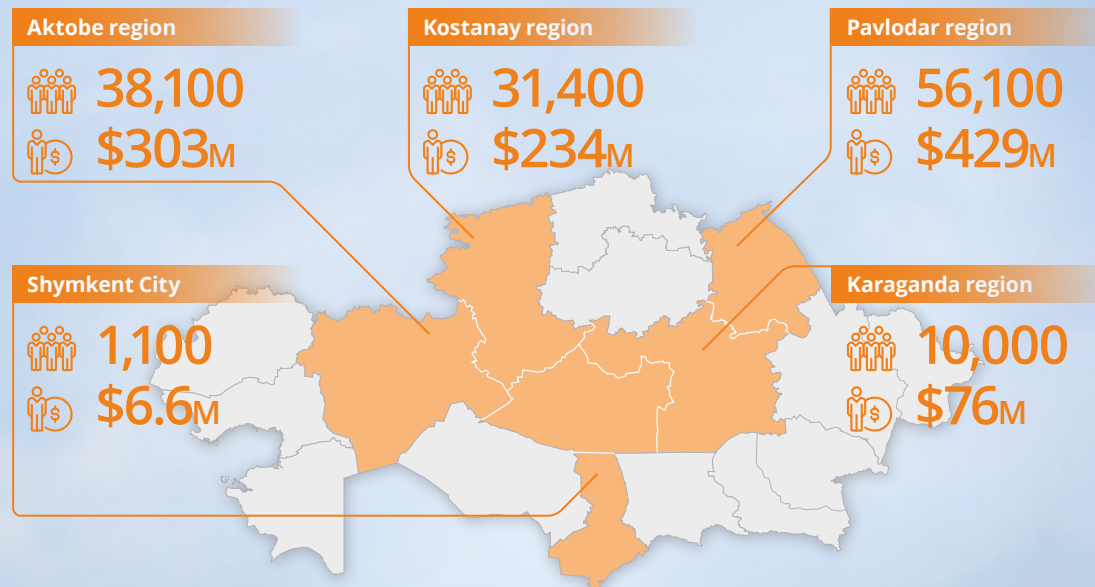
Beyond this, the spending of our employees and those of our suppliers helps to generate further impact in consumer sectors and additional tax contributions (our induced impact).

More broadly, we aim to support the development agenda of the Government of the Republic of Kazakhstan (p. 78).

## OUR TOTAL ECONOMIC IMPACT<sup>1</sup>



## REGIONAL OUTCOMES



<sup>1</sup> Data taken from a socio-economic contribution report produced by EY (covering the period 2021-2022). All figures for 2022 (unless otherwise stated). The figures quoted in US\$ have been converted from Tenge using an end-2023 exchange rate (for consistency with the rest of this report).



# Environment

**We are committed to the responsible management of our environmental impacts and the implementation of international best practice.**

In Kazakhstan, our operations are certified to ISO 14001. In Africa, our Safety, Health and Sustainability (SHS) management system is informed by the standard (with plans to achieve certification at Metalkol in 2024), and our active operations are subject to mandatory, third-party Environmental and Social Impact Assessments (ESIAs) and related management plans. In Brazil, our BAMIN integrated iron ore and logistics operation implements an environmental management system to ensure its ongoing compliance with all environmental licence requirements.

➔ For additional information on our management approach, see p. 85 of the Appendix.

## RELEVANT PRIORITIES UNDER OUR 2025 STRATEGY

Sustainable development of our host regions

## 2023 HIGHLIGHTS

Ongoing implementation of our 10-year, \$480m Environmental Strategy to reduce our emissions to air

Approval for the construction of our 150 MW Khromtau-1 wind power project near Donskoy GOK

7.9 million tonnes of historical tailings reprocessed at Metalkol

## MATERIAL ISSUES

### Managing impacts on air and water

➔ See p. 35

### Energy and climate change

➔ See p. 40

### Tailings and broader waste management

➔ See p. 43

# MANAGING IMPACTS ON AIR AND WATER

## Strategic context

Sustainable development of our host regions: Under our 2025 Strategy, we have prioritised our contribution to the well-being of communities in our regions of operation. This includes a focus on avoiding and / or minimising any potential negative environmental impacts, including through the application of relevant international standards.



### Relevant UN SDGs

➔ See p. 97 for associated UN Targets.

The nature and location of our operations (including those in and around the city of Pavlodar<sup>1</sup>) mean that our Environmental Strategy in Kazakhstan is highly focused on reducing our emissions to air. We also actively manage our impacts on air quality in Africa and Brazil, as well as water quality in all of our operating regions.

## What we are doing Environmental Strategy in Kazakhstan

In 2023, we continued to implement our 10-year Environmental Strategy in Kazakhstan<sup>2</sup>, which is supporting our compliance with Kazakhstan's 2021 Environmental Code and bringing our practices in line with international best practice.



Our Strategy places particular focus on air quality – including the application of advanced filtration technology (p. 36). It also addresses:

- Biodiversity conservation
- Enhanced environmental monitoring
- Restoration of disturbed lands
- Waste management
- Water conservation

Our Strategy is supplemented by an internal environmental compliance framework, which covers issues including:

- Integrated audits and guidance around best available technologies
- Additional financial provisions for closure
- Relevant processes and guidance regarding site closure and remediation

We continued to actively engage with the Government of Kazakhstan regarding the practical implementation of the Code (e.g. liquidation fund requirements, best available techniques and the new national Water Code).

## NEW ENVIRONMENTAL POLICY IN KAZAKHSTAN

In 2023, we finalised a new Environmental Policy for Kazakhstan. This sets out our belief that sound environmental management is a fundamental element of responsible operational management, as well as a source of competitive advantage.

Among other things, the Policy requires us to:

- Ensure that environmental issues are taken into account as an integral part of business planning and decision-making processes
- Prevent and / or reduce any potentially negative environmental impacts, including by complying with relevant international standards
- Conduct open and transparent two-way communication on environmental protection issues with all stakeholders

1 The location of Aluminium of Kazakhstan's Pavlodar Aluminium Plant and Power Station, Kazakhstan Aluminium Smelter and ERG Service. Furthermore, the broader region hosts EEC's Aksu Power Plant and Vostochny coal pit, as well as Kazchrome's Aksu Ferroalloys Plant.

2 The Strategy was first implemented in 2018.

## Managing our emissions to air

### Kazakhstan

We are continuing to implement a 10-year, US\$480 million programme<sup>1</sup> to bring our metallurgical and power generation operations in line with European Union (EU) particulate matter standards. This includes significant ongoing investments in high-impact filter technology, as well as the conversion of some of our facilities from coal to gas fuel. In the latter case, in 2023 we installed a new gas-fired boiler and converted an existing boiler to gas at Kacharsky mine in the Kostanay region. This will significantly reduce its particulate, NOx, SOx and greenhouse gas (GHG) emissions.<sup>2</sup>

At the same time, we are using water-based dust suppression systems and reagents to reduce emissions to air from our ash dumps, slag dumps, tailings dams and other sources of dust. In 2023, new measures included:

- The use of new, environmentally friendly dust suppressants on Aksu Ferroalloys Plants' roads and the acquisition of watering trucks at Kachary Ruda
- The application of a new water-based dust suppression system at Donskoy GOK's unloading facilities, as well as related measures at Aluminium of Kazakhstan's Power Plant No. 1 ash dump

## Air quality monitoring

We continue to enhance our gas and particulate monitoring and analysis systems at the main sources of emissions and at the border of our enterprises' sanitary protection zones. In 2023 we worked on installing the at-source automated monitoring systems at Donskoy GOK, KAS, EEC, 3-Energoortalyk, Aluminium of Kazakhstan, Aktobe Ferroalloys Plant and Aksu Ferroalloys Plant. We plan to commission all at-source systems in Kazakhstan by the end of 2024.

During 2022-2023, we commissioned remote, automated monitoring systems on the edge of defined 'sanitary protection zones' at:

- Kazchrome (Aktobe Ferroalloys Plant, Aksu Ferroalloys Plant and Donskoy GOK)
- EEC (Power Plant and Vostochny coal pit)

We have already implemented similar systems at Aluminium of Kazakhstan's Pavlodar Aluminium Plant and Power Plant. These systems stream live air quality data to public, digital dashboards.

During the year, we also conducted a pilot launch of automated environmental data management systems at EEC and Aluminium of Kazakhstan. We are exploring the application of similar systems at our other enterprises in the country.

## Key particulate reduction activities in Kazakhstan in 2023

Region	Enterprise / operation	Activity	Status at the end of 2023	Reduction <sup>3</sup>
<b>Pavlodar</b>	Aluminium of Kazakhstan	Replacement of the ash collection facility at the power plant with a high efficiency bag filter	Implemented	-91%
<b>Pavlodar</b>	Aluminium of Kazakhstan	Pilot industrial testing of a Coromax filter system at the power plant to increase the effectiveness of the existing electric filter, with additional work carried out in 2023 to achieve further efficiency improvements	Ongoing	-66%
<b>Pavlodar</b>	Aluminium of Kazakhstan	Replacement of four new hybrid filters at Pavlodar Aluminium Plant's sintering shop, following the commissioning of two advanced filters in 2021	Ongoing	-99%
<b>Pavlodar</b>	Aksu Ferroalloys Plant	Replacement of gas cleaning equipment at Workshop No. 4 (Furnace No. 42)	Ongoing	-43%
<b>Aktobe</b>	Aktobe Ferroalloys Plant	Replacement of two electrostatic precipitators with high-efficiency bag filters at Smelting Workshop No. 2 and installation of a new bag filter at Smelting Workshop No. 1	Implemented	-94%
<b>Kostanay</b>	SSGPO	Commissioning of a new gas-fired boiler and the conversion of an existing boiler from coal to gas	Implemented	-100%
<b>Kostanay</b>	SSGPO	Reconstruction of Boiler Unit No. 1 at the Rudnenskaya Power Plant, including the replacement of its ash collection plants	Ongoing	-97%

1 The value of the programme was updated in 2022 to reflect variables such as inflation, the integration of new projects, updated prices and engagement with new vendors.

2 NOx – nitrogen oxides, SOx – sulphur oxides.

3 Actual or anticipated reduction in annual emissions at specific operations' facilities (i.e. power unit, sintering shop, furnace etc.).

## Africa

The nature of our operations in Africa means that our main (non-GHG) emissions to air typically relate to:

- Dust from mining and road transport, which we control through water spraying and chemical suppressants
- Diesel-related particulate emissions from vehicles and generators

We apply air and water monitoring plans prepared by third-party specialists, which cover our own active sites and their surrounding villages. Results are verified via external laboratory analysis and are reviewed by third parties, prior to their annual submission to the DRC Government.

At Metakol, we also apply:

- Monthly<sup>1</sup> air quality monitoring, including 'directional' dust monitoring to support more timely and effective controls, with supplementary directional monitoring stands installed at our plant and in the villages of Tshala and Kamimbi
- Molasses-based road treatments to minimise dust across 47km of onsite access roads during the dry season



## Brazil

Our efforts in Brazil are defined by our mandatory environmental plans (Projeto Básico Ambiental, PBAs)<sup>2</sup>, as well as relevant licence conditions.

At BAMIN's Pedra de Ferro mine, we maintain an automated air quality monitoring system, which uses six monitoring stations to measure general dust, PM2.5 and PM10 emissions around the operation. We also apply a range of dust control measures, including road spraying and the use of polymer dust suppressants on our ore stockpiles and wind barriers.

In addition, we are implementing measures to control particulate emissions associated with our FIOLE 1 construction activities. This includes covering trucks that transport materials and wetting roads during drier periods. At Porto Sul, we apply water spraying to unpaved roads and service access roads to minimise traffic-related dust, and also monitor vehicle emissions.

## Managing our water emissions

### Kazakhstan

We recycle the majority of our process water, and monitor both our discharges and local groundwater. This includes the monitoring of observation wells around potential pollution sources (e.g. reservoirs, waste landfill sites, tailings storage facilities, slag dumps and ash dumps, etc.).

Examples of measures we have taken – and are currently taking – to improve our water management performance are set out in the table below.

### PILOTING OF A REGION-WIDE WATER AUDIT PROGRAMME

In 2023, we launched a water audit of our operations in Kazakhstan. The results (which are due in 2024) will be used to develop new projects to reduce our primary water consumption, including through the treatment and recycling of our discharges. This will support our efforts to improve the quality of our water discharges.

### Key water management activities in Kazakhstan in 2023

Region	Enterprise/operation	Activity	Status at the end of 2023	Impact <sup>3</sup>
<b>Pavlodar</b>	Aksu Ferroalloys Plant	Initiation of construction of a new stormwater treatment facility (as part of a broader project to separate and return stormwater into the process cycle)	Ongoing	1,310 million m <sup>3</sup> reduction in water intake
<b>Aktobe</b>	Donskoy GOK	The return of mine water to production, eliminating discharges – with commissioning due in early 2024	Ongoing	Elimination of all mine water discharges
<b>Karaganda</b>	Shubarkol Komir	Cleaning of the wastewater treatment plant's receiving basin, with the aim of improving its operational efficiency	Implemented	To be confirmed following laboratory testing
<b>Karaganda</b>	Shubarkol Komir	Development of a project to reconstruct domestic and floodwater treatment facilities	Ongoing	To be confirmed once the project is implemented

<sup>1</sup> Compared to the regulatory requirement for quarterly monitoring.

<sup>2</sup> The PBA for FIOLE 1 was given partial approval in 2023, with final approval pending.

<sup>3</sup> Actual or anticipated annual impact at specific operations' facilities (i.e. power unit, sintering shop, furnace etc.).

## Africa

Our operations in Africa apply a range of measures to support responsible water management. For example, at Metalkol we:

- Apply a comprehensive upstream / downstream water quality monitoring system to monitor (in line with relevant regulatory requirements) the quality and levels / flow of local surface water (monthly), groundwater (quarterly) and drinking water (monthly) – with testing results subjected to laboratory analysis. We supplement this with 'beyond compliance' daily testing of surface and groundwater around the processing plant, as well as weekly laboratory-based testing of the same
- Recirculate all of the operation's process water without it being discharged to the environment, except for exceptional events during periods of very heavy rain. Where process water is discharged in such circumstances, it is subject to monitoring to ensure it stays within permitted limits
- Implement a range of measures to prevent and contain potential acid spillages, including automated truck unloading systems, bunding and specialised storage systems
- Use recycled water and molasses to suppress road dust

Similarly, Frontier applies mandatory water quality monitoring and uses settling ponds to reduce suspended solids in water pumped from its pit, prior to its discharge to the environment.

At Boss Mining, we monitor water quality on a daily, monthly and quarterly basis (depending on the parameters being measured). In 2023, we used the suspension of operations at Boss Mining following localised flooding there (p. 60), to further enhance our water management processes. This included:

- The installation of a new tailings neutralisation plant to further improve our existing treatment processes
- The enhancement and maintenance of existing water infrastructure

## Brazil

At BAMIN, our water management activities are determined by the terms of our PBAs and broader environmental licence requirements. We monitor water quality at the Pedra de Ferro mine using multiple surface water, groundwater and discharge monitoring points, which assess up to 23 parameters. We also monitor surface water and groundwater levels, plus rainfall.

Effluents from our Porto Sul port development are managed by a specialised licenced company. We also apply a Sediment Quality Monitoring Programme at the port to monitor potential impacts on the onshore and offshore environment. We currently monitor onshore water quality via 14 sampling stations near local rivers, streams and estuarine systems. This is in addition to the monitoring of planktonic and benthic communities in the project's areas of influence.

As we progress the construction of the FIOL 1 railway (p. 23), we are taking particular care to avoid negative impacts on the rivers intercepted by the rail route. We monitor the quality of surface water in the main waterbodies that interact with the railway, as well as any changes in their aquatic systems. This takes place via 75 sample collection points.

## MINIMISING BAMIN'S IMPACTS ON LOCAL WATER AVAILABILITY

Our Pedra de Ferra mine currently uses a dry beneficiation process, limiting its water consumption. Its future impact in this regard will be further limited by the fact it will use a dry stack tailings storage facility. This will increase water recovery by 18% – resulting in a total water recovery rate of 90%.

In addition, BAMIN is implementing a Water Replacement Programme to guarantee a minimum replacement rate, should expanded mining activity lower the local water table. The Programme is focused on the nearby Antas and Jequitai streams, which would be supplemented with pit water where necessary. This will help maintain local aquatic ecosystems, as well as the availability of water for local users.





## LARGE-SCALE TREE-PLANTING IN KAZAKHSTAN

**In 2023, we continued planting trees across our Kazakhstan region at scale. This is with the aim of supporting local biodiversity and improving peoples' quality of life.**

We aim to plant around 420,000 trees in Kazakhstan by 2025, focused on the sanitary protection zones (SPZs) around our operations and at the operations themselves. In 2023, this included the planting of:

- Pavlodar: 10,000 trees
- Aktobe: 18,000 trees
- Kostanay: 14,000 trees
- Karaganda: 2,500 trees

## Our performance

In Kazakhstan, our total annual particulate and gas emissions to air<sup>1</sup>, as well as the volume and quality of our water discharges<sup>2</sup>, remained within permitted annual total limits.

In Africa, the quality of our air emissions at Frontier and Metalkol remained within permitted annual limits. Frontier experienced a number of temporary exceedances during the dry season, due to road dust and bush-burning by some of the nearby communities.

Frontier did not experience any regulatory exceedances with respect to surface water monitoring and / or the quality of its water discharges. At Metalkol, we experienced regulatory water quality exceedances for total suspended solids and total dissolved solids in our discharges. Upstream and downstream monitoring demonstrates, however, that this is due to the presence of third-party upstream operations. Analysis of Metalkol's upstream and downstream monitoring results show no negative impacts on water quality as a result of its operations.<sup>3</sup>

In Brazil, PM2.5 and PM10 emissions from our Pedra de Ferro mine were within average annual regulatory limits and it did not experience any temporary exceedances. The mine did register 10 complaints related to dust impacts, however. As a result, we implemented enhanced control measures (such as speed controls on vehicles, road watering, wind fences and the application of polymers on ore piles), to prevent reoccurrence. In terms of water quality, the mine was within regulatory limits and experienced no temporary exceedances, except for the parameters historically registered as above limits, which are considered a preexisting condition of the project's environment.

## Next steps

In 2024, we plan to continue implementing measures to reduce our particulate emissions in Kazakhstan. This will include filter upgrades, as well as the commissioning of automated air quality monitoring systems at all emissions sources at relevant operations. We also plan to:

- Convert a further boiler at our Kacharsky mine from coal to gas, completing the gas conversion project at the site
- Complete the preliminary audit of the water balance at all of our operations in Kazakhstan, as well as the quality of their discharges, to inform future actions focused on discharge minimisation, treatment and reuse
- Identify enhanced water treatment technologies to be applied at our mining operations

In Africa, we plan to continue the implementation of clean drinking water initiatives in local communities as well as engaging further with local medical professionals to better understand the potential health risks posed by mining-related pollution to human health in the Kolwezi region of the DRC (p. 70), and working with peer companies in the region to establish how these can best be addressed.

In Brazil, we will continue to focus on the implementation and update of our PBAs (and, by extension, compliance with our licence requirements) as we expand operational activity at the railway and port. In addition, we will also continue to consider potential engineering enhancements at FIOL 1, with a focus on ensuring that the project does not result in negative impacts on the rivers intercepted by the rail route.

<sup>1</sup> Measured on a quarterly basis.

<sup>2</sup> Measured on a quarterly basis.

<sup>3</sup> Our previous report stated that there had been no surface water monitoring exceedances in 2022. Surface water monitoring exceedances did in fact take place in 2022, although these related to third-party upstream operations. Our own water discharges were (as previously stated) within regulatory limits.

# ENERGY AND CLIMATE CHANGE

## Strategic context

**Sustainable development of our host regions: Under our 2025 Strategy, we have prioritised our contribution to the well-being of communities in our regions of operation. Our focus on maintaining international environmental standards to support local well-being includes the management of our carbon emissions and the use of renewable energy.**



### Relevant UN SDGs

➔ See p. 97 for associated UN Targets.

We account for 14% of national installed electricity generating capacity in Kazakhstan. This is used to power our own operations, as well as third-party electricity customers. The fact that around 90% of the power we produce is generated using coal, means our carbon footprint in the country is substantial. Our operations in Africa primarily rely upon third-party generated hydropower.

In 2023, we took a major step by finalising a Decarbonisation Strategy for our Kazakhstan region, where the vast majority of our carbon emissions occur. Importantly, this commits us to achieving Net Zero by 2050. It is in this context that we plan to reduce our carbon intensity by increasing, over time and subject to immediate internal and external energy demands, the proportion of energy we get from non-coal sources. Although this will be a gradual process, it is a journey we are committed to making.

The global energy transition also offers considerable opportunities. It is widely anticipated that this will drive a long-term increase in demand for key 'transition metals' that we produce, such as cobalt, copper and aluminium. Likewise, ferroalloys will also play a key role in the development of new renewable and nuclear generation capacity.

## What we are doing

### Our approach to climate change in Kazakhstan

Given that Kazakhstan represents our main source of emissions, our efforts are focused on improving the efficiency of our production processes, reducing (over time) our reliance on coal-generated power and increasing our renewable energy generation capacity. This approach will help us navigate an anticipated future tightening of carbon regulation in Kazakhstan. It will also help mitigate the potential impact of the EU's planned Carbon Border Adjustment Mechanism (CBAM), which will apply levies on imports into the EU based on their carbon footprint (with payments due from 2026).

In 2023, we adopted a new Climate Change Impact and Adaptation Management Policy for Kazakhstan. Among other things, this commits us to:

- Incorporating the cost of carbon emissions into business decisions across our entire value chain
- Identifying and prioritising opportunities to reduce our carbon footprint, including through energy efficiency, resource efficiency and waste efficiency
- Calculating our Scope 3 emissions and highlighting the need for our partners, contractors and suppliers to assess and reduce their carbon footprints

### THE ROAD TO NET ZERO VIA OUR DECARBONISATION STRATEGY FOR KAZAKHSTAN

In 2023, we finalised a defined Decarbonisation Strategy for our Kazakhstan region, which will systematise our GHG reduction efforts and enhance the long-term competitiveness of our products. Importantly, it is built around the following goals:

- Net Zero by 2050
- 30% reduction in the carbon footprint of key products (ferrochrome, aluminium and iron ore pellets) by 2035

These goals are supported by defined roadmaps for the decarbonisation of key assets in the country, including a focus on identifying the preliminary investment requirements needed to achieve our goals, as well as the necessary conditions for project implementation.

The finalisation of the Strategy marks a major step as we proactively navigate the significant regulatory and market changes that are expected to be driven by decarbonisation efforts in Kazakhstan and our key sales markets.

- Participating in public policy development around climate change by offering insight and proposals to help ensure predictable long-term conditions that support GHG reductions and promote the circular economy
- Promoting innovative low emission technology through partnerships with other metals and mining actors, technology companies and specialist accelerators

➔ For more information, see: [www.erg.kz](http://www.erg.kz)

## Understanding our climate risks in Kazakhstan

Our approach to managing our carbon emissions is closely informed by a thorough understanding of the risks (and opportunities) that climate change poses to our business.

### Transition risks

Our climate-related transition risks in Kazakhstan (our main source of carbon emissions) relate to:

- Reduced carbon quotas and / or the application of carbon taxes
- The impact of the EU's CBAM (particularly in relation to our aluminium, ferrochrome and iron ore sales)
- The development of Kazakhstan's energy system, including plans for the development of renewable energy sources
- Increased interest rates as finance providers apply carbon-related environmental, social and governance (ESG) criteria

We conduct systematic analysis of the risks posed to our business in Kazakhstan by the transition to a low-carbon economy, and develop appropriate mitigation measures. As part of this activity, in 2023 we:

- Finalised a Decarbonisation Strategy, which was informed by assessments of our competitiveness based on our carbon footprint indicators, related market risk assessments and the development of roadmaps for reducing the carbon footprint of our products
- Modelled Kazakhstan's energy system, which will enable us to understand the implications of operating our own energy facilities within the national system and to effectively plan for the development of a portfolio of renewable energy projects

- Analysed potential regulatory developments with respect to emissions trading in Kazakhstan, including scenario analysis and the development of our strategy towards the implementation of decarbonisation projects

We intend to continue this work in the future. This will enable us to develop an optimal portfolio of energy assets and economically viable decarbonisation projects.

### Physical risks

We also analyse the physical risks posed by climate change to our key production assets in Kazakhstan. We plan to develop this work further, including through continued research into key risk areas and quantitative risk assessment.

### Integrating GHG reduction measures into project evaluation

In 2023, we developed an internal methodology to assess the economic impact of GHG emissions on investment project evaluation. This methodology will allow for the systematic evaluation of projects in terms of their future GHG-related payments, helping us prioritise our investments in the context of a low-carbon economy.

### Product footprinting

We also initiated a project to calculate the carbon footprint of our key products in Kazakhstan (aluminium, ferroalloys and iron ore products), using an automated process. This will put us in a strong position to understand the potential impact of climate transition risks on our business, pursue opportunities to reduce our product footprints and deliver higher levels of transparency to our customers.

## Energy efficiency in Kazakhstan

All ERG enterprises that operate power generation facilities<sup>1</sup> are certified to the ISO 50001 energy management system standard. We are pursuing a range of strategic projects to enhance our energy efficiency in the region, including:

- Heat recovery projects at Aluminium of Kazakhstan's Pavlodar Aluminium Plant and Power Plant, Kazakhstan Aluminium Smelter, Aksu Ferroalloys Plant, Aktobe Ferroalloys Plant and SSGPO – including the launch of an audit in 2023 to assess heat recovery potential
- Renovation of the No. 1 boiler at SSGPO's Power Plant<sup>2</sup>
- Optimisation of Aluminium of Kazakhstan's bauxite leaching process and Kazchrome's smelting process
- Installation of enhanced sintering equipment at SSGPO
- Development of thermal efficiency projects at our Aluminium of Kazakhstan, SSGPO and EEC power plants

In addition, we have identified the energy efficiency potential at all of our operations to help identify and prioritise our future energy efficiency efforts.

We continue to investigate opportunities to generate energy using off-gas from our ferroalloys production processes. We are continuing to explore opportunities to implement this technology at Aktobe Ferroalloys Plant. At Shubarkol Komir's Soft Coke Plant, we are developing a small-scale generation project using off-gases. While related measures do not appear to be economically viable at Aksu Ferroalloys Plant, we are examining the potential modernisation of EEC's Power Unit No. 7, which could see the use of Aksu Ferroalloys Plant's off-gas there.

In addition, we applied a range of more incremental energy efficiency measures under our 2021-2025 Energy Efficiency Plan. In 2023, these reduced our consumption by 2,886 terajoules (2022: 1,339 terajoules).

## IMPACT OF THE KHROMTAU-1 WIND POWER PROJECT

Once fully established, our US\$170 million Khromtau-1 project is expected to help us avoid 4,000 tonnes of particulate and gas emissions per year as well as up to 0.5 million tonnes of GHG emissions per year that would otherwise have been caused by our energy generation activities.

This included:

- **EEC:** Installation of an upgraded heating scheme to reduce Unit No. 8's cooldown time
- **Aksu Ferroalloys Plant:** Installation of a frequency converter on the motor of a turbo gas blower at Melting Shop No. 2
- **Aktobe Ferroalloys Plant:** Installation of thermal insulation on two heat exchangers
- **SSGPO:** Installation of frequency-controlled converters on four pumps, as well as the restoration of the lining and thermal insulation of a boiler unit at the power plant

## Renewable energy

In addition to purchasing defined amounts of renewable energy in Kazakhstan (as required in the context of national renewable energy targets<sup>3</sup>), we are continuing to expand our own renewable generation capacity. This includes the advancement of our 150 MW Khromtau-1 wind power project near Donskoy GOK – with construction and installation work expected to be completed in 2025. There is potential to further expand wind capacity at the site by an additional 155 MW. This is in addition to a feasibility project for the potential development of a 4.8 MW solar project at Shubarkol Komir.

As part of our Decarbonisation Strategy, we will continue to investigate the potential development of additional large-scale wind and solar projects at other sites in Kazakhstan – with wind monitoring completed at six prospective sites.

<sup>1</sup> With the exception of 3-Energoortalyk.

<sup>2</sup> With work on the No. 3 boiler currently suspended based on economic analysis.

<sup>3</sup> National targets are in place to generate: (1) 15% of electricity from renewables (i.e. wind, solar and small-scale hydropower) by 2030; and (2) 50% of electricity from renewables and alternative energy sources (e.g. nuclear power) by 2050.

## NEW ENERGY SECURITY POLICY FOR KAZAKHSTAN

In 2023, we developed a new Energy Security Policy to manage our energy security in Kazakhstan. This is in recognition of the need to ensure we maintain a reliable, sustainable and cost-effective energy supply in a rapidly changing global and local energy landscape – and will directly support our Energy Security Strategy, which will be implemented in 2024.

The Policy is focused on the establishment of energy security metrics for each of our operations, the definition of associated targets and the identification / implementation of projects to achieve these targets. The policy takes into account the need to minimise our carbon footprint, as well as our broader environmental impacts.

In comparison to Kazakhstan, our carbon footprints in Africa and Brazil are relatively small. We plan to increase our use of wind and solar power at BAMIN, as operational activity there expands. The carbon credentials of the operation are further bolstered by the fact that the very high iron content of its ore helps reduce its transportation- and smelting-related emissions. In the DRC, we are examining opportunities to supply Metalkol and Frontier with solar power, and to develop long-term hydropower projects to support both our operations and local communities.

## Energy security in Africa

In the DRC, national utility company SNEL is the primary supplier of power to our operations. While most of this power is generated using hydropower (helping to limit our carbon footprint), it is unreliable, with power outages continuing to affect the country. This reflects inadequate national supply, maintenance challenges, failing infrastructure and sometimes low water levels. These outages continued to worsen in 2023, largely due to an ongoing increase in regional demand linked to expanded third-party mining activity. As a result, we have had to increase our reliance on backup diesel generators, increasing our costs, impacts on air quality and GHG emissions.

In this context, we are exploring how we can reduce our existing power consumption, import more energy from outside of the DRC, develop renewable energy projects (including solar and hydropower) and work with both SNEL and peer companies to improve external power infrastructure.<sup>1</sup>

## Our performance

In 2023, our total energy consumption increased slightly to 278,174 terajoules (2022: 276,502 terajoules).<sup>2</sup> At the same time, our Scope 1 and Scope 2 GHG emissions decreased slightly to 29.4 million tonnes of CO<sub>2</sub>e (2022: 29.8 million tonnes of CO<sub>2</sub>e),<sup>3</sup> mainly due to changes in our production volumes.<sup>4</sup> Almost all of these emissions are produced in Kazakhstan, due to the nature and scale of our operations there.

At Metalkol, our GHG emissions were higher than in previous years, due to our increased reliance on diesel generators to address network power outages.

## Energy consumption breakdown (terajoules)

Type	Energy source	2023	2022	2021
Direct	Coal	223,446	223,185	226,857
	Petrol	120	111	102
	Residual fuel	6,845	6,815	6,566
	Diesel	10,913	10,037	10,278
	Natural gas	31,904	33,233	32,959
	Kerosene	15	14	14
	Subtotal	273,244	273,395	276,776
Indirect <sup>5</sup>	Electricity	4,682	2,877	2,811
	Heat	182	179	188
	Steam	66	51	66
	Subtotal	4,930	3,107	3,065
Total		278,174	276,502	279,841

## GHG emissions (million tonnes CO<sub>2</sub>e)<sup>6</sup>

	2023	2022	2021
Scope 1 emissions <sup>7</sup>	29.3	29.7	30.2
Scope 2 emissions <sup>8</sup>	0.1	0.1	0.1
Total	29.4	29.8	30.3

## Next steps

In 2024, we plan to:

- Monitor the implementation of our Decarbonisation Strategy in Kazakhstan and explore further opportunities to reduce our carbon intensity in the country
- Continue work to expand our renewable energy generation capacity and focus our portfolio growth on assets that support the low-carbon economy (p. 41)

- Finalise the development of appropriate methodologies to calculate the carbon footprint of the products we produce in Kazakhstan (and automate related processes)
- Conduct our 2023 carbon footprint calculation at Metalkol, which will inform our future management actions at the operation
- Expand our work with SNEL to improve power infrastructure

1 Note that we have suspended the potential use of a fast-acting, battery-based backup system at Metalkol, given the overall structural power deficit.

2 Restatement from 276,250, due to revised figures from Brazil that reflect the inclusion of additional data on electricity purchasing, data recategorisation and the inclusion of vehicle diesel consumption data. GHG emissions data has been adjusted accordingly.

3 Restatement; see table on GHG emissions.

4 Note that our emissions include those associated with our industrial processes in Kazakhstan, meaning they are not entirely determined by our energy consumption.

5 Excluding internal purchases of internally generated power.

6 Note that all 2022 and 2021 figures in the table are restatements. Data on GHG emissions for 2022 and 2021 have been recalculated using updated global warming potential values to ensure comparability between the data, in accordance with Decision 6/CP.27 of the 27<sup>th</sup> Conference of the Parties to the UN Framework Convention on Climate Change and the Paris Agreement (November 2022).

7 I.e. GHG emissions that result from the consumption of direct energy for the generation of electricity and / or heat / steam, used in mining, production and for ERG-controlled transportation activities (CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O only), as well as other emissions sources in industrial processes in Kazakhstan. Conversion factors are from the 2006 IPCC Guidelines for National Greenhouse Gas Inventories – Stationary and Mobile Combustion. Our production sites in Kazakhstan (which are covered by an emissions trading framework) are subject to government mandated GHG inventories, in line with national guidelines. The outcomes are subject to reasonable assurance by an independent accredited body.

8 I.e. GHG emissions that result from the consumption of indirect energy purchased from third parties not owned or controlled by ERG (based on operational control of assets). The conversion factors for calculating purchased electricity and purchased heat and steam in Kazakhstan are based on the national Fuel and Energy Balance for 2022 (in the format of the International Energy Agency, released on 01.08.2023, by the Bureau of National Statistics of the Agency for Strategic Planning and Reforms of Kazakhstan). The coefficients for calculating purchased electricity in Brazil are based on data from the energy supplier.

# TAILINGS AND BROADER WASTE MANAGEMENT

## Strategic context

**Sustainable development of our host regions: Under our 2025 Strategy, we have prioritised our contribution to the well-being of communities in our regions of operation. This includes a focus on the safe management of our large-scale waste storage facilities, as well as responsible approaches to waste management, recycling and the promotion of a circular economy.**



### Relevant UN SDGs

➔ See p. 97 for associated UN Targets.

All of our established large-scale waste storage facilities are subject to regular, legally mandated monitoring inspections. These are carried out by official inspectors, external specialists and our own teams. We are in the process of enhancing our related management systems to ensure a consistent approach to tailings that is aligned with international best practice.

In addition, we continue to reprocess, recycle and commercialise waste, with our efforts being led by ERG recycling (as well as our enterprises) in Kazakhstan and Metalkol in the DRC.

## What we are doing Managing our large-scale waste storage facilities

We manage our overburden, tailings, sludge, slag and ash deposits in line with our established environmental management systems and local regulations (including the maintenance of closure and rehabilitation funds). We are particularly focused on preventing:

- Loss of physical / geotechnical integrity
- Groundwater and surface water pollution
- Dust emissions

In 2023, we focused on the development of a package of policies and procedures to standardise the management of our tailings storage facilities (TSFs) – while allowing for local conditions and regulations. This included a new TSF Management Procedure for our operations in Africa.

In addition, we completed a pilot project for satellite-based monitoring of the geotechnical condition of our TSFs at SSGPO. This produced a series of recommendations for the future application of the technology.

At Metalkol in Africa, we report the condition of our TSF to our external Engineer-of-Record (EoR) on a daily basis, and the operation's management team also conducts quarterly TSF review meetings. A similar approach has been initiated at our other operations in Africa from early 2024.

## ONGOING THIRD-PARTY RISK REVIEW PROCESS IN AFRICA

In 2023, we continued our independent, third-party risk review process focused on the condition of our TSFs. In the DRC, this included annual audits at Metalkol, Frontier, Boss Mining and COMIDE, as well as additional quarterly inspections at Metalkol. These follow earlier third-party assessments carried out across the Group between 2019 and 2022.

Reviews are carried out by external EoRs (where they are in place) and are focused on (among other things) operating conditions, compliance with design parameters and potential risks to local populations and the environment. The review process references national and international regulations and standards, including the Canadian Dam Association (CDA) Dam Safety Guidelines and guidance from the International Commission on Large Dams (ICOLD).

We are continuing to act on the recommendations generated by the process, including through:

- Additional 'deep-dive' investigations into potential issues – including cone penetration testing, updated stability analysis and risk assessments
- Improved policies and procedures
- The formal appointment of EoRs in Africa, with an EoR already in place at Metalkol, and appointed at our other operations in the region in early 2024
- The application of automated monitoring technology

In addition to these formal annual reviews and quarterly inspections, we will initiate (in line with the Global Industry Standard on Tailings Management (GISTM)) a supplementary Dam Safety Review. This will be carried out by either an International Tailings Review Board or by a Senior Independent Technical Reviewer, depending on the risk classification of each TSF.

## Dry-stack tailings at BAMIN

In Brazil, we are awaiting regulatory approval to develop a dry-stack TSF system for BAMIN's Pedra de Ferro mine, along with a supporting waste processing and filtering plant.

Compared to other tailings storage approaches, dry-stack TSFs offer enhanced safety, a smaller footprint and improved rehabilitation potential. Importantly, this approach will also enable BAMIN to recover and reuse more than 90% of the water required for the operation.

## ERG Recycling and waste processing in Kazakhstan

ERG Recycling employs a range of enhanced extraction technologies to process mining and metallurgical waste. These enable the extraction of valuable metals from complex and low-grade raw materials, contributing to more efficient resource utilisation and reducing the impact of our waste stockpiles. Examples include dry gravity enrichment, as well as magnetic and pneumatic separation. In addition, our Concrete Mortar Complex uses the inert outputs from this process to produce high-grade concrete (and related products), enabling us to produce commercial concrete and concrete products that are 70% composed of metallurgical waste. For the fourth consecutive year, we continued to process slag waste from Aktobe Ferroalloys Plant. This produces both chromium metal concentrates (which are returned to production) and inert materials (which are used for construction at the site).

ERG Recycling also certifies and sells a range of waste to third parties for use as raw materials – including for construction, metal production, chemical production and road construction.

Our efforts were supplemented with the commissioning of the first phase (gravity beneficiation section) of our ERG Green project at Donskoy GOK (p. 21), which is focused on historical deposits there. This uses innovative technology to enhance the enrichment of chrome-oxide bearing tailings at a recovery rate of more than 60%. In 2023, we continued to construct a new storage facility to contain waste from the project and plan to commission it in 2024. In July 2024, we commenced construction of ERG Green's floatation enrichment section. This will support plans for the project to ultimately produce more than 500kt of chrome concentrate per year.

These efforts are supported by additional enterprise-level initiatives, including the recycling of:

- Carbon-containing materials, refractory materials and linings at KAS, which started in 2023
- Sludge and capture dust from gas purification filters at Aktobe Ferroalloys Plant
- Slag at Aktobe Ferroalloys Plant and Aksu Ferroalloys Plant

## Tailings reprocessing at Metalkol

In the DRC, our Metalkol operation is directly supporting the global energy transition through its production of copper and cobalt. It does so by progressively reprocessing historical, third-party tailings that were:

- Dry-stacked at the dust-emitting Kingamyambo Tailings Dam (approximately 30 million tonnes)
- Deposited in the Musonoi River valley (approximately 80 million tonnes)

We extract and reprocess these tailings before redepositing them into a modern, centralised and comprehensively managed TSF. This is subject to regular inspections, monitoring and reporting, and is supported by both a dedicated EoR and an independent testing laboratory. As a result, Metalkol will, over time, reduce the negative impact of these historical tailings on local air, water and land quality – while also rehabilitating post-extraction areas.

## REMOVAL OF POLYCHLORINATED BIPHENYLS (PCBs) FROM OUR OPERATIONS IN KAZAKHSTAN

In 2023, we completed the replacement and destruction of equipment containing PCBs at Aluminium of Kazakhstan. These are persistent organic pollutants prohibited by the Stockholm Convention on Persistent Organic Pollutants. During the year, we replaced 59 PCB capacitors and three transformers, meaning Aluminium of Kazakhstan is now almost 'PCB-free' after five years of similar actions.

The decommissioning of all equipment containing PCBs was also completed at the Vostochny Open pit (EEC). Similar initiative is in process at the Aksu Ferroalloys plant (Kazchrome). Work on the responsible disposal and destruction of this equipment will continue into 2024.

## Our performance

ERG Recycling produced and / or sold over 1.6 million tonnes of recycled products in Kazakhstan, with key activities in 2023 including the processing of:

- 250,000 tonnes of slag waste at Aktobe Ferroalloys Plant to produce 6,200 tonnes of metal concentrate
- Approximately 226,000 tonnes of technogenic mineral formations at our Vostochny Kamys mine, with over 124,000 tonnes of manganese concentrate sold to the external market
- More than 10,700 tonnes of inert materials obtained during slag processing to produce 6,400m<sup>2</sup> of liquid concrete and 4,957 concrete blocks
- 51.4 tonnes of plastic / polymer waste to produce 2,562m<sup>2</sup> of polymer-sand tiles

In Africa, Metalkol reprocessed 4.1 million tonnes of dry stacked historical tailings at the Kingamyambo Tailings Dam (2022: 5.1 million tonnes) and 3.8 million tonnes of tailings extracted from the Musonoi River (2022: 3.1 million tonnes), prior to their relocation to our new TSF. This was used to produce:

- 102.6kt of copper (2022: 99.9kt)
- 20kt of cobalt hydroxide (2022: 22.5kt)

## Next steps

We plan to:

- Continue improving our tailings management standards and practices, with the longer-term aim of further aligning them with the GISTM
- Implement an automated geotechnical monitoring system at our new large-scale waste storage facilities at Donskoy GOK
- Continue advancing our recycling efforts in Kazakhstan, including additional focus on the recycling of tyres, the application of pneumatic separation techniques and the production of mineral powders for road construction

# Social

We are committed to the responsible management of our social impacts, risks and opportunities.

In this context, our People Strategy is helping us develop a resilient and innovative workforce that will support the long-term sustainability of our business. This includes the active management of employee safety, talent development and professional growth – as well as the delivery of comfortable workplaces and living conditions.

Beyond our organisation, we are focused on managing our positive and negative impacts on local communities, including through structured and transparent engagement. In Kazakhstan, we also support targeted socio-economic development across our mining towns and wider operating regions – and make an important contribution to national-level social investment. We are equally focused on helping to address socio-economic priorities within local communities around our operations in Africa and Brazil.

➔ For additional information on our management approach, see page 86 of the Appendix.

## RELEVANT PRIORITIES UNDER OUR 2025 STRATEGY

A happy and professional team

Sustainable development of our host regions

## 2023 HIGHLIGHTS

\$52M spent on Group-wide CSI (2022: \$95.2M)

Implementation of Community Development Plans in the DRC

Retention of our Great Place to Work® certification at BAMIN in Brazil

## MATERIAL ISSUES

Health and safety

➔ See p. 46

Talent attraction, development and retention

➔ See p. 51

Employee relations

➔ See p. 56

Community impacts

➔ See p. 59

Community social investment

➔ See p. 63

# HEALTH AND SAFETY

## Strategic context

**A happy and professional team: Under our 2025 Strategy, we have prioritised our employees' safety and well-being. This includes the maintenance of safe working conditions and the improvement of employee wellness and health.**



### Relevant UN SDGs

See p. 98 for associated UN Targets.

In line with our Values, we put safety first. We continue to invest in the ongoing enhancement of our safety management system, risk assessment / mitigation and culture as we strive to achieve our ultimate goal of Zero Harm (including the prevention of production-related accidents).

All of our operations in Kazakhstan<sup>1</sup> are certified to the ISO 45001 safety management system standard. Our operations in Africa and Brazil apply management systems informed by the same standard.

## Our performance

It is with great sadness that we report the loss of three employees and seven contractors in work-related incidents during 2023. In Kazakhstan, we experienced two separate employee fatalities at ERG Service and at the Krasno-Oktyabrskoye Mining Unit (Aluminium of Kazakhstan). In addition, Aktobe Ferroalloys Plant (Kazchrome) experienced two contractor fatalities in separate incidents, while three contractor fatalities occurred in separate incidents at Manganese Zhayrema, Donskoy GOK (Kazchrome) and SSGPO.

In the DRC, one of our employees and two contractors working at Boss Mining were fatally injured in a helicopter crash. We offer our deepest condolences to all those affected by these tragic events. All loss of life is unacceptable, and these events show we must do even more to eliminate fatalities at our operations.

## Response to fatalities

### Kazakhstan

Following detailed investigations into each incident, we have developed a range of targeted measures focused on reducing the risk of future fatalities at our operations. In Kazakhstan, this included (among other measures):

#### Employees

- Enhanced critical risk assessment and mitigation processes, including the development of targeted measures to reduce safety risks
- Improved production controls (including in relation to behaviour, equipment and technology) under our 'Production Control 2.0' project (p. 47)
- Further digitalisation and automation of our occupational health and safety management systems
- Establishment of a geotechnical laboratory to monitor and control rock mass stability during mining operations
- Installation of anchor points, protective barriers and covers on stationary platforms to prevent falls from height, as well as enhanced safety harness controls and monitoring
- Enhancement of road safety controls close to our operations, in partnership with local authorities

### Contractors

- Introduction of additional site-level contractor safety inspections
- Digitalisation of pre-work permitting systems to enhance supervision and control levels, particularly for higher risk work
- Revision and enhancement of contractor work schedules
- Enhanced requirements regarding contractors' procedures for conducting explosive works
- Development of additional detailed work plans to enhance the safety of specific operational tasks

In addition, we implemented an enhanced safety control and supervision procedure for employees and contractors across our operations in Kazakhstan.

Beyond these targeted measures, we continued to implement a range of broader initiatives to support our ongoing efforts to eliminate critical safety risks (p. 47) and strengthen contractor safety (p. 48).

### Africa

In the DRC, the civil aviation authority conducted an official investigation into the fatal helicopter crash that occurred during a flight to assess emergency evacuation routes. This concluded that the probable cause was wind shear, with human error as a possible contributing factor. We are now outsourcing all aviation services to third-party service providers, in line with the key recommendations from the investigation. We are also reviewing our emergency response policy, drills and assessments.

<sup>1</sup> With the exception of 3-Energootalyk, Kachary Ruda and Manganese Zhayrema.

## Group key safety indicators by year

Indicator		2023	2022	2021	2020	2019
Fatalities	Employees	3	5	7	3	10
	Contractors	7	2	3	1	1
LTIs	Employees	83	105	101	67	85
	Contractors	21	30	17	13	17
LTIFR	Employees only	0.71	0.91	0.93	0.61	0.83

## Key safety indicators by region

Indicator		Kazakhstan	Africa	Brazil	
Fatalities	Employees		2	1	0
	Contractors		5	2	0
LTIs	Employees		83	0	0
	Contractors		21	0	0
LTIFR	Employees only		0.81	0.06	0

## Broader performance

In 2023, lost time injuries decreased to 86<sup>1</sup> (2022: 110). This resulted in a lost time injury frequency rate (LTIFR) of 0.71<sup>2</sup> (2022: 0.91).

In the DRC, we recorded more than 19 million consecutive LTI-free hours at Metalkol since August 2022 and more than 10 million consecutive LTI-free hours at Frontier since November 2022. At BAMIN in Brazil, we have recorded more than 10.5 million consecutive LTI-free hours since October 2019.<sup>3</sup>

## What we are doing

### Employee safety

#### 📍 Kazakhstan

We are implementing a comprehensive Safety Strategy in Kazakhstan. This includes a focus on:

- Reducing the level of critical risks and enhancing the effectiveness of our production controls

- Increasing safety competencies across all organisational levels through the delivery of training and mentoring
- Reducing workplace hazards (with a focus on higher risk working environments) on a systematic and gradual basis
- Enhancing transparency around our safety controls through digitalisation
- Improving our emergency response readiness, including via the establishment of high-quality internal rescue services (in line with new legislative requirements)
- Actively involving managers in the management of production-related safety issues

In future, our Safety Strategy will also focus on the enhanced safety of lifting mechanisms and conveyor transport; the embedding of HSE best practices into our capital projects; and enhanced contractor safety management, including the further integration of contractors into our ongoing efforts to enhance safety.

The Strategy is underpinned by our integrated, risk-based occupational and process safety management system.

In recognition of the need for faster progress on safety management, we also revised the timeline for a major workplace risk management programme from five to three years. In 2023, this programme saw the launch of the 'Production Control 2.0' project, which focuses on identifying critical workplace safety risks and making decisions using 'barrier logic'. This project aims to improve the quality of decision-making to help prevent major accidents and / or minimise the consequences in the event of their occurrence.

Other key safety initiatives included:

### Training and culture

- **Internal training:** The provision of beyond compliance safety training to around 6,500 employees via our new Safety Academy (part of the ERG Corporate University, p. 52). This included the delivery of:
  - Training focused on embedding our safety culture and safe behaviours to 144 managers, under our 'ERG Safety Leader' programme
  - Training on working at heights, including onsite practice, to around 5,300 employees
  - Driver safety training to around 1,000 employees
- **External training:** The provision of certified third-party training in IOSH / NEBOSH to more than 200 managers
- **Safety dialogues:** The hosting of two large-scale forums to enable safety departments from different operations to share experiences and best practices, with a focus on supporting production safety and enhancing production controls
- **Cultural transformation:** The launch of a cultural change programme, which includes a focus on the ongoing development of our safety culture (among other areas) (p. 52)

### Safety risk controls and higher risk work

• **Safety risk controls:** The ongoing implementation of a range of initiatives to strengthen our safety risk controls. In addition to the training above, this included:

- **Working at heights:** Investigation into alternative technologies and working methods to reduce the need for human involvement in higher risk activities
- **Transport safety:** The rollout of our advanced satellite control, analytics and transport management systems at a further two operations (Krasnooktyabrsky Mine and SSGPO)

- **Enhanced machine safety:** Pilot implementation of 'lock out / tag out' (LOTO) safety systems at Aksu Power Plant. This aims to ensure that higher risk machinery is safely isolated prior to maintenance or repair. We plan to commence the phased rollout of the project to other operations from 2024
- **Industrial safety:** The further enhancement of industrial and fire safety measures across our operations. This included undertaking internal audits at key production sites to identify priority preventive measures, conducting emergency scenarios at our underground mining facilities, and delivering extensive employee and contractor training focused on emergency response (among other areas)

1 Employees only and including employee fatalities.

2 Employees only and including employee fatalities.

3 Figures for consecutive LTI-free hours at Metalkol, Frontier and BAMIN include both employees and contractors.

## Management systems and standards

- **Digitalisation:** The launch of a pilot project under the 'Production Control 2.0' project (see above) to digitalise our occupational and process safety management systems, with an immediate focus on work permitting controls and a future focus on the enhanced assessment of critical risks
- **External standards:** Participation in dialogues and meetings to help support the Government of the Republic of Kazakhstan in the development of its 2030 Safe Work Concept. This new framework includes a range of new mandatory requirements aimed at reducing occupational safety and illness rates in Kazakhstan

In addition, we continued to revise and enhance our management standards, including those relating to incident investigation, transportation safety and production control.

### Africa

In Africa, we implement an integrated Safety, Health and Sustainability (SHS) management system, supported by IsoMetrix software.

In 2023, other key safety initiatives included:

- **Management systems:** The revision and enhancement of our standard operating procedures at Metalkol and Frontier. We also implemented an enhanced hazard identification system at Metalkol to support our ongoing efforts to achieve ISO 45001 certification at the operation
- **Safety training:** The ongoing delivery of targeted employee training across our operations, including vehicle and machine operator safety training at Frontier; occupational safety risk management, occupational health and radiological safety training at Metalkol; and training on emergency response, fire prevention and electrical safety at Boss Mining
- **Safety culture:** The ongoing implementation of our Visible Felt Leadership (VFL) safety programme at Metalkol and Frontier. This includes regular site inspections by senior operation-level managers. At Metalkol, we also further developed our planned behaviour-based safety programme, which we plan to rollout in 2024

- **Safety monitoring:** The ongoing implementation of regular safety audits and site inspections across our operations
- **Key Performance Indicators (KPIs):** The ongoing implementation of a remuneration-linked KPI for LTI-free hours for all employees at Metalkol, which was achieved in 2023. This is in addition to existing safety KPIs in place at our operations in Africa

### Brazil

At BAMIN, we apply a comprehensive Occupational Health and Safety (OHS) management system. In 2023, we recorded zero LTIs among our employees and contractors (2022: zero).

Our Work Safety Committee (which includes senior operation-level managers) continued to support the implementation of our OHS management system. During the year, we carried out internal OHS performance assessments with participation from senior operation-level managers. We also carried out ongoing site-level OHS monitoring across the mine, port and railway.

We continued to expand the scope of our training programmes, in line with the ongoing development of the operation. This included the delivery of behavioural safety training for senior operation-level managers, as well as organisation-wide training focused on the embedding of a consistent, safety-first culture. We also analysed third-party safety incidents at other operations to support the development of our safety culture.

### Contractor management

We experienced five contractor fatalities at our operations in Kazakhstan, as well as two contractor fatalities in a helicopter crash near Boss Mining in the DRC. Further information on the specific measures we have taken to reduce the risk of these events reoccurring can be found on p.46.



Beyond this, we are continuing to strengthen general contractor safety management across our global operations. In Kazakhstan, this includes the enhanced monitoring of contractor activities, the improvement of our regular safety briefings and the provision of safety training through our online and onsite training programmes.

We also continued to undertake frequent contractor risk assessments, onsite inspections and safety briefings across our operations in Africa. At Metalkol, we share our SHS management system documentation with all our contractors, who we audit on a regular basis to ensure compliance.

At BAMIN in Brazil, we continued to deliver comprehensive contractor safety inductions and training on our OHS policies and procedures. We also implemented an enhanced design and safety assessment process for planned contractor work.

### Occupational health

Some of our workplace activities can, if not proactively managed, pose risks to the health of our employees. This includes potential exposure to dust, noise, vibration and heat. To address this, we deliver comprehensive occupational health programmes for all our employees.

### Kazakhstan

In Kazakhstan, our occupational health programme includes:

- Workplace health risk assessments delivered by third-party experts
- Mandatory annual medical examinations
- Role-specific, pre-shift and post-shift medical examinations
- Health treatment for employees working in hazardous conditions

During the year, around 40% of employees working in hazardous conditions participated in the programme. In addition, more than 11,000 employees received health treatment under the programme.

We also completed a pilot project focused on the automation of pre- and post-shift employee medical examinations at Kachary Ruda and a workshop at Aktobe Ferroalloys Plant. Following the success of the pilot, we are now implementing the project at Donskoy GOK and other divisions of Aktobe Ferroalloys Plant.

### Africa

In Africa, we continued to implement and enhance our Industrial Hygiene Programme and a related risk-based occupational health monitoring and analysis strategy at Metalkol and Frontier. Key areas of focus include dust, noise, vibration, gases and illumination, among others. The programme is supported by employee awareness training.

During the year, we identified elevated levels of noise at the Horizontal Belt Filter, the Cobalt Dryer and near to specific compressor units at Metalkol. We are further investigating these instances to establish the level of risk and assess the potential need for enhanced controls beyond PPE.

### Brazil

At BAMIN, our occupational health services are supported by a specialist external company that provides onsite health professionals. This includes a physician, a nurse, nursing technicians and ambulance drivers. In addition, we have hired a dedicated doctor to cover the FIOL 1 project. During the year, we continued to provide annual occupational health assessments for all employees.

## Personal health and well-being

We implement a range of initiatives to support the personal health of our employees 'outside work'.

### Kazakhstan

We provide free employee medical services through our dedicated employee medical centre, as well as enhanced 'beyond compliance' employee healthcare cover. This includes outpatient and inpatient care, dental services, medication provision and treatment / rehabilitation services.

In 2023, following successful piloting in 2022, we also expanded our oncological screening programme, including the provision of:

- Pancreatic cancer screening for 20,598 employees
- Colorectal cancer screening for 23,954 employees
- Prostate cancer screening for 12,535 employees

In 2023, we invested US\$7.9 million in health programmes (2022: US\$4.6 million).

In addition, we implement a preventative examination programme through our medical centre to support the early detection of critical illnesses among our employees. This includes diagnostic examinations for the detection of coronary heart disease in men over 40 and screening for breast cancer in women over 40.

We also continued to implement our 'ERG Balance' psychological support programme through our employee medical centre. This programme aims to increase employees' awareness of psychological health and conditions such as stress, anxiety and depression. It includes the monitoring of our employees' emotional well-being through face-to-face consultations with psychologists and surveys, as well as workplace-based training and online seminars.

- ➔ For information on our physical activity programmes and employee sports events in Kazakhstan, see p. 57.



## ERG CARE – LISTENING TO OUR EMPLOYEES AND SUPPORTING THEIR WELL-BEING IN KAZAKHSTAN

In May 2023, we conducted a large-scale well-being survey across our operations and corporate offices in Kazakhstan, which more than 17,600 employees responded to. This focused on five key areas of well-being: health, social, professional, financial and the living environment. The survey found relatively high levels of social well-being, with financial well-being identified as the most challenging area for employees.

In addition, the well-being survey assessed employee satisfaction and engagement levels at ERG, as well as our 'employee Net Promoter Score' (eNPS).<sup>1</sup> It found high levels of overall employee satisfaction, with areas of strength including positive professional relationships between colleagues and management, as well as working conditions. Areas for further improvement included salary levels and the related processes for determining compensation.

In November 2023, we launched 'ERG Care', a holistic employee well-being programme focused on addressing some of the key findings of the survey. The programme includes, among other measures, the rollout of management toolkits to support the development of more effective people management skills; the development of healthier menus for company canteens, in partnership with external nutritionists; the opening of subsidised 'social stores', where employees can purchase essential household items at below market rates; and the delivery of financial literacy training.

In 2024, we plan to undertake our next annual survey to measure our progress and inform the next steps as we continue to work to enhance employee well-being, satisfaction and engagement.

<sup>1</sup> The eNPS is a metric that measures employees' job satisfaction based on their willingness to recommend their company to others as a good place to work.



## Africa

In Africa, we provide free medical support to employees and their families. We also:

- Implement malaria awareness and prevention measures for employees at Metalkol, Frontier and COMIDE – including regular spraying and fumigation
- Carry out HIV / AIDS awareness raising, voluntary counselling and testing activities at Metalkol, Frontier and Boss Mining (in partnership with relevant government health departments)
- Implement cholera awareness and prevention measures at Metalkol, Frontier, Boss Mining and COMIDE
- Participate in government vaccination campaigns
- Run a region-wide breast cancer screening programme and annual awareness raising activities

At Metalkol, we work with two clinics in Kolwezi and Lubumbashi to provide enhanced healthcare to our employees and their families. This includes free medical consultations, basic medications and specialist referrals.

At Frontier, we offer medical support to employees and their families through an onsite clinic and two affiliated local clinics in Sakania and Lubumbashi.

At COMIDE, medical support is offered to employees and their families through third-party medical providers.

At Boss Mining, we continued to provide free medical services to employees and their immediate families via our fully supported offsite clinic. As it is the only clinic in the Kakanda area, it also provides emergency medical services to local community members. The suspension of the operation meant that other medical services that were previously provided to local communities from the clinic were temporarily discontinued. Nonetheless, we continued to support health care provision for local communities as part of our broader CSI efforts at Boss Mining (p. 66).

## Brazil

In Brazil, we provide all employees and their families with a partially funded employee health insurance plan and fully funded dental care. We also offer a separate benefit plan that includes free gym memberships, nutritional guidance, online counselling and financial management advice.

During the year, we ran several voluntary employee vaccination programmes. This included the provision of vaccinations for hepatitis B, yellow fever, tetanus, influenza and COVID-19. We also conducted a range of awareness campaigns, including a focus on diabetes, hypertension, mental health, sexually transmitted infections and various forms of cancer.

## Next steps

In 2024, we plan to continue the rollout of our major workplace risk management programme in Kazakhstan. This will include a focus on the ongoing implementation of 'Production Control 2.0', which will combine holistic audits with traditional production controls and help to build a cross-functional, comprehensive approach to safety management.

Other planned initiatives in Kazakhstan, include:

- The launch of enhanced safety training through our new Safety Academy. This will include a focus on the conducting of enhanced safety audits and incident investigations, effective safety communication and risk management, as well as the expansion of our ERG Safety Leader programme
- The implementation of enhanced procedures for major incident investigations, supplemented by the development and delivery of enhanced training
- The further strengthening of contractor safety management processes, including through the delivery of joint meetings, conferences and safety inspections

In Africa, we plan to further enhance our occupational safety and industrial hygiene processes. At Metalkol, this will include the implementation of a strengthened SHS Policy, the further enhancement and expansion of our VFL and Industrial Hygiene programmes, and the construction of a new onsite laboratory to provide diagnostic blood testing and pathology services to our employees. In addition, we will continue our work to achieve ISO 45001 certification in 2025.

In Brazil, we plan to continue enhancing our comprehensive OHS management system. This will include a focus on, among other areas, leadership and culture, performance assessment, accident prevention, training and OHS inspections.

# TALENT ATTRACTION, DEVELOPMENT AND RETENTION

## Strategic context

**A happy and professional team: Under our 2025 Strategy, we have prioritised the development of our employees' competencies. This includes the building of their strategic skills and capabilities, the evolution of our corporate culture and the development of our talent pool and leadership pipeline. We also focus on enhancing employee motivation, improving our employee benefits and developing our overall employee proposition.**



### Relevant UN SDGs

See p. 98 for associated UN Targets.

The long-term sustainability of our business depends on our ability to attract, develop and retain the right people and to build the right working culture. In line with our Values and our People Strategy, we place particular emphasis on the ongoing development of an innovative

and agile workforce. This means developing the competencies of our employees and supporting their personal and professional growth; advancing our corporate culture; and supporting the rapid development of our high-potential individuals and future leaders.

## Number of employees by region

Region	2023	2022
Kazakhstan	62,033	64,246
Africa	5,143	4,062
Brazil	257	277
Corporate offices <sup>1</sup>	179	191
Total	67,612	68,776

<sup>1</sup> Includes employees at offices in Europe, the UAE and China. The headcount of corporate offices in Kazakhstan, Africa and Brazil are included within each relevant region. In 2023, we closed our Moscow corporate office (effective from January 2024).

<sup>2</sup> I.e. employees holding a written contract of employment with ERG as at 31 December 2023. This figure does not include contractors.

## What we are doing

### People management

#### Kazakhstan

In Kazakhstan, we employ more than 62,000 people – representing over 90% of our workforce.

We are working to enhance our attractiveness as an employer, in the context of intense competition for metals and mining specialists (and particularly young specialists) in our operating regions and across the country more broadly. This includes a focus on the delivery of competitive performance-linked remuneration, the ongoing development of enhanced employee skills and competencies, and on supporting the social needs of employees and their families.

#### Building our future skills pipeline

More than 35% of our workforce in Kazakhstan is under the age of 35. We are implementing a comprehensive programme focused on our young professionals to support our skills pipeline. This includes a focus on engaging young people in corporate life, developing our corporate culture, building key competencies, and supporting knowledge transfer from experienced employees, as well as the rapid progression of high-potential individuals and future leaders.

In 2023, key initiatives included:

- **Growth Portal:** This event for newly hired young specialists involved 471 employees and focused on developing and embedding our corporate culture
- **Youth Council:** This initiative supported career development and other opportunities for 232 young employees. It also focuses on the organisation of 'Growth Portal' events to engage young employees in our corporate culture
- **'Generation Kazchrome' Scientific and Technical Conference:** This annual scientific and technical conference at Kazchrome was attended by 182 young professionals and focused on developing scientific solutions for the business
- **Employee-led events:** Young professionals initiated and led more than 300 events during the year, covering a range of areas from personal development through to supporting local community causes

## Workforce profile

67,612

directly employed people<sup>2</sup>, as at the end of 2023

25%

of our employees are female

35%

of our employees are under the age of 35

92%

of our employees are located in Kazakhstan

In addition, we are implementing an extensive programme to support educational institutions in our operating regions. Under this programme, we maintain a range of partnerships with schools, colleges and universities, with the aim of attracting young professionals to ERG. This includes the ongoing implementation of:

- **ERG for Schools:** A programme that aims to improve the quality of educational provision and transform STEM<sup>1</sup> education at secondary schools in the Aktobe, Kostanay and Pavlodar regions (p. 64)
- **ERG for Colleges:** A strategic partnership that supports the development of education in colleges and universities in the Aktobe, Pavlodar and Kostanay regions, and aligns educational provision with our need for 'versatile specialists' (p. 53)
- **Industrial Internships:** The provision of industrial internships for more than 2,700 students at our operations (2022: 2,800) – 453 of whom were hired into full-time positions (2022: 335)

During the year, we also carried out a survey involving more than 5,500 students to better understand their career plans and to raise awareness of professional opportunities at ERG.

These future-focused initiatives not only help to build our skills pipeline over the longer term, but also provide assurance to current and future employees that their children can look forward to promising futures in our operating regions.

### Skills development

In 2023, we launched our new ERG Corporate University to significantly enhance the standards, scope and impact of our employee skills development programmes in Kazakhstan (see opposite).

### Cultural transformation

In 2023, we launched a cultural change programme in Kazakhstan. This aims to embed a corporate culture that will support the long-term success of our organisational transformation programme. Key initiatives included:

- The launch of cultural development initiatives across our operations, with a particular focus on enhancing the working environment (p. 64), building a culture of openness and safety, developing a constructive feedback culture and increasing employee engagement
- The development of standard ERG management practices (including those covering effective meetings, feedback and goal setting), which we plan to rollout in 2024. This will support the development of key production management and line management skills
- The development of two interactive training programmes through our ERG Corporate University focused on the fundamentals of our corporate culture and how managers can support its development. It is anticipated that 20,000 production specialists and 12,000 managers will participate in these programmes over 2023 and 2024
- The ongoing rollout of a programme to reward employees who are representing ERG's Values

In addition, we continued to support broader organisational transformation via our established employee engagement programmes. This included the cascading of our transformation programme's strategic objectives via our League of Professionals programme and Innovators Forum, as well as the hosting of dedicated roundtable discussions and transformation 'demo days'. During the year, around 3,200 employees participated in these events.

## BUILDING CRITICAL EMPLOYEE COMPETENCIES THROUGH THE ERG CORPORATE UNIVERSITY IN KAZAKHSTAN

In 2023, we established the ERG Corporate University to help support our transformation goals through the development of our critical employee competencies in Kazakhstan. Key objectives include:

- The creation of a unified skills development system
- The development of our leaders
- The provision of training on unified work standards to enhance our operational efficiency
- The delivery of organisational change and our strategic transformation projects

The ERG Corporate University is implemented through seven 'Academies', which focus on: occupational health and safety; production (e.g. mining, processing, geology, energy and environment); technical maintenance and repairs; production systems; leadership; project management; and digitalisation.

In 2023, these Academies developed 422 new training programmes. These included:

- 186 programmes aimed at developing employee competencies
- 222 professional and mandatory training programmes (including those covering applicable legislative requirements and our internal safety standards)
- 14 'Leaders Teach Leaders' programmes, whereby experienced leaders and internal experts share knowledge and best practices

Training is provided in modern classrooms, equipped with advanced learning tools, including simulators and virtual reality / augmented reality, and is delivered by internal experts, certified trainers and instructors from the ERG Corporate University.

In 2023, the ERG Corporate University was accepted into the European Foundation for Management Development (EFMD) and the Executive Corporate Learning Forum (ECLF).

In total, over 54,000 employees underwent training through the ERG Corporate University, accounting for approximately 90% of our workforce in Kazakhstan.

<sup>1</sup> Science, technology, engineering and mathematics.



## SUPPORTING EDUCATION AND EXTERNAL SKILLS DEVELOPMENT IN KAZAKHSTAN

ERG continues to support a range of future-focused initiatives at educational institutions in Kazakhstan, including through our ERG for Colleges programme. This implements educational programmes at regional colleges and universities that are aligned with our need for 'versatile specialists', as well as with the future-orientated roles identified in the Atlas of New Professions.<sup>1</sup> In doing so, we are helping young job seekers to thrive in an ever-changing labour market, while proactively developing our talent pipeline. Our approach is also aligned with the Government of the Republic of Kazakhstan's 2025 programme. This is aimed at improving the income of citizens, including through the ongoing adaptation of the country's education system.

ERG for Colleges was launched in 2022 in partnership with 14 colleges in the Aktobe, Pavlodar and Kostanay operating regions.

In 2023, Zhubanov University in Aktobe and Toraighyrov University in Pavlodar also joined the programme. In addition, a related memorandum was signed by the partner institutions to establish the 'College Alliance', in collaboration with ERG. The College Alliance aims to enhance cooperation between the Government, educational institutions and business to support the development of a future-orientated education system.

In 2023, key activities under the ERG for Colleges Programme included:

- A professional 'ERG Skills' competition – aligned with the WorldSkills<sup>2</sup> framework – for 30 talented students from the partner institutions, with 10 winners awarded internships in technical disciplines at leading colleges in China

- Training in 'universal technical skills' for more than 80 college students
- Grants for the top 75 college students from the partner institutions
- Internships for 17 leading teachers and college directors at professional and technical educational institutions in Germany and France

As part of our support for ERG for Colleges and the College Alliance, we also invested US\$928,000 to fund additional scholarships for students, equipment for educational institutions and bonuses for teachers in the Aktobe, Kostanay and Pavlodar regions.

### Talent pools

In Kazakhstan, we have created strategic 'talent pools' to support the rapid development of our high-potential individuals, as well as our succession planning and future leadership pipeline. During the year, we continued to expand our talent pools framework, which now includes 374 employees. We also implemented targeted skills development programmes for 53 senior leaders, 28 future candidates for enterprise-level managers and 37 future candidates for workshop-level managers who are also covered by the framework.

We continued the second phase of our 'LIFT' project to enable 75 young leaders to complete leadership modules at Narkhoz University in Kazakhstan.

Finally, we launched an initiative to develop our female leaders. This included the hosting of a dedicated forum attended by 318 women, including female employees as well as female relatives of our employees.

### Competency models and employee evaluation

In 2023, we further enhanced our competency evaluation programme. This included the assessment of 431 employees from our strategic talent pools (see above) against a new set of competency models, as well as the assessment of 53 managers against new region-wide corporate competencies. In 2024, we plan to extend the programme to assess approximately 15,000 employees against new corporate competency models – and more than 1,000 employees against function-specific competency models – via our annual performance evaluation process.

<sup>1</sup> The Atlas is a strategic planning tool that includes advanced forecasting of the most critical and in-demand professions over the next 10-15 years. It is based on the Skills Technology Foresight (STF) methodology, which is recognised by the International Labour Organization.

<sup>2</sup> WorldSkills: [worldskills.kz](https://www.worldskills.kz)

### Motivation and remuneration

We implement a systematic and transparent approach to employee motivation and remuneration. This is based on the structured evaluation of employee performance against appropriate KPIs and aims to closely align remuneration with performance.

We continued to enhance our employee motivation system, including the rollout of KPIs for our divisions and operations in Kazakhstan, as well as related individual performance goals for around 13,000 employees at our operations and corporate offices in the country (see 'Performance' on p. 55).

We also further standardised and digitalised our performance evaluation process by integrating it within 'ERG Talent', our digitalised talent management platform. In addition, we implemented an enhanced reward system for production personnel at Donskoy GOK and Aksu Ferroalloys Plant, which provides additional payments for exceeding production targets.

Finally, we completed the implementation of a unified SAP® system to manage the payroll to around 62,000 employees.

### Africa

In Africa, we continued to expand our full-time operational workforce at Frontier to support the Cut 4 expansion and transition to owner-operator mining. In line with local requirements, the vast majority of our employees in the DRC are Congolese nationals and we seek to recruit from our surrounding communities, where possible.

During the year, in the DRC we continued to standardise, automate and enhance our talent management systems, standards and processes.

Key initiatives included:

- **Localisation and succession management:** An ongoing programme to support the enhanced development of our Congolese employees, including the planned creation of a 'talent pool' for high-potential individuals and future leaders. The programme will also help ensure that we facilitate effective skills transfer from expatriate employees to locals, and will support our succession planning
- **Human resources information system:** The ongoing, phased implementation of a SAP® management system to support enhanced organisational decision-making, data management and reporting. This includes the ongoing development of dedicated modules focused on performance management, leave management, recruitment and payroll integration
- **Skills training:** The delivery of role-specific training across our operations. At Frontier, for example, we delivered technical training on the operation of heavy mining equipment to support the safe and efficient transition to Cut 4 and the ongoing transition to owner-operator mining. At Metalkol, we delivered role-specific training to support the Phase 2 production

At Metalkol, we also provided 20 students from the Lubumbashi Polytechnical University and High School of Engineering with two-month long internships at the operation.



## Brazil

At BAMIN, we continued to develop our talented, multi-disciplinary team to support the ongoing ramp-up of the operation (p. 58). In this context, we continued to maintain our compliance with local employment requirements stipulated in our licensing agreement, which mandate that a minimum of 60% of our workforce (including employees and contractors) must be hired from local populations.

Key initiatives in 2023 included:

- **Performance management:** The ongoing implementation of an enhanced performance management model to support integrated performance evaluation and skills development across all levels of our workforce
- **Professional development:** The ongoing implementation of our BAMIN Leadership University programme to support the rapid progression of our future leaders, as well as the launch of our 'Elas por Elas' professional development and mentoring programme for female employees
- **Skills development:** The delivery of role-specific technical training programmes across our workforce. The fact that the majority of our workforce is drawn from the local population means these programmes are helping to build a legacy of transferable skills in the region
- **Internal communications:** The launch of an internal communication programme to support the more effective cascading of information from our senior executives

We also started to implement a SAP® people management system to support the ongoing enhancement of our people management processes.

## Our performance

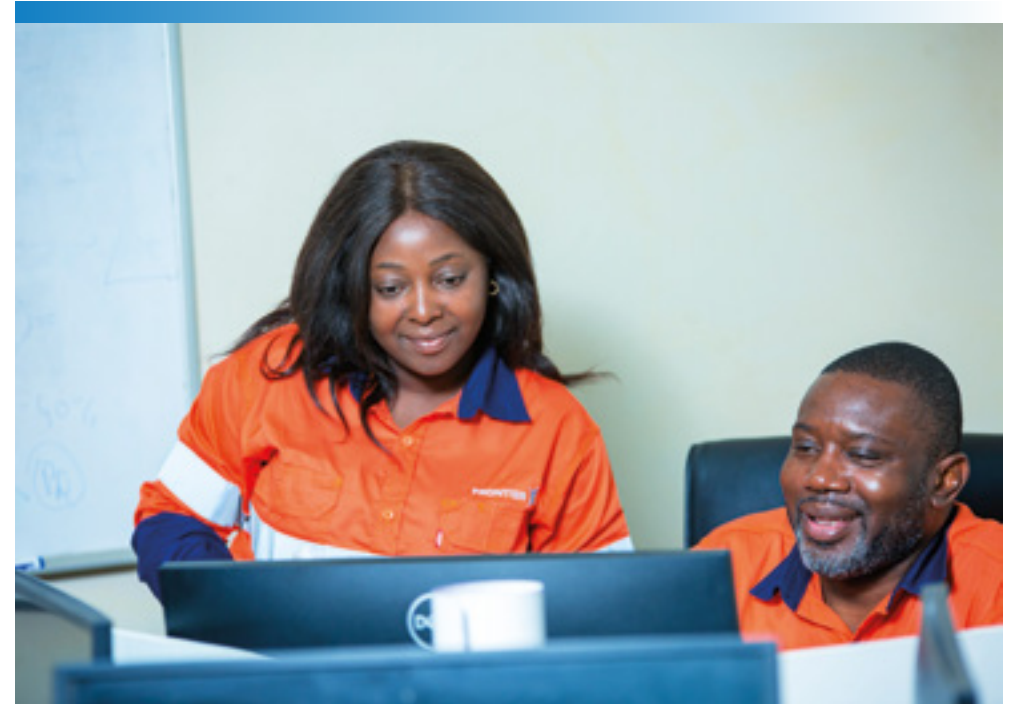
As noted above, we continued to implement and enhance our employee motivation system. This included its application to more than 13,000 production and administrative personnel in Kazakhstan (2022: more than 13,000). In addition, we provided production-linked bonuses to more than 1,400 production personnel and more than 700 non-production personnel at Metalkol in the DRC (2022: more than 1,150 and more than 550, respectively).

In Kazakhstan, we invested around US\$7 million<sup>1</sup> in training and skills development for our employees (2022: around US\$7 million). In Africa, we spent US\$1.1 million on such efforts (2022: US\$1 million).

## Next steps

In Kazakhstan, we plan to:

- Commence the rollout of ERG 'qollab'<sup>2</sup>, an enhanced digital talent management and internal communications platform, which will be available to all employees in Kazakhstan
- Continue the expansion of our ERG Corporate University, with a particular focus on the rollout of training programmes focused on enhanced production, industrial safety and maintenance
- Further enhance our employee motivation system, including through the implementation of bonuses for exceeding production targets across key professions and functions; the implementation of a bonus system for our workshops that accounts for cross-functional performance; and the automation of our performance bonus management system



In Africa, we plan to continue implementing our localisation and talent management programmes. This will include the rollout of individual development plans for individuals in our new talent pool, as well as the ongoing exploration of opportunities to increase local representation in managerial and technical roles.

Finally, we plan to continue the phased implementation of our SAP® people management system across both our Africa and Brazil regions.

<sup>1</sup> This includes mandatory training delivered under ERG's subsoil licensing obligations, as well as large-scale employee development events.

<sup>2</sup> Formerly SmartERG.

# EMPLOYEE RELATIONS

## Strategic context

**A happy and professional team: Under our 2025 Strategy, we have prioritised the development of our employees' competencies, as well as their safety and well-being. This not only includes employee wellness and health, but also the delivery of comfortable workplaces.**



### Relevant UN SDGs

➔ See p. 98 for associated UN Targets.

Developing a happy and professional team also requires us to build and maintain strong relations with our employees. Getting this right will help support the development of a motivated, safe, productive, stable and loyal workforce.

Our Group-wide approach to employee relations is underpinned by the maintenance of constructive engagement with our employees' unions. We respect the right of all employees to join unions and to freely engage in collective bargaining. Around 90% of our employees are trade union members, and collective bargaining agreements are in place at the majority of our operations.

Similarly, we are committed to respecting universally recognised human rights and labour standards. This includes our commitment to the principle of equal opportunity and the delivery of an inclusive, fair and non-discriminatory workplace. We apply these commitments to our employees, our contractors and our suppliers.

➔ See p. 72 for more information on our Group-wide approach to human rights.

## What we are doing

### Employee relations

#### Kazakhstan

In Kazakhstan, our approach to employee relations is shaped by the significant inter-connectivity between our workforce and local communities in our operating regions. In this context, we focus on the delivery of comfortable working conditions and competitive employee benefits, as well as on supporting the broader social needs of our employees and their families. This is why we carry out engagement surveys and benchmarking of local socio-economic conditions to help identify and respond to these needs on an ongoing basis.

During the year, we continued to maintain constructive engagement with our employees' unions. At Kazchrome, this included the successful renegotiation and implementation of an enhanced collective agreement (following the expiration of the prior agreement) to ensure we comply with recent changes to relevant labour legislation.

### Delivering comfortable workplaces

We continued to enhance and standardise physical working conditions at our operations in Kazakhstan, as part of a multi-year programme. In 2023, we focused on:

- **Onsite facilities:** Investment of more than US\$10 million to enhance onsite facilities and accommodation, including the construction of new accommodation and canteens at Shubarkol Komir, as well as the renovation of canteens at Aktobe Ferroalloys Plant and Pavlodar Aluminium Plant
- **Catering:** Completion of a large-scale project to establish a single, cross-region service provider for canteens at our operations and to automate our catering management systems. This is with the aim of delivering consistently high standards of catering for all employees
- **Transportation:** Ongoing implementation of our transport standardisation programme, which focuses on the staged modernisation of ERG-owned and contracted transport. This included the investment of more than US\$2.5 million for the purchase of 24 new buses (2022: 16)

### Enhanced working conditions in Kazakhstan

**\$85M**

**invested in enhanced onsite facilities and canteens (2016-2023)**

**78%**

**of onsite facilities and canteens have either been renovated or newly constructed (2016-2023)**

**\$13M**

**more than US\$13 million invested in enhanced transportation including the purchase of 140 modern buses (2018-2023)**

**95%**

**of onsite facilities and canteens assessed as being in "good" technical condition (based on annual internal audits in 2023)**

## Improving living standards

Beyond our own operations, we continued to focus on raising living standards for our employees and their families outside of the workplace. In 2023, this included:

- **Affordable Housing Programme:** Continued help for our employees to access high-quality housing through:
  - The ongoing construction of housing, which will be provided to employees on preferential financial terms.<sup>1</sup> In 2023, this included the completion of two new buildings in Khromtau and Aksu (each containing 60 apartments) and the start of construction of a new 144-apartment building in Pavlodar. In addition, a 180-apartment building in Khromtau and a 100-apartment building in Aksu are in the planning phase
  - The signing of three separate memoranda between ERG, local akimats and the Otbasy Bank to provide preferential mortgages for employees in our operating regions (with funding divided equally between the three parties). This includes joint investments of US\$4.6 million in the Aktobe region, around US\$2 million in the Pavlodar region and US\$2.4 million in Karaganda region (with ERG to fund more than US\$1.5 million, US\$660,000 and more than US\$880,000, respectively)
  - These programmes prioritise young employees and employees in critical roles, as well as those with large and / or socially disadvantaged families.
- **Social infrastructure:** Support for sports and recreation facilities across our operating regions, including:
  - Ongoing funding of community sports facilities and mass participation events

- The hosting of recreational camps for the children of our employees, which benefit more than 4,000 children on an annual basis
- The ongoing funding of recreational facilities and activities for our employees and their families. In 2023, we invested around US\$360,000 to renovate the centre at EEC

- **Essential provisions:** The launch of subsidised 'social stores' across our operations, where employees can purchase essential household items at below market rates (as part of our 'ERG Care' well-being programme, p. 49)
- **Education and entrepreneurship:** Investment in a range of programmes to support long-term regional economic diversification and future job prospects for the children of employees (p. 64)

During the year, we conducted a further large-scale survey of local residents (including our employees) across six of our mining towns, as part of our ongoing efforts to benchmark local socio-economic conditions (p. 59).

## Supporting employee well-being

We continued to expand our employee sports and well-being programmes. This included the significant expansion of the number of sports clubs and classes available to our employees. We also hosted our fifth annual ERG Run Fest event across the cities of Khromtau, Aksu and Rudny. This is in addition to the hosting of more than 270 different sports events, involving more than 26,000 participants (including ERG employees).

We also continued to implement our sports infrastructure modernisation and standardisation programme. This included the renovation of gym facilities at Donskoy GOK, Pavlodar Aluminium Plant, the Krasnooktyabrsky Mine (Aluminium of Kazakhstan) and Aktobe Ferroalloys Plant. In addition, we completed a significant renovation of a swimming pool at SSGPO.

## Differentiated pay rises

In Kazakhstan, we undertake extensive benchmarking of employee salaries on an ongoing basis. In January 2023, the outputs from this process informed differentiated pay rises for more than 60,000 employees, following a round of earlier pay rises implemented in January 2022. In 2023, we applied further differentiated salary increases for more than 5,000 employees working in 'scarce' professions, following a round of similar rises implemented during the previous year. In 2024, we plan to implement pay rises of at least 10% for all employees in Kazakhstan.

## Managing the planned closure of our TUR mining unit

During the year, we continued to actively manage the impact of the closure of our TUR mining unit at the Kazmarganets mine (Kazchrome) on our employees. The closure took place in December 2023 and resulted in the retrenchment of around 91 employees. We have helped 40 of these individuals transfer to similar roles at Kazmarganets (Kazchrome), Shubarkol Komir and Marganec Zhairama. Their terms of employment, including remuneration, remain unchanged, and retraining has been provided as required. In addition, a total of 51 employees chose to terminate their employment contracts by mutual agreement and were provided with compensation.



<sup>1</sup> The projected number of apartments being constructed under the programme has been revised downwards from the previously stated figure of 832. This reflects a change in focus towards the provision of more preferential mortgages to our employees in Kazakhstan.



## Africa

The maintenance of strong employee relations is an important area of focus across our operations in Africa. As noted above, we continue to implement measures to support the ongoing localisation of our workforce in the DRC (p. 54).

Our operations in the DRC apply a range of policies and procedures to maintain a fair and constructive working environment for employees and contractors. This includes the application of the ERG Code of Conduct, the ERG Supplier Code of Conduct and our Human Rights Policy (p. 72). In 2023, we delivered training on the ERG Code of Conduct to employees at Metalkol, Frontier and Boss Mining. We also maintain a well-publicised hotline and site-based grievance mechanisms for employees to raise any potential concerns.

The remuneration we provide is both competitive and aligned with relevant collective bargaining agreements and legislative requirements. Permanent Congolese employees also receive school fees, housing, transport and family allowances, among other benefits.

We continued to pay basic salaries to all our employees at Boss Mining, while the operation was temporarily suspended.

### Payment of living wages at Metalkol

In March 2023, Rights and Accountability in Development (RAID) and the Centre d'Aide Juridico-Judiciaire (CAJJ), a legal aid organisation based in Kolwezi, released a report alleging that wages paid by some industrial mining operations in the DRC have not kept pace with local prices for basic goods. Metalkol was one of five operations referenced in the report. This followed a report from RAID in November 2021 that included historic allegations relating to Metalkol and practices alleged to have been undertaken by its subcontractors. Metalkol's detailed response to this previous report is publicly available here: [ergafrica.com](http://ergafrica.com)

As noted above, we provide competitive remuneration, as well as a range of additional benefits, at all our operations in the DRC. During the year, Metalkol also carried out external salary benchmarking to ensure our remuneration practices are aligned with the market.

## Brazil

At BAMIN, we continued to build constructive and transparent relations with our employees' unions.

During the year, we undertook an operation-wide employee engagement survey, building on similar annual surveys undertaken since 2019. This resulted in an overall engagement score of 87% (2022: 89%) and the retention of our externally recognised Great Place to Work® certification. We also implemented a range of measures to address areas identified via our previous engagement survey. This included the review and improvement of selected employee benefits (such as maternity and paternity leave), as well as the implementation of a holistic programme to enhance the overall 'employee experience'.

In addition, we implemented new KPIs to support gender pay equity and transparency (in line with legislative requirements in Brazil). We also launched a new diversity, equity and inclusion (DEI) programme. This focuses on five pillars: training, internal engagement, internal action, organisational processes and external commitments. Under the new programme, we provided training to our leaders and wider workforce on DEI, hosted lectures delivered by BAMIN's female leaders, established an internal group of volunteers to support action on DEI, and further enhanced our DEI Policy. Finally, BAMIN continued to participate in the 'Women in Mining Brazil' initiative<sup>1</sup> to help support gender inclusion in the mining sector.

## Our performance

During 2023:

- We did not identify any of our operations as presenting risks to workers' rights to freedom of association and collective bargaining
- We did not experience any strike action in Kazakhstan, Africa or Brazil
- There were no reported incidents of discrimination at our operations

## Next steps

In Kazakhstan, we plan to focus on:

- **Affordable Housing Programme:** The ongoing construction of affordable employee apartments, as well as the rollout (with our external partners) of our large-scale preferential mortgage programme. We also plan to sign a further US\$3.3 million memorandum with the Kostanay akimat and the Otbasny Bank to provide preferential mortgages to employees (with each party providing equal funding of US\$1.1 million)
- **Onsite facilities:** The construction of a modern canteen and sports complex at Shubarkol Komir, as well as dormitories and canteens at Marganets Zhairam and Donskoy GOK
- **Transportation:** Investment of approximately US\$4 million to purchase a further 26 buses in 2024
- **Sports and well-being:** The renovation of internal and external sports infrastructure in the city of Aksu, as well as the hosting of mass participation sports events for our employees and their families (including the ERG Batyry traditional sports event and ERG Run Fest running event)

In Africa, we plan to commence negotiations with our employees' representatives to agree new collective bargaining agreements at Metalkol and Frontier.

<sup>1</sup> Women in Mining Brazil is an initiative of International Women in Mining: [wimbrasil.org](http://wimbrasil.org)

# COMMUNITY IMPACTS

## Strategic context

**Sustainable development of our host regions: Under our 2025 Strategy, we have prioritised our contribution to the socio-economic development and well-being of communities in our regions of operation. This includes ongoing community engagement and the maintenance of relevant international standards, among other measures.**



### Relevant UN SDGs

➔ See p. 98 for associated UN Targets.



In line with both our Values and our Human Rights Policy, we respect human rights as well as the interests and traditions of local stakeholders, wherever we operate. We aim to minimise the potential adverse impacts of our activities and we undertake human rights risk assessments and / or due diligence (based on local risk profiles), in cooperation with local stakeholders. At the same time, we seek to maximise our positive impacts, including through community social investment (CSI, p. 63) as well as our ongoing support for local content in our host countries (p. 29). Our efforts are guided by structured and transparent engagement with local communities.

## What we are doing

### Managing our impacts

#### 📍 Kazakhstan

In Kazakhstan, we conduct comprehensive impact assessments and public consultations whenever undertaking major developments or operational changes. These processes are undertaken in line with national legal requirements and relevant international standards. In 2023, for example, we conducted public consultations in relation to operational activity at Kazchrome, SSGPO, EEC, KAS, Shubarkol Komir and Aluminium of Kazakhstan.

We also undertake large-scale surveys of local communities and undertake benchmarking of socio-economic conditions in our mining towns (see below).

In addition, local communities can raise grievances through our publicly available ERG Hotline (see: [erg.integrityline.org](http://erg.integrityline.org) and p. 70).

#### 📍 Africa

### Impact and grievance management

In Africa, we manage our community impacts through our integrated SHS management system. In addition, we apply IsoMetrix software to help record, centralise and analyse SHS data, facilitate more effective mitigating actions and manage related grievances, investigations and remediation.

Our operations apply site-based community grievance mechanisms and related procedures, which are aligned with the International Finance Corporation (IFC) Performance Standards and the UN Guiding Principles on Business and Human Rights.

These grievance mechanisms are publicised widely at our operations and communicated to communities via our frequent engagement processes. We provide multiple channels to raise grievances, including through our community liaison officers and via community-based 'drop off points'. Our approach is supported by ongoing community engagement, including through our mandatory Environmental and Social Impact Assessments (ESIAs) and Community Development Plans (or Cahier des Charges) in the DRC (p. 65).

## RESPONDING TO THE VIEWS OF MINING TOWN RESIDENTS IN KAZAKHSTAN

In November 2023, we carried out a further large-scale survey involving around 6,500 residents (including ERG employees) across six of our mining towns.<sup>1</sup> This was carried out with support from local akimats (regional governments) and built on the findings of two similar surveys carried out in April and October 2022 (involving more than 8,300 residents).

The November 2023 survey found that the main challenges faced by local residents continued to relate to rising living costs (including the affordability of housing) as well as local perceptions that health care, municipal services and road infrastructure still required improvement. Nonetheless, local perceptions of socio-economic conditions had marginally improved.

In addition, there was a decrease in the proportion of residents who were considering whether to migrate from their towns.

Separately, there were generally average to high levels of satisfaction regarding ERG's contribution to local socio-economic development, albeit marginally lower than in the prior survey.

We will use the findings from the survey to continue to evolve and enhance the programmes being implemented in partnership with local akimats under our regional development programme (p. 63). We have also shared the findings with local akimats to help support the broader development agenda in our mining towns.

<sup>1</sup> Lisakovsk, Rudny, Aksu, Khromtau, Kachary and Oktyabrsky.

All of our operations in the DRC have undertaken ESAs, including human rights aspects. These are updated on a five-yearly basis and / or in line with significant operational changes. We implement a range of ongoing programmes to mitigate risks identified through our ESAs – as well as inclusive engagement approaches with communities to identify their development priorities – much of which is done via our Community Development Plans.

➔ For information on our Group-wide approach to human rights (including our related stakeholder engagement activities), see p. 72.

### **Responding to ASM activity at our operations**

While artisanal and small-scale mining (ASM) activity is present in the vicinity of our Metalkol, Boss Mining and COMIDE operations<sup>1</sup>, none of our production comes from ASM. At the same time, we recognise the important role that ASM plays in supporting much-needed livelihoods in the DRC.

In this context, our CSI programmes include initiatives to improve socio-economic conditions for ASM communities. This includes the development of alternative livelihoods (p. 65), among other measures. We also collaborate with the Government and international development agencies to support improvements in the environmental and social practices of local ASM miners. In addition, we continue to explore opportunities to support the potential formalisation of the ASM sector (p. 66).

We further set out key updates on ASM activity (including illegal mining) at our operations during 2023. For details on our structured management approach to ASM, see p. 87 of the Appendix.

### **Metalkol**

During the year, a significant number of illegal miners continued to operate on the boundary of our concession at Metalkol. This takes place outside of our fenced Kingamyambo tailings deposit. We worked with an independent NGO to deliver capacity building within the community. Our efforts focused on occupational health and safety, hygiene, waste management, basic financial management and governance, among other areas.

In addition, we participated in multi-stakeholder working groups to support the broader promotion and application of the Voluntary Principles on Security and Human Rights (Voluntary Principles), including with respect to interactions with ASM communities.

### **Boss Mining**

At Boss Mining, illegal ASM activity continues to take place on selected areas of our concession, but outside of the current production area.

Separately, we continue to engage with the Ministry of Mines, Entreprise Générale du Cobalt (a Gecamines subsidiary) and other key stakeholders to help find a sustainable solution to the formalisation of ASM. In 2024, we aim to launch a pilot project focused on addressing related negative environmental, safety and social impacts, supporting the development of responsibly managed third-party ASM cooperatives and informing official ASM formalisation efforts in the DRC.

### **COMIDE**

At COMIDE, illegal, mechanised and ASM mining activity takes place on our concession. COMIDE continues to engage with local stakeholders and applicable regulators in relation to this issue.

### **Flooding and related suspension of Boss Mining in the DRC**

In March 2023, Boss Mining and the broader Kakanda area received unprecedented levels of rainfall, as well as related flooding from upstream, third-party tailings storage facilities. This also resulted in water flooding into the nearby Kakanda River. These downpours and the subsequent flooding affected Boss Mining and its nearby communities. Testing did not identify any resulting hazardous water pollution.

Prior to these events, Boss Mining broadcasted public rainfall warnings and alerted the local authorities. It also requested the evacuation of the neighbouring villages, which was carried out (other than a small number of individuals engaged in illegal mining activities who chose to stay in place).

Following the flooding, Boss Mining immediately liaised with local communities, relevant authorities and civil society and took action to provide financial and medical support to those impacted, as well as food and emergency supplies. It subsequently worked with the relevant authorities to assess the routes of the flooding, its impacts, the remediation and prevention measures that needed to be implemented, and to establish the facts around the incident. An independent report by the regional Voluntary Principles Working Group has also confirmed the facts around the incident.

In April 2023, the Ministry of Mines' Directorate for the Protection of the Mining Environment (DPEM), the local authorities and Boss Mining worked together to implement an action plan to improve the environment around the concession and the Kakanda community. This required the submission of a 90-day action plan in this regard by 15 June 2023, which was submitted accordingly.

Nonetheless, on 29 May 2023 (i.e. before the deadline given to Boss Mining to submit its action plan), the Ministry of Mines ordered a three-month suspension of operations. This suspension was then renewed for three months on 29 August 2023, followed by a further three months on 28 November 2023. At the end of May 2024, Boss received notification from the Minister of Mines that the suspension had been lifted on the basis of the satisfaction of the DPEM's recommendations. At the time of writing, we are reviewing options regarding the recommencement of operations.

In the meantime, we are focusing on implementing the measures stipulated under the action plan and are supporting the enhancement of safety practices for local individuals engaged in artisanal mining. In addition, Boss Mining signed two Community Development Plans in 2023. Over the next five years, these agreements will benefit 27 communities, impacting more than 82,000 people in the Haut-Katanga and Lualaba provinces. We have also completed a related compensation programme, which was a requirement of the DPEM action plan.

<sup>1</sup> ASM activity is not present in the vicinity of our Frontier operation (our other active operation in the DRC) due to the geological nature of the deposit.

## Resettlement at Metalkol

For the fifth consecutive year, we continued to support 16 resettled families from the Samukonga community near Metalkol. The families were successfully resettled in a new village (Kamimbi II) in 2018, as part of a voluntary resettlement process and in line with local law and the IFC Performance Standards.<sup>1</sup>

We have established an alternative livelihood programme for the community, which currently focuses on agriculture. We are evaluating opportunities to diversify the programme in future. During the year, we also provided monthly supplies of food and helped to maintain water supply systems, solar power systems and housing at the village. Furthermore, the Kamimbi II and Samukonga communities continued to benefit from our broader sustainable livelihood programmes which we are implementing under our Community Development Plans (p. 65). We also commenced the construction of a health clinic that will benefit the resettled families and the surrounding communities.

In September 2023, Amnesty International made allegations relating to, among other issues, the Samukonga resettlement process and related compensation payments. For further details on our response to these allegations, see p. 73 and our publicly available response at [ergafrica.com](https://www.ergafrica.com)

## Community compensation at Metalkol

During the year, we paid compensation to communities living near to Metalkol. This included the payment of US\$811,000 to local farmers in relation to potential localised impacts on the Ndazama River. Separately, compensation of around US\$219,000 was paid to local farmers following a diversion of the Musonoi River, which caused short-term flooding of local fields. Furthermore, around US\$6,000 was paid to local farmers affected by road construction work around Kalulu community.

## Brazil

At BAMIN, we implement a risk-based approach towards the management of our direct and indirect impacts (as per local legal requirements). This is supported by close and ongoing cooperation between our ESG and Risk Management functions, and is underpinned by our comprehensive engagement programmes.

## Engagement and impact management

At BAMIN, our large-scale engagement programmes play an important role in building trusted relations with local communities and supporting our social licence to operate. These focus on:

- The hosting of multiple public consultations and site visits
- The distribution of environmental and social awareness-raising materials, including the promotion of our independently managed grievance management and engagement system
- Ongoing stakeholder surveys to help guide our environmental and social programmes

At our Pedra de Ferro mine, our engagement programme covers 108 communities while our programme at Porto Sul covers 35 communities. At the FIOL 1 railway, we commenced the rollout of an engagement plan covering 198 communities, in line with the start of construction activities at the site.

In addition, we continued to implement a programme to improve agricultural production for 15 families<sup>2</sup> from the nearby Fazenda Lapa community, who were resettled in 2011 in line with legal requirements.

## Specific impacts at Porto Sul

Under the terms of Porto Sul's land concession agreement and PBA, the development of the Porto Sul port requires the expropriation of 212 plots of agricultural land. This affects around 320 families, most of whom do not live on the land in question. The expropriation process began in 2019 and is being conducted by the government of the State of Bahia. Landowners are compensated, while the small proportion of people who are not owners (but who nonetheless live and work on the land in question) are resettled and also receive compensation as required by law.

In 2023, a further 10 families were resettled, with the final remaining 15 families (who work on two communal plots of land) scheduled to be resettled once construction on the port progresses further. BAMIN continues to closely monitor the process, with support from a specialist third-party consultancy.

In addition, we continued to implement a comprehensive joint fishing monitoring programme. This – as well as a planned compensation programme, which will commence once offshore construction starts – aims to help minimise the negative impacts that the port development could have on artisanal fishing, the most significant source of income for nearby communities.

## Indigenous communities

Our ESAs have established that, despite indigenous communities living within the areas of influence of Porto Sul (see below), our port development will not have a material impact on these communities. We have received formal approval from Fundação Nacional dos Povos Indígenas (FUNAI, the government body tasked with overseeing Indigenous Peoples' rights) as part of our licensing process. In addition, no indigenous communities have been identified within the direct or indirect areas of influence of the Pedra de Ferro mine or the FIOL 1 railway concession.<sup>3</sup>

Tupinambá indigenous communities live in the city of Ilhéus, which is within the direct area of influence of Porto Sul (around 45km from the project). Despite the absence of significant project impacts, we continue to implement voluntary measures to help improve living conditions for these communities. During the year, this included the provision of vocational training to 20 indigenous community members under our Canteiro Escola (or 'Site School') programme (p. 67). In addition, our health and safety team provided training in fire safety and emergency response.

## OUR MANDATORY ENVIRONMENTAL PLANS AT BAMIN

Under our licensing obligations, the Pedra de Ferro mine and Porto Sul port development have established mandatory environmental plans (Projeto Básico Ambiental, PBAs). These legally mandated documents are approved by, and monitored by, government environmental agencies. The PBAs establish the social and environmental programmes that are required to mitigate the potential and / or actual impacts of our operations on local communities and the environment, as identified through our environmental impact studies.

We continue to implement a range of targeted social and environmental programmes around FIOL 1, while we await full approval for our PBA covering the railway concession.<sup>4</sup>

<sup>1</sup> The need for resettlement was identified through our ESIA, due to the proximity of the families to Metalkol's new tailings storage facility. ERG funded the construction of the village, which offers a better standard of accommodation than the families previously enjoyed.

<sup>2</sup> This excludes three families who waived their rights to a plot of land. Nonetheless, we continue to support and monitor all 18 families.

<sup>3</sup> The total number of formally recognised local indigenous communities could increase in future, subject to further recognition processes undertaken by FUNAI.

<sup>4</sup> In 2023, we received partial approval for our FIOL 1 PBA. The licensing body requested supplementary information, which we have since submitted. At the time of writing, we are awaiting confirmation regarding full approval.



## BUILDING A DEEPER UNDERSTANDING OF LOCAL COMMUNITIES IN BRAZIL

At BAMIN, we worked with an expert third-party consultancy to undertake an enhanced stakeholder mapping exercise covering 271 communities living within the direct and indirect areas of influence around our mine, port development and railway concession. This focused on building a consistent understanding of these local communities' interests and traditions – including the key challenges they face and their main income generating activities.

The outcomes will inform our engagement and socio-economic development programmes.

Our community relations teams will periodically update this exercise to support our broader community engagement programme. In future, we also plan to develop a centralised stakeholder management system.

In addition, eight<sup>1</sup> traditional Quilombo (i.e. Afro-Brazilian) communities live near to the project (six within Porto Sul's indirect areas of influence and two within its direct areas of influence). These communities benefit from the social programmes we implement under our PBA for the port development, and we keep them informed on project developments as part of our wider engagement programmes.

### Mitigating dust impacts

In 2023, we continued to enhance our dust suppression controls and monitoring measures at the Pedra de Ferro mine. This was in response to a further 10 community complaints that were received during the year, relating to iron ore dust from the mine and road dust from our local haulage routes. Ongoing measures include the installation of wind barriers, water spraying along haulage roads and the application of polymer dust suppressants on our stockpiles. Our monitoring programme indicated that all PM10 and PM2.5 particulate levels fell within legislative limits in 2023. In addition, we continued to host a related joint community monitoring committee to enable local stakeholders to discuss the findings of the monitoring programme and any related issues.

### Our performance

In Kazakhstan, we conducted 23 public consultations related to project changes (2022: 42). No significant grievances were raised during these hearings or through any of our available community relations channels, including the large-scale surveys in our mining towns (p. 59).

In Africa, 29 complaints were raised via our grievance mechanisms (2022: five), 25 of which have been resolved. These complaints related to the behaviour of third-party security contractors and public law enforcement, community compensation claims and delays in the implementation of CSI projects, among other issues.

Finally, we received 103 complaints via our community grievance management and engagement system in Brazil (2022: 83) – all of which were resolved during the year. Key complaints included inconvenience caused by the FIOL 1 construction work, dust emissions, site-related traffic and contractor employment practices.

### Next steps

In Kazakhstan, we plan to conduct our next large-scale survey involving residents (including ERG employees) across our six mining towns in 2024. These annual surveys continue to inform our own CSI activities, as well as the regional development agenda.

In Africa, we plan to continue the development and implementation of our Community Development Plans (including through our multi-stakeholder partnerships), as well as undertaking regular public consultation as part of the process (p. 65).

In Brazil, we plan to further update our PBAs at the port and mine to maintain our ongoing compliance with key licensing requirements. We also anticipate receiving full approval for our FIOL 1 PBA.

<sup>1</sup> This figure has been revised upwards from the five communities cited in ERG's Sustainable Development Report 2022, based on the findings from an updated stakeholder mapping exercise undertaken at BAMIN.

# COMMUNITY SOCIAL INVESTMENT

## Strategic context

**Sustainable development of our host regions: Under our 2025 Strategy, we have prioritised our contribution to the socio-economic development of communities in our regions of operation. This includes improving community well-being and prosperity, while also supporting entrepreneurship and the development of the local business environment.**



### Relevant UN SDGs

➔ See p. 98 for associated UN Targets.

We use community social investment (CSI) to build sustainable futures for our local communities that extend far beyond the lifespan of our operations. At the same time, it directly supports the maintenance of our social licence to operate, the delivery of positive living standards for employees living within local communities, and the fulfilment of our mandatory CSI obligations.

In Kazakhstan, we focus on supporting socio-economic development and diversification across our (often remote) mining towns and broader

operating regions. We also play an important role in supporting national-level social investment, in line with the broader development agenda of the Government of the Republic of Kazakhstan (p. 64).

We are equally focused on helping to address sustainable development priorities within local communities around our operations in Africa and Brazil, many of which face material socio-economic challenges.

## What we are doing

### Supporting our communities<sup>1</sup>

#### Kazakhstan

In 2023, we continued to implement our regional development programme, which supports long-term socio-economic development across our mining towns and operating regions. The programme is implemented through government partnerships at the national and regional levels, including our regional memoranda of understanding (Regional MoUs<sup>2</sup>). It is focused on the specific needs of our operating regions, which are identified through targeted annual engagement surveys, as well as our Tugan Qala ('Home Town') and School of Active Citizens programmes.

These workstreams have identified the following priorities:

- **Improved living standards**, including housing and utilities infrastructure, public transport and roads, and urban spaces
- **Education and youth skills development**, including support for local educational and entrepreneurship programmes – as well as targeted investment in schools, colleges and universities
- **Healthcare**, including the modernisation of medical institutions and the provision of advanced training for doctors
- **Promotion of sports and well-being**, including the development of community infrastructure and youth sports leagues

For the purposes of our reporting, we have structured this section around our ongoing efforts to address these priorities. This includes initiatives under our Regional MoUs, as well as our direct social investments (i.e. that fall outside the scope of the programme).

### Improving living standards

Our long-term aim is to support the development of comfortable urban environments in our mining towns and operating regions, where multiple generations (including the children of our employees) will choose to live and work. We place particular emphasis on enabling local communities to define their own priorities, and on supporting collaboration between regional governments and Kazakhstani citizens (including our employees).

Below, we set out some of our key initiatives in this regard.

#### *Tugan Qala ('Home Town')*

The Tugan Qala programme focuses on improving the urban environment in the Aktobe, Pavlodar and Kostanay regions.<sup>3</sup> Under the programme, we involve local populations in deciding how funds should be distributed via our Regional MoUs with local akimats (regional governments). Residents have the opportunity to put forward ideas for development into potential projects. Winning projects are then selected via an online vote and fully funded through our Regional MoUs.

During the year, we invested more than US\$880,000 to fund 43 winning projects. This will include improvements to public courtyards, as well as the creation of art installations and monuments. In addition, we expanded the scope of the programme to fund local cultural festivals and sports tournaments. These projects will be implemented from 2024, with priority given to local businesses when selecting companies to carry them out. In 2023, 43 winning projects from the previous round of voting were also implemented. This included the construction of sports facilities and children's playgrounds, as well as the improvement of sidewalks.

<sup>1</sup> Projects that benefit our local communities (including, where relevant, employees and their families) are set out in this section. Projects that only benefit employees are covered in 'Employee Relations' on p. 56.

<sup>2</sup> Regional MoUs are negotiated strategic partnerships between ERG and regional authorities targeted at the broader socio-economic development of local communities (some of which are undertaken as part of our licensing obligations).

<sup>3</sup> Specifically, it is being implemented in the cities of Khromtau (Aktobe region), Aksu (Pavlodar region) and Rudny (Kostanay region), as well as in the town of Kachar and the village of Oktyabrsky (both in the Kostanay region). In 2024, we plan to expand it to the city of Lisakovsk (Kostanay region).

### School of Active Citizens

The School of Active Citizens programme helps train local residents on how to participate in state budgeting mechanisms. It also helps residents improve their own cities by actively participating in decision-making by local authorities through the government-run Public Participation Budget.<sup>1</sup>

In 2023, a further 77 ERG employees completed practical training at our operations in the Pavlodar, Aktobe and Kostanay regions. These employees then submitted and promoted their ideas for local development projects, with winning projects selected via a public vote and planned for implementation in 2024. We now plan to open the School of Active Citizens programme to local residents in the city of Khromtau from 2024.

### Broader support for improved living standards

Beyond this, we provided funding (through our Regional MoUs) for:

- The construction of the first phase of a cultural centre in the city of Khromtau in the Aktobe region (US\$1.3 million)

- The improvement of public courtyards in the city of Khromtau (US\$429,000)
- The project planning phase for a public park in the city of Ekibastuz in the Pavlodar region, which will be constructed by third-parties in 2024 (US\$167,000)
- The maintenance and replacement of boilers in the village of Shubarkol in the Karaganda region (US\$212,000)

### Education and youth skills development

We support the enhancement of educational standards and teaching capabilities in our operating regions to help equip local pupils with the skills needed to thrive in future labour markets. This is in addition to our support for a range of future-focused skills development initiatives at universities and colleges in Kazakhstan (p. 53).

In 2023, related projects carried out through our Regional MoUs included:

- The construction of modern and digitally-enabled schools, including two schools in the

Pavlodar region (US\$4.4 million) and a school in the Kostanay region (US\$4.2 million)

- The modernisation of a cultural and creative centre ('Oner Ortalygy') in Aktobe city (US\$1 million)
- The purchase of modern learning equipment for a school in the Aktobe region (US\$132,000), as well as the purchase of interactive learning boards for 28 schools in the Kostanay region (US\$104,000)
- The installation of STEM laboratories at an educational centre in the Pavlodar region (US\$26,000)

In addition, we supported the following initiatives via our direct social investment:

- The construction of a creative learning centre for children in the city of Ekibastuz in the Pavlodar region (US\$9.9 million)
- The launch of a community education centre in the Khromtau region (US\$123,000). The project is being implemented in partnership with the NGO Qadam, and will deliver vocational and non-vocational training to unemployed women and young people

Finally, we continued to support the Student Entrepreneurship Ecosystem programme<sup>4</sup>, including a further direct social investment of US\$33,000. This helps transform regional universities and colleges into hubs of entrepreneurial excellence, with the long-term goal of supporting new start-up businesses in our operating regions. Since 2017, more than 700 teachers and around 8,000 students have participated in the programme.

We continued to support the Tikkun Olam Makers' (TOM) Makeathon<sup>5</sup> event in Kazakhstan, which addresses daily challenges faced by people with disabilities. The 72-hour event took place in May 2023 in Almaty and saw 35 inventors develop prototype devices (from modern walking equipment through to improved prosthetics). These were given to seven people with disabilities.

🔗 For more information, see: [tomglobal.org/about](https://tomglobal.org/about)

### ERG MEKTEPKE ('ERG FOR SCHOOLS')

In 2023, we continued to implement our ERG Mektepke ('ERG for Schools') programme to support the ongoing improvement of STEM education at secondary schools in the Aktobe, Kostanay and Pavlodar regions. This is being implemented in partnership with leading third-party education providers, as well as the Ministry of Education of the Republic of Kazakhstan.

In 2023, we invested US\$301,000 in the programme through our Regional MoUs (2022: US\$702,000). Key activities included the completion of an advanced teacher training programme. This included the provision of STEM-focused training to more than 8,900 teachers (2022: more than 4,700 teachers) in accordance with the standards of the internationally recognised Program for International Student Assessment (PISA).

In 2024, we plan to continue supporting secondary schools across these regions, with a focus on further embedding international standards of education and modernising educational facilities and learning materials.

### Healthcare

We finance modern medical infrastructure through our Regional MoUs. This is focused on supporting enhanced healthcare provision for our employees and their families, as well as for the wider communities in our operating regions.

In 2023, key initiatives included:

- The purchase of modern medical equipment for an emergency ambulance station in the Aktobe region (US\$953,000)
- The purchase and repair of medical equipment (US\$229,000) and the provision of advanced training for medical personnel (US\$66,000) in the Pavlodar region

### SUPPORTING THE KAZAKHSTAN KHALKYNA PUBLIC SOCIAL FUND

In January 2022, ERG donated US\$65 million<sup>2</sup> to support the creation of the Kazakhstan Khalkyna public social fund. This forms part of our efforts to support the broader development priorities of the Government of the Republic of Kazakhstan. The fund was created to help address national development priorities, including the enhancement of healthcare, education and social services, among other areas.

In 2023, ERG's donation helped to partially fund a range of initiatives under the fund. These included, among other projects:

- The procurement of medicines to help treat rare diseases
- The construction of STEM<sup>3</sup> laboratories, the provision of digital learning equipment and the delivery of enhanced teacher training at schools in remote rural areas
- The equipping of schools for children with special educational needs, as well as the equipping of a health centre for children with special educational needs

The priority areas of the fund are identified via structured engagement with established charities and corporate donors (including ERG).

<sup>1</sup> The Public Participation Budget enables citizens to contribute their ideas via a public online portal. Following initial consideration by a government-led committee, winning submissions are decided via an online public vote and are funded by regional governments.

<sup>2</sup> This figure is based on the Tenge / US dollar exchange rate at the end of 2022. The Tenge equivalent is 30 billion.

<sup>3</sup> Science, technology, engineering and mathematics.

<sup>4</sup> The programme is being implemented in partnership with the Tel Aviv University Friends Association in Kazakhstan and the Almaty Management University (AlmaU).

<sup>5</sup> TOM Makeathons is an international movement of crafters who develop accessible solutions to problems faced by people with disabilities, the elderly and low-income sections of the population.

## Africa

In the DRC, we are helping to directly address the key development priorities of 58 communities, and play an indirect role in supporting many more. Our long-term aim is to empower local communities to build their own sustainable futures and prosper well beyond the lifespan of our operations.

Much of our support is delivered via our operation-specific Community Development Plans (Cahier des Charges – see box). Each Community Development Plan is based on extensive multi-stakeholder engagement and is focused on addressing the specific needs of communities living near to our operations.

Below we set out some of the key CSI projects we are implementing in the DRC, both under our Community Development Plans and as part of our broader voluntary activities.

## MANDATORY INVESTMENT FRAMEWORK IN THE DRC

### Context

The 2018 Mining Code requires mining companies to establish legally binding Community Development Plans, to be renewed on a five-yearly basis in parallel with the updating of operations' ESAs.

Community Development Plans are based on extensive formal consultation with key stakeholders. This is used to identify local development priorities and to inform the implementation of CSI projects focused on addressing the same. The plans are agreed and signed on a collective basis by relevant stakeholders, including the mine operator, the government and local communities. This is with the aim of ensuring transparency, aligning expectations and establishing collective ownership among the stakeholders. Prior to their implementation, Community Development Plans are approved by the local authorities, with the implementation of resulting community development projects subject to annual independent monitoring.

### Alternative livelihoods and food security

We support alternative livelihoods to address food insecurity and a lack of formal employment opportunities, including for communities engaged in ASM activity. Our long-term aim is to support the development of self-sustaining local economic ecosystems.

During the year, we continued the implementation of the agricultural programme at COMIDE, which directly benefits 112 households (including 37 female family heads) in three local communities. In addition, a sustainable agricultural programme that we established at Boss Mining is now being independently run by local communities.<sup>1</sup>

In addition, the Code requires all mining companies to contribute 0.3% of annual turnover to community sustainability funds, which are managed by multi-stakeholder committees (see below).

### Status at our operations in 2023

In 2023, we implemented a range of CSI projects under our Community Development Plans at Metalkol and Frontier (examples of which are provided below).<sup>3</sup> We also worked closely with stakeholders to finalise our Community Development Plans at Boss Mining and Comide.<sup>4</sup>

Furthermore, we made the first tranche of payments at Metalkol, Frontier and Boss Mining to meet our obligation to contribute 0.3% of annual turnover to community sustainability funds following the establishment of the Committees and their bank accounts in 2023.<sup>5</sup> We have supported the establishment of multi-stakeholder committees to help manage the allocation and oversight of these funds. We plan, subject to government approval, to start the implementation of related community development projects in 2024.

### Water

We help provide clean water to communities living near to our operations. Our most significant project in this regard has been the development of a large-scale water reticulation system to support residents in the town of Sakania near to Frontier (see box). At Frontier, we also plan to start the drilling of 20 boreholes and the installation of related solar-powered distribution facilities in 2024.

At Metalkol, we completed the drilling and construction of 10 wells and solar-powered distribution facilities that will deliver clean water to eight local communities.<sup>2</sup> The total investment for this project amounted to US\$604,000.

### Education

Access to adequate formal education is a significant challenge for many communities in the DRC. Despite the temporary suspension of Boss Mining, we continued to fund educational initiatives in Kakanda. This included the provision of US\$2.2 million (2022: US\$2 million) to support more than 4,600 students and 129 teachers across 13 nearby schools.

At Metalkol, we completed the construction of a combined primary and secondary school for the Kamimbi II community. The school has been operational since the start of the 2023 school year, and we now plan to hand it over to the government in 2024.



## AMENSHI E BUMI WATER RETICULATION PROJECT AT FRONTIER

At Frontier, we have supported the development of the Amenshi E Bumi (meaning 'Water is Life' in Bemba) water reticulation system to provide the town of Sakania with a reliable and sustainable supply of clean water. The project was initiated in 2020 to help address the fact that the growing population of Sakania was exceeding the original water supply capacity of the town.

The system consists of three large-diameter, high-flow boreholes as its supply source and two water tanks with a combined capacity of 3,300 cubic metres. This provides the town of Sakania with a continuous water supply.

The new system was officially commissioned in December 2022. During 2023, we invested a further US\$189,000 and provided ongoing maintenance services, prior to the full handover of the system to the government.

1 A planned fish farming programme near Metalkol was postponed due to project security related challenges.

2 Drilling had been planned for 2022, but was delayed due to procurement challenges. We launched the programme in response to community priorities identified through our Participatory Rural Appraisals (PRAs) – and in light of some of our own project impacts, including the fencing of the Kingamyambo tailings dam, which restricted water access for some community members.

3 The Metalkol Community Development Plan was approved in 2020, with project implementation starting in 2021. The Frontier Community Development Plan was approved in 2022, with project implementation starting in 2023.

4 In 2024, COMIDE and Boss Mining received approval from the Government for their respective Community Development Plans.

5 This process is currently not applicable to COMIDE as it is on care and maintenance and is not generating turnover.

## Healthcare

We focus on improving healthcare services within local communities, many of which face a range of health challenges. This includes the provision of support to government vaccination campaigns, as well as HIV / AIDS, tuberculosis, cholera and malaria programmes.

At Metalkol, we continued to support the construction of a community health clinic, equipped with an ambulance, to support the Tshamundenda, Tshala, Kamimbi II and Samukonga communities. We plan to complete the centre in 2024.

At Frontier, we provided US\$98,000 to purchase emergency response vehicles and motorbikes for the largest hospital in the nearby town of Sakania.

At Boss Mining, we continued to provide emergency medical care for local communities. We also helped to maintain a local hospital and pay salaries for hospital staff.

## Infrastructure

We support infrastructure improvements and service delivery for local communities in the DRC. At Boss Mining, for example, we spent US\$1.3 million (2022: US\$635,000) to provide electricity to the nearby town of Kakanda and support much needed maintenance work on the broader network.

## MULTI-YEAR SUPPORT FOR THE GOOD SHEPHERD INTERNATIONAL FOUNDATION

Since 2017, we have partnered with the Good Shepherd International Foundation (GSIF) to help support the long-term sustainable development of local ASM communities living near Metalkol. This includes a focus on addressing the conditions of poverty that can lead to children being exposed to exploitative conditions, including the worst forms of child labour.

During the year, we continued to fully fund an intervention programme in the community of Tshala, which is run by Bon Pasteur Kolwezi, GSIF's implementing partner. The programme focuses on alternative livelihoods, social and economic empowerment, child protection and capacity building.

In 2023, our fully funded programme resulted in:

- 202 children (47% of whom are girls) being enrolled in a related school programme
- 282 women participating in savings groups
- 325 community members (82% of whom are women) engaging in agriculture and poultry farming
- 1,632 community members receiving awareness training on children's rights and the risks associated with child labour

In addition, we co-funded a Bon Pasteur mobile health clinic, which provides free services to rural communities in Kolwezi. The clinic conducted more than 5,000 medical consultations, delivered medical services to more than 4,900 people (65% of whom are women) and provided health awareness training to around 10,700 people.

## SUSTAINABLE AGRICULTURAL PROGRAMME AT FRONTIER

At Frontier, we invested US\$479,000 as part of our ongoing support for a large-scale, community-based agricultural programme, which supports not only the households living nearby, but also a much wider network of people across the agricultural value chain. This money is used to purchase agricultural inputs and machinery, while participants also benefit from capacity-building delivered by expert agronomists.

In 2023, the programme focused on the planting and harvesting of maize and the preparation of additional land for the next agricultural season.

Participating households can generate income by processing and selling their maize via a related milling cooperative, which is also supported by Frontier. The processed product is purchased by Frontier, as well as being sold on the local market.

In early 2024, we invested a further US\$319,000 in the programme to help establish six poultry farms for local communities. This will support our ongoing efforts to diversify local income generating opportunities.

## Artisanal and small-scale mining

In line with our Clean Cobalt and Copper Framework (p. 75), none of our production comes from ASM. Nonetheless, we acknowledge the important role that ASM plays in supporting livelihoods for many communities in the DRC. In this context, we have partnered with the GSIF through a multi-year commitment at Metalkol (see box).

We place particular emphasis on the promotion of alternative livelihoods for those who would otherwise be involved in ASM activity (p. 65).

During the year, we hosted a workshop at Boss Mining to celebrate International Women's Day, which was delivered by female employees. This aimed to empower girls in Kakanda's secondary schools to pursue education and build rewarding careers, and to raise awareness around the potential risks associated with engaging in ASM activities.

## Brazil

At BAMIN, we place particular emphasis on supporting local business incubation, vocational skills training, educational provision, infrastructure development and ecological restoration, among other aspects. This is in a context in which many local communities face conditions of poverty and have limited access to formal employment. During the year, around 34,000 community members benefitted from social programmes implemented under our PBAs.

Key activities under our PBAs included the ongoing implementation of:

- **Transformar ('Transform')**: This provides equipment, supplies and training to community-based entrepreneurs in the municipalities of Caetité, Licínio de Almeida and Pindaí. In 2023, the project benefitted 153 people (including 104 women), including the delivery of training focused on administrative and accounting skills
- **Circuito do Lixo ('Refuse Cycle')**: This provides opportunities for local businesses to collect and recycle revenue-generating waste from the Pedra de Ferro mine. In 2023, 40 community members benefitted from the programme, which in November delivered the highest average monthly income per beneficiary since it commenced in 2010 (around 30% above national minimum wage) and resulted in around 300 tonnes of solid waste being recycled
- **Canteiro Escola ('Site School')**: This provides vocational training and professional qualifications to young people from the lowest-income local communities. It aims to help these individuals access employment opportunities with BAMIN or at other companies. In 2023, a further 206 individuals completed the programme (including 20 indigenous community members, p. 61)

Outside of our PBAs, we continued to support a range of community initiatives on a voluntary basis. This included the donation of around US\$129,000 to help provide meals for patients, their families and employees at the São José – Santa Casa de Misericórdia Hospital in the city of Ilhéus (2022: around US\$125,000).

## Our performance

In 2023, ERG's worldwide CSI contributions amounted to US\$52 million (2022: US\$95.2 million). This decrease primarily reflects the donation of US\$65 million to support the establishment of the Kazakhstan Khalkyna public social fund in 2022.

In Kazakhstan, our CSI contributions amounted to US\$42.5 million (2022: US\$86 million). This included US\$25.4 million to fund Regional MoUs with local governments (2022: US\$18.2 million), with the increase reflecting investment in the construction of schools in the Pavlodar and Kostanay regions.

In Africa, our CSI contributions totalled US\$8 million (2022: US\$7.8 million), including the ongoing implementation of a range of projects under our mandatory Community Development Plans, our mandatory contributions of 0.3% of annual turnover and our broader voluntary initiatives.

In Brazil, our CSI contributions totalled US\$1.5 million (2022: US\$1.4 million<sup>1</sup>), including the implementation of several initiatives under our mandatory PBAs and our broader voluntary efforts.

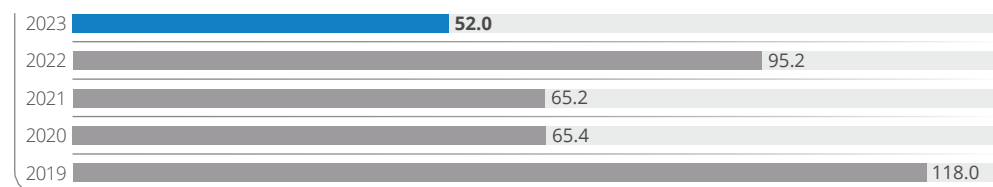
## Group CSI contributions by region (US\$M)

Region	2023	2022
Kazakhstan	42.5	86.0
Africa	8.0	7.8
Brazil	1.5	1.4

## CSI contributions in Kazakhstan by type (US\$M)

Spending type	2023	2022
Direct investment	17.1	67.8
Regional memoranda of understanding	25.4	18.2

## Group CSI contributions by year (US\$M)



## Next steps

In the future, we plan to:

- **Kazakhstan**: Continue to implement our long-term regional development programme, including the launch of several initiatives to support the ongoing enhancement of education, healthcare and the urban environment in our operating regions. We will also continue to expand our Tugan Qala ('Home Town') and School of Active Citizens programmes
- **Africa**: Implement a range of existing and new CSI programmes under our Community Development Plans and 0.3% mandatory contributions at our operations in the DRC, and explore new procurement and contracting opportunities for community enterprises
- **Brazil**: Continue to implement a range of social and environmental programmes, in line with our obligations under our PBAs

<sup>1</sup> Restatement to reflect the exclusion of projects which do not fully relate to CSI in line with Group definitions.

# Governance

The sustainability of our business is underpinned by our maintenance of sound management systems and our commitment to acting as a responsible partner.

We are focused on earning and maintaining the trust of our stakeholders – including our customers, downstream value chain partners, host governments and the societies in which we operate. This means applying and demonstrating beyond-compliance ethical standards, respect for human rights and transparency around our interactions with governments.

It also means that we responsibly manage our indirect supply chain impacts and deliver high levels of assurance to downstream value chain actors that they can use our products with confidence.

➔ For additional information on our management approach, see p. 88 of the Appendix.

## 2023 HIGHLIGHTS

Ongoing application of our ‘beyond compliance’ assurance model

PwC assurance of our third Clean Cobalt and Copper Performance Report<sup>1</sup>

Second successful RMI RMAP<sup>2</sup> assessment at Metalkol

## MATERIAL ISSUES

**Ethics and compliance, including human rights**

➔ See p. 69

**Responsible value chains**

➔ See p. 74

**Government relations and policy**

➔ See p. 78

<sup>1</sup> Assurance of our fourth Performance Report was received in July 2024.  
<sup>2</sup> Responsible Minerals Initiative Responsible Minerals Assurance Process.

# ETHICS AND COMPLIANCE, INCLUDING HUMAN RIGHTS

## Strategic context

Strong ethical standards, including those relating to human rights, underpin all that we do. This is essential if we are to avoid negative impacts on others, protect our relationships, continue to access finance and achieve our long-term business objectives. This includes the delivery of responsible mineral value chain assurance, given ever-growing downstream scrutiny regarding the provenance – and conditions of extraction – of metals, and those supporting the global energy transition in particular.



### Relevant UN SDGs

➔ See p. 98 for associated UN Targets.

We apply a 'beyond compliance' approach to ethics that is focused on an effective, risk-based approach, as well as continuous improvement. We are continuing to align our policies with fast-evolving legislation and sustainability standards and frameworks – including in relation to human rights (p. 72).

➔ For more information on key compliance risks in 2023, see p. 88 of the Appendix.

## How we manage our risks

Our compliance policies are implemented through our risk-based Group Compliance management system, which covers anti-bribery and corruption, anti-money laundering (AML), sanctions, human rights and data protection. Key elements of the system include compliance risk identification and management, counterparty due diligence, training, monitoring and reporting. In 2023, we updated (with support from specialist external advisors) our human rights, AML and data protection policies to reflect evolving internal and external developments, as well as international best practice.

➔ For more information, see: [eurasianresources.lu](http://eurasianresources.lu)

## Process-focused internal assurance

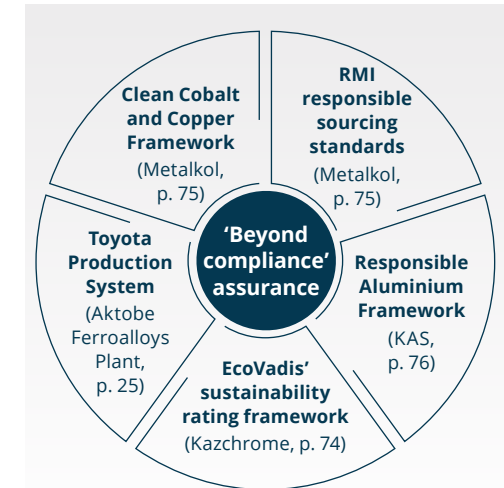
Our Compliance team provides assurance around the internal application of our compliance-focused policies and procedures. It does so through a risk-based assurance process that focuses on entities, processes and / or jurisdictions that pose higher levels of compliance risk. This is focused on:

- The engagement of process owners to ensure controls are adequate, well designed and efficient – and to understand their compliance risks
- An expanded set of issues that extend beyond 'pure' legal compliance

## Training and communication

We apply a comprehensive, risk-based Compliance Training and Awareness Programme to ensure our business partners, governance body members and employees have a deep understanding of our Group ethical standards. Key components of the Programme are set out below.

## Delivering 'beyond compliance' assurance



## Compliance Training and Awareness Programme

Category	Type of training
<b>All employees</b>	<ul style="list-style-type: none"> <li>• Communications from senior management</li> <li>• E-learning focused on:                             <ul style="list-style-type: none"> <li>– The ERG Code of Conduct</li> </ul> </li> </ul>
<b>Employees involved in higher-risk processes<sup>1</sup></b>	<ul style="list-style-type: none"> <li>• Additional face-to-face training on:                             <ul style="list-style-type: none"> <li>– Counterparty Due Diligence (CPDD)</li> <li>– Personal data protection</li> </ul> </li> </ul>
<b>Third parties</b>	<ul style="list-style-type: none"> <li>• E-learning module focused on the ERG Supplier Code of Conduct</li> </ul>

<sup>1</sup> This, for example, includes CSI, procurement, sales, finance etc.

In addition, our training programme helps ensure our Compliance teams (including new members) have the necessary skills, knowledge and capabilities – and that we have common baseline knowledge across the Group. This includes the use of externally facilitated workshops on both conventional compliance issues, as well as wider discussions regarding the changing external compliance landscape and the integration of relevant issues and trends into our compliance model.

### Sanctions

Our Sanctions Compliance Programme is aligned with the US Office of Foreign Assets Control (OFAC) Framework for Compliance Commitments (2019) and the Guidelines on Implementation and Evaluation of Restrictive Measures (Sanctions) in the Framework of the EU Common Foreign and Security Policy (2018). We review and incorporate other regulatory updates and guidance as they are issued.

Key elements include, among others, clear policy statements, training, real-time updates, risk assessment and monitoring, ongoing relationship reviews, sanctions screening (including during the CPDD process), scenario planning and contractual provisions, including right to audit clauses.

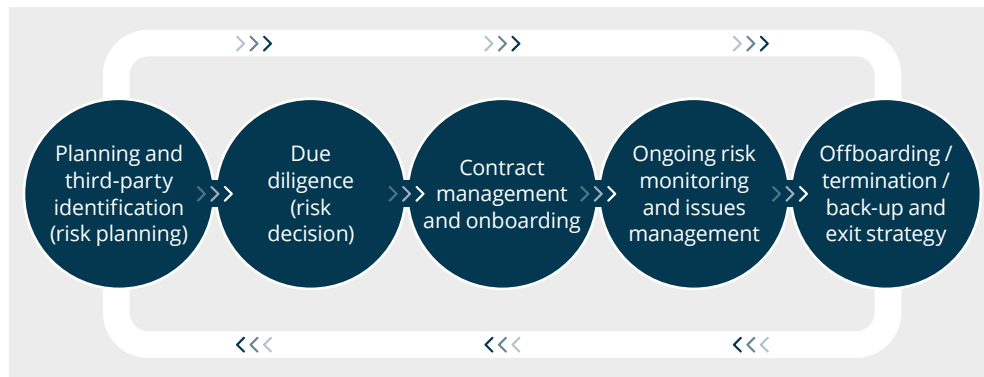
While 2022 had been a dynamic year in terms of sanctions risks, there was a degree of stabilisation in 2023 in terms of the imposition of new sanctions. We integrated the activities that were previously carried out by our Global Crisis Team (which was formed in 2022 in response to the Russia-Ukraine conflict) into our established Sanctions Compliance Programme. The Programme continues to address sanctions related to the conflict, including through the use of real-time sanctions monitoring and reporting. Similarly, we continued to update the scenarios developed in 2022 to provide ongoing insight into the impact of current and possible sanctions on our financial position.

### Third-Party Risk Management (TPRM) programme

Building on our CPDD process, our Group-wide TPRM programme supports a broader, more integrated approach to contract management, from the inception of our third-party relationships through to their cessation. It also helps us respond to a broader set of sustainability-focused requirements.

The programme, which covers our counterparties across the relationship lifecycle, was fully operationalised in 2023. In addition, we continued to enhance its supporting IT infrastructure (including the launch of a new CPDD portal for the corporate offices) and implemented real-time monitoring using risk analytics.

### TPRM process



Over time, the programme will generate compliance- and sustainability-related metrics that will significantly enhance our risk management efforts.

### Counter-Party Due Diligence (CPDD) process

As part of our TPRM programme, our compliance managers conduct CPDD assessments using reputable third-party information and compliance databases. This is with the aim of identifying risks relating to (among other things) sanctions, money laundering, CAHRAs<sup>1</sup> and human rights, as well as bribery and corruption. The process generates risk ratings for each transaction and third party, and supports the identification of appropriate mitigation actions.

In 2023, we had the CPDD process validated by an external expert and issued a revised CPDD Framework and enhanced its operation with the introduction of new – or the improvement of existing – supporting IT tools.

### Whistleblowing

The Group operates a unified ERG Hotline, which enables all employees and third parties to report violations. The ERG Hotline is operated by an independent operator and allows anonymous reporting. The ERG Code of Conduct prohibits retaliation against persons who report violations in good faith.

### Closure of SFO investigation into ENRC

In August 2023, the Serious Fraud Office (SFO) officially closed its long-standing investigation into Eurasian Natural Resources Corporation (ENRC). This investigation, which opened in 2013, had a proclaimed focus on allegations of fraud, bribery and corruption relating to the acquisition of mineral assets in Africa. No charges were brought against ENRC or its officers as a result of the investigation.

### RAID allegations regarding the pollution impacts of cobalt mining in Kolwezi, DRC

In March 2024, RAID published a report<sup>2</sup> alleging that pollution from industrial cobalt mining in the Kolwezi region of the DRC was negatively impacting local people and the environment.

This included a focus on large-scale industrial producers in the area, including Metalkol. Metalkol engaged constructively with RAID's enquiries in relation to the research it carried out for the report.

In April 2024, we published a formal response to the RAID report, which noted (among other things) that:

- Metalkol has established monitoring location points for surface water and groundwater quality, which are monitored weekly, monthly, and quarterly as specified within the Mining Code, relevant regulations and the operation's approved Environmental and Social Impact Assessment (ESIA). Analysis of monitoring results shows no negative impacts on water quality arising from Metalkol's operations
- Community engagement carried out during the development process of Metalkol's Community Development Plan Agreement (or Cahier des Charges) identified access to clean water as the top priority across communities. As a result, we have sited and drilled 29 new boreholes equipped with solar-powered pumps, which have been handed over to local communities and are managed by water committees
- Metalkol holds regular community engagement sessions and participates in health awareness campaigns focused on wider issues relating to water quality and disease

We are currently strengthening our relationship with the surrounding clinics and Health Zone workers to jointly investigate issues raised in the RAID report, such as impacts on women's gynaecological and reproductive health, and health impacts on children.

<sup>1</sup> Conflict-affected and high-risk areas (in the context of the OECD Due Diligence Guidelines).

<sup>2</sup> 'Beneath the Green: A critical look at the cost of industrial cobalt mining in the DRC', March 2024.

Furthermore, we are working with other companies in the region to consider additional programmes to address health, safety and hygiene issues raised in the RAID report. We will continue projects related to the provision of clean drinking water to the surrounding communities.

We will also further promote our grievance mechanisms across our host communities to ensure they know how to raise any concerns to us and seek recourse for grievances, including (but not limited to) human rights, social, safety, security and environmental issues. Community members can, and already do, make use of our Grievance Mechanism Procedure, which is aligned with the IFC Performance Standards and the UN Guiding Principles.

For our full response (including details on our Clean Cobalt and Copper Framework and Metalkol's compliance with the RMI RMAP Standards), please see the link below.

➔ For more information, see: [ergafrica.com](https://www.ergafrica.com)

## Our performance

In 2023, we completed over 16,000 CPDD reviews (2022: 24,000). The decrease primarily reflects ERG's efforts to enhance and rationalise its procurement, sales and contracting strategies and processes.

ERG's Hotline received 376 reports from our employees and business partners (2022: 284 reports).<sup>1</sup> Further analysis found that 185 of the issues reported amounted to Code of Conduct violations (2022: 84) – with corrective actions (including enhanced management controls through to disciplinary action) taken in all cases.

In addition, between 2022 and 2023 we increased (as part of a new, Group-wide compliance training cycle) e-learning on Data Protection, Human Rights and Conflict of Interest (see table opposite).

We also issued 49 email communications within the Group to inform relevant personnel about the evolving sanctions environment.

## Allegations, investigations and findings

We were not subject to any material judicial findings or regulatory sanctions (including those linked to our social, economic and / or labour impacts). Nor were we subject to any investigations, legal actions or findings in relation to internationally applicable sanctions.

We have been subject to allegations made by both Amnesty International (in relation to relocation and compensation processes at Samukonga and Tschamundenda, near Metalkol, as well as the actions of local military personnel, p. 73) and RAID (in relation to pollution claims linked to Metalkol, p. 70). We have responded fully to these allegations, which are denied. We have also received a number of complaints with possible human rights implications via our established grievance channels in Africa (p. 62). These are all subject to appropriate investigation, evaluation and response.

## Next steps

In 2024, we plan to:

- Continue implementing our 'beyond compliance' risk-based compliance model
- Evolve our compliance management systems to ensure we manage shifting compliance risks effectively, including those relating to international geopolitical / geoeconomic tensions, technological disruption (including Artificial Intelligence) and emerging sustainability frameworks and standards

<sup>1</sup> This increase against the prior year reflects a stronger speak-up culture across the Group, which has been driven by our efforts to raise awareness among employees and business partners regarding the ERG Hotline.

<sup>2</sup> Please note that these categories have been enhanced since 2022 to add greater granularity / support more detailed analysis.

<sup>3</sup> C-Level, Chief engineer, Chief accountant, etc.

<sup>4</sup> Our dedicated, cross-Group sanctions training was initiated in 2023 due to a more complex international operating environment, with training having taken place on a more focused, targeted basis prior to this.

## Number of Code of Conduct reports in 2023 (by category)

Category <sup>2</sup>	All reports	Confirmed reports (i.e. risks identified)
Competition law and anti-monopoly	1	1
Conflict of interest	12	8
Data protection (including employees and counterparty privacy and data) / Information security issues	3	2
Procurement / vendor issues	124	84
Reputation	1	0
Sales / customer issues	16	6
Asset misappropriation (including fraud, theft)	58	27
Bribery and corruption	6	0
Health & safety	7	1
Fair employment practices (including discrimination or harassment)	105	40
Human rights	30	10
Policy breaches	13	6
<b>Total</b>	<b>376</b>	<b>185</b>

## Compliance training (number of employees trained)

	Senior management <sup>3</sup>	Management	Employees	Total in 2023	Total in 2022
Code of Conduct	55	2,079	10,489	12,623	9,468
CPDD	4	183	1,169	1,356	2,287
Data protection	67	2,317	12,485	14,869	2,140
Conflict of interest	30	1,384	10,130	11,544	1,607
Anti-bribery	10	85	6,437	6,532	1,783
Human rights	45	3,244	13,237	16,526	4,873
Sanctions <sup>4</sup>	10	204	6,591	6,805	n/a

## Ethics and compliance training for third parties

1,019

counterparties' personnel trained on the ERG Supplier Code of Conduct across the Group

1,859 / 100%

private security personnel in Africa trained on the Voluntary Principles on Security and Human Rights

## Our approach to human rights

We actively manage potential and actual adverse human rights impacts resulting from, caused by or linked to our business. We do so through management processes aligned with the UN Guiding Principles on Business and Human Rights. Where we have caused or contributed to adverse human rights impacts (or could do so), we will contribute to their prevention, mitigation and remediation, as appropriate.

This section provides an overview of our human rights approach, although the cross-cutting nature of human rights management means supplementary and / or associated details can be found in the following sections of this report:

- Health and safety (p. 46)
- Employee relations (p. 56)
- Community impacts (p. 59)
- Managing impacts on air and water (p. 35)
- Responsible value chains (p. 74)

## Human rights policy

Our commitment to respecting human rights is set out in our Code of Conduct and ERG Supplier Code of Conduct, and is further supported by our Human Rights Policy, human rights and human resources procedures and associated implementation statements, processes, frameworks and systems.

Among other things, our Human Rights Policy commits us to:

- Respecting human rights
- Working to identify, prevent and mitigate potential adverse human rights impacts
- Providing a grievance mechanism for the reporting of human rights incidents
- Recording, assessing and investigating all human rights incidents
- Training employees on the Human Rights Policy
- Working with third parties which have comparable human rights standards to those of ERG

In 2023, we worked with external specialist advisors to update the policy to ensure it stays in line with international best practice.

➔ For more information, see: [eurasianresources.lu](http://eurasianresources.lu)

## Management activities

### Risk management

We carry out human rights risk assessments in the DRC. These are carried out at an operational level, with support from internal experts. The most recent baseline assessments were carried out at Metalkol and Boss Mining in 2021 and 2022, respectively – with similar assessments due to take place at COMIDE and Frontier. Operational cross-disciplinary Human Rights Working Groups (which include regional- and Group-level experts, see further below) review these assessment results on a regular basis to ensure they remain current, and update the related risk registers and actions as required.

Findings from these assessments and subsequent updates have been incorporated into the Metalkol and Boss Mining Human Rights Statements of Commitment (see below). They have also been integrated into relevant risk management processes at a site level.

### Training

In addition to our general compliance-focused training programmes, we also implement supplementary e-learning training modules on human rights and the ERG Supplier Code of Conduct (p. 69). The mandatory human rights module is targeted at senior- and management-level employees (depending on relevant risk exposure), with the ERG Supplier Code of Conduct training being delivered to suppliers.

## Grievance mechanisms

We have a variety of grievance mechanisms through which rights holders (and other stakeholders) can report human rights incidents, including our:

- Confidential, independently managed whistleblowing ERG Hotline (p. 70)
- Standard human resources channels
- Community engagement processes (p. 86)
- Site-based grievance mechanisms (p. 59)

All incidents are recorded, assessed, investigated and remediated in accordance with ERG Code of Conduct, Human Rights Policy, internal procedures and legislation.

➔ To access our hotline, see: [erg.integrityline.org](http://erg.integrityline.org)

## Suppliers and third parties

We assess our suppliers, all of which are required to comply with the ERG Code of Conduct, ERG Supplier Code of Conduct and Human Rights Policy, in accordance with our CPDD process (p. 70). ERG Supplier Code of Conduct is not only aligned to the requirements of the OECD Due Diligence Guidance<sup>1</sup>, but contains explicit prohibitions on forced labour and child labour.

In addition, it requires suppliers (and their subcontractors) to comply with:

- The ERG Human Rights Policy
- The UN Guiding Principles on Business and Human Rights
- The Voluntary Principles on Security and Human Rights

Where necessary (e.g. with respect to higher risk suppliers and / or regions, including in Africa), we implement additional procedures and / or targeted action plans to further remove the risks of forced labour and child labour in our supply chain. These include detailed reviews of supplier labour practices during our audits and the review of these processes and systems by independent assurance providers. Labour brokers are subject to detailed annual audits.

In accordance with the ERG Supplier Code of Conduct and Human Rights Policy, where allegations are made in respect of third parties, we follow up to ensure clarity and provide advice and support as needed, including audits and mitigation measures.

➔ For more information, see: [oecd.org](http://oecd.org); [voluntaryprinciples.org](http://voluntaryprinciples.org)

## Operation- and region-specific activity

### Site-level impact assessments in the DRC

In Africa, much of our human rights due diligence activity takes place within the context of our Clean Cobalt and Copper Framework. For example, cross-functional Human Rights Working Groups at Metalkol and Boss Mining oversee the implementation of the Framework and each site's associated Human Rights Statements of Commitment. In early 2024, we also established Human Rights Working Groups at COMIDE, with Frontier in process.

As noted above, Metalkol and Boss Mining have had recent UN Guiding Principles-aligned baseline assessments, which continue to be regularly updated by their Human Rights Working Groups. This includes a focus on ongoing areas of potential risk (i.e. security, traffic safety, labour brokers and emissions to air and water). Subsequent actions are subject to ongoing monitoring by dedicated managers.

➔ For more information, including with respect to the human rights issues being managed at Metalkol and Boss Mining, see: [ergafrica.com](http://ergafrica.com); *Clean Cobalt & Copper Framework*; *Metalkol Human Rights Statement of Commitment*; *Boss Mining Human Rights Statement of Commitment*; *Metalkol RTR Clean Cobalt & Copper Performance Report 2023 and PwC Assurance Report*

<sup>1</sup> OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas.

## Security and human rights in the DRC

We seek to align ourselves with the Voluntary Principles at all of our sites in the DRC, and run awareness campaigns including 'toolbox talks', posters and training for our security employees and contractors. In 2023, 100% of our private security personnel at Metalkol, Boss Mining, COMIDE and Frontier were trained on the Voluntary Principles.

We also require (via the terms of our contracts) our private security providers in the DRC to abide by the Voluntary Principles and implement policies and procedures reflecting the same. Providers are required to implement training on the Voluntary Principles, and they are subject to audit as part of our supplier audit schedule. In addition, we assess potential security providers on the basis of their adherence to the Voluntary Principles, prior to their engagement.

## VOLUNTARY PRINCIPLES-SPECIFIC TRAINING AT OUR DRC OPERATIONS IN 2023

In 2023, Voluntary Principles-specific training was delivered to our security officers, community officers and private security providers via face-to-face sessions provided by ERG and external trainers. These sessions covered the following areas, among others:

- Human rights and related expectations
- Introduction to the Voluntary Principles
- Security-related legislation and norms (national and international)
- Requirements and guidelines on the use of force and firearms
- Management of security incidents, including de-escalation strategies

At Metalkol, our private security providers' adherence to these requirements is subject to external assurance by PwC as a result of the Clean Cobalt and Copper Framework assurance process. This includes the review of related activity logs, incident reports, security-related grievances and related evidence.

We have memoranda of understanding (MoUs) with relevant public security forces protecting each of our operations in the DRC. These communicate and embed our human rights commitments and are closely aligned to the requirements of the Voluntary Principles.

In addition, we have enhanced our multi-stakeholder engagement with respect to the effective local application of the Voluntary Principles. This includes our participation in Voluntary Principles regional working groups involving the Mines Police, the army (FARDC), peers, the local authorities and relevant NGOs.

- Reporting of violations
- Appropriate interactions with women and vulnerable groups

We have provided internal training and our security contractors also provide VP training to their own personnel.

Moving forwards, we plan to continue this process. We recognise that our contracts with private security providers present potential human rights risks. As such, they will always be subject to our internal and external assurance processes with respect to their compliance with the Voluntary Principles, as well as broader internal policies (including in relation to labour rights).

## RESPONSE TO AMNESTY INTERNATIONAL ALLEGATIONS FOCUSED ON SAMUKONGA AND TSHAMUNDENDA, NEAR METALKOL

In a September 2023 report, Amnesty International raised claims regarding the allegedly forced eviction of community members in the DRC by industrial miners in the country. While the report focused on multiple operators, it made allegations in relation to Metalkol, including those concerning:

- The compensation process used in relation to the loss of access by some community members to farmland at Samukonga in 2017, as well as claims that compensation was inadequate
- The alleged eviction of farmers at Tshamundenda from farmland without notice or compensation in 2020
- An alleged serious sexual assault on a Tshamundenda community member by members of the Armed Forces of the Democratic Republic of the Congo (FARDC)

A total of 16 households were relocated at Samukonga, in line with our ESIA. In relation to crop compensation, we worked with the Provincial Division of Agriculture (AGRIPEL), during the compensation process, which applied official (i.e. fixed) AGRIPEL rates when determining compensation amounts. No form of coercion was used during this process and the farmers received their payments fairly and without any undue pressure.

Regarding the alleged eviction of 144 farmers at Tshamundenda, the initial engagement process was also carried out with AGRIPEL, with the Provincial Division of Agriculture subsequently indicating that the area in question had already been compensated twice and the land had subsequently been illegally reoccupied without the consent of the company.

Despite several requests to vacate the land, some farmers were still occupying it without the consent of Metalkol, while others have already moved from the area. This matter has been the subject of review by AGRIPEL, the Lualaba Governor's Office and the Provincial Assembly of Lualaba. Relevant reports and supporting documents have been provided to these authorities to confirm this position and we have no reason to believe that there are any outstanding matters relating to these inquiries.

With respect to the serious allegation made against FARDC personnel, we deplore any instances of sexual violence. We have urged the investigation of this matter by the provincial Commandant and have requested feedback on the outcomes of these investigations. The FARDC has not been involved in any resettlement or crop compensation activities undertaken by Metalkol; nor has Metalkol requested its presence in relation to protest actions near the Metalkol offices as described in the report. The FARDC was deployed in the area in response to an influx of ASM and a serious incident involving fatalities at a nearby third party mine, unrelated to Metalkol.

➔ For more information, see: [ergafrica.com](https://www.ergafrica.com)

# RESPONSIBLE VALUE CHAINS

## Strategic context

Our commitment to contribute to the socio-economic development and well-being of communities in our operating regions relates not only to our own impacts and immediate areas of operation. We also seek to promote responsible standards beyond our business, including among our suppliers and contractors, as well as our broader value chain partners. We do so while delivering assurance to our downstream partners that our products have been responsibly mined and processed, and are not associated with negative environmental, social or governance impacts.



### Relevant UN SDGs

➔ See p. 98 for associated UN Targets.

We are committed to the responsible management of our supply chain to ensure we address our potential indirect adverse impacts on others. Similarly, the nature of our markets, commodities and operating environments means we need to deliver high levels of assurance to customers and other downstream actors regarding our products. This includes their proof of origin, as well as the conditions under which they were extracted and processed. Collective industry action on this front is essential, given concerns facing the mining and metals sector around the potential negative externalities of the global energy transition.

## What we are doing Responsible supply chain management

### ERG Supplier Code of Conduct

ERG Supplier Code of Conduct (Supplier Code) is integrated into our supplier contracts and supplier CPDD onboarding process in all our regions. It applies to all our suppliers, who are also required to ensure their sub-suppliers agree to comply with the same terms.

We provide training on the Supplier Code to key suppliers to our operations in the DRC (who are subject to audit against the same). In 2023, we rolled out similar supplier training in Kazakhstan and Brazil.

This is in addition to our global CPDD and TPRM processes (p. 70), as well as additional supply chain management measures in Kazakhstan, Africa and Brazil. These include:

- Assessment of legal standing, commercial viability and compliance status
- Sustainability-focused contractual provisions for major suppliers, including in relation to human rights (and, in Kazakhstan, GHG emissions reporting)
- (In the case of onsite suppliers and contractors) contractual provisions regarding health, safety and the environment; safety compliance assessments; and supplementary controls for higher risk activities

➔ For more information, see: [eurasianresources.lu](http://eurasianresources.lu)

## Working with suppliers in Africa

In Africa, we use regional suppliers that present higher levels of responsible supply chain risk compared to Group norms. This includes companies in the DRC, South Africa and Zambia that recruit local people, use local labour brokers, transport hazardous cargoes or provide private security services. We strive to develop and work with local suppliers constructively to help them meet our international-standard requirements.



## KAZCHROME'S RESPONSIBLE CHROMIUM STATUS

In 2023, Kazchrome was again given 'Responsible Chromium' status by the International Chromium Development Association (ICDA), following the latest evaluation by sustainability ratings agency EcoVadis. Kazchrome received an assessment score of 68/100 – keeping it among the global iron and steel companies with advanced ESG-practices.

This reflected the quality of Kazchrome's management systems with respect to environmental, labour / human rights and ethical issues.

## Delivering assurance through the Clean Cobalt and Copper Framework

Our Clean Cobalt and Copper Framework covers all our producing assets in the DRC and enables us to deliver the highest levels of assurance to our customers. This 'beyond compliance' framework ensures conformance with the OECD Due Diligence Guidance, while actively supporting improved living conditions for people living and working near our operations, and preserving the environment.

The Framework integrates our commitment to the Responsible Minerals Initiative (RMI) Responsible Minerals Assurance Process (RMAP). This demonstrates our compliance with the relevant RMI standards, which have been developed to meet the requirements of the OECD Due Diligence Guidance, as well as EU and US regulations around conflict minerals.<sup>1</sup>

➔ For more information, see: [ergafrica.com/responsiblemineralsinitiative.org](http://ergafrica.com/responsiblemineralsinitiative.org)

## Delivering cross-value chain assurance through the Global Battery Alliance

The multi-stakeholder Global Battery Alliance (GBA) aims to establish a sustainable battery value chain by 2030. It is doing so in the context of what is expected to be historically unprecedented growth in demand for minerals that support the battery market and the broader global energy transition. ERG is a founding member and its CEO co-chairs the GBA's Supervisory Council, with members including Anglo American, BASF, BMW, CATL, Tesla, Rio Tinto, Volkswagen and Volvo, as well as the World Bank, GIZ and Transport & Environment.

The GBA works with other organisations that are seeking to achieve common goals, including the Battery Pass Coalition, the Zev Transition Council (ZEVTC) and Catena-X.

## Battery Passport initiative

The GBA is developing a Battery Passport to increase transparency and environmental, social, and governance (ESG) performance across the battery value chain. It will support the collection, exchange, analysis and communication of reliable data among actors across the battery value chain.

The Battery Passport is designed to meet the requirements of the new EU Battery Regulation, which will require 'digital battery passports' from 2026 and builds on work carried out by the GBA.<sup>2</sup>

In January 2023, the GBA unveiled the results of the pilot application of the Battery Passport 'in practice' using data from Audi, Tesla and their value chain partners. These pilots integrated data relating to the batteries' technical characteristics, material provenance and sustainability performance (using relevant Battery Passport rulebooks). Two of the three pilot exercises used ReSource's blockchain-based platform to ensure the traceability of the batteries' input materials – including cobalt.

➔ For more information, see: [globalbattery.org/re-source.tech](http://globalbattery.org/re-source.tech)

## Battery Passport rulebooks

Importantly, the Battery Passport offers a comprehensive definition of a sustainable battery – helping value chain actors understand 'what good looks like'. This definition is based on Battery Passport rulebooks (plus accompanying assessment indices). Three of these rulebooks have already been launched (child labour, human rights and GHG emissions), and four more have been drafted for piloting (biodiversity, forced labour, Indigenous People's rights and circular design (p. 77). These consensus-driven frameworks will enable customers and other stakeholders to make more informed purchasing decisions, helping drive sustainable cross-value chain practices in future.

## KEY GBA ACTIVITIES IN 2023

- Launch of the world's first Battery Passport proof of concept
- Launch of public consultation on GHG rulebook
- GBA outreach missions to China and the United States (including engagement with policy makers, research institutes, civil society and the private sector)
- Launch of the Critical Minerals Advisory Group
- Finalisation of the Battery Passport concept, scoring logic and quality seal concept
- Publication of (inaugural) 2022 Annual Impact Report

➔ For more information, see: [www.globalbattery.org](http://www.globalbattery.org); [thebatteryass.eu](http://thebatteryass.eu); [zevtc.org](http://zevtc.org)

In 2023, the GBA carried out a public consultation to identify further improvements to the GHG Rulebook and to gather perspectives on how to reduce GHGs across the battery lifecycle.

➔ For more information, see: [globalbattery.org](http://globalbattery.org) (*Battery Passport*); [globalbattery.org](http://globalbattery.org) (*consultation*)

## Working with the Cobalt Institute to develop an industry ESG standard

ERG is an active member of the Cobalt Institute, which aims to promote the responsible and sustainable production and use of cobalt in all its forms and applications. In May 2024, the Cobalt Institute published a Sustainability Standards and Assurance Schemes Position Paper to give its perspective on the role of sustainability standards in human rights and environmental due diligence, including opportunities and challenges around implementation, and the core elements of a credible sustainability standard for the cobalt industry.

## GBA CRITICAL MINERALS ADVISORY GROUP

ERG is an active participant in the GBA's recently established Critical Minerals Advisory Group (CMAG). This is working to identify the sustainability challenges and opportunities presented by what is expected to be a major growth in demand for (and the supply of) energy transition minerals – including cobalt, nickel, lithium and graphite. This includes a focus on the environment, human rights and the generation of stakeholder benefits.

In 2023, the CMAG started to engage both GBA members and external stakeholders (including standard setters, industry initiatives, government agencies and commodity traders), with a focus on:

1. **Challenges**, including potential 'blockages' standing in the way of more sustainable battery value chains (e.g. policy, regulations and standards)
2. **Action plans** to help address priority areas
3. **Good practice** along the value chain, as applied by GBA members

➔ For more information, see: [globalbattery.org](http://globalbattery.org) (CMAG)

Future activity will focus on promoting engagement and dialogue between the cobalt sector, standard setters and downstream companies.

➔ For more information, see: [cobaltinstitute.org](http://cobaltinstitute.org)

1 Including EU Regulation 2017/821 on conflict minerals and Section 1502 of the US Dodd-Frank Wall Street Reform and Consumer Protection Act.

2 See [environment.ec.europa.eu](http://environment.ec.europa.eu).

## ERG AND THE SUSTAINABLE MARKETS INITIATIVE

The GBA works with the Sustainable Markets Initiative (SMI). In 2023, ERG's CEO Benedikt Sobotka was appointed a founding non-executive director of the SMI, as it continues to advance the role of the private sector in achieving global sustainability goals. ERG also participates in the Energy Transitions Task Force.

➔ For more information, see: [www.sustainable-markets.org](http://www.sustainable-markets.org)

## Our Responsible Aluminium Framework

All of the ore in our aluminium supply chain is mined at our own operations. Nonetheless, we apply our Responsible Aluminium Framework to provide the highest levels of assurance to our value chain partners.

The Framework demonstrates the responsible management of human rights, business ethics, health and safety, and environmental issues (in line with international standards). It also demonstrates our compliance with the London Metal Exchange's (LME) Responsible Sourcing requirements; a necessary step for aluminium produced at KAS to maintain its LME 'approved brand' status.

In particular, the Framework sets out our commitment to respecting human rights and delivering sustainable aluminium production in line with the OECD Due Diligence Guidance.

The Framework is based on (among other elements) our CPDD process, which includes a review of CAHRA status, as well as supplementary Red Flag assessments triggered by incidents of corruption, sanctions and other issues – or material changes to related risk profiles. It also imposes 'beyond compliance' health, safety and environment obligations on onsite suppliers and contractors, and integrates third-party assurance.

➔ For more information, see: [www.erg.kz](http://www.erg.kz)

## Our performance

In 2023, we carried out over 16,000 CPDD reviews (2022: more than 24,000) globally. Where we identified compliance risks, we applied relevant controls, ranging from the avoidance of contractual relations through to the termination of existing contracts.

With respect to our Clean Cobalt and Copper Framework, we published our third Metalkol Clean Cobalt and Copper Performance Report. This was independently assured by PwC, who verified Metalkol's compliance with the statements made in the report. Our fourth Performance Report (and accompanying PwC third-party assurance statement) was published in July 2024.

In addition, in March 2023, the RMI gave Metalkol its updated confirmation of conformance with the RMAP Cobalt Due Diligence Standard (2018) and relevant sections of the Joint Due Diligence Standard for Copper, Lead, Nickel and Zinc (2021).<sup>1</sup> This followed the completion of Metalkol's second RMAP assessment.<sup>2</sup>



During 2023, Metalkol continued to be subject to ongoing customer audits focused on responsible mineral supply chains. These did not identify any material issues. In addition, the operation was certified to the ISO 9001 quality management system standard.

With respect to the application of the LME Responsible Sourcing requirements at KAS, we are required to produce a Red Flag Assessment report for the aluminium we produce there. This was finalised in 2022 and received reasonable assurance in June 2023.<sup>3</sup>

➔ For more information, see: *Metalkol RTR Clean Cobalt & Copper Performance Report 2023 and PwC Assurance Report; Metalkol RTR Clean Cobalt & Copper Performance Report 2024 and PwC Assurance Report; LME Red Flag Assessment Report*

## Next steps

We will continue to play a leading role in the evolution and implementation of the GBA Battery Passport (including the development of additional rulebooks focused on forced labour, circular design, Indigenous People's rights and biodiversity) and to participate actively in the CMAG. Similarly, we plan to play an active role in dialogue related to ESG standards for the mining sector broadly, and the cobalt sector in particular, through our participation in the Cobalt Institute.

<sup>1</sup> This followed an initial confirmation of conformance in August 2022.

<sup>2</sup> During May-June 2024, Metalkol underwent its third RMAP assessment. At time of publishing confirmation of re-conformance from RMI is expected.

<sup>3</sup> The reasonable assurance for our 2023 Red Flag Assessment report was received in August 2024.

# The Battery Passport

The Global Battery Alliance (GBA) Battery Passport brings new levels of transparency to the global battery value chain by supporting the flow of trusted sustainability performance data (among other aspects) for all stakeholders across the lifecycle.

This includes data relating to batteries:

- Environmental, social and governance indicators
- Material provenance
- Performance scores

It establishes a digital twin of a physical battery that conveys this data based on a comprehensive definition of a sustainable battery.

ERG is a founding member of the GBA.

🔗 For more information, see: [www.globalbattery.org](http://www.globalbattery.org) (Battery Passport overview)

## Pilot application results

In January 2023, the GBA unveiled the results of the pilot application of the Battery Passport 'in practice' using data from Audi, Tesla and their value chain partners.

🔗 For more information, see: [www.globalbattery.org](http://www.globalbattery.org) (Battery Passport pilot)

### Digital and physical traceability



#### Track and trace

Track and trace solutions to link digital data flows with material flows (including for cobalt). This includes the use of blockchain technology and zero-knowledge proofs, via platforms offered by third-party providers such as ReSource (*re-source.tech*), among others

#### 'Big bag' registration

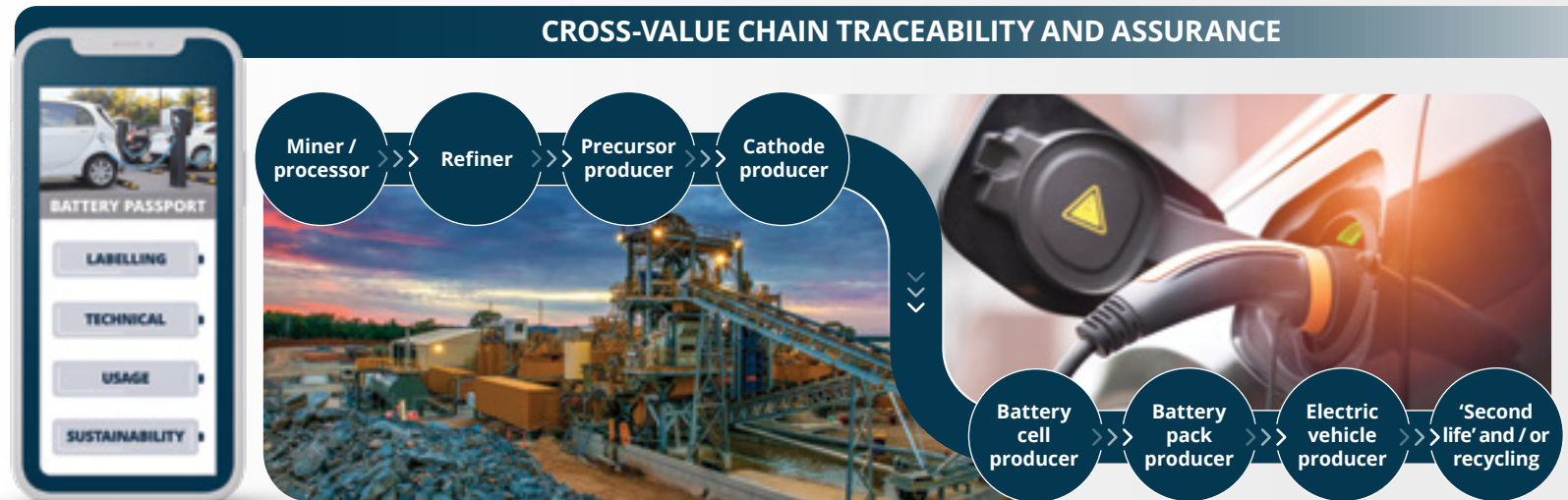
Registration modules to ensure the integrity of cobalt origin data, secure bag transfer and record the chain of custody

#### 'Smart seals'

Seals that support automated data transfer without the need for human input

#### Blockchain mass balancing

Algorithms to calculate cobalt input mass / output mass during processing to generate additional assurance



### Sustainability standards and assurance



#### Human Rights Index

Contains relevant expectations regarding the management of human rights risks, including:

- Policy
- Risk / impact assessment
- Prioritisation, prevention and mitigation
- Monitoring and reporting
- Stakeholder engagement
- Remediation

#### Child Labour Index

Contains similar steps to the Human Rights Index, but specifically focused on child labour. This includes requirements around:

- Minimum age and related checks
- Addressing root causes
- Children's rights training
- Family friendly policies

#### GHG Emissions Rulebook

Technical guidance to facilitate the calculation of comparable GHG footprints of lithium-ion batteries at each stage of the manufacturing lifecycle.

Plans in place for additional Rulebooks, including those focused on forced labour, circular design, Indigenous People's rights and biodiversity

# GOVERNMENT RELATIONS AND POLICY

## Strategic context

The governments and public institutions we work with count amongst our most important stakeholders. This reflects the actual and potential impact of public policy, legislation and regulation on our business. The Government of the Republic of Kazakhstan owns 40% of ERG.



### Relevant UN SDGs

➔ See p. 98 for associated UN Targets.

We adhere to the highest principles of ethical business with respect to our interactions with host (and other) governments. We also engage our host governments to better understand how we can support their legitimate efforts to promote socio-economic development at the local, regional and national levels.

## What we are doing

### Maintaining constructive relations with our host governments

#### 📍 Kazakhstan

The Government of Kazakhstan owns 40% of ERG. As of March 2024, the Group's Board of Managers included the following Government representatives:

- Mr Serik Zhumangarin, Deputy Prime Minister of the Republic of Kazakhstan
- Mr Madi Takiyev – Minister of Finance of the Republic of Kazakhstan

We support (where it aligns with our business objectives) the Government's national strategy, including its focus on fair, inclusive and pragmatic growth, as well as modernisation, improved living standards and social harmony. In particular, we are supporting:

- Improved education, including the preparation of students for future labour markets
- Enhanced living conditions for those in our mining towns and regions of operation
- Economic diversification, as well as innovation, digitalisation and entrepreneurship
- Improved technological and environmental standards within our sector, as well as worker health and safety

In this context, our main areas of engagement with Government agencies during the year related to socio-economic development and economic growth. This included our support for the development of our operating regions and beyond (including through our memoranda of understanding with regional authorities (Regional MoUs) (p. 63). It also included our promotion of the following among the broader population:

- Digital innovation (p. 27)
- Entrepreneurship (p. 64)
- Local supplier development (p. 29)
- Professional development (p. 51)

In addition, we aim to support the ongoing development of a green economy, including the generation of renewable energy and the responsible management of water.

More broadly, we play an important role in the Government's wider strategic economic agenda through our generation of domestic power (p. 24), energy efficiency measures (p. 41) and maintenance of domestic infrastructure, as well as our mineral exploration efforts in the country (p. 20).

Specific topics of discussion with the Government in 2023 included:

- The attraction of investment into the national mining and metals sector – and ERG specifically
- The development of the national Low Carbon Development Strategy (approved in early 2023), which will support the Government's 2060 carbon neutrality ambitions (p. 40)
- The development of the Government's 2030 Safe Work Concept approved in December 2023
- The development and implementation of Government proposals regarding special social benefits for workers engaged in potentially hazardous jobs

## Africa

The Government of the DRC holds direct interests in Metalkol and Frontier, as well as in Boss Mining and Swanmines via state mining company Gécamines. In line with the terms of the Mining Code, the Government's interest in Metalkol increased from 5% to 10% following the renewal of the operation's licence in February 2023.

During 2023, a key area of discussion related to the Government's ongoing suspension of our Boss Mining operation. This followed:

- Unprecedented levels of rainfall and related flooding from upstream, third-party tailings storage facilities that impacted Boss Mining and the broader Kakanda area in March 2023
- The implementation (and our subsequent satisfaction) of related recommendations made by the Ministry of Mines' Directorate for the Protection of the Mining Environment (DPEM)

The suspension, which was imposed in May 2023 has been extended multiple times and was lifted in May 2024.

➡ For more information, see p. 60.

In 2023, we successfully demonstrated our commitment to meet our social obligations under the Mining Code (p. 65).

This is in addition to ongoing discussions with the Government regarding the shared value we deliver, including through our:

- Recruitment and development of Congolese employees (p. 54)
- Development and use of local suppliers (p. 74)
- Contributions to socio-economic development (p. 65)
- Contributions to Government development initiatives, including those focused on the formalisation of ASM activity in the country (p. 60)

Other areas of engagement in 2023 included:

- Continuing challenges around energy security and a national energy deficit, as well as our ongoing efforts to work with national utility company SNEL to address the issue (p. 42)
- The responsible management of illegal ASM activities on our concessions (p. 60)
- The application of the fiscal system and our commitment to transparency in the context of the Extractive Industries Transparency Initiative

## Brazil

A significant proportion of our engagement activity in Brazil continues to be focused on local municipalities, mayors and government representatives – with additional engagement aimed at building strong and positive institutional relations at the national level.

Our consistent engagement and monitoring approach directly supports our effective identification, analysis and management of related risks and opportunities as we develop BAMIN. In 2023, key areas of focus included:

- The ongoing maintenance of our licences and permits, including the approval<sup>1</sup> of the mandatory environmental plan (Projeto Básico Ambiental, PBA) for the implementation of the FIOLE 1 railway
- BAMIN's current and future positive impact on Bahia's regional economy (and how this can be maximised), as well as broader social opportunities to be explored with stakeholders in the region

In addition, we discussed the eligibility of our BAMIN operation for Brazilian Development Bank (BNDES) funding, with the aim of unlocking additional sources of investment.

## Our performance

In line with our Code of Conduct, we do not, directly or indirectly, make political contributions other than in exceptional circumstances approved in advance by the ERG Board of Managers. In 2023, ERG did not make any contributions (financial or in-kind) to political parties.

In Kazakhstan, we work with both the national government and regional governments to support socio-economic development. This includes:

- Programmes carried out in the context of our regulatory and / or licence obligations (e.g. see our Regional MoUs with regional governments, which support local development (p. 63))
- Where it is aligned with the interests of our business, our voluntary participation in projects that support the Government's policy agenda (p. 78)

Likewise, in the DRC, we implement local development projects, in line with the terms of the 2018 Mining Code. In Brazil, we support social and environmental programmes in line with our mandatory obligations under our PBAs, and beyond (p. 61).

## Next steps

We plan to continue engaging with the Government of the Republic of Kazakhstan with respect to our contribution to society and the broader economy. This includes our support for the domestic mining and metals sector, the provision of social protections to employees in higher-risk roles and the implementation of the Government's 2030 Safe Work Concept (p. 48).

In the DRC, we plan to continue delivering on our commitments as codified in our Community Development Plans (or Cahier des Charges) and generating shared value through our broader activities.

In Brazil, we plan to continue working with local municipalities, state authorities and the federal government to maximise the economic benefits that BAMIN can deliver to Bahia and its people.

<sup>1</sup> By the Brazilian Institute of Environment and Renewable Natural Resources (IBAMA), which requested additional information for analysis, prior to the granting of full approval (currently pending).

# Governance, management structures and risk management

In 2023, we continued the organisational restructuring of our business to further support our long-term resilience. Please note that all content in this section, except for the new appointments in 2024, relates to the corporate governance structure of the company as of 2023.

## Corporate governance

The shareholders of ERG appoint the Board of Managers of ERG (the Board), oversee financial performance and pass resolutions on certain matters reserved for the shareholders.

The Board is composed of five members – three representatives of private shareholders and two representatives of the Government of the Republic of Kazakhstan.

As part of the above-mentioned restructuring, in 2024 the shareholders resolved to introduce the following changes to the composition of the Board:

- Mr Shukhrat Ibragimov (a member of the Board since 2021) was appointed the Chairman in June 2024
- Mr Eduard Surlevich replaced Dr Alexander Machkevitch (founding Shareholder) in July 2024
- Mr Sabir Chodiev replaced Dr Patokh Chodiev (founding Shareholder) in April 2024
- Mr Madi Takiyev (Minister of Finance of the Republic of Kazakhstan) replaced Mr Yerulan Zhamaubayev in March 2024.

Mr Serik Zhumangarin, Deputy Prime Minister of the Republic of Kazakhstan (representing the Government since 2022), continued in his role as a member of the Board.

The Board determines and implements the strategy of the Group, appoints the Group CEO and other senior managers, and considers key transactions.

In August 2024, the Board appointed the new Group CEO. Mr Benedikt Sobotka has stepped down after over a decade of dedicated service and Mr Shukhrat Ibragimov, the former First Deputy Group CEO, has taken the lead.

The Board conducts oversight in relation to the Group's compliance with the highest business and ethical standards and local and international laws wherever ERG operates. The Board approved our Code of Conduct and key Group Compliance policies.

The Board has four committees to help it discharge its responsibilities in key governance areas. All Board committees have clearly defined terms of reference, which describe in detail their duties and the extent of their authority:

- **Compliance Committee:** Responsible for review, oversight and approval of the Group compliance systems, policies and controls, as well as for monitoring the effectiveness of the Group Compliance function
- **Remuneration Committee:** Responsible for overseeing the remuneration of ERG's senior managers and monitoring the Group remuneration system

- **Sustainable Development and Mergers and Acquisitions (M&A) Committee:** Responsible for overseeing M&A activity (including due diligence, assessment and mitigation of related risks, structuring and implementation of projects, and post-acquisition integration), as well as supporting Group-wide transformation and business sustainability
- **Audit Committee:** Responsible for overseeing the integrity of ERG's financial reporting, the effectiveness of its internal controls and risk mitigation actions, the effectiveness of its Internal Audit function and the engagement of external auditors

## Executive Committee (ExCom)

ExCom is a Group-level collegial management body. It is authorised to pass resolutions on matters within its competence and to provide consultations and recommendations in relation to matters pertaining to the Group's business. Its resolutions, consultations and recommendations support the coordination of the Group's business and the provision of assistance to the management bodies of relevant Group companies.

ExCom's strategic function is to:

- Guide the overall performance of the Group
- Act in line with targets and strategies approved by the Board
- Develop a long-term financial plan and key performance indicators
- Implement standards and policies for key processes, including their communication to regional level
- Identify and allocate key resources for the Group to fulfil its key obligations and tasks

## Regional sustainability-related committees

### Kazakhstan

In April 2023, we established a regional ESG Committee in Kazakhstan. This is made up of the heads of our functions in Kazakhstan and is chaired by the CEO of our Kazakhstan region. The committee met three times during the year, with key areas of focus including the ongoing development of our regional ESG Strategy and related goals, mandatory reporting requirements, ESG ratings performance, ESG audit results and our regional Decarbonisation Strategy.

We have also continued to operate the following regional committees made up of senior regional management and the CEOs of our business units:

- Occupational and Industrial Safety Committee
- Investment Committee

These committees:

- Define our safety strategy
- Review relevant policies, procedures and initiatives
- Receive regular progress reports on the implementation and improvement of controls

## APPENDIX CONTINUED

### Africa

In December 2023, we established a Sustainability Committee for our Africa region. This is made up of senior regional- and Group-level management and is chaired by the CEO of our Africa region. In Africa, our Safety, Health and Sustainability (SHS) performance is reported on a monthly basis to the region's Management Committee, including site General Managers, the Head of SHS for ERG Africa, site SHS managers, and selected senior employees. Participants in this process discuss the cause of serious incidents, as well as preventative measures.

Specific attention is given to:

- Incidents, grievance mechanisms and resolution
- The monitoring of environmental and social risks
- Progress against internal / external audit reports and internal sustainability goals
- Host community needs and the progress of community social investment (CSI) projects
- Artisanal and small-scale mining (ASM) monitoring and appropriate mitigation actions
- Security and human rights risks assessments and stakeholder engagement

At our operations in the DRC, we also operate a formal Safety and Hygiene Committee, as required under local law.

### Brazil

In 2023, the Sustainability Committee at BAMIN did not meet in the context of a review of BAMIN's broader governance structures. During this period, sustainability issues continued to be reviewed as part of the operation's wider management process.

During the year, BAMIN also implemented a new digitalised system to centralise the management of its licences and permits, including its mandatory environmental plans (Projeto Básico Ambiental, PBAs). This was supported by the establishment of an internal body<sup>1</sup> to coordinate enhanced monitoring of compliance with the terms of the PBAs. Finally, BAMIN also developed an internal dashboard of sustainability indicators to support enhanced performance monitoring against its broader suite of operation-specific material issues.

### Risk management

Our risk management framework helps us to identify and understand potential threats to the sustainability of our business, as well as related opportunities. This includes our most material Sustainable Development issues, which have the potential to impact our people, local communities and the environment, as well as our ability to achieve our operational and strategic objectives.

Our risk management policies are informed by the International Standard for Risk Management (ISO 31000), and recommended ISO 31010 techniques are applied when assessing risk.

### ACTIVELY MANAGING GEOPOLITICAL RISK

In 2023, geopolitical developments – including the military conflict between Russia and Ukraine – continued to affect our external operating environment, requiring the active management of associated risks and opportunities. This included:

- A focus on our ongoing compliance with a range of international sanctions imposed on the Russian Government and major Russian banks, as well as selected companies and individuals<sup>2</sup>
- The reconfiguration of some of our sales and logistics arrangements, given the disruption of commodity flows through Russia and Ukraine

Actions included:

- The ongoing suspension of commodity shipments to sanctioned customers (including a key iron ore customer) and the seeking of alternative markets

In addition, business continuity management practices are applied in accordance with the 'Good Practice Guidelines' of the British Business Continuity Institute, as well as the recommendations of the international business continuity standard ISO 22301.

We embed risk management at every level of the organisation to effectively manage risks and opportunities. Our three lines of defence framework provides necessary assurance that risks are effectively managed in line with our policies, standards and procedures.

- The restructuring of debt to the Russian lenders
- The ongoing suspension of relationships with sanctioned suppliers and the maintenance of sufficient stocks of critical production-related components
- The closure of our Moscow office

Our efforts – which are being managed through our established, cross-disciplinary Sanctions Compliance Programme – continue to be effective in terms of mitigating related impacts on our business and ensuring our full compliance with all applicable sanctions. Similarly, international markets and supply chains have adapted to circumstances, reducing – but not eliminating – the likelihood of future disruption.

We regularly assess the potential impact and likelihood of our principal risks and monitor the effectiveness of mitigation actions and associated controls.

Our Kazakhstan, Africa and Brazil regions prepare risk reports on a monthly and / or quarterly basis for regional- and Group-level management.

Our principal risks are set out in the table on page 82. There may be additional risks that are as yet unknown to the Group and other risks currently not believed to be material, which could have a significant impact on our business performance and financial results.

<sup>1</sup> The Environmental Guarantee Technical Committee.

<sup>2</sup> These sanctions were applied by the United States, the European Union, Switzerland and the United Kingdom, among others.

## APPENDIX CONTINUED

### Principal risks and selected mitigation actions<sup>1</sup>

Key risk areas	Selected mitigation actions	
<p><b>Capital project execution risks</b> A failure to deliver major capital projects within planned timeframes, budgets and quality criteria could negatively affect the long-term profitability and reputation of the Group, including our ability to attract future financing.</p>	<ul style="list-style-type: none"> <li>• Systematic, transparent and stage-gated project implementation process</li> <li>• Enhanced project due diligence, including independent project reviews prior to stage gates</li> <li>• Contingency planning based on quantitative schedule and cost risk analysis</li> </ul>	<ul style="list-style-type: none"> <li>• The insurance of construction risks and risks relating to the delayed start-up of critical capital projects</li> <li>• Monitoring / control of project deadlines, budgets and ramp-up, etc.</li> </ul>
<p><b>Climate change risks</b> We face regulatory and market risks in relation to our GHG emissions that require the implementation of appropriate management actions. In addition, our operating facilities may be affected by harsh weather conditions, as well as extreme temperatures, floods and other extreme weather impacts.</p>	<ul style="list-style-type: none"> <li>• Adoption of our Climate Change Impact Management and Adaptation Policy for Kazakhstan (p. 40)</li> <li>• Investigation and implementation of renewable energy projects (p. 41)</li> <li>• Implementation of energy efficiency measures at our operations in Kazakhstan, as well as ISO 50001-certified energy management systems</li> </ul>	<ul style="list-style-type: none"> <li>• Assessment of our carbon footprint to help us manage the same</li> <li>• Analysis of our carbon risks to better understand and manage exposure, and inform our carbon strategies</li> <li>• Factoring-in of GHG emission implications when making long-term investment decisions</li> </ul>
<p><b>Compliance risks</b> We are subject to a range of internal and external compliance obligations, including those relating to sanctions, data protection, human rights, money laundering / the financing of terrorism, and bribery and corruption. Any non-compliance in this regard could result in financial and non-financial sanctions, as well as reputational damage.</p>	<ul style="list-style-type: none"> <li>• Implementation of our Group Compliance Programme, including training / monitoring of adherence to policies and guidance (ERG Code of Conduct, ERG Supplier Code of Conduct, etc.) (p. 69)</li> <li>• Application of updated counterparty and supply chain due diligence processes (CPDD), including a special focus on human rights / OECD Due Diligence Guidance<sup>2</sup> (p. 72)</li> <li>• Implementation of our Sanctions Compliance Programme (p. 70)</li> </ul>	<ul style="list-style-type: none"> <li>• Implementation of our data protection programme to ensure compliance with the EU General Data Protection Regulation (EU GDPR) and other related laws (p. 88)</li> <li>• Maintenance of our whistleblower system (p. 70)</li> <li>• Application of our Human Rights Policy and a range of implementation actions, including risk assessment, training, grievance mechanisms, counterparty due diligence and the rollout of ERG Supplier Code of Conduct (p. 72)</li> </ul>
<p><b>Environmental risks</b> The nature of our activities and processes mean they have, in the absence of appropriate controls, the potential to harm the environment. In turn, this could pose regulatory risks to our business and undermine our social licence to operate.</p>	<ul style="list-style-type: none"> <li>• ISO 14001-certified and / or aligned environmental management systems (p. 34)</li> <li>• Implementation of our Environmental Strategy in Kazakhstan, including the phased implementation of advanced filter and air monitoring technology at our key operations (p. 35)</li> </ul>	<ul style="list-style-type: none"> <li>• Regular risk analysis and technical review of our residual waste storage facilities (p. 86)</li> <li>• Plans for the adoption of a dry-stack tailings storage facility (TSF) at BAMIN's Pedra de Ferro mine in Brazil (a design that is widely considered to be more sustainable and physically stable compared to conventional designs)</li> </ul>
<p><b>Financial risks</b> Risks relating to the ability of the Group to carry out necessary operational and investment activities, and the potential for these to be undermined by credit risks, liquidity risks, foreign exchange risks and interest rate risks.</p>	<ul style="list-style-type: none"> <li>• Maintenance of strong relationships with existing non-sanctioned lenders as well the renegotiation and amendment of the applicable terms of certain financing arrangements and the termination of certain transactions with some of our lenders in compliance with all applicable laws and regulations</li> <li>• Expansion of our credit lines to allow for diversified sources of funding, improvements to our debt portfolio and the identification of new funding opportunities / conditions (in the context of current sanctions restrictions)</li> </ul>	<ul style="list-style-type: none"> <li>• Prudent financial policies (including the regular updating of our cash flow plan, control of the Group's liquidity level, compliance with our covenants, monitoring of the Group's open FX position and compliance with tax legislation)</li> <li>• Disciplined credit control processes</li> <li>• Analysis of our counterparties' creditworthiness</li> </ul>

<sup>1</sup> Please note, the risks in this table are listed in alphabetical order and do not reflect order of significance and / or prioritisation.

<sup>2</sup> OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas.

## APPENDIX CONTINUED

Key risk areas	Selected mitigation actions
<p><b>Health, safety and security risks</b>                      The Group's production activities include hazardous activities that have the potential to affect the physical health and well-being of our employees, contractors and community members. In turn, this can pose risks to the Group in terms of regulatory responses, workforce morale, production disruption and the physical integrity of our facilities.</p>	<ul style="list-style-type: none"> <li>• Application of ISO 45001-certified occupational health and safety management systems in Kazakhstan – as well as management systems in Africa that are informed by ISO 45001 (p. 48)</li> <li>• Zero Harm approach towards critical health and safety risks and reinforcement of our safety culture through training, the implementation of standards and team engagement</li> <li>• Risk assessment using Hazard Identification (HAZID) methodologies</li> <li>• Implementation of safety management system audits</li> <li>• Integration of safety targets into managers' KPIs</li> </ul>
<p><b>Information technology and information security risks</b>                      In the context of our digitalisation and the enhancement of our information technology (IT) landscape, we recognise that we are exposed to potential risks, including, but not limited to: loss of access to IT infrastructure, disruption of business processes including industrial control systems, internal and / or external fraud, data leakage and data breaches, loss of confidentiality, non-compliance with information security regulations, and other related risks.</p>	<ul style="list-style-type: none"> <li>• Maintenance of a reliable cybersecurity system</li> <li>• Prompt response to failures in IT services and cybersecurity incidents</li> <li>• Implementation of continuity plans for key IT processes</li> <li>• Monitoring of compliance with the terms of software licence agreements</li> <li>• User training</li> <li>• Backup validation and disaster recovery for all critical systems</li> </ul>
<p><b>Personnel management risks</b>                      The fact we operate in remote locations presents challenges in terms of accessing skilled labour and our ability to attract, develop and retain people with the skill sets required for our operations. In addition, failure to deliver broader social benefits to our workforce, many of whom live in relatively remote mining towns in Kazakhstan, may result in a loss of talent and skills and would make it hard to recruit new employees.</p>	<ul style="list-style-type: none"> <li>• Maintenance of competitive remuneration packages</li> <li>• Training and development to maintain the skills pipeline (p. 51)</li> <li>• Maintenance of partnerships with local universities, as well as the engagement of higher educational institutions with the aim of attracting young professionals</li> <li>• Application of succession planning</li> <li>• Development of our talent pools (p. 53) and internal staff rotations</li> <li>• Implementation of an effective employee motivation system</li> <li>• Recruitment of new personnel into rare and specialist roles</li> <li>• Continuous monitoring of staff satisfaction and engagement</li> <li>• Implementation of social support programmes for personnel (see 'Social risks' below)</li> </ul>
<p><b>Political risks</b>                      We conduct our business in complex environments, which are characterised by ever-changing political dynamics and the potential for unexpected risks – including those relating to international sanctions. In addition, geopolitical tensions and military conflicts have the potential to affect our key markets, supply routes, vendors and customers.</p>	<ul style="list-style-type: none"> <li>• Monitoring and analysis of political and macroeconomic trends in our regions of operation</li> <li>• Close monitoring of, and compliance with, applicable international sanctions</li> <li>• Regular engagement with third-party legal advisors</li> </ul>

## APPENDIX CONTINUED

Key risk areas	Selected mitigation actions	
<p><b>Price risks</b> Volatile commodity prices could materially affect our business, including our financial results and our liquidity.</p>	<ul style="list-style-type: none"> <li>Investigation of opportunities to expand and diversify our product portfolio</li> <li>Regular reviews and forecasts of short- and medium-term market fundamentals (consumption, supply, availability, etc.)</li> <li>Maintenance of long-term sales contracts that link commodity prices to benchmarks</li> </ul>	<ul style="list-style-type: none"> <li>Analysis of prices and price management for raw materials, using a range of tools (excluding financial derivatives)</li> <li>Development of alternative sales channels</li> </ul>
<p><b>Production and operational risks</b> The company's production activities are subject to risks relating to equipment failure and geological uncertainty, as well as both natural and human-induced accidents.</p>	<ul style="list-style-type: none"> <li>Risk-based reliability planning and maintenance</li> <li>Independent technical diagnostics of machines and equipment</li> <li>Control of input materials</li> <li>Implementation of business continuity processes</li> <li>Application of comprehensive technical regulations to ensure efficient and safe production</li> </ul>	<ul style="list-style-type: none"> <li>Maintenance of property damage and business interruption insurance</li> <li>Ongoing assessment / evaluation of Mineral Resources and Mineral Reserves</li> </ul>
<p><b>Regulatory and legal risks</b> There are a number of factors that could affect our regulatory context and present risks to our business. These include the introduction of new (or changes to existing) laws and regulations by our host governments.</p>	<ul style="list-style-type: none"> <li>Monitoring of potential legislative and regulatory changes</li> <li>Implementation of internal training and awareness-raising to ensure up-to-date knowledge and common understanding of regulatory developments among our teams</li> </ul>	<ul style="list-style-type: none"> <li>Representation of our interests through professional bodies / associations</li> <li>Monitoring of compliance with our licence and permit obligations</li> </ul>
<p><b>Social risks</b> Our business activities may negatively affect nearby communities, including in relation to their human rights (see p. 72 for an overview of ERG's approach to human rights). Therefore, there is a risk this could affect our social licence to operate. Similarly, a failure to deliver broader social benefits to our workforce, many of whom live in relatively remote mining towns, would result in a loss of talent and skills, and would make it hard to recruit new employees.</p>	<ul style="list-style-type: none"> <li>Delivery of sustainable, long-term benefits to local communities through sponsorship and strategic community social investment (CSI), including regional economic development in our host countries (p. 63)</li> <li>Application of Community Development Plans (or Cahier des Charges) framework, as well as the Clean Cobalt and Copper Framework, in the DRC (p. 65)</li> <li>Social attitude monitoring in our host regions, and the maintenance of community grievance mechanisms (p. 59)</li> </ul>	<ul style="list-style-type: none"> <li>Implementation of employee housing programmes, the provision of social benefits to employees and the improvement of local urban environments (p. 57)</li> <li>Application of our Human Rights Policy and a range of implementation actions (see 'Compliance risks' above)</li> <li>Provision of social support for employees under the terms of their collective agreements</li> </ul>
<p><b>Supply chain and logistics risks</b> The Group's large supply chain exposes it to risks related to contractual non-compliance by suppliers, shortages and delays in transportation, price fluctuations and international sanctions.</p>	<ul style="list-style-type: none"> <li>Supply chain analysis to identify the risk of losing key suppliers due to sanctions and logistical restrictions</li> <li>Ongoing efforts to establish alternative / more efficient logistical routes for our supply chain</li> <li>Maintenance of long-term supplier contracts and category strategies for key goods / services</li> <li>Implementation of initiatives to develop local and domestic suppliers in our countries of operation</li> </ul>	<ul style="list-style-type: none"> <li>Maintenance of our own fleet of railway wagons</li> <li>Quality / specification / completeness controls related to the supply of goods and services</li> <li>Creation and maintenance of supplementary stocks of critical items (including PPE)</li> <li>Quality control of delivered goods</li> </ul>

# Management approach

Our Values reflect how we want to do business and guide us on our journey towards true business sustainability. We apply our Values in every decision we make, at all levels of our business – from the most senior manager to the most junior employee.

## OUR VALUES



### Safety

- We put safety first
- We ensure safe labour conditions for all our employees and contractors, and continuously work to prevent any injuries occurring in the workplace



### Unity

- We work together as a team of passionate people aiming to achieve our set goals
- We respect the cultural and regional traditions where we operate



### Efficiency

- We do not work for the sake of it – we are focused on delivering results
- We manage our resources carefully to achieve results
- We prioritise the most relevant issues
- We minimise tasks that do not add value



### Development

- We appreciate our employees and create conditions for their development
- We efficiently implement new technologies and develop as a company
- We ensure the sustainable development of the Group



### Responsibility

- We fulfil our obligations to our employees, their families, customers, partners, shareholders and society
- We carefully manage the resources and the environment entrusted to us
- We build a culture of mutual confidence and respect within the Group, as well as with partners and customers

## KEY EXTERNAL MANAGEMENT SYSTEM STANDARDS APPLIED BY ERG<sup>1</sup>

### Kazakhstan

- ISO 45001 Occupational health and safety management system standard
- ISO 50001 Energy management system standard<sup>2</sup>
- ISO 14001 Environmental management system standard
- ISO 9001 Quality management system standard
- ISO / IEC 27001 Information security management system standard

### DRC (Metalkol)

- ISO 9001 Quality management system standard

Below, we set out additional information regarding our commitments and management approaches with respect to the environment, society and governance.

## Our approach to the environment

↪ See 'Environment' on p. 34.

We seek to preserve and maintain healthy, natural environments through the application of sustainable practices wherever we operate. We pursue continual improvement in our environmental performance, including with respect to air, water, energy, climate change and waste – as well as our contribution to the conservation of biodiversity and integrated land-use planning.

Our commitment is supported by the requirements of our HSE Policy, which requires us to:

- Develop, implement and improve Health, Safety and Environment (HSE) management systems and programmes that are consistent with international best practice
- Ensure the accountability of senior ERG managers at all sites for improving HSE performance
- Ensure that all personnel understand their HSE responsibilities
- Ensure HSE issues are considered in business planning and decision-making

<sup>1</sup> With the exception of Kachary Ruda and Manganese Zhayrema. <sup>2</sup> 3-Energoortalyk is certified to ISO 14001 only. <sup>3</sup> Including our energy generating assets (i.e. Kazchrome, SSGPO, EEC and Aluminium of Kazakhstan, with the exception of 3-Energoortalyk, which was purchased in 2018) and KAS.

## APPENDIX CONTINUED

In 2023, we supplemented this with the following Kazakhstan-specific policies:

- Environmental Policy, which reflects our country-specific risks, impacts and opportunities (p. 35)
- Climate Change Impact and Adaptation Management Policy, which will guide our long-term decarbonisation efforts (p. 40)
- Biodiversity Conservation Policy, which will enhance the management of our impacts on local ecosystems

Similarly, our Group HSE Policy is supplemented by ERG Africa's Safety, Health and Sustainability (SHS) Policy, under which we have committed to:

- Systematically identify, assess and manage all negative environmental impacts
- Strive for continuous improvement in environmental performance through the 'plan, implement, check and review' steps
- Minimise pollution, disturbance and / or the degradation of ecosystems
- Comply with and, where appropriate, exceed applicable laws and regulations. This includes working towards full compliance with applicable international good practice guidelines, such as the IFC Performance Standards and the relevant SHS components of the OECD Guidelines for Multinational Enterprises

Our active sites in the DRC are subject to legally mandated, third-party Environmental and Social Impact Assessments (ESIAs) and associated management plans. These require regular monitoring of our emissions to air (such as particulates, SO<sub>x</sub> and NO<sub>x</sub>) and water (such as suspended solids, dissolved solids and heavy metals).

Our operations in Kazakhstan are certified to ISO 14001.<sup>1</sup> In Africa, our SHS management systems are informed by ISO 14001, with plans to achieve certification for Metalkol in 2024.

In Brazil, BAMIN implements an environmental management system to ensure its compliance with all environmental licence requirements (p. 38).

### Community engagement

Our environmental performance is closely linked to our social licence to operate. This means we need to engage with our community stakeholders and civil society organisations on environmental issues in a transparent and constructive manner. In addition, we carry out community consultations focused on the environment in all of our operating regions, including in the context of our impact assessment activity.

In Kazakhstan, we also:

- Publicly disclose live air quality performance data from the boundary of Aluminium of Kazakhstan's sanitary protection zones (i.e. at Pavlodar Aluminium Plant and Power Station)
- Participate in public events, which in 2023 included the ECOJER International Congress in Astana (focused on 'Carbon Neutrality Pathways') and the AMM<sup>2</sup> Congress in Astana (where ERG presented on the 'Transition to BAT Principles in Kazakhstan')
- Meet with environmental NGOs and community members to show them our operations, hear their concerns and to present how we are addressing the same. In 2023, this included the participation of environmental activists, bloggers and local people in a tour of Aktobe Ferroalloys Plant (including a focus on filter installation)

- Engage local officials and public representatives, with SSGPO's management meeting with Rudny's Department of Ecology and Community in 2023 to discuss issues relating to the operation of SSGPO's pellet warehouse. We also met with regional deputies regarding ash disposal from Aluminium of Kazakhstan's power plant
- Take part in grassroots community engagement events in Pavlodar. In 2023, this included a meeting with residents from Arkalyk, where we presented the results of our reclamation of Aluminium of Kazakhstan's Torgayskoe mine. We also established routes at Pavlodar Aluminium Plant, KAS and Aktobe Ferroalloys Plant to allow local people to safely visit the sites

In addition, we submit our environmental monitoring results to the national authorities for publishing via Kazakhstan's National Pollutant Release and Transfer Register. This is a structured database that provides transparency, facilitates public scrutiny and complies with the EU's Pollutant Release and Transfer Register protocol.

### Waste management

Our established large-scale waste storage facilities in Kazakhstan and Africa are subject to regular, legally mandated monitoring inspections (p. 43). In Brazil, we plan to adopt a dry-stack TSF system for BAMIN's Pedra de Ferro mine (p. 44).

In accordance with Kazakhstan's 2021 Environmental Code, industrial waste generated by our operations in the country is divided into hazardous and non-hazardous waste. The collection, transportation, processing and / or disposal of hazardous waste is usually carried out by specialist third-party, licenced organisations. We check that contractors have the necessary production sites, equipment, transportation, qualified personnel and environmental permits and licenses.

In Africa, Frontier has engaged an external service provider to segregate, manage and recycle its waste. We plan to extend a similar approach to our other operations in the DRC.

In Brazil, we maintain a Solid Waste Management Plan. Key areas of focus include:

- Waste identification, generation reduction, segregation and conditioning
- Waste storage, collection, transportation and disposal by the operation and / or with the involvement of third-party organisations (where required)

## Our approach to society

### How we manage our people

➔ See 'Health and safety' on p. 46, 'Talent attraction, development and retention' on p. 51 and 'Employee relations' on p. 56.

We continue to strive towards achieving Zero Harm, and are fully committed to delivering a safe, healthy, productive and stable working environment for all our employees and contractors. This includes the pursuit of continual improvement in health and safety performance.

Our commitments are supported by the requirements of our Health, Safety and Environment (HSE) Policy Statement, our Human Rights Policy, our Code of Conduct and our Supplier Code of Conduct.

Our HSE Policy Statement commits us to:

- Continually improving our performance
- Assessing and managing our risks
- Carrying out training, communication and reporting
- Implementing audit and review processes

1 With the exception of Kachary Ruda and Manganese Zhayrema.  
2 Astana Mining & Metallurgy.

## APPENDIX CONTINUED

All of our operations in Kazakhstan<sup>1</sup> are certified to ISO 45001, with Metalkol in the DRC continuing to work towards certification and our other operations in Africa applying a management system informed by the same standard. At our BAMIN operation in Brazil, we apply a safety management system based on the requirements of ISO 45001.

### Emergency preparedness

Emergency preparedness plans have been rolled out across our operations in Kazakhstan. We conduct regular emergency scenario exercises in line with these plans, as well as periodic risk assessments. This helps support the competencies of our emergency response teams, identify additional training needs and ensure our response equipment is fit for purpose. In 2023, we implemented a range of measures to further enhance our emergency preparedness plans (p. 46).

In Africa, we maintain an emergency management system procedure which forms part of our integrated SHS management system.

At our BAMIN operation in Brazil, we apply an Emergency Response Programme. Under the programme, we have established an emergency response team who conduct emergency scenario and crisis response planning, as well as related employee training.

### How we manage community impacts and social investment

➔ See 'Community impacts' on p. 59 and 'Community social investment' on p. 63.

### Community social investment

We pursue continual improvement in social performance and contribute to the development of our host communities. In particular, we support CSI programmes that maximise our positive socio-economic impacts.

In line with our Group Corporate Social Responsibility (CSR) Projects and Sponsorship Policy, we focus on a range of issues including:

- Healthcare
- Safety and environmental programmes
- Infrastructure and social welfare
- Education and support for youth initiatives
- Sports and the promotion of healthy lifestyles
- Preservation of cultural heritage
- Economic development, as well as community training and development programmes
- Human rights (e.g. external programmes focused on the elimination of child labour)

We implement this policy through a systematic process framework, which ensures a comprehensive, focused approach to the identification, implementation, monitoring and review of our CSI spending (p. 63). In addition, our approach is guided by structured, inclusive engagement with our communities to ensure we remain responsive to local priorities and needs (p. 63).

Much of our CSI is delivered under relevant mandatory frameworks and partnership agreements in our host countries. Most notably, this includes our regional memoranda of understanding in Kazakhstan (p. 63), our Community Development Plans (or Cahier des Charges) in the DRC (p. 65) and our environmental plans (Projeto Básico Ambiental, PBAs) in Brazil (p. 61).

### Community impacts

In line with both our Values and our Human Rights Policy (p. 72), we aim to apply the mitigation hierarchy to minimise our negative impacts, and respect cultural and local traditions wherever we operate. Where possible, we aim to avoid the involuntarily resettlement of communities. Where this is not possible, we will take measures to minimise the negative impacts on affected communities, including the provision of fair compensation and the implementation of initiatives to improve local livelihoods. Such measures are informed by structured engagement, including via community consultations and public hearings.

We primarily manage our community impacts in Kazakhstan through our international standard environmental management systems. These focus on the detection, prevention and / or minimisation of harmful discharges to local water systems and to the air (p. 35). In Kazakhstan, we also conduct comprehensive impact assessments and public consultations whenever undertaking major developments or operational changes (p. 59). In addition, local communities can raise grievances through our publicly available ERG Hotline (see: [erg.integrityline.org](http://erg.integrityline.org)).

In Africa, we manage our community impacts through our integrated Safety, Health and Sustainability (SHS) management system. This provides a structured framework to (among other things):

- Identify, avoid and mitigate (when necessary) risks to and negative impacts on communities, as well as the environment
- Manage, resolve, and monitor community grievances and complaints
- Maintain open and inclusive relationships with communities
- Proactively engage communities throughout the project lifecycle and work towards obtaining free-consent for any significant operational changes

- Recognise the value of cultural heritage and diversity, and respect protected sites
- Contribute to communities' lasting social and economic well-being by supporting sustainable social and environmental projects (based on structured consultation with communities).

In addition, we apply site-based community grievance procedures across our Africa operations (p. 58).

In Brazil, we maintain a third-party managed grievance management and engagement system covering the Pedra de Ferro mine, Porto Sul port development and the FIOQ 1 railway. This facilitates impartial oversight of community complaints, follow-up actions and effective response times. It also provides a neutral communication channel for communities to provide broader feedback.

### ASM management

In the DRC, our approach to ASM management is guided by our:

- Dedicated ASM policies and procedures
- ASM Management Plans to ensure our operations do not purchase or profit from ASM-sourced ore
- Human Rights Policy and occupational health & safety procedures (p. 88)
- Socio-economic development procedures and related activities (p. 66)

At Metalkol, we maintain a cross-departmental Joint ASM Working Group, which meets on a regular basis. This is responsible for reviewing and assessing ASM-related information, risks and incidents – and for developing recommendations for remediation and / or mitigation measures.

In addition, we maintain ongoing and constructive engagement with local communities (including those involved in ASM), relevant government agencies<sup>2</sup> and other mining companies.

<sup>1</sup> With the exception of 3-Energootalyk, Kachary Ruda and Manganese Zhayrema.

<sup>2</sup> This includes engagement with the 'Strategy for ASM in DRC and a National Action Plan for the ASM Technical Services' (SAEMAPE, formerly SAESSCAM).

## APPENDIX CONTINUED

### Our approach to governance

➔ See 'Governance' on p. 68.

We seek to play a positive role in society by delivering societal value and building stakeholder trust. More specifically, we aim to:

- Apply sound systems of corporate governance, ethical business practices and transparency to support sustainable development
- Respect the human rights of workers and communities affected by our activities

Our approach is based on our Values, Code of Conduct, policies and procedures, and is subject to regular review. Relevant Group policies that govern our broader interactions with society include, but are not limited to:

- **Anti-bribery and Corruption Policy:** This commits us to always acting responsibly, honestly and with integrity, and to not engaging in or tolerating any form of bribery or corruption
- **Agents Compliance Policy:** This requires agents acting on our behalf to comply with applicable laws and regulations, as well as our policies and Code of Conduct
- **Anti-Money Laundering Policy:** This commits us to not knowingly engaging in transactions involving money laundering or terrorism financing
- **Human Rights Policy:** This requires ERG and its employees and contractors to abide by human rights norms
- **Anti-trust and Competition Compliance Policy:** This commits us to not engaging in or tolerating any form of conduct that fails to comply with applicable competition laws
- **CSR Projects and Sponsorship Policy:** This sets out the process, criteria and approvals necessary for ERG to commit to and manage CSR projects or sponsorship arrangements
- **International Economic Sanctions Compliance Policy:** This commits us to avoiding breaching international economic sanctions imposed by relevant governments, as well as supranational or international organisations

- **Personal Data Protection Policy:** This commits us to complying with all data protection and privacy legislation and regulations applicable to the jurisdictions in which we operate
- **Group Tax Policy:** This sets out our commitments with respect to our approach to tax compliance

These are in addition to our Code of Conduct, which is binding on all our employees, managers and Board members. It applies a range of obligations with respect to:

- Compliance with laws, internal rules and regulations
- Anti-bribery and corruption
- Fair employment practices
- Health, safety and environment
- International trade, export controls, and financial, economic and political sanctions and other restrictions
- Human rights
- Political and non-political contributions, donations and sponsorships by ERG

Similarly, ERG Supplier Code of Conduct sets out our expectations in relation to our suppliers and contractors.

### Compliance governance

Our compliance efforts are driven by the Board's Compliance Committee, which is responsible for:

- Oversight and approval of our Group Compliance Programme, policies, systems and controls
- Monitoring of the effectiveness of our Compliance function

The Group Head of Compliance reports to the CEO and the Board's Compliance Committee (p. 80). Our senior managers are kept informed of key risk areas on a frequent basis.

### Compliance management

ERG Code of Conduct, ERG Supplier Code of Conduct and supporting policies and procedures (such as our ERG Compliance Counterparty Due Diligence Framework) sit at the heart of our Compliance management system. In 2023, we approved updated Anti-Money Laundering, Data Protection and Human Rights Policies to ensure their ongoing effectiveness and alignment with external requirements.

➔ For more information, see: [eurasianresources.lu](http://eurasianresources.lu)

### ERG Supplier Code of Conduct

Key topics covered by ERG Supplier Code of Conduct include, among others:

- Health, safety and environment (e.g. working environment, PPE, environmental compliance, etc.)
- Integrity (e.g. zero tolerance of bribery and corruption, conflicts of interest, sub-supplier sanctions checks, etc.)
- Fair employment practices (e.g. discrimination, freedom of association / collective bargaining, forced labour, child labour, etc.)
- Human rights (e.g. compliance with the UN Guiding Principles, OECD Due Diligence Guidance and Voluntary Principles on Security and Human Rights)

### Tax and payment transparency

In line with our Group Tax Policy, which is approved by the Board of Managers, we are committed to complying not only with the letter but also the spirit of local laws. This includes the submission of Extractive Industries Transparency Initiative (EITI) reports in our host countries, where required.

### COMPLIANCE RISKS

Key compliance risks that we identified in 2023 are set out below:

- Sanctions, including in relation to our potential exposure to those imposed on Russia as a result of the conflict in Ukraine
- Anti-bribery and corruption, reflecting the fact that some of the countries in which we operate pose relatively high latent corruption risks
- Human rights risks, including in relation to the presence of ASM activity on or near our sites in Africa, as well as downstream demand for assurance
- Anti-money laundering, reflecting the latent risks posed by some of the countries in which we do business
- Data protection, including in relation to the EU GDPR and related measures in other jurisdictions in which we do business

### EITI status of host countries

Actual / potential mining locations	EITI status (validation assessment)
Brazil	Non-participant
DRC	Participant (high)
Kazakhstan	Participant (meaningful progress)
Mozambique	Participant (moderate)
South Africa	Non-participant
Zambia	Participant (high)
Zimbabwe	Non-participant

## What are ERG's most material issues and why?

	Material issue	Relevant 2025 Strategy goal	Relevance to ERG	Relevance to stakeholders	Page
<b>BUSINESS</b>	<b>Growth and asset maintenance</b>	Balanced portfolio growth	Replenishment and growth of Mineral Resources and Ore Reserves, maintenance / renewal of existing projects and access to new commercial opportunities and / or the disposal of assets	Establishment of new projects (with all attendant positive and / or negative impacts), the continued commercial viability of existing projects and the maintenance of long-term value generation and distribution	20
	<b>Technology, efficiency and digitalisation</b>	Efficiency in all that we do	Support of short-, medium- and long-term business sustainability – including through reduced costs, enhanced competitiveness and higher levels of productivity	Impact on returns, the protection of shareholder / finance provider value and the sustainability of economic value distribution (see below)	25
	<b>Financial performance and value distribution</b>	Sustainable development of our host regions Financial stability	The need to generate revenue and profits in order to sustain ERG as a going concern – and achieve future growth. In addition, the ongoing ability of the business to successfully navigate external shocks and continue as a successful going concern	The continued ability to generate and distribute value, and the positive impact of direct payments to suppliers, employees, capital providers, governments and communities – including associated indirect and induced economic impacts	29
	<b>Geopolitics</b>	Financial stability	The impact on our ability to access financing, our customer / supplier relationships and our logistics capabilities – as well as our ongoing compliance with relevant sanctions	Our ability to deliver commodities to our customers – as well as restrictions on our relationships / agreements with finance providers and other third parties exposed to international sanctions. Plus, our adherence to sanctions imposed by foreign governments	81
<b>ENVIRONMENT</b>	<b>Managing impacts on air and water</b>	Sustainable development of our host regions	Legal compliance and the maintenance of our social licence to operate through the avoidance / minimisation of our negative environmental impacts	The potential for ERG activities (including mining, smelting, refining, power generation and the operation of railway systems) to result in discharges to the environment that result in possible human and ecological harm	35
	<b>Energy and climate change</b>	Sustainable development of our host regions	Compliance with current and / or future emissions regulations, minimisation of future carbon tax liabilities, reduced costs (associated with energy consumption), the meeting of customer carbon transparency and / or reduction requirements and the maintenance of our broader social licence to operate	The potential for ERG activities to contribute to climate change and its associated negative environmental and socio-economic impacts. Plus, ERG's contribution to the full lifecycle carbon footprints of downstream partners' products	40
	<b>Tailings and broader waste management</b>	Sustainable development of our host regions	Compliance, operational continuity and social licence requirements around the physical and environmental management of large volumes of waste (including tailings, waste rock, sludges and industrial waste) – plus potential commercial opportunities around waste processing	The need to avoid catastrophic failures of large-volume waste management facilities (as well as associated human, economic and environmental harm). Plus, the broader need to responsibly manage waste that could otherwise result in ground, water or air contamination – and / or serious human and / or environmental consequences	43

APPENDIX CONTINUED

	Material issue	Relevant 2025 Strategy goal	Relevance to ERG	Relevance to stakeholders	Page
<b>SOCIAL</b>	<b>Health &amp; safety</b>	Happy and professional team	The right thing to do – as well as the maintenance of our operational continuity, efficiency and the motivation of our employees	Protection of employees and contractors from occupational injury, as well as occupational illnesses	46
	<b>Talent attraction, development and retention</b>	Happy and professional team	Maintenance of our ability to generate value and to transform our business by attracting, developing, motivating and retaining high quality, skilled employees	The professional advancement of employees – and their ability to reach their full socio-economic, technical and personal potential	51
	<b>Employee relations</b>	Happy and professional team	Nurturing of a productive, positive workplace culture that directly supports our productivity, efficiency and profitability	Delivery of positive working conditions, fair pay and benefits, and a responsive management culture – as well as the meeting of the social needs and living standards of our employees and their families (many of whom reside in remote communities in Kazakhstan that are highly reliant on ERG’s activities)	56
	<b>Community impacts</b>	Sustainable development of our host regions	Responsible management of ERG’s impacts, as well as the maintenance of constructive stakeholder relations	The delivery of positive impacts by ERG’s operations, as well as the need to ensure ERG’s activities do not undermine the social and economic interests of local people	59
	<b>Community social investment</b>	Sustainable development of our host regions	Maintenance of our social licence to operate and the delivery of positive living standards for our workers in our local communities – many of which have historically grown around our operations. This is in addition to the fulfilment of legal obligations relating to mandatory socio-economic development contributions required under our operating licences	The addressing of socio-economic challenges in local communities in Kazakhstan (which are remote, economically undiversified and rely on ERG for employment and public services), as well as in Africa and Brazil (where many local communities live in conditions of poverty, with limited access to formal employment opportunities)  The improvement of socio-economic conditions for ASM communities and the transitioning of children out of ASM activity	63

APPENDIX CONTINUED

	Material issue	Relevant 2025 Strategy goal	Relevance to ERG	Relevance to stakeholders	Page
<b>GOVERNANCE</b>	<b>Ethics and compliance</b>	Compliance is a cross-cutting issue that is relevant to all aspects of our 2025 Strategy	Compliance with relevant law, the maintenance of the trust of our partners and the protection of our reputation – as well as the enhancement of our operating environments	Preventing the potential undermining of legitimate economic, social, legal, political and business interests (including human rights), as well as the undermining of the broader governance environment – plus the avoidance of association with such behaviour and related reputational harm	69
	<b>Responsible value chains</b>	Sustainable development of our host regions	The avoidance of reputational harm as a result of any indirect negative impacts that may take place in ERG's supply chain – plus the delivery of assurance to customers and other downstream actors that their own products are responsibly sourced	The need to ensure workers and other stakeholders in the value chain are not negatively impacted – plus the need to avoid reputational harm as a result of any indirect negative impacts (including those relating to human rights) that may take place as a result of company activities and / or relationships	74
	<b>Government relations and policy</b>	Government relations and policy is a cross-cutting issue that is relevant to all aspects of our 2025 Strategy	The potential impact of governments on ERG's revenue generation and profitability via public policy, taxation legislation and regulation – as well as the awarding of new licences. In addition, the status of the Government of the Republic of Kazakhstan as a 40% shareholder in ERG – as well as the DRC government's interests in a number of ERG subsidiaries	The need for transparent and constructive interactions between business and government to avoid the undermining of the legitimate interests of other stakeholders – and to support balanced, well-informed public policy	78

# Stakeholder engagement overview

We proactively engage with our stakeholders on sustainable development issues in a constructive and transparent way, and report on our performance.

We select stakeholders for engagement on the basis of their actual / potential impact on ERG's achievement of its business objectives (including with respect to its financial performance) as well as ERG's actual / potential impact on them and their interests.

The identification, prioritisation and engagement of our stakeholders helps us:

- Understand the impact we have on others and enhance our materiality assessments
- Prevent and / or minimise negative impacts resulting from our operations and maximise our positive impacts

- Monitor the effectiveness of our management activities
- Understand the risks and opportunities that our stakeholders represent to our business – and how these are influenced by our own activities and impacts
- Identify and support partnerships

Engagement takes place at the following levels:

- Corporate level (i.e. strategic issues), including our materiality assessment
- Regional level (i.e. strategic / operational issues)
- Site level (i.e. operational issues)

Key examples of our stakeholder engagement activities are provided in the table below.

Category	Stakeholder group	Engagement channel	Issues of interest	Relevant report section
Commercial	Customers and end-users	<ul style="list-style-type: none"> <li>• Direct interaction focused on product development and quality assurance</li> <li>• Responses to customer surveys</li> <li>• CPDD / KYC process</li> </ul>	<ul style="list-style-type: none"> <li>• Supply stability / predictability</li> <li>• Product specifications and / or delivery terms</li> <li>• Product quality / price / traceability</li> <li>• Logistics scheduling / reliability</li> <li>• Responsible sourcing and value chain assurance (including human rights and decarbonisation)</li> <li>• Broader ESG assurance (including certification to management system standards)</li> <li>• Product lifecycle and logistics carbon footprints</li> <li>• Sanctions compliance</li> <li>• Business ethics (including anti-corruption, AML, tax disclosure and KYC)</li> </ul>	Introduction, 1, 4
	Suppliers, business partners and contractors	<ul style="list-style-type: none"> <li>• Engagement through business associations and initiatives</li> <li>• Ongoing bilateral dialogue</li> <li>• Training</li> <li>• Supplier audits</li> <li>• ERG Supplier Code of Conduct</li> <li>• CPDD / KYC process</li> </ul>	<ul style="list-style-type: none"> <li>• Contract stability</li> <li>• Compliance, KYC and onboarding process</li> <li>• Transaction efficiency</li> <li>• Logistics scheduling / reliability</li> <li>• Health and safety, business ethics, human rights and labour standards</li> <li>• Local content opportunities and local supplier capabilities</li> <li>• Responsible production</li> <li>• Broader ESG assurance</li> <li>• Import / export regulations</li> <li>• Sanctions compliance</li> </ul>	Introduction, 4

**APPENDIX CONTINUED**

Category	Stakeholder group	Engagement channel	Issues of interest	Relevant report section
Financial	Shareholders	<ul style="list-style-type: none"> <li>• Updates to website, media releases, public statements and operational reports</li> <li>• Meetings and roadshows</li> <li>• Engagements focused on financial services</li> <li>• Bilateral engagement with insurers</li> </ul>	<ul style="list-style-type: none"> <li>• Sustainable business development, including ESG integration</li> <li>• Dividend policy</li> <li>• Corporate reputation</li> <li>• Capital spending</li> <li>• Geopolitical risk</li> <li>• Sanctions compliance</li> </ul>	Introduction, 1, 4
	Lenders		<ul style="list-style-type: none"> <li>• Successful project execution</li> <li>• Borrower risks, including geopolitical risk</li> <li>• Legal compliance</li> <li>• Credit and debt arrangements</li> <li>• Climate change and ESG performance</li> <li>• Sanctions compliance</li> <li>• Green finance opportunities</li> </ul>	Introduction, 1, 2, 4
	Insurers		<ul style="list-style-type: none"> <li>• Health and safety risks</li> <li>• Industrial safety (including fire- and environment-related risks)</li> <li>• Climate change risks</li> <li>• Tailings management risks</li> <li>• Business ethics and sanctions compliance risks</li> </ul>	2, 3, 4

## APPENDIX CONTINUED

Category	Stakeholder group	Engagement channel	Issues of interest	Relevant report section
Government	National governments	<ul style="list-style-type: none"> <li>Engagement regarding the issuing of permits, compliance with regulations and supervision of activities</li> <li>Dialogues / meetings focused on the development of regulations and public policy</li> <li>Development of business / government partnerships (e.g. regional memoranda of understanding in Kazakhstan)</li> <li>Implementation of projects for socio-economic development</li> </ul>	<ul style="list-style-type: none"> <li>Tax and royalty payments</li> <li>National socio-economic development</li> <li>Development of domestic skills and capabilities</li> <li>Support for local content and the development of domestic production</li> <li>Government of the Republic of Kazakhstan policy and development priorities</li> <li>Employee health and safety, including the Government's 2030 Safe Work Concept in Kazakhstan, and social support</li> <li>Implementation of the national Low Carbon Development Strategy and Environmental Code in Kazakhstan (p. 35)</li> <li>Legal / fiscal regime for mining in the DRC</li> <li>Energy security in the DRC</li> <li>ASM in the DRC</li> <li>Eligibility of BAMIN for Brazilian Development Bank funding</li> </ul>	1, 2, 3, 4
	Regional governments		<ul style="list-style-type: none"> <li>Regional socio-economic development in Kazakhstan</li> <li>Socio-economic development programmes in the DRC</li> <li>Social and environmental programmes under our mandatory environmental plans (Projeto Básico Ambiental, PBAs) in Brazil</li> <li>The start of construction of the FIOL 1 railway in Brazil</li> <li>The promotion of broader economic activity in the state of Bahia, Brazil</li> <li>Emergency preparedness and incident management in the DRC</li> </ul>	3
	Regulatory bodies		<ul style="list-style-type: none"> <li>Environmental impacts, including the reduction of air emissions in Kazakhstan</li> <li>Enhanced technological, environmental and safety standards for the mining sector in Kazakhstan</li> <li>Workforce health and safety</li> <li>Labour conditions</li> <li>Local contracting requirements</li> <li>Tailings management</li> <li>Sanctions / AML compliance</li> </ul>	2, 3, 4

## APPENDIX CONTINUED

Category	Stakeholder group	Engagement channel	Issues of interest	Relevant report section
Society	Local communities	<ul style="list-style-type: none"> <li>Public hearings and meetings</li> <li>Grievance mechanisms and procedures</li> <li>Large-scale surveys and socio-economic benchmarking</li> <li>Formal feedback mechanisms (including Tugan Qala ('Home Town') in Kazakhstan)</li> <li>CSI projects</li> <li>Information in local media</li> <li>Community Development Plan framework in the DRC</li> <li>Educational institutions</li> </ul>	<ul style="list-style-type: none"> <li>Employment opportunities and job creation</li> <li>Local living conditions and infrastructure</li> <li>Local procurement and enterprise promotion</li> <li>Alternative livelihoods</li> <li>Healthcare</li> <li>Emissions to air and water, including particulate emissions in Kazakhstan</li> <li>Site-related traffic, noise and dust emissions</li> <li>Tailings management and safety</li> <li>Security and ASM in the DRC</li> <li>Investment in educational institutions and skills development for teachers and students</li> <li>Community Development Plans and related CSI projects in the DRC (p. 65)</li> <li>PBAs and related social and environmental programmes in Brazil (p. 61)</li> <li>Emergency preparedness and incident management in the DRC</li> </ul>	2, 3
	NGOs, civil society organisations and media	<ul style="list-style-type: none"> <li>Membership of industry / sector initiatives</li> <li>Multi-stakeholder initiatives and partnerships</li> <li>Implementation of CSI projects</li> <li>Press releases and other publications on CSI projects, financial information, information on project development</li> <li>Ongoing dialogue</li> </ul>	<ul style="list-style-type: none"> <li>National and regional socio-economic development</li> <li>Conservation, biodiversity and environmental education</li> <li>Business ethics</li> <li>Human rights</li> <li>Tailings management and safety</li> </ul>	2, 3, 4
	Broader society		<ul style="list-style-type: none"> <li>Climate change and the energy transition</li> <li>Responsible battery value chains</li> <li>Circular economy</li> <li>Environmental impacts</li> <li>Employment generation</li> <li>Human rights</li> </ul>	1, 2, 4

## APPENDIX CONTINUED

Category	Stakeholder group	Engagement channel	Issues of interest	Relevant report section
Workforce	Employees and their representatives	<ul style="list-style-type: none"> <li>• Ongoing dialogue between the management and teams</li> <li>• Internal communication channels</li> <li>• Suggestions for ideas to improve productivity</li> <li>• Engagement surveys</li> <li>• Formal feedback mechanisms (including School of Active Citizens in Kazakhstan)</li> <li>• Established industrial relations channels</li> <li>• Collective bargaining agreements and union engagement</li> <li>• Safety risk management</li> <li>• Accident investigations</li> </ul>	<ul style="list-style-type: none"> <li>• Rising living costs</li> <li>• Occupational health and safety</li> <li>• Psychological health and well-being</li> <li>• Training and development</li> <li>• Remuneration and career opportunities</li> <li>• Conditions of employment, pay / benefits and working conditions</li> <li>• External living conditions for employees and families in Kazakhstan</li> <li>• Organisational change and corporate culture</li> <li>• Union member interests</li> <li>• Social investment in our mining towns in Kazakhstan and our local communities in the DRC</li> </ul>	3
	Senior managers		<ul style="list-style-type: none"> <li>• Organisational change and corporate culture</li> <li>• Skills development</li> <li>• Professional development</li> </ul>	1, 3

# UN SDG mapping

Chapter	Section	Relevant UN SDGs	Relevant UN Targets <sup>1</sup>	Relevant UN SDGs	Relevant UN Targets <sup>1</sup>	
<b>Business</b>	Growth and asset maintenance		<b>8.2</b> Achieve higher levels of economic productivity through diversification, technological upgrading and innovation		<b>9.2</b> Promote inclusive and sustainable industrialisation and, by 2030, significantly raise industry's share of employment and gross domestic product <b>9.4</b> By 2030, upgrade infrastructure and retrofit industries to make them sustainable	
	Technology, efficiency and digitalisation		<b>8.2</b> Achieve higher levels of economic productivity through diversification, technological upgrading and innovation		<b>9.5</b> Enhance scientific research, upgrade the technological capabilities of industrial sectors in all countries, in particular developing countries	
	Value distribution		<b>9.2</b> Promote inclusive and sustainable industrialisation and, by 2030, significantly raise industry's share of employment and gross domestic product			
<b>Environment</b>	Managing impacts on air and water		<b>3.9</b> By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination		<b>9.4</b> By 2030, upgrade infrastructure and retrofit industries to make them sustainable	
			<b>6.3</b> By 2030, improve water quality by reducing pollution, eliminating dumping and minimising release of hazardous chemicals and materials		<b>12.4</b> By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle	
			<b>8.4</b> Improve progressively, through 2030, global resource efficiency in consumption and production and endeavour to decouple economic growth from environmental degradation			
	Energy and climate change		<b>7.2</b> By 2030, increase substantially the share of renewable energy in the global energy mix <b>7.3</b> By 2030, double the global rate of improvement in energy efficiency			<b>12.2</b> Achieve the sustainable management and efficient use of natural resources
			<b>8.4</b> Improve progressively, through 2030, global resource efficiency in consumption and production and endeavour to decouple economic growth from environmental degradation			<b>13.2</b> Integrate climate change measures into national policies, strategies and planning
			<b>9.4</b> By 2030, upgrade infrastructure and retrofit industries to make them sustainable			
	Tailings and broader waste management		<b>12.2</b> Achieve the sustainable management and efficient use of natural resources <b>12.4</b> By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle			<b>12.5</b> By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse

<sup>1</sup> Note that all references to associated UN Targets are for the contextualisation of our impacts, risks, opportunities and performance only – and do not represent formal corporate targets.

## APPENDIX CONTINUED

Chapter	Section	Relevant UN SDGs	Relevant UN Targets <sup>1</sup>	Relevant UN SDGs	Relevant UN Targets <sup>1</sup>
Social	Health and safety		<b>3.8</b> Achieve universal health coverage		<b>8.8</b> Protect labour rights and promote safe and secure working environments for all workers
	Talent attraction, development and retention		<b>4.4</b> By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship		<b>8.6</b> By 2020, substantially reduce the proportion of youth not in employment, education or training
	Employee relations		<b>8.8</b> Protect labour rights and promote safe and secure working environments for all workers		<b>11.1</b> By 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums
	Community impacts		<b>3.9</b> By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination		<b>6.3</b> By 2020, improve water quality by reducing pollution, eliminating dumping and minimising release of hazardous chemicals and materials
			<b>5.2</b> Eliminate all forms of violence against all women and girls in the public and private spheres, including trafficking and sexual and other types of exploitation		<b>12.4</b> By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle
	Community social investment		<b>1.2</b> By 2030, reduce at least by half the proportion of men, women and children of all ages living in poverty		<b>6.1</b> By 2030, achieve universal and equitable access to safe and affordable drinking water for all <b>6.B</b> Support and strengthen the participation of local communities in improving water and sanitation management
			<b>2.3</b> By 2030, double the agricultural productivity and incomes of small-scale food producers		<b>8.3</b> Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalisation and growth of micro-, small- and medium-sized enterprises
			<b>4.4</b> By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship		<b>11.1</b> By 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums
			<b>5.1</b> End all forms of discrimination against all women and girls everywhere		
Governance	Ethics and compliance, including human rights		<b>8.7</b> Eradicate forced labour, end modern slavery and human trafficking and secure the prohibition and elimination of the worst forms of child labour		<b>16.5</b> Substantially reduce corruption and bribery in all their forms
	Responsible value chains		<b>8.7</b> Eradicate forced labour, end modern slavery and human trafficking and secure the prohibition and elimination of the worst forms of child labour <b>8.8</b> Protect labour rights and promote safe and secure working environments for all workers	 	<b>16.5</b> Substantially reduce corruption and bribery in all their forms <b>17.16</b> Enhance the global partnership for sustainable development
	Government relations and policy		<b>16.5</b> Substantially reduce corruption and bribery in all their forms		<b>17.16</b> Enhance the global partnership for sustainable development <b>17.17</b> Encourage and promote effective public, public-private and civil society partnerships

<sup>1</sup> Note that all references to associated UN Targets are for the contextualisation of our impacts, risks, opportunities and performance only – and do not represent formal corporate targets.

## Key examples of participation in external initiatives

Level of engagement	Organisation
Group	<ul style="list-style-type: none"> <li>• <b>Global Battery Alliance</b> (founding member and co-chair of supervisory council and board of directors) and its related initiatives</li> <li>• <b>World Economic Forum</b> (Strategic Partner Associate), including the Partnering Against Corruption Initiative (signatory)<sup>1</sup></li> <li>• <b>Responsible Minerals Initiative</b> (Responsible Minerals Assurance Process assessment)(p. 75)</li> <li>• <b>Cobalt Institute</b> (member)</li> <li>• <b>ReSource project</b> (founding member)</li> <li>• <b>International Chromium Development Association</b> (member)</li> <li>• <b>Sustainable Markets Initiative</b> (member), as well as the related Terra Carta (signatory)</li> </ul> <p>In addition, ERG is committed to adherence with the principles of the following external initiatives:</p> <ul style="list-style-type: none"> <li>• <b>Extractive Industries Transparency Initiative (EITI):</b> We continue to submit EITI reports in our host countries, where required<sup>2</sup></li> <li>• <b>UN Guiding Principles on Business and Human Rights:</b> The Principles are embedded within our Human Rights Policy (which also references internationally recognised human and labour rights, such as those set out in the Universal Declaration of Human Rights and the core conventions of the International Labour Organization), Code of Conduct and Supplier Code of Conduct</li> <li>• <b>OECD Due Diligence Guidance on Responsible Supply Chains of Minerals:</b> Our Clean Cobalt and Copper Framework aims to ensure our compliance with the Guidance, which is also embedded within our Code of Conduct and Supplier Code of Conduct</li> <li>• <b>Voluntary Principles on Security and Human Rights:</b> The Principles are embedded within our Code of Conduct and Supplier Code of Conduct</li> </ul>

1 Also includes: Mining and Metals Governors; Securing Minerals for the Energy Transition; Accelerating Clean Hydrogen Initiative; Coal to Renewables Initiative.

2 For more information on EITI status in our other countries of presence, see p. 88 and [eti.org](http://eti.org)

Level of engagement	Organisation
Kazakhstan	<ul style="list-style-type: none"> <li>• Eurasian Industrial Association</li> <li>• Association of Mining and Metallurgical Enterprises</li> <li>• National Chamber of Entrepreneurs of Kazakhstan ‘Atameken’</li> <li>• Association of Taxpayers of Kazakhstan</li> <li>• Kazakhstan Foreign Investors’ Council</li> <li>• Kazakhstan Business Council for Sustainable Development</li> <li>• Kazakhstan Association of Regional Environmental Initiatives ‘ECOJER’</li> <li>• Kazakhstan Electrical Power Association</li> </ul>
DRC and Zambia	<ul style="list-style-type: none"> <li>• Chamber of Mines of the DRC</li> <li>• Federation of Congolese Enterprises</li> <li>• Voluntary Principles on Security and Human Rights Working Group (national-level in the DRC, as well as the Haut-Katanga and Lualaba regions)</li> <li>• Framework for Sustainable Investment in Katanga (IDAK)</li> <li>• Zambia Chamber of Mines</li> <li>• Zambia Institute of Human Resource Management</li> </ul>
Brazil	<ul style="list-style-type: none"> <li>• Brazilian Mining Institute</li> <li>• Bahia Ports User Association</li> <li>• Federation of Industries of the State of Bahia</li> <li>• Agency for Technological Development of the Brazilian Mining Industry</li> <li>• National Association of Railway Transporters (ANTF)</li> <li>• Women in Mining Brazil</li> <li>• Union of Extractive Industries for Metals, Precious and Noble Metals, Precious and Semiprecious Stones, and Magnesite in the State of Bahia</li> <li>• Brazilian Association of Business Journalism (ABERJE)</li> <li>• United Nations Global Compact (Bahia Mineracao submitted its own Communication on Progress in 2022)</li> <li>• Brazilian Mining Association (IBRAM)</li> </ul>

## Key operating assets

Commodity / services	Number of assets	Name of asset	Principal activity	Country of operation
Ferroalloys	5	Aksu Ferroalloys Plant (TNC Kazchrome JSC)	Processing	Kazakhstan
		Aktobe Ferroalloys Plant (TNC Kazchrome JSC)	Processing	Kazakhstan
		Donskoy Mining and Processing Plant <sup>1</sup> (TNC Kazchrome JSC)	Mining and processing	Kazakhstan
		Kazmarganets (TNC Kazchrome JSC)	Mining and processing	Kazakhstan
		Manganese Zhayrema JSC	Mining	Kazakhstan
Iron ore	3	Sokolovsko Sarbaiskoye Ore Mining and Processing Association JSC <sup>2</sup>	Mining and processing	Kazakhstan
		Kachary Ruda JSC	Mining and processing	Kazakhstan
		Bahia Mineração S/A <sup>3</sup>	Mining and processing	Brazil
Alumina and aluminium <sup>4</sup>	3	Krasno-Oktyabrskoye Mining Unit (Aluminium of Kazakhstan JSC)	Mining and processing	Kazakhstan
		Pavlodar Aluminium Plant (Aluminium of Kazakhstan JSC)	Processing	Kazakhstan
		Kazakhstan Aluminium Smelter JSC <sup>5</sup>	Processing	Kazakhstan
Cobalt, copper and other non-ferrous <sup>6</sup>	6	Metalkol SA	Mining and processing	DRC
		Frontier SA	Mining and processing	DRC
		Chambishi Metals PLC	Processing	Zambia
		Boss Mining SAS	Mining and processing	DRC
		COMIDE	Mining and processing	DRC
		Sabot Management Limited <sup>7</sup>	Transportation	Central and Southern Africa <sup>8</sup>
Energy	4	Vostochny Open Pit Coal Mine (Eurasian Energy Corporation JSC) <sup>9</sup>	Mining	Kazakhstan
		Aksu Power Plant (Eurasian Energy Corporation JSC)	Power generation	Kazakhstan
		Shubarkol Komir JSC	Mining and processing	Kazakhstan
		3-Energoortalyk JSC	Power generation	Kazakhstan
Logistics	1	TransCom LLP	Transportation	Kazakhstan

1 Referred to as 'Donskoy GOK' throughout the report.

2 Referred to as 'SSGPO' throughout the report.

3 Referred to as 'BAMIN' throughout the report.

4 Our Torgayskoye Mining Unit (Aluminium of Kazakhstan JSC) was closed in 2023.

5 Referred to as 'KAS' throughout the report.

6 Our Boss Mining, Chambishi Metals and COMIDE operations are currently on care and maintenance.

7 Our logistics entity Sabot is included in 'Other non-ferrous' as it primarily acts in a supporting capacity for our operations in Africa.

8 There are several companies headed by Sabot and present across the various countries in Africa.

9 Referred to as 'EEC' throughout the report.

# GRI content index

ERG has reported the information cited in this GRI content index for the 2023 calendar year with reference to the GRI Standards. It has used GRI 1: Foundation 2021 in the preparation of this report.

Disclosure No.	Disclosure description	Page(s)	Comments
<b>GRI 2: General Disclosures 2021</b>			
2-1	Organisational details	3-6, 78, 80	Front and back cover; ERG's headquarters are in Luxembourg.
2-3	Reporting period, frequency and contact point	1	
2-4	Restatements of information	2, 19, 42, 67	
2-6	Activities, value chain and other business relationships	9	
2-7	Employees	9, 51	
2-9	Governance structure and composition	78, 80-81	
2-13	Delegation of responsibility for managing impacts	80-81	
2-22	Statement on sustainable development strategy	7-11, 14-16	
2-23	Policy commitments	69-73	
2-25	Processes to remediate negative impacts	59-62, 70-72	
2-26	Mechanisms for seeking advice and raising concerns	70, 72	
2-27	Compliance with laws and regulations	71	None
2-28	Membership associations	99	
2-29	Approach to stakeholder engagement	12, 92-96	
2-30	Collective bargaining agreements	56, 58	
<b>GRI 3: Material Topics 2021</b>			
3-1	Process to determine material topics	12-13, 92-96	
3-2	List of material topics	13	
3-3	Management of material topics	17-33, 34-44, 45-67, 68-79, 82-84, 85-88	
<b>GRI 201: Economic Performance 2016</b>			
201-1	Direct economic value generated and distributed	16, 31	
<b>GRI 203: Indirect Economic Impacts 2016</b>			
203-1	Infrastructure investments and services supported	56-58, 63-67	
203-2	Significant indirect economic impacts	56-58, 59-62, 63-67	
<b>GRI 204: Procurement Practices 2016</b>			
204-1	Proportion of spending on local suppliers	29-33	
<b>GRI 205: Anti-corruption 2016</b>			
205-1	Operations assessed for risks related to corruption		We assess 100% of our processes and transactions subject to relevant compliance procedures requirements in Kazakhstan, Africa and Brazil and for corruption-related risks as part of the regional and Group-level application of our Group-wide risk management system.
205-2	Communication and training about anti-corruption policies and procedures	69-73	
205-3	Confirmed incidents of corruption and actions taken	71	None
<b>GRI 206: Anti-competitive Behaviour 2016</b>			
206-1	Legal actions for anti-competitive behaviour, anti-trust, and monopoly practices		None

## GRI content index

Disclosure No.	Disclosure description	Page(s)	Comments
<b>GRI 207: Tax 2019</b>			
207-1	Approach to tax	30, 32, 88	
207-2	Tax governance, control, and risk management	30, 82, 88	
207-3	Stakeholder engagement and management of concerns related to tax	30, 32	
207-4	Country-by-country reporting	32	
<b>GRI 302: Energy 2016</b>			
302-1	Energy consumption within the organisation	42	
302-4	Reduction of energy consumption	41	
<b>GRI 303: Water and Effluents 2018</b>			
303-1	Interactions with water as a shared resource	35-39	
303-2	Management of water discharge-related impacts	35-39	
303-3	Water withdrawal	9	
<b>GRI 305: Emissions 2016</b>			
305-1	Direct (Scope 1) GHG emissions	42	
305-2	Energy indirect (Scope 2) GHG emissions	42	
<b>GRI 306: Waste 2020</b>			
306-1	Waste generation and significant waste-related impacts	43-44	
306-2	Management of significant waste-related impacts	43-44	
<b>GRI 401: Employment 2016</b>			
401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	56	
<b>GRI 402: Labour / Management Relations 2016</b>			
402-1	Minimum notice periods regarding operational changes		<p>Minimum notice periods vary across the Group. In Kazakhstan, minimum notice periods of one month or more are specified in collective bargaining agreements (in excess of the 15 calendar days' notice required under local labour laws).</p> <p>In the DRC, operational changes (e.g. layoffs, restructuring and mergers) require compliance with specific legal notice periods, including a 45-day decision period for mass layoffs and a minimum of 14 days' notice for employee termination, with additional days based on employee type and years of service. As per market practice, ERG sites in the DRC increase these minimum legal notice periods through their collective bargaining agreements and provide additional end-of-employment notice for retrenched staff.</p> <p>Minimum notice periods are not specified in either local labour laws or collective bargaining agreements at our BAMIN integrated iron ore operation in Brazil.</p>

## GRI content index

Disclosure No.	Disclosure description	Page(s)	Comments
<b>GRI 403: Occupational Health and Safety 2018</b>			
403-1	Occupational health and safety management system	45-60, 83, 86-87	
403-2	Hazard identification, risk assessment, and incident investigation	45-60, 81, 82-84	
403-3	Occupational health services	48-50	
403-4	Worker participation, consultation, and communication on occupational health and safety	47-48, 81, 92-96	
403-5	Worker training on occupational health and safety	46-50	
403-6	Promotion of worker health	46-50	
403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	46-50	
403-9	Work-related injuries	47	
403-10	Work-related ill health	48-49	
<b>GRI 404: Training and Education 2016</b>			
404-2	Programmes for upgrading employee skills and transition assistance programmes	25, 51-55, 69-71	
404-3	Percentage of employees receiving regular performance and career development reviews	53-54	
<b>GRI 406: Non-discrimination 2016</b>			
406-1	Incidents of discrimination and corrective actions taken	58	None
<b>GRI 407: Freedom of Association and Collective Bargaining 2016</b>			
407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	58	None
<b>GRI 408: Child Labour 2016</b>			
408-1	Operations and suppliers at significant risk for incidents of child labour	66, 72	
<b>GRI 409: Forced or Compulsory Labour 2016</b>			
409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labour	72	
<b>GRI 410: Security Practices 2016</b>			
410-1	Security personnel trained in human rights policies or procedures	71, 73	
<b>GRI 413: Local Communities 2016</b>			
413-1	Operations with local community engagement, impact assessments, and development programmes	59-62, 63-67	
413-2	Operations with significant actual and potential negative impacts on local communities	59-62	
<b>GRI 414: Supplier Social Assessment 2016</b>			
414-1	New suppliers that were screened using social criteria	74	
<b>GRI 415: Public Policy 2016</b>			
415-1	Political contributions	79	None

## Units of measurement

US\$	US dollars
Bn	Billion
M	Million
kt	Thousand tonnes
ktpa	Thousand tonnes per annum
Mt	Million tonnes
mtpa	Million tonnes per annum
GWh	Gigawatt hours
MW	Megawatt
km	Kilometres
PM	particulate matter
m <sup>3</sup>	Cubic metre
ha	Hectare

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## Forward-looking statements

This Sustainable Development Report contains certain forward-looking statements. Forward-looking statements are not based on historical facts and are inherently prospective in nature. Forward-looking statements may be identified by the use of terminology including, but not limited to, 'intend', 'aim', 'project', 'anticipate', 'estimate', 'plan', 'believes', 'expect', 'may', 'should', 'will', 'potential', 'possible', 'investigate', 'explore', or similar terms.

Forward-looking statements involve known and unknown risks, uncertainties and other variables that may cause actual performance, events and outcomes to vary significantly from any future performance, events or outcomes expressly or implicitly anticipated by such forward-looking statements. Such variables may include, but are not limited to, actual operational performance, market conditions, exchange rate fluctuations, operational disruption, macroeconomic dynamics, political uncertainty, government regulation and other related factors. As such, undue reliance should not be placed on such forward-looking statements.

Forward-looking statements contained in this report are only made with respect to the situation at the date of publishing. ERG will not be under any obligation and will not undertake to update or revise any forward-looking statements contained in this report after this date.



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