



2021 Environmental Social and Governance Report

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About this Report

The *Environmental, Social and Governance Report* (hereinafter “this report” or “ESG report”) provides an account of the performance of China Molybdenum Co., Ltd. (hereinafter “CMOC”, “we”, or “the company”) in terms of fulfilling environmental, social, and governance responsibilities in 2021. For more information about the company, please refer to the 2021 Annual Report issued by the company on the Shanghai Stock Exchange (SSE) and the Hong Kong Stock Exchange (HKEX).

The report is compiled based on the *Environmental Information Disclosure Guide* issued by the SSE and the *Environmental, Social and Governance Reporting Guide* (HKEX Reporting Guide), including conformance with the latter’s “comply or explain” provisions, as published by the HKEX. Information and data in the report are obtained from CMOC’s official documents and statistical reports, as well as summaries and statistics provided by its affiliates. The CMOC Kisanfu copper–cobalt mine (“KFM”) in the Democratic Republic of the Congo (DRC), which was acquired by the company on December 13, 2020, is included in this year’s report. However, as KFM is a greenfield project and development activities have not formally commenced except for ground clearance work and initial preparations, the available data is limited compared with other mining sites.

Data and information in this report reflect the reporting period from January 1, 2021 to December 31, 2021. Additional information that is relevant to the subject matter of this report and derived from events in 2022 prior to the publication date may also be included to ensure that investors have full access to material information. Events after the reporting period are clearly identified as such in the body of the text. Please note that data from previous years may have been updated as a result of methodology changes or corrections. We encourage users of this report to contact our sustainability department for inquiries (603993@cmoc.com). This report can be downloaded from the official websites of the company (www.cmoc.com), Shanghai Stock Exchange (www.sse.com.cn), or HKEX (www.hkexnews.hk).

The boundaries of this ESG report represent a snapshot in the evolution of our company and its sustainability governance structure. In 2018, CMOC formulated a roadmap for a sustainability governance system and a Strategic and Sustainability Committee at the Board level. In 2019, CMOC established the Sustainability Executive Committee at the executive level; it also reviewed and updated nine compliance and sustainability policies applicable to the whole Group, namely the *Code of Business Conduct*, *Supplier Code of Conduct*, *Anti-Corruption Policy*, *Export Controls Policy*, *Economic Sanctions Policy*, *Human Rights Policy*, *Environmental Policy*, *Community Policy*, and *Health, Safety, and Environmental Policy*. In 2020, CMOC furthered the implementation of the aforementioned policies across all business segments. In 2021, it updated its *Human Rights Policy* and formulated a new *Employment Policy*, *Anti-Money Laundering Policy*, and *Global Privacy Guidelines*. These four policies were published in January 2022 following approval by the Board of Directors. The sustainability policies mentioned in this report are applicable to CMOC and all of its directly or indirectly controlled or majority-owned subsidiaries, and are available to read and download from the company’s official website (www.cmoc.com). As in 2020, the company continued to seek external assurance covering all three international mining sites (namely Tenke Fungurume Mining in the Democratic Republic of the Congo, CMOC Brasil in Brazil, and Northparkes Mines in Australia) and IXM. Chinese mining operations and CMOC Kisanfu Mining are not currently covered in the scope of the assurance.

In August 2021, MSCI upgraded the company’s ESG rating from ‘BBB’ to ‘A’¹.

Global Reporting Initiative (GRI)

As in 2020, in addition to addressing disclosure requirements of the SSE and HKEX Reporting Guide, this report also provides disclosures on material sustainability matters in accordance with the Global Reporting Initiative (GRI) Standards (core) framework. The GRI disclosures were reported according to a harmonized data reporting process that included all business operations. Indexes to the HKEX ESG and the GRI content of this report are appended.

Cautionary Statement

This report includes forward-looking statements. All statements in this report, dated March 18, 2022, other than disclosures of historical facts, that address business activities, events, or developments that the company expects or anticipates may or will occur in the future (including but not limited to projections, targets, estimates, and business plans) are forward-looking statements. A range of factors and uncertainties may cause the company’s actual results or developments to differ materially from those indicated by these forward-looking statements. The company undertakes no obligation or responsibility to update these statements, nor do the statements constitute a substantive commitment by the company to investors. Investors are advised to pay attention to investment risks.

¹ Disclaimer: THE USE BY CMOC OF ANY DATA OF MSCI ESG RESEARCH LLC OR ITS AFFILIATES (“MSCI”), AND THE USE OF MSCI LOGOS, TRADEMARKS, SERVICE MARKS, OR INDEX NAMES HEREIN, DO NOT CONSTITUTE A SPONSORSHIP, ENDORSEMENT, RECOMMENDATION, OR PROMOTION OF CMOC BY MSCI. MSCI SERVICES AND DATA ARE THE PROPERTY OF MSCI OR ITS INFORMATION PROVIDERS, AND ARE PROVIDED ‘AS-IS’ AND WITHOUT WARRANTY. MSCI NAMES AND LOGOS ARE TRADEMARKS OR SERVICE MARKS OF MSCI.



About CMOC

Headquartered in the People's Republic of China, CMOC is engaged in the mining, processing, and trading of base and rare metals. With its main business presence in Asia, Africa, South America, Oceania, and Europe, the company is one of the world's largest producers of tungsten, cobalt, niobium, and molybdenum, as well as a leading copper producer. It is also a major producer of phosphatic fertilizers in Brazil and ranks among the world's top three base metals merchants. The company is listed on the Shanghai Stock Exchange (SHA: 603993) and the Hong Kong Stock Exchange (HKEX: 03993).

CMOC strives to be a highly respected, world-class modern resources company. The company's corporate philosophy values meritocracy, cost control, continuous improvement, and shared success. Its development strategy aims to consolidate existing cost advantages, continuously manage and optimize the balance sheet, build synergies while ensuring stable domestic and overseas operations, continue to acquire, develop, and invest in resources projects, and continuously improve its corporate governance and promote a socially and environmentally responsible business model that enables value creation, restructuring, and a transition to new growth engines.

As of December 31, 2021, the company's main mining assets were located in the Democratic Republic of the Congo (DRC), China, Brazil, and Australia, and its metal trading business spanned more than 80 countries.

Tenke Fungurume Mining (TFM), located in the Democratic Republic of the Congo. CMOC holds 80% equity in TFM, the world's second largest cobalt producer and one of the world's leading copper producers. TFM engages in exploring, mining, processing, and refining, and selling copper and cobalt in a mining concession that covers over 1,500 sq. km. The concession's main products are copper cathode and cobalt hydroxide. TFM operates a large, high-grade copper deposit that is also home to one of the world's largest high-grade cobalt deposits.

CMOC Kisanfu Mining ("KFM"), located in the Democratic Republic of the Congo. In December 2020, CMOC acquired the KFM copper-cobalt mine, in which it currently holds a 95% stake. As one of the world's leading cobalt and copper projects, the KFM mine is home to large untapped resources of high-grade cobalt and copper, and is expected to create significant synergies with TFM's operations. The project is not yet in production, initial preparations are currently under way to facilitate the start of development activities.

Sandaozhuang molybdenum-tungsten mine and Shangfanggou molybdenum mine, located in China. CMOC has the highest ferro-molybdenum and molybdenum oxide production capacity in China. The Sandaozhuang molybdenum-tungsten mine is wholly owned and operated by CMOC, and is home to very large primary deposits of molybdenum and tungsten, which CMOC produces very competitively and at a low cost. The Shangfanggou molybdenum mine in Luanchuan (close to the Sandaozhuang molybdenum-tungsten mine), owned by Fuchuan Mining, a joint venture of CMOC, also has large untapped deposits of molybdenum and iron ore as by-product; operational capacity has continued to increase since production resumed, and the mine stands to benefit from the recent recovery in iron ore and molybdenum prices.

CMOC Brasil, located in Brazil. CMOC indirectly holds 100% equity in CMOC Brasil, which is a leading producer of phosphate fertilizer in Brazil and spans the entire phosphate supply chain. CMOC Brasil is also a world's leading niobium producer and is involved in exploiting and processing niobium minerals. Its main product is ferroniobium.

Northparkes Copper and Gold Mine ("NPM"), located in Australia. The company also holds 80% equity in NPM, which utilizes an advanced, fully automated block cave mining method to produce copper concentrate, and gold and silver as by-products.

IXM, headquartered in Switzerland. With offices in 12 countries and trading activity in more than 80 countries, IXM is fully owned by CMOC. It is one of the largest merchants of non-ferrous metals and plays a key commercial role at each stage of the metals supply chain, fueling the energy transition.

Production data for each business segment is provided below, and can also be found in the CMOC annual report.

Product	Production volume
Copper metal, TFM (tonnes)	209,120
Copper metal, NPM (based on 80% equity interest) (tonnes)	23,534
Molybdenum metal (tonnes)	16,385
Tungsten metal (tonnes)	8,658
Cobalt metal (tonnes)	18,501
Niobium metal (tonnes)	8,586
Phosphate fertilizers (HA+LA) (10,000 tonnes)	112
Gold, NPM (based on 80% equity interest) (ounces)	19,948

IXM metal trade	Trade volume
Concentrates (10,000 tonnes)	288.4
Refined metals (10,000 tonnes)	361.3

The following table provides a summary of CMOC's key economic contributions to global operations:

 Total of employees
11,472

 Total of contractors
13,222

For the year ended December 31, 2021 (million RMB)	China	Africa	Brazil	Australia	IXM	Other countries	Total
Payment to suppliers	5,076.9	4,231.6	2,703.3	694.2	146,131.3	39.5	158,877
Employee wages and benefits	854.6	743.2	326.1	168.2	582.2	50.1	2,724
Payment to providers of capital	1,165.5	165.2	71.0	1.9	490.9	–	1,894
Dividends	712.8	165	–	–	–	–	878
Interest	452.7	–	71.0	1.9	490.9	–	1,016
(Refunds from) payments to governments	594.3	3,255.9	454.3	35.4	83.8	1.4	4,425
Community investments	12.0	173.1	4.7	5.0	–	–	195
Direct economic contributions	7,703	8,569	3,559	905	147,288	91	168,115

CMOC applies the PRC Generally Accepted Accounting Principles when consolidating information in its annual report. At the close of the reporting period, CMOC had a total of 11,472 employees and 13,222 contractors across all business segments and corporate management sites. Of this total of 24,694 personnel, 21,613 were male and 3,081 (approximately 12.5%) female.

External Initiatives

CMOC is a member of the Chairing Bureau of the China Mining Association, Vice-President of the China Nonferrous Metals Industry Association, and Vice-President of the China Chamber of Commerce of Metals Minerals & Chemicals Importers & Exporters (CCCMC). CMOC is also a member of the Cobalt Institute, a non-profit trade association that promotes the sustainable and responsible production and use of cobalt in all forms.

In 2021, CMOC joined the Responsible Minerals Initiative, which provides companies with tools and resources to facilitate the responsible sourcing of minerals. The company also joined the Better Mining initiative and the Fair Cobalt Alliance to support efforts to improve conditions at artisanal and small-scale mining sites and within neighboring communities.

01 Message from the Chairman of the Board of Directors

2021 was a year full of challenges, but also opportunities for everyone at CMOC. The global economic recovery remained uneven amid continued disruption from the pandemic; heightened geopolitical tensions and great power politics had a profound impact on mineral supply chains; and extreme weather events across the globe sharpened awareness of the urgent need for climate action. Against this backdrop, CMOC resolutely pursued our vision of becoming a "highly respected, world-class modern resources company". We continued to institute organizational changes and improve global governance, made historic breakthroughs in business performance, and pushed our ESG efforts to new heights.

Responsible mining for a better world. This is our original aspiration and mission of ESG work. For CMOC, ESG offers a powerful means to mitigate internal and external risks. As a multinational mining company with diversified business operations and world-class resources, CMOC faces risks on many fronts. The nature of our business means that every day, we engage directly with natural resources and the natural environment. Moreover, the transnational nature of mining means that we must effectively manage country risk, cross-cultural corporate governance, and relationships with local communities. These considerations drive our ESG agenda and provide impetus for high-quality growth.

The issue of climate change and China's ambitions to peak emissions and become carbon neutral have fueled a boom in the green energy industry, while uniting countries to act under the common goal of combating climate change. In this context, we can expect that metals, which are critical to the energy transition, will enjoy sustained demand, providing a unique opportunity. CMOC will focus on the development of metals for electric vehicle batteries, including copper, cobalt, and nickel, and supply minerals to the world in a responsible way. By doing so, we can empower countries to combat climate change and transition to clean energy. This is the main motivation behind our high-quality growth strategy.

In 2021, our ESG agenda built a solid foundation for high-quality growth. In the field of governance, CMOC continued to improve its ESG policy framework and risk management. With regard to the environment, the Board recently discussed and adopted two visions and four targets that provide a more systematic framework for the company's long-term environmental strategy and near-term goals. In terms of human resources, we stepped up recruitment and training and began to build multidimensional incentive structures. These will provide a continuous pipeline of talent that will drive CMOC's organizational improvements and rapid development. In local communities, we continued to pursue an active community investment policy, allocating approximately RMB 190 million in funds across our operations to poverty alleviation, public health, education, agriculture, infrastructure, and resettlement. The company's total global economic contributions amount to RMB 168 billion.

With its extensive experience in the industry, CMOC is fully aware that ESG is the bulwark of a company's survival and high-quality growth, as well as a cushion against shocks. In 2021, we demonstrated remarkable resilience in the face of Covid-19 and extreme weather events. This was only possible thanks to the strong foundation we have built in areas such as health and safety, emergency management, human resources, supply chain management, and information systems over the years.

Our unremitting efforts in the field of ESG have also earned us recognition from the mining industry and investors. In August 2021, MSCI upgraded the ESG rating of CMOC from "BBB" to "A", providing us with both encouragement and a new starting point. The vast potential of renewable energy is just starting to be realized, and China's goal of peaking emissions and becoming carbon neutral is opening up exciting prospects. Going forward, CMOC remains committed to providing stable, high-quality, and responsible raw materials for batteries, and will work with all parties to accelerate the global energy transition and ensure that mining benefits future generations.

To conclude, I would like to express my heartfelt thanks to all staff for contributing to the company's sustainable development; to shareholders, local governments, local communities, and NGOs for supporting our ESG work; and to our customers and partners for their continued trust. We look forward to continue working together to pursue the sustainable development of CMOC.



Honglin YUAN
March 18, 2022

02 Management Approach

As a company continuously progressing in its international development, CMOC fully recognizes the importance of sustainable development in its access to resources, markets, and financing. In recent years, international and Chinese stakeholders' expectations of sustainability-related issues have also been evolving, and we face increasingly high expectations and strict regulatory requirements on matters including the environment, tailings, health and safety, and contractor management. In this regard, we keep learning from international good practices and are continually improving the company's sustainability governance framework.

CMOC's compliance and sustainability policies are applicable to the entire Group, as well as all of its directly or indirectly controlled or majority-owned subsidiaries. These policies reference international best practice frameworks, including: the sustainable development principles of the International Council on Mining and Metals (ICMM), the International Finance Corporation's (IFC) Environmental and Social Performance Standards, the International Labor Organization (ILO) Conventions, the International Bill of Human Rights, the UN Guiding Principles on Business and Human Rights (UNGPs), the Voluntary Principles on Security and Human Rights (VPSHR), and the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas ("OECD Guidance"). In 2021, CMOC continued to improve its policy framework by updating its *Human Rights Policy* and developing an *Employment Policy*, *Anti-Money Laundering Policy*, and *Global Privacy Guidelines*. Guided by these policies, each of our sites has formulated and revised its own administrative measures and procedures to reflect actual circumstances and material risks.

External Assurance and Audits

All our mining sites undergo recurrent third-party audits to verify their alignment with applicable certification and compliance schemes in environmental, health, and safety management, including ISO14001 and ISO45001. Our China and Brazil operations also receive regular audits of their quality management system in accordance with ISO9001 requirements.

In 2021, we continued to seek external assurance on the progressive implementation of the Responsible Minerals Initiative's Risk Readiness Assessment (RRA) at our 3 international mining sites, as well as the progressive implementation of the OECD Guidance at IXM. CMOC has retained the services of Corporate Integrity Ltd. for this purpose. Due to Covid-19, their assurance review was conducted remotely; their assurance statements can be found annexed to this report.

In addition, the expectations of external stakeholders have been evolving in recent years, especially in light of the growth of the renewable energy industry, resulting in increased scrutiny of the sustainability risks in the cobalt supply chain. In order to make further improvements and provide more transparency for stakeholders, in 2020 TFM conducted a self-evaluation against OECD Guidance and the RRA. In 2021, we updated our self-evaluation and the corresponding action plan, which has been reviewed by our assurance provider.

In 2020, CMOC China's tungsten operation was audited against the Responsible Minerals Assurance Process (RMAP) of the Responsible Minerals Initiative. In 2021, our tungsten company completed a further RMAP audit, and is currently on the list of RMAP Conformant Tungsten Smelters.

Governance

The CMOC Board of Directors (the Board) is responsible for risk oversight. There are four standing committees on the Board, namely Strategic and Sustainability, Audit and Risk, Nomination and Governance, and the Remuneration Committee. The Strategic and Sustainability Committee is led by the Chairman of the Board of Directors and is responsible for formulating the company's sustainability strategy. It also works with the Audit and Risk Committee to review and report non-financial material risks to the full board, and discuss with management the adequacy of measures to identify and manage sustainability-related material risks.

The Chairman of the Board of Directors and the Group Senior Executives are based at the company headquarters in China. Material sustainability matters are addressed at the senior executive level through the Board Secretary function. At the executive level, the Sustainability Executive Committee established by the company in 2019 is a multifunctional organization whose members are nominated from the Board Office, HSE, Internal Control, Legal, Global Supply Chain, Human Resources, Business Development, and Commodity and Marketing departments. The Sustainability Executive Committee is responsible to the Strategic and Sustainability Committee of the Board and reports its work directly to the Board Secretary. Its responsibilities include implementing the decisions of the Board and the company's sustainability strategies at the executive level, as well as monitoring and evaluating the sustainability risks associated with the company's operations.

Amid growing focus on climate change and the transition to a low-carbon economy, in 2021, CMOC formulated a climate change vision and incorporated this into its ESG governance framework. The climate change vision will be overseen by the Strategic and Sustainability Committee of the Board and shall involve the development of a climate change strategy, monitoring of climate related topics (including risks), and periodic approval and review of goals and key measures. At the execution level, the Sustainability Executive Committee, which is led by the ESG Director, shall be responsible for formulating and implementing relevant measures, tracking goals, and providing feedback to the Strategic and Sustainability Committee.

In January 2022, upon recommendation by CMOC management, the Strategic and Sustainability Committee submitted a proposal to the Board concerning environmental goals and compliance policies. After reviewing the proposal, the Board approved four compliance and sustainable development policies, new environmental goals, a climate change vision, and a biodiversity vision. These approvals will enhance the company's ESG governance framework and chart a course for CMOC's long-term environmental strategy and achievement of short-term quantitative emissions targets. For more information about CMOC's environmental goals and vision, please refer to the "Environment" section of this report.

The Board of Directors attaches great importance to risk management and audit procedures. Since 2020, we have revised and published a series of more stringent Group policies and systems, including a comprehensive risk management system, internal control system, and internal audit system. We have also established and implemented a risk management accountability and reporting system, designated clear responsibilities for our operations, functional departments, internal control department, and audit department, and devised a comprehensive risk management system with appropriate checks and balances. These measures have helped to further reinforce the company's risk management and audit procedures. In 2021, the Group headquarters and all our operations conducted comprehensive risk screening to analyze and evaluate the Group's risks and corresponding risk management measures, and formulated a risk control register and risk accountability checklist for each of our business segments and operations.

Business Ethical Values

Our *Code of Business Conduct (CBC)*, *Anti-Corruption Policy*, *Supplier Code of Conduct*, *Health, Safety, and Environment Policy*, and *Employment Policy* address CMOC positions on business ethics, including anti-corruption and conflicts of interest, as well as the promotion of safe and healthy workplaces, workplace equality, and the elimination of discrimination. All staff are required to undergo regular compliance training on the CBC and Anti-Corruption policies. These policies also communicate the responsibility of individual employees and suppliers to report violations of the CBC, other company policies, or the law. They also provide guidance for acting on that obligation, including use of the company's whistleblower channel.

Management of Sustainability Risks

With operations spanning five continents, CMOC headquarters and all sites have established reporting systems and risk registers to mitigate material operational risks, including sustainability risks, ensure effective communications across all levels, and promptly escalate material risks to higher levels for resolution.

Under CMOC's reporting system, all sites must submit monthly reports to the Group Senior Executives on ESG practices, including important ESG topics such as workplace safety, environmental protection, local communities, and epidemic prevention. In addition, quarterly reports submitted to the Board by the management feature a dedicated chapter on safety, environmental protection, ESG performance, and other relevant topics. Matters of ESG strategy that could have a material impact on company operations are referred to the Board by the Strategic and Sustainability Committee for deliberation and vote. For example, in January 2022, the Board set out its expectations and requirements for ESG strategy when reviewing Group environmental goals.

By establishing risk registers, the company is able to incorporate risks into operational management processes by developing and implementing action plans for the highest ranked risks, including ESG risks. Risk registers undergo regular review by corporate and site management leadership in order to update risk ratings and accompanying action plans and procedures. The corporate risk register is formulated and updated by the Internal Control and Audit department and regularly presented to the Audit and Risk Committee of the Board for deliberation. In 2021, the Internal Control and Audit department systematically reviewed risk registers for all business units, and started to establish a risk register management model that linked business units to corporate functional departments, and to unify the format, categories, and evaluation criteria for risk registers activities.

IXM implements a risk-based management approach and conducts due diligence in order to determine the severity and probability of supplier risks, especially with regard to suppliers in conflict-affected and high-risk areas, for which reasonable steps are taken and efforts are made to implement the due diligence framework envisaged by the OECD Guidance. In 2021, CMOC performed gap analysis on IXM's alignment with the OECD Guidelines, based on which it formulated an action plan to progressively close gaps.

Our materiality assessments, stakeholder engagement, grievance mechanisms, and risk registers are processes that help in informing us of our key material issues and areas of risk, and to prioritize risk management activities.

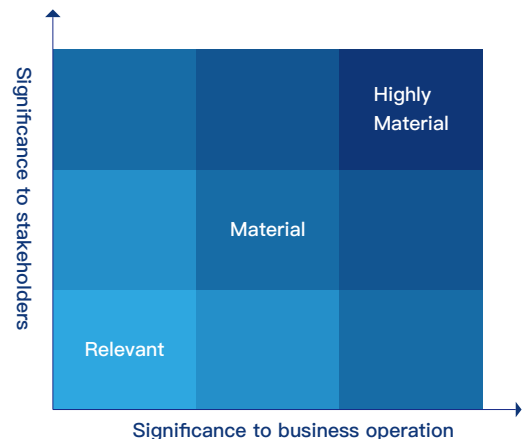
Materiality

There are both similarities and differences in the sustainability risks that affect CMOC sites. All sites treat environmental, occupational health and safety, and social risks as a top priority and have taken diverse measures to mitigate such risks. However, local sustainability risks may vary between sites due to differences in the natural, economic, social, and human environment. Our NPM operation, located in a developed country, is regulated by a strict legal framework. Currently, NPM's main sustainability risk is the impact of increased rainfall in 2020 and 2021 on water supply and the risk rating of its tailings facility. The Chinese and Brazilian operations are both situated in developing countries and face constantly evolving and tightening regulatory frameworks, such as environmental regulations in China and tailings regulations in Brazil. Our TFM operations in the DRC comply with international standards in areas where local laws and regulations are weak or absent. However, the low level of socio-economic development and the weak infrastructure present a significant challenge for industrial business operations. In recent years, the significant influx of migrants into the region has caused increasing pressure associated with illegal artisanal mining and community development within TFM concession. The KFM site is still in the initial stages of development, and the main challenge is to establish a management system compliant with international standards. KFM is also preparing all the necessary documents for approval, such as the Feasibility Study and the Environmental and Social Impact Assessment, in accordance with Group policies, applicable domestic and international laws, and our international good practice framework. As a metals trading company, the main challenges faced by IXM include conducting due diligence of upstream suppliers and ensuring that upstream mines and process plants comply with the environmental and social criteria in IXM's *Sustainability Policy*.

In light of this diverse set of risks, CMOC conducts materiality assessments to determine the issues that could have the greatest impact on stakeholders, the economy, the environment, and society, as well as to identify material risks to CMOC's business in terms of accessing capital, finance, markets, and resources. In accordance with the HKEX Reporting Guide and the Global Reporting Initiative (GRI) reporting principles, CMOC has conducted a Group level assessment to identify material issues at our operations for inclusion in our ESG report. These issues help shape risk management interventions at all of our sites, while ensuring we address the material concerns of stakeholders.

Using the guidance referred to above on materiality, our assessment was conducted by considering stakeholder feedback on priority issues according to the current understanding of the CMOC management and sustainability team, corporate and site-based risk registers, and feedback from internal and external stakeholders associated with individual operating sites. Notable stakeholder groups providing feedback on sustainability matters include employees, regulatory agencies, investors and financial institutions, communities, human rights-focused NGO associations, and customers, as identified in the table below. Material issues resulting from this information were then prioritized in a materiality matrix and vetted by senior executives of the Group and the Sustainability Executive Committee, with the following results.

Highly Material	Material
Business ethics & transparency	Closure planning/reclamation
Health & safety	Biodiversity
Human rights	Water
Product stewardship	Energy
Tailings management	Climate change
Community relations	Air quality
Labor relations	Waste/dangerous goods
Economic value generated	
Government relations	
Suppliers/contractors management	



Stakeholders

CMOC regards stakeholder engagement as a critical tool in the management of risk and the creation of value for businesses under our management. Strategies for engaging with stakeholders at our operating sites are described in the "Community" section of this report. An overview of relations with stakeholders is presented below.

Stakeholder group	Areas of interest	Engagement methods
Employees and contractors	<ul style="list-style-type: none"> · Competitive compensation and benefits · Workplace health and safety · Training and capacity · Protection of human rights 	<ul style="list-style-type: none"> · Meetings with union representation · Collective bargaining agreements · Safety and compliance meetings · Training and career development · Internal communications channels · Grievance procedures
Government and regulatory agencies	<ul style="list-style-type: none"> · Compliance with applicable laws and regulations · Creating economic benefits · Workplace health and safety · Benefits to stakeholder communities · Environmental stewardship and social responsibility 	<ul style="list-style-type: none"> · Compliance reports · Site visits and inspections · Permit applications · Meetings on compliance matters · Direct meetings
Investors and financial institutions	<ul style="list-style-type: none"> · Protecting the rights and interests of shareholders · Timely disclosures of relevant and accurate information · Improving corporate governance · Conducting business in compliance with laws and regulations 	<ul style="list-style-type: none"> · Shareholders' meetings · Press releases and announcements · External reporting · Company website · Investor meetings and site visits
Communities	<ul style="list-style-type: none"> · Local development · Environmental stewardship and social responsibility · Employment · Opportunities to furnish goods and services · Protection of human rights 	<ul style="list-style-type: none"> · Scheduled community meetings · Focus group meetings · Notices of procurement opportunities · Employment notices · Grievance procedures
NGOs	<ul style="list-style-type: none"> · Investment in local development · Participation in local community programs · Environmental stewardship and social responsibility · Protection of human rights · Equity in sharing benefits 	<ul style="list-style-type: none"> · Annual sustainability reporting · Direct meetings · Contacts through industry groups
Customers	<ul style="list-style-type: none"> · Customer service · Quality assurance · Product stewardship · Protection of human rights · Environmental stewardship and social responsibility 	<ul style="list-style-type: none"> · Key account meetings · Systematic communications · Customer visits to operating sites · Participation in trade associations · Sustainability reporting

Grievance procedures

To maintain effective stakeholder relationships, we have dedicated systems in place to record and resolve stakeholders' concerns and compliance issues, including those related to employees, the environment, community investment, human rights, land use, and contractor management. CMOC provides corporate and subsidiary-level whistleblower channels that are available to all stakeholders and published on the Group's website and the websites of its subsidiaries. The whistleblower channel on the Group's website is anonymous. The Group's compliance team, consisting of members from the legal/compliance department and the sustainability team, is responsible for logging, tracking, and resolving complaints. All mining operations and the trading company also maintain dedicated grievance systems that can receive and register concerns from employees, the community, and other stakeholders, which are then tracked through the various stages of being addressed and resolved. In Australia, for example, residents of the Northparkes Mine community can provide feedback via phone, email, text message, and social networks. The TFM operation manages a community grievance system operated by members of the Community Liaison group. All community members, including TFM employees, may present grievances related to the impacts of our operations in the DRC. In addition, community members can take part in the resolution of grievances through

an independent mediation board. At our operations in Brazil, complaints from employees, the community, suppliers, and partners are received and addressed through a structured management system that tracks, resolves, and then gives feedback to complainants. In addition, the community department makes regular visits to local residents in order to collect feedback on the company's operations. Community grievances at our mining and processing sites in China are managed through a "letters and visits" program, through which local people or organizations can provide information, make comments or suggestions, or lodge complaints to the company through correspondence, emails, faxes, phone calls, and on-site visits. IXM also operates a dedicated complaints hotline, which is listed on the company's website. The compliance department is responsible for the collection, handling, and reporting of complaints. The recently-acquired KFM site in the DRC has a dedicated officer who records verbal or written complaints from the community, tracks their progress, and provides feedback to complainants. For more complex complaints, community representatives are also involved in the resolution process.

In 2021, our mining and trading operations received a total of 490 grievances, of which 201 were closed, and 90% were associated with TFM's operations. Roughly 85% of the complaints received by TFM were in the environment category, primarily regarding the discharge of water and dust emissions from mine pits. The increase in complaints can be attributed to the potential impact of additional TFM production activities and construction projects. TFM established an interdepartmental Community Grievance Response Committee in early 2021 to further enhance community engagement and the handling of historical grievances. The environment team also strengthened its collaboration with the community team to promote the quick resolution of these grievances and reduce the number of such grievances in the future.

Reported grievances											
Site	Resettlement	Environment	Employment	Damages	Social/ community	Health/ safety	Human rights	Security	Land	Other	Total
China	0	0	0	0	0	0	0	0	0	0	0
NPM	0	0	0	0	0	0	0	0	0	0	0
Brazil	0	21	0	0	0	0	0	0	0	0	21
TFM	43	375	12	7	0	0	0	2	0	0	439
KFM	16	0	0	0	0	1	0	0	7	6	30
IXM	0	0	0	0	0	0	0	0	0	0	0
HQ	0	0	0	0	0	0	0	0	0	0	0
Total	59	396	12	7	0	1	0	2	7	6	490



Environment

In 2021, CMOC continued to implement its *Environmental Policy*, which is applicable to the entire group. Environmental aspects figure prominently among the issues of material importance to CMOC, including tailings management, closure planning and reclamation, water management, biological diversity, energy, greenhouse gas (GHG) emissions, air quality, and climate change. As a global mining company, CMOC must manage these issues while meeting the challenges of the different climatic, physical, biological, and human environments where we operate, as well as the changing and evolving expectations of stakeholders. CMOC is committed to complying with environmental laws and regulations applicable to our operations. In addition, we manage the extent of our environmental impact through risk-based approaches to material issues and meeting standards. Every year, we invest in initiatives to improve production efficiencies and manage environmental risks.

According to the Global Risks Report 2022 from the World Economic Forum, “extreme weather” and “climate action failure” are among the top five short term risks to the world. However, the five most menacing long-term threats are all environmental. “Climate action failure”, “extreme weather”, and “biodiversity loss” also rank as the three most potentially severe risks for the next decade. In such a global context, stakeholders have increasingly high expectations for corporate environmental performance. In 2021, CMOC further improved its corporate environmental indicators to keep pace with global focuses. This included developing long-term environmental visions and short-term performance targets for the company to promote energy conservation and emission reduction initiatives across its global operations, and shift to higher quality, more sustainable development. In January 2022, the Board discussed and approved an environmental proposal, which included:

Two visions



Climate Change Vision: We will incorporate climate change into the company’s ESG governance framework. The Strategic and Sustainability Committee of the Board will be responsible for monitoring implementation and establish a top-down framework for managing the company’s response to climate change. We will work together with international and domestic stakeholders and make our due contribution to achieving a carbon neutral world.



Biodiversity Vision: We will ensure no net loss of biodiversity from operations by continuously improving management and implementing mitigation measures.

Four performance goals:

Air pollution: CMOC aims to reduce the emissions intensity (per tonne of processed ore) of nitrogen oxide by 5% and sulfur oxide by 2% by the year 2025 compared with 2020.

Energy use: CMOC aims to increase the proportion of renewable energy sources in its energy mix to at least 40% by 2025.

Water resources: CMOC aims to increase the proportion of reused water to 83% by 2025.



Reduction of
NOx density
by 2025

5%↓



Reduction of
SOx density
by 2025

2%↓



The proportion of
renewable energy
by 2025

40%



The proportion of
reused water
by 2025

83%

All of our operations maintain mature Environmental Management Systems (EMS) certified to ISO 14001 standards. These management systems are independently audited at each operating site for recertification and include required training of all employees and contractors on environmental objectives and procedures.

01 Tailings

From the mine operations, ore with valuable minerals is processed and reduced in size to recover the economic mineral. When this ore treatment or beneficiation is done by the processes of crushing, milling, separation, screening, and flotation, the remaining material is referred to as tailings. Tailings are composed primarily of the non-ore bearing rock particles (typically fine sand and silt) along with process water with residual reagents. Most commonly, the tailings slurry is passed through a thickener or filter system to recover process reagents and water, before being hydraulically or mechanically transported to an engineered tailings storage facility (TSF). TSFs vary greatly in design, capacity, operation, and other factors, but are intended to safely and efficiently store tailings, usually in perpetuity. Construction and expansion of one or more TSFs is often an ongoing process over the operating life of the mine.

CMOC is aware of the history of TSF failures and of their catastrophic consequences for the public, the environment, and the mining businesses involved. We understand that responsible tailings management is essential to mitigate catastrophic TSF risks that could jeopardize CMOC's reputation, solvency, viability, and business operations. CMOC's standards of TSF management will continue to evolve towards reducing the risks associated with these facilities. CMOC's engineering, safety, and environmental programs have been established and are continuously improved to ensure that the risks associated with tailings management are minimized for our communities, the environment, and our operations.

CMOC maintains a set of standards and processes prepared for mitigating the risks associated with our TSFs and water retaining structures, including *CMOC's Corporate Governance Standard for Tailings and Mineral Residue Management*, supported by the *Tailings & Dams Quantitative Performance Objective (QPO) Reporting Procedure* and the *Tailings & Dams Stewardship Team (TDST) Program*. These Governance Standards came into force after being signed off by the CMOC Chairman in February 2019, and were implemented at all of CMOC's business units. Another operational standard entitled *Management Guidelines for Safe Operation of Tailings Storage Facilities* was released in 2021 to reinforce the operational safety of the TSFs of all CMOC's business units. CMOC's TSF management standards and guidelines are reviewed and updated as appropriate and meet or exceed the regulatory and other industry requirements in all host jurisdictions. These mandatory global standards and guidelines address the long-recognized principal risk of TSFs and set minimum requirements for design, construction, monitoring, inspection, and surveillance.

CMOC's corporate standards and guidelines for tailings management address six key governance elements: (i) accountability, responsibility, and competency; (ii) planning and resourcing; (iii) risk management; (iv) change management; (v) emergency preparedness and response; and (vi) review and assurance. CMOC implements management strategies that include having professional staff qualified in tailings management at both the operations and corporate levels; retaining qualified consultants and ensuring that a qualified Engineer of Record (EoR) from the consultant is identified for each TSF; designing, constructing, operating, and closing our TSFs in accordance with international guidelines; implementing surveillance and monitoring programs; and performing systematic third-party reviews.

In response to the Covid-19 pandemic, CMOC adjusted the scheduling and protocols for completing some elements of its tailings governance framework in 2021, most notably deferring site visits by its TDST to the company's operating mines in Australia, Brazil, and the DRC and rescheduling the dam safety review by third-party specialists on the TSF of the DRC operation to the first quarter of 2022. Throughout the year, CMOC's corporate technical staff remained engaged with site-based operation and management personnel, as well as the EoRs, via regular teleconference meetings. CMOC corporate tailings specialists also traveled to Brazilian operations in 2021 to oversee the closure and reinforcement planning of the upstream dams as well as dam raise and dam reinforcement designs to ensure all the remaining TSFs meet internationally recognized safety standards. Despite the ongoing challenges of the global pandemic, CMOC continued to advance sound technical and managerial stewardship at its TSFs and other critical mine waste management facilities with the intent of identifying and mitigating risks while striving for continuous improvement and implementation of recognized international good practices.

Tailings safety & communities

All of CMOCs operating mines have TSF emergency response plans, assess and monitor community risks, and make communities a key priority of emergency preparedness measures.

In 2021, CMOC Brasil completed the socioeconomic survey of the communities located in the Self-Rescue Zone and Secondary Salvage Zone of CMOC's tailings dams. The survey consisted of identifying, mapping, recording,

and understanding the various variables necessary for the development of the Emergency Response Plan for Mining Dams (PAEBM), as required by Brazilian legislation. In addition to surveying general community data, the survey assessed the vulnerability of families inside the two zones, as well as emergency response plan limitations. This involved compiling property inventories, conducting topographical land surveys, and conducting interviews with residents. The survey also gave prominence to the assessment of six key risk factors, including the risks to disabled persons, the elderly, and children. At Brazil's niobium operation, the safety team and the TSF team jointly organized an emergency response drill in November 2021, simulating the response in the event of a level 3 safety incident at the niobium TSF. At the TFM site in the DRC, the environment team and fire team drilled the emergency response plan for the No.1 Tailings Pond in September 2021 to simulate response measures in the event of a dam failure. At our Chinese operations, CMOC conducts real-time monitoring of TSF safety, with comprehensive coverage of all important elements, including pipelines near rivers, villages, and residential areas, in addition to the tailings dams themselves.

02 Reclamation

In 2021, CMOC continued its practice of applying sustainability principles to the design, development, operation, and closure of our mining operations. Identifying strategies and planning for the closure of a mining or processing facility is of material importance for CMOC and the communities in which we operate to ensure public safety, protection of environmental quality, and optimal land uses in the post-operations phase. Where practicable, we pursue progressive reclamation during the operational phase to reduce environmental impact. Actions to progressively revegetate disturbed surfaces at our operations help to reduce erosion and dust emissions.



Our China operations continue to carry out progressive reclamation and prevention of geological hazards. In 2021, we restored 381,000 square meters of vegetation at the Sandaozhuang molybdenum mine and 152,000 square meters of vegetation at the Shangfanggou molybdenum mine.

03 Biological diversity

Due to the nature of the mining industry, biodiversity has always been a key focus of environmental management at CMOC. In order to establish a unified vision, goals, and plans for environmental protection at the Group level and build a clearer performance planning and monitoring system, we formulated our Biodiversity Vision in 2021, which commits to "ensure no net loss of biodiversity from operations by continuously improving management and implementing mitigation measures." Guided by this vision, in the future we will gradually develop key implementation strategies and establish a framework of core indicators to improve data aggregation, monitoring, and review.

As stated in our *Environmental Policy*, CMOC is committed to developing internationally recognized practice strategies for managing areas of potential environmental sensitivity and high biodiversity value identified as being impacted by our operations. The environmental impact assessment process is key to ensuring that the effects of our activities on biological diversity are appropriately recognized and mitigated. These programs are founded on baseline assessments of biological resources in the areas of planned operations, which are described in terms of species composition and species of concern, as well as supporting habitats at local, regional, and if appropriate, global levels. Baseline descriptions allow accurate identification of impacts anticipated from greenfield or brownfield project development. Accurate impact definition in turn drives application of the mitigation hierarchy in typical stages, such as "avoid, reduce, mitigate, and offset" and the subsequent development of biodiversity management plans if needed.

The actions described above, associated with project environmental impact, are a common requirement under the regulatory systems that govern our operations in various countries. At our TFM mine in the DRC, the company also aligns with internationally recognized practice frameworks, including the guidelines and standards of the International Finance Corporation (IFC), notably IFC Performance Standard 6 on Biodiversity Conservation and Living Natural Resources. CMOC's operations are also governed by individual site environmental policies and procedures that recognize biodiversity risk.

At TFM, the leading biodiversity conservation issue continues to be associated with plants adapted to the local soil and climate with naturally occurring high concentrations of metals. These "metallophyte" plants are of high interest to the scientific community due to their ability to tolerate concentrations of metals, chiefly copper and cobalt, that would be toxic to most plants. Furthermore, these plants occupy a highly restricted and heavily exploited habitat type; their growth in areas with high-grade ore deposits leads to limited distribution (i.e. endemism) as well as a direct threat from historic and active mining in the region. The conservation efforts of TFM with regard to metallophyte studies and preservation have pioneered and greatly furthered scientific knowledge about this unique plant life. In 2021, TFM continued its biodiversity programs and relocated 1,912 metallophyte plants to several artificial ecosystems. In addition, TFM also planted 300 plants in the Fungurume community on December 5, 2021 to celebrate Arbor Day.

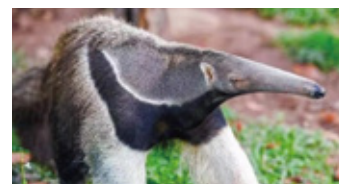
At our NPM operation in Australia, the Kokoda Biodiversity Offset Project was completed in 2021 after eight years of planning. NPM worked with other organizations to train members of the local indigenous community in grassland conservation and tree planting. The trainees joined our team in planting 18,000 seedlings across more than 350 hectares of land to restore the Grey Box Grassy Woodlands ecosystem. The project was awarded the Parkes Shire 2022 Australia Day Environmental Award by the local community in January 2022 for its biodiversity achievements. The area surrounding the NPM is home to a diverse range of flora and fauna, including some protected species, such as the Pine Donkey Orchid. There are two known populations of the orchid in the mine area that we survey every year. In 2021, we observed a record increase in the Pine Donkey Orchid population due to the end of the drought and increased rainfall.



The Kokoda Biodiversity Offset Project at our NPM site in Australia planted seedlings, and was awarded the Parkes Shire 2022 Australia Day Environmental Award.



In Brazil, our operations are located in the Cerrado savannah biome and the Atlantic Forest biome, areas which are particularly rich in biodiversity. In accordance with legal requirements, we continue to carry out biodiversity conservation actions embedded within an active reforestation program linked to the use of biomass at the Catalão site in the state of Goiás. In addition, these areas are home to some animal species that are unique to Brazil, such as the giant anteater and maned wolf. Our environmental control plan provides specific programs for monitoring animal and plant populations.



04 Resource management

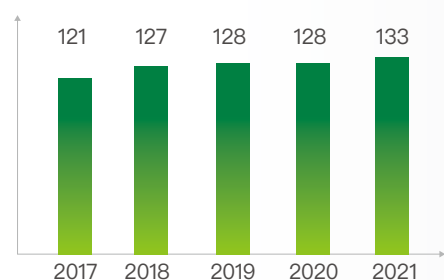
CMOC is committed to responsible stewardship of the resources we use and the minimization of waste generation. We recognize the value of responsible stewardship of these elements to our business and the communities in which we operate. In 2021, we set near-term quantitative targets for resource consumption to promote energy transition and use of recycled water at our operating units.

Water

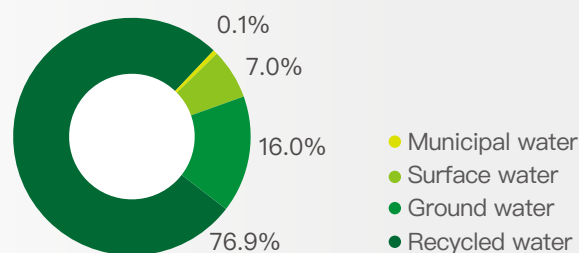
We recognize water as an essential resource for the mining and processing of ores, and sustainable water sourcing is a basic strategic need common to our businesses and the surrounding communities. We use water for processing ores, for dust control, and for drinking, and therefore the efficient management of water resources is essential to our operations. A significant amount of water used on our sites is recycled water from our own operations, and other makeup water is sourced from groundwater, surface water, and municipal sources. In 2021, we used 133 million cubic meters of water, of which approximately 77% was recycled water. The total water use intensity was 2.924 cubic meters per tonne of processed ore, a 4% reduction compared to 2020.

Under the company's expansion plan, our goal is to encourage water-saving practices and reduce water use intensity. We will also continue to encourage the use of recycled water to reach 83% of total water usage by 2025.

Total water consumption (millions cubic meters)



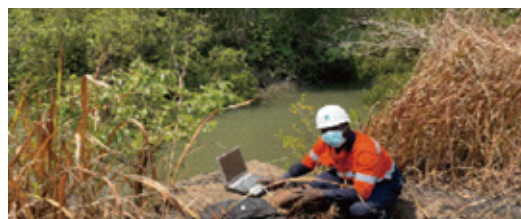
Total water consumption by category



Sourcing water for each operation varies according to regional availability and climate. Collectively, most of our water is recycled, supplemented in order of volume by groundwater, surface water, and municipal water. All CMOC operations utilize recycled water. At all of our mining operations, process water is used to transport tailings from processing areas to the tailings storage facilities. The sandy solids of the tailing material settle, and the clarified water is recovered to be reused in the production process.

The company is committed to the protection of local surface and groundwater systems. Each of our operations employs a variety of techniques and strategies for water management with the primary objective of complying with applicable laws and regulations and the minimization of impact. These strategies may include the use of technological innovation to increase water utilization, water monitoring programs, lined surface impoundments, storm water controls, and other physical or procedural systems to reduce fresh water usage and protect surface and/or ground water resources. For example, in 2021, at our Chinese operations, we modified reciprocating pumps to use softened water. This made it possible to recycle the cooling water for pumps, thereby increasing water utilization and reducing parts wear and electricity consumption. At our Brazilian operations, we installed an automated monitoring system for water catchment wells. The system has real-time data on well operation, pump running hours, and water collection flow to ensure compliance with environmental permits and the effective distribution of water resources between plants. The TFM mine in the DRC diverted contact water from the quicklime plant to runoff ponds built in 2021 to improve storm water management and protect the environment. The KFM mine in DRC regularly monitors water levels and water quality to prevent water contamination from operations.

CMOC continues to monitor water security and usability across all operations. In 2021, the end of the drought in Australia resulted in increased on-site water reserves due to heavy rainfall at the NPM mine. In 2021, NPM reduced external water consumption by approximately 11% compared to previous years, helping to alleviate water shortages. In addition, Henan Province, where our Chinese operations are located, suffered extreme rainfall in July 2021, although this did not affect operations or result in any losses. In contrast to China, southern Brazil experienced its worst drought in 90 years in 2021. However, the use of recycled water helped to reduce dependence on fresh water, preventing any impact on operations.



The KFM mine in DRC regularly monitors water levels and water quality to prevent water contamination from operations.

Energy

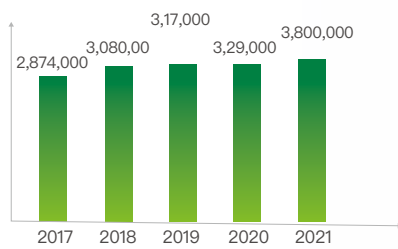
Today's large-scale mining and processing operations require significant amounts of energy. Our operations consume energy both directly by the use of diesel, natural gas, and biofuels, as well as indirectly from purchased power sources such as hydropower, coal, natural gas, and renewable energy sources. In addition, our operations examine all practicable opportunities to enhance energy security to ensure our access to affordable and dependable energy, to improve energy efficiency, and to make further use of renewable and low carbon energy sources.

Due to business expansion, our total energy consumption increased by 15.5% from 3,290,000 MWh in 2020 to 3,800,000 MWh in 2021. This equates to an intensity of 0.0836 MWh per tonne of processed ore, an increase of 6.7%. In 2021, 36.7% of our overall energy consumption was from renewable energy sources. For our direct energy consumption, 57.4% was sourced from diesel and 14.0% from renewable energy sources. For our indirect energy consumption, 58.5% was sourced from renewable energy sources such as hydropower.

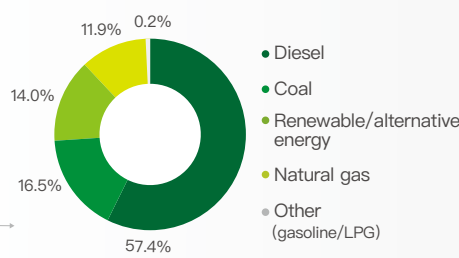
In terms of energy, our goal is to incorporate energy-efficient methods of production into the company's expansion plan and continue to reduce energy intensity per unit of processed ore. We will ensure that at least 40% of our overall energy consumption is sourced from renewables by 2025, both by promoting the use of clean energy sources such as solar and hydropower, and by retrofitting our mining machinery.

In 2021, our Chinese operations made improvements to a range of machinery and processes, helping us to save 5,445.5 MWh of electricity. In addition, in 2022 our Chinese operations plan to launch a photovoltaic project to further increase the use of renewables and reduce coal consumption and greenhouse gas emissions. Both our DRC and Brazilian sites use cogeneration in their acid plants, with electricity production in 2021 reaching 62,000 MW and 68,000 MW respectively. Our Brazilian site also implemented a range of measures to reduce diesel consumption, such as the use of improved oil tanks and dispatch systems for optimizing haulage.

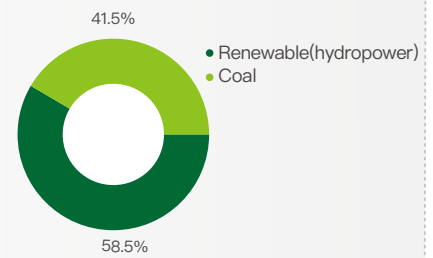
Total energy consumption(MWh)



Direct energy consumption by energy type



Indirect energy consumption (purchased electricity) by energy type



05

Emissions and discharges management

CMOC operations are committed to the process of continuous improvement through our environmental management systems, and to pursuing new opportunities to reduce pollution and minimize the environmental impact associated with air and waste emissions. We implement appropriate control measures for managing air and waste emissions to ensure compliance with applicable environmental standards. In addition, our systems are designed to comply with the relevant laws and regulations that apply to our facilities in the countries where we operate.

In 2021, we received four environmental fines or notices, all of which related to minor non-compliance issues at our Brazilian operations in Cubatão. These included one incident involving damage to 0.005 hectares of natural vegetation in the Discovery Coast Atlantic Forest Reserves without the approval of the São Paulo State Environmental Agency (CETESB), and three incidents of non-compliant particulate emissions caused by defective ventilation systems or rock storage and transfer systems. In response to the first incident, the company applied for the requisite license from the State Environmental Agency. Following the other incidents, we serviced the defective ventilation systems and retrofitted our rock storage and transmission systems to ensure compliance with particulate emissions requirements. In 2021, the company paid RMB 330,000 in environmental fines.

Air quality

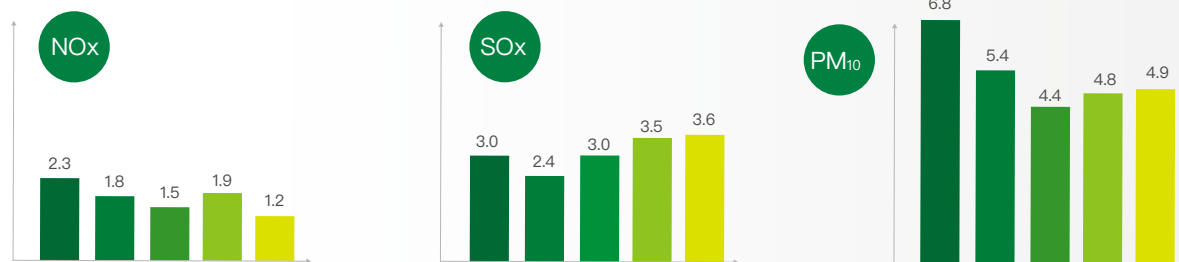
The primary sources for air emissions, including nitrogen oxides, sulfur oxides, and particulates, are associated with vehicle use and industrial production.

Particulate matter emissions are a primary concern for any mining operation. Potential sources for dust emissions include mine hauling, ore transfer, blasting, crushing, fugitive dust, and industrial process sources. On our roadways, we use management controls such as treatment of road surfaces, regular road maintenance, and speed limits to minimize the generation of dust. In 2021, nitrogen oxide, sulfur oxide, and particulate emissions increased due to the expansion of our DRC operations.

In terms of atmospheric emissions, our goal is to reduce our emissions intensity by 5% for nitrogen oxides and 2% for sulfur oxides by 2025 (compared with 2020 levels). We aim to achieve this by upgrading emissions treatment facilities and through the use of alternative energy and process improvements.

2021 2020 2019 2018 2017

Total airborne emissions (thousand tonnes)

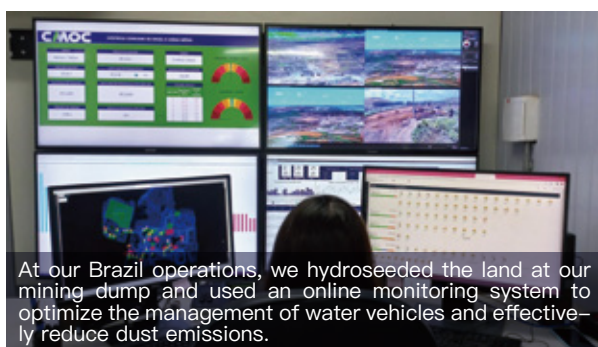


In 2021, our Chinese operations increased investment in dust filtration systems, delivering a continuous improvement to our dust filtering capacity through a diverse range of measures including eco-friendly spraying stations, mobile fog cannons, the installation of sprinkler pipes on designated roadways, and baghouse filters. In order to reduce dust emissions from vehicles during the unloading of waste rock and slag, our haulage vehicles were fitted with water storage tanks, which harness the pressure generated by the vehicle to spray water and effectively reduce dust. In addition, we also heavily promoted the use of electric vehicles to reduce emissions from our haulage fleet. In 2021, our Chinese operations purchased an additional 31 electric vehicles, bringing our total fleet of electric vehicles to 91.



At our Chinese operations, we covered storage sites with grass and installed dry fog dust suppression systems at unloading sites.

At our Brazil operations, we hydroseeded 150,000 m² of land at our mining dump to improve the control of wind-blown dust, and used an online monitoring system to optimize the management of water vehicles. CMOc Brasil has also worked to reduce its impact on the local community by controlling dust generated during mining operations and transportation through extensive greening and paving roads. In Australia, we continued to use progressive reclamation and planted perennial plants at tailings storage facilities to effectively control dust emissions. In the DRC, our TFM operation used speed limits and sprayed unpaved roads with water or dust suppressants to minimize the generation of dust, while at our KFM site, we installed PM10 meters in areas susceptible to dust emissions in order to measure particulate concentrations and ensure compliance with environmental regulations.



At our Brazil operations, we hydroseeded the land at our mining dump and used an online monitoring system to optimize the management of water vehicles and effectively reduce dust emissions.



Waste management

Tailings and waste rock produced from our processing and mining activities form the largest volume of waste associated with our operations. In 2021, approximately 43 million tonnes of tailings and 132 million tonnes of waste rock were produced by our global operations. Both figures increased compared to 2020 due to yearly variability in mine plans. These materials are managed according to applicable laws and standards. Storage facilities are engineered and designed to minimize risks associated with slope stability, geochemistry, safety, and environmental impacts. In the future, we will continuously improve the recycling rate of waste, reduce environmental impact and promote circular economy through recycling of scrap metal and smelter dust, reduction and recycling of hazardous waste.

Other waste generated by our operations includes both non-hazardous and hazardous waste streams. We manage waste generated by our activities to minimize disposal volumes. Waste may be managed onsite in approved facilities or shipped to offsite recycling, treatment, storage, or disposal facilities. Recycled waste may be managed on site or off site depending on the specific character and reusability of the waste. In 2021, new legislation required us to classify the ground phosphate rock produced by our Chinese mining operations as hazardous waste, resulting in a significant increase in hazardous waste compared with 2020. All ground phosphate rock produced by our operations is recycled by a certified provider.



At our Brazilian operation, we issued employees with waste disposal bags and disposed of all waste at the end of each shift.



Our TFM operation resumed the implementation of its waste metal recycling program in September 2021.

Waste	2021 volume (thousand tonnes)	Intensity (tonnes per tonne of processed ore)	Percent recycled	Type of waste
Non-hazardous waste	21.0	4.617×10^{-4}	61%	Scrap metal, domestic waste (disposable products, kitchen waste, waste paper, etc.), waste food, ferromolybdenum slag, coal slag, calcium slag
Hazardous waste	26.0	5.717×10^{-4}	85%	Used oil and grease, mixed industrial waste, ground phosphate rock, acid sludge, used catalysts, used sodium cyanide containers, or used oil containers

In 2021, our Chinese operations constructed three new tertiary sedimentation tanks and a domestic sewage treatment system. We also fitted our waste tank with a three-tier protection mechanism to prevent the leakage, scattering, and discharge of waste. At our Brazilian operations, we provided employees with waste disposal bags and disposed of all waste at the end of each shift. CMOC Brasil also recycled waste hardware to produce electric cables. At our NPM site in Australia, we continued to promote the recycling of waste metals. In the DRC, our TFM operation resumed the implementation of its waste metal recycling scheme in September 2021. At the KFM site, we worked with certified waste disposal companies in the local area to recycle used oil and oil containers and prevent environmental pollution. KFM also introduced a safe waste disposal policy to separate medical waste from general waste, and constructed a purpose-built medical waste incinerator.

06 Climate change

The primary impacts of climate change on CMOC's operations include physical risks, transition risks, and the opportunities arising from the increased demand for our product in the renewable energy sector.

Material physical risks include the increased probability and intensity of floods, droughts, and other extreme weather events. In addition to affecting the ecosystems at our mining sites, these physical risks also pose a threat to our production capacity and health and safety of our employees. Major transition risks include changes in policies and regulations, and the cost of transitioning to low emissions technologies.

Our mining sites may face a range of extreme weather events, including heavy rainfall, thunderstorms, and droughts. In 2021, following intense rainfall in Henan province, the Group headquarters implemented a number of emergency response measures. In addition, the Group CEO led a team of experts to inspect flood prevention measures at our Yangshuwa, Luchanggou, and Secaohu tailings storage facilities, ensure the effective implementation of emergency response measures, and guarantee safe production. Our Chinese operations also formulated the "Procedures for Classifying and Controlling Risks and



At our DRC mining site, we conducted inspections of flood and lightning protection systems in preparation for the rainy season.

Eliminating Hazards”, and conducted safety inspections of tailings storage facilities during the annual flood season to prevent accidents from occurring. In 2021, our NPM operation continued to implement its “*Flood and Drought Trigger Action Response Plan*” in order to ensure a prompt response to climate change. In the DRC, we inspected drainage facilities at our tailings dam in preparation for the rainy season, and installed lightning protection systems at explosive storage facilities, fuel stations, sulfur storage sites, and other key facilities.

However, risks also come with opportunities. Climate change is accelerating the global energy transition and has led to unprecedented growth in the renewable energy sector. In the long term, this will increase the demand for certain metals such as copper, cobalt, and nickel.

	Copper	Cobalt	Nickel
High demand	✓	✓	✓
Moderate demand	✓	✓	✓
Low demand	✓	✓	✓

Copper is a key enabler in the energy transition. As the world moves towards a greener future, the power generation sector is transitioning to cleaner forms of energy. This will lead to a significant increase in demand for copper. Demand for copper is also increasing in the electric vehicle sector, with all-electric cars requiring almost four times as much copper as gasoline-powered vehicles. The growth of the electric vehicle sector and battery storage technologies has also fueled the demand for cobalt. Cobalt is an indispensable material in the production of NMC and NCA lithium-ion batteries for electric vehicles, as it helps to keep the battery structure stable and increase the lifespan and power of the battery. It also plays a critical role in ensuring the thermal stability of the battery materials. In 2021, NMC and NCA lithium-ion batteries accounted for 75% of all batteries in the global EV market. Despite the trend towards nickel-based batteries, demand for cobalt is expected to double by 2025 as EV penetration continues to increase. Currently, more than 70% of the world’s cobalt is sourced from the DRC. Thanks to the country’s abundant water resources, copper and cobalt production is primarily powered by hydropower, and therefore the environmental impact is smaller compared with energy-intensive pyrometallurgical methods of production.

Climate change is associated with numerous long-term risks and challenges that threaten to have far-reaching implications. In order to incorporate climate change into the highest levels of corporate governance and formulate a climate strategy, in January 2022 the Board of Directors reviewed and approved CMOC’s Climate Vision, which specifies the following aims: “We will incorporate climate change into the company’s ESG governance framework. The Strategic and Sustainability Committee of the Board will be responsible for monitoring implementation and establishing a top-down framework for managing the company’s response to climate change. We will work together with international and domestic stakeholders and make our due contribution to achieving a carbon neutral world.”

Guided by this vision, we will initiate the development of a top-down framework for managing our response to climate change, continue to improve our procedures for identifying, assessing, managing, and disclosing risks, and establish and disclose science-based carbon emissions targets. Across all our operations, we will strictly comply with extreme weather guidelines issued by local governments and continue to improve response mechanisms to mitigate the impact of climate change. At the same time, we will meet our environmental responsibilities commensurate with our stage of development, strive to improve the efficiency of our global operations, and use cleaner, renewable forms of energy to reduce our carbon footprint. We will also work to ensure a clean, reliable, and responsible supply of metals for the sustainable energy sector in order to meet the needs of the global energy transition.

Greenhouse gas emissions

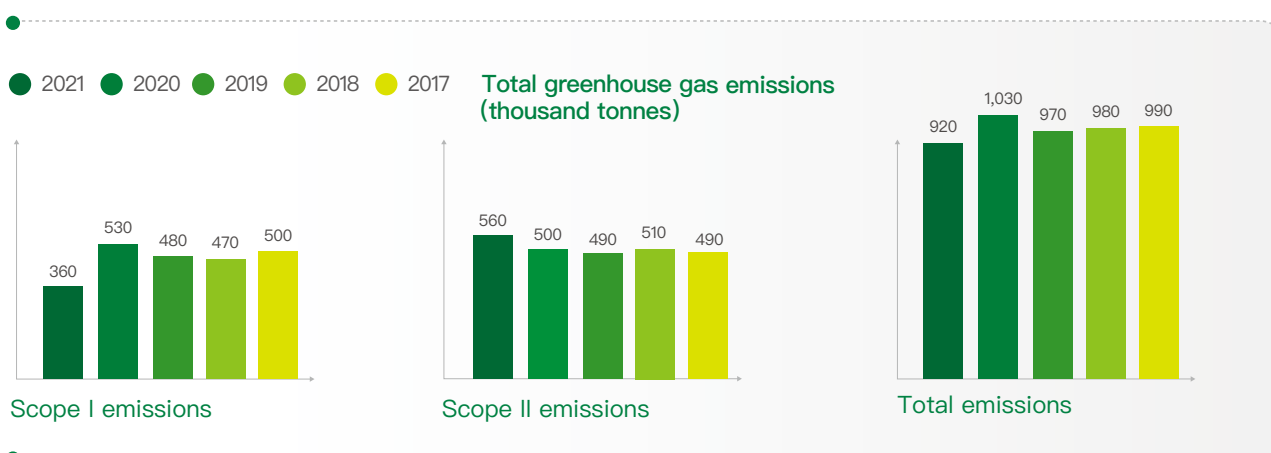
In 2021, our total greenhouse gas emissions measured on a CO₂-equivalent basis were approximately 920,000 tonnes, or 0.020 tonnes per tonne of processed ore. This represents a 20% decrease in intensity compared to 2020.

Our Scope I direct GHG emissions, which are primarily generated from diesel, coal, and natural gas, were approximately 360,000 tonnes. Diesel fuel is mainly used to power the haulage fleets at each of our operations. Most of our coal consumption is attributable to the quicklime plant at our TFM site in the DRC, while natural gas is mainly used for the drying of our product in Brazil. In 2021, our Brazilian operations used a more scientific method to calculate Scope I direct GHG emissions, resulting in a slight decrease to overall emissions compared with 2020.

In 2021, our Scope II indirect greenhouse gas emissions were approximately 560,000 tonnes, the majority of which were attributable to purchased electricity. 58.5% of the purchased electricity for our worldwide operations came from hydropower in the DRC and Brazil. Our Scope II emissions increased slightly compared with 2020, primarily due to an increase in the grid emissions factor for our Brazilian operations.

Guided by the Group's Climate Vision, we will continue to reduce the intensity of greenhouse gas emissions through use of alternative energy, upgrading of mining machinery, development of clean energy projects, and adjustment of the proportion of purchased energy.

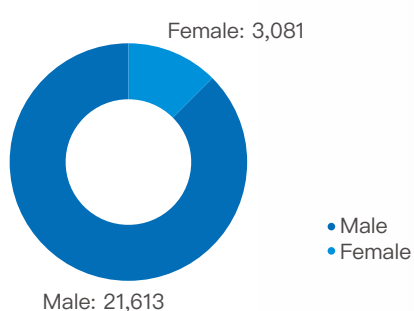
In addition of the scope I and II emissions, our trading platform IXM has launched a 1-year pilot project with one of its main financing banks and Carbon Chain aiming to have in place sustainable financing facility that would be tied to measuring, reporting, and lowering (vs. industry benchmarks) its supply chain emissions (upstream and downstream). IXM will disclose the necessary details on a per shipment basis with Carbon Chain to allow them to calculate the carbon intensity and share the results with the bank. Upon achieving its target, IXM will earn interest rate discounts based on a preset scale. IXM is keen to develop this project to help it (and CMOC) manage the transition risk to a low-carbon economy.



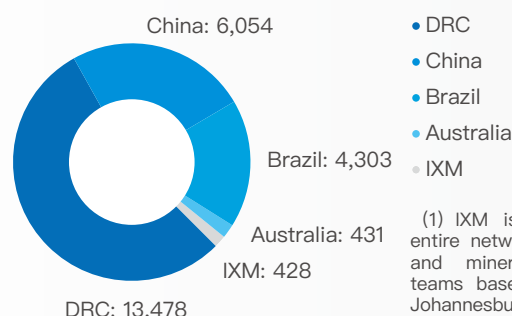
Employees

At the close of the 2021 reporting period, CMOC had 11,472 employees across its operating sites and management offices, as well as 13,222 contractors. This represents an increase in the workforce of 14% compared with the previous year, mainly due to the TFM expansion project and the start of initial development work at the KFM site. Approximately 12.5% of the workforce was female. Roughly 24.5% of the workforce was under the age of 30, 59.8% was aged between 30 and 50, and 15.7% was over 50. 62.8% of CMOC employees were employed in production, 7.9% in quality control and R&D, 11.4% in management and administration, and 17.9% in finance and sales roles.

Number of employees and contractors by gender

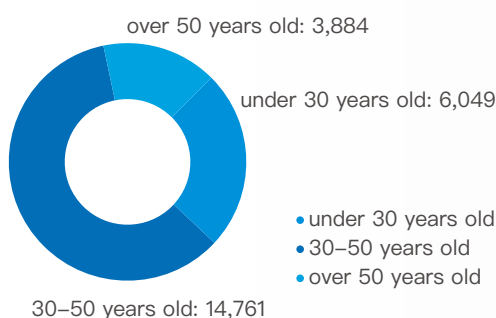


Number of employees and contractors by region ⁽¹⁾

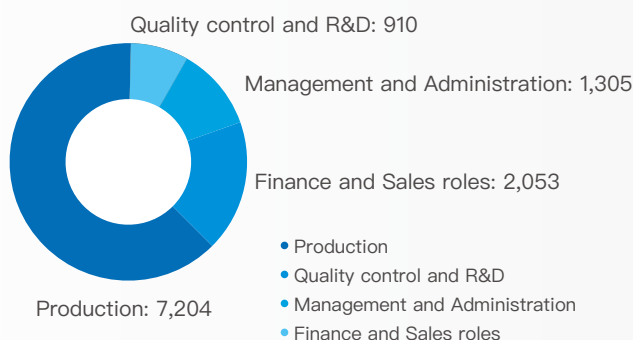


(1) IXM is active throughout the entire network of the global metals and minerals industry, including teams based in Geneva, Shanghai, Johannesburg and Connecticut, and also offices in major Latin American producing countries such as Mexico, Peru, and Chile.

Number of employees and contractors by age



Number of employees by job category



In 2021, the company drafted the *Employment Policy*, which was approved by the Board and published in January 2022. The policy applies to CMOC and all of its directly or indirectly controlled global subsidiaries, and outlines the company's commitments in terms of fair employment, comprehensive remuneration schemes, career development, freedom of association and collective bargaining, and employee communication. CMOC is committed to ensuring that the needs of employees and wider society are met during the growth of the company. This involves establishing harmonious labor relations, respecting and upholding employees' rights and interests, and pursuing diverse, open and inclusive employment policies that respect local culture and customs and give employees access to equal career opportunities irrespective of nationality, race, gender, religion or cultural background. CMOC values communication with its employees. The grievance mechanisms provided by the Group and each of its operations are available to all employees and contractors, and employees and contractors are encouraged to provide feedback.

In our labor relations, CMOC aims to comply with the requirements of ILO Conventions and local labor laws and regulations, and to establish fair employment mechanisms. Although some sites do not operate under collective bargaining agreements, all 11,472 employees in our worldwide operations have the right to freedom of association and collective bargaining. In 2021, 5,603 members of our global workforce employed at the CMOC Brasil, TFM and KFM sites were covered by collective bargaining agreements (49%). Collective bargaining agreements are developed in consultation with union leadership and include provisions which stipulate that further consultation is required in the event of modifications to operating schedules that impact employees. At all of our sites, we provide employees with market-based wages and benefits in accordance with legal requirements, including health insurance, life insurance, and maternity leave. In 2021, there were no strikes or work stoppages at any of our global operations.

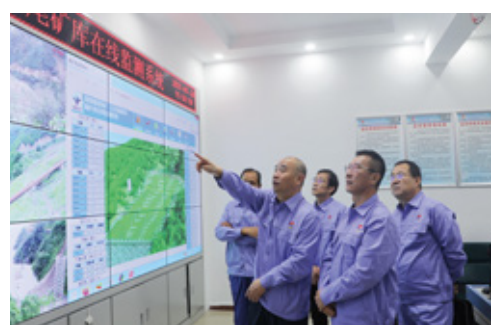
The company offers a diverse range of incentive schemes including operational, equity, project-based and long-term incentives. We have also introduced short-term incentives such as KPI-based incentives, profit target bonus and project milestone incentives, which are developed based on the specific needs and development phase of each site. In addition, the company has started to establish a long-term incentive scheme in coordination with its long-term strategy. In 2021, we implemented the first phase of our employee stock ownership plan; subsequent employee stock ownership plans and other stock ownership and incentive plans will be launched in due course to cover more management staff and key professionals.

CMOC strives to provide a safe and healthy working environment for its employees and is committed to maintaining fair labor relations, promoting equality, and making continuous improvements to its career development framework. In 2021, the overall turnover rate among CMOC staff and contractors was 24%. Among staff, the turnover rate was 8%, and was highest among staff employed by CMOC Brasil, primarily due to changes in management structure. The relocation of the Group headquarters from Beijing to Shanghai in 2021 also contributed to a high turnover rate. Among contractors, the turnover rate was 22%, and was highest among contractors employed by TFM, primarily due to the high number of short-term construction contractors required for the TFM expansion project.

01 Safety

Reflecting our commitment to safe operations, CMOC's health and safety management systems integrate risk-based processes and regulatory compliance measures designed to prevent accidents and occupational hazards. CMOC's *Health, Safety, and Environment Policy* is applicable to all of the company's global operations. In 2021, CMOC achieved its safety goal of zero fatalities, and other safety indicators were controllable. The company established a Workplace Safety Committee and developed its working rules. In terms of systems and processes, the Group headquarters issued and made improvements to a series of procedural documents, such as the *Safety and Environmental Accountability Framework* and the *Procedures for Managing Workplace Accidents*, and supervised operating sites to revise and enhance 88 workplace safety regulations and procedures.

Despite the impact of Covid-19 and travel restrictions, the Group senior management seized every opportunity to carry out on-site safety inspections and practice felt leadership, and to ensure the full implementation of safety regulations. The Group HSE department has enhanced its controls based on seasonal characteristics and data analysis, by organizing targeted checks and annual comprehensive inspections covering hazardous chemicals, pyrotechnics, TSFs, open pit mines, environmental facilities, safety culture communication, the investigation and elimination of TSF hazards, mine safety compliance, management accountabilities, and special equipment checks. Closed-loop measures are implemented for the problems identified.



At our Chinese mining operations, we are committed to providing a zero-harm workplace and have developed a comprehensive and systematic safety management regime. We continue to implement the *Ten Safety Principles* and carry out regular safety inspections and other targeted inspections. All identified and reported weaknesses are addressed through a closed-loop correction system. In 2021, our Chinese mining operations revised the *Procedures for Managing Major Safety Hazards* and the *Procedures for Risk Classification and Control and Management of Potential Hazards*, both of which aim to improve hazard identification and risk control. In addition, our Chinese mining operations also introduced more comprehensive safety training for employees, who are taught in different levels and modules by our in-house safety experts. This includes training for senior and mid-level management staff, universal safety training for all employees, and emergency response training. A total of 28,000 employees have participated in training to improve their knowledge of workplace safety. The safety management system in China is certified in accordance with ISO 45001 requirements.

In 2021, health and safety management system at our TFM mine site completed the transition from OHSAS 18001 to ISO 45001 standards. The site also revised and enhanced existing procedures and programs to ensure compliance with the ISO standards. TFM's HSE Committee is comprised of representatives from each department and holds monthly meetings to discuss on-site HSE performance. Implementation is monitored by internal audits, workplace inspections, manager inspections, and other types of reviews, as well as regular safety drills. In addition, in 2021 TFM piloted a workplace safety accountability system which further clarified the responsibilities of all levels of management in terms of workplace safety. The system was developed based on the principles of risk control and subjected to an internal audit to monitor compliance. TFM attaches great importance to safety training. All new employees and contractors are required to complete a safety induction, and annual safety refresher courses are obligatory for all employees. In addition, employees working in high-risk jobs are required to complete special training and certification (e.g. training for working at height, fire safety training, truck driver training, and fatigue management). In 2021, TFM provided safety training to over 32,800 participants.



The entrance to our tungsten company has installed an automatic helmet detection system which prevents employees without a helmet from accessing the premises.

At our Brazilian operations, HSE systems were also certified under the ISO 45001 safety standard. In 2021, CMOC Brasil optimized a series of safety procedures to reduce bureaucracy and improve operational agility and safety performance. The company continues to use the "Safety Acts" management tools, and has made improvements to the Safety Leadership Tools Review to ensure that managers implement safety measures in accordance with established targets and reinforce the company's safety culture. In addition, CMOC Brasil also holds OHS meetings with Directors in order to conduct regular audits of safety performance indicators and enhance its integrated management system, as well as encourage members of the management team to exchange information and experiences. In 2021, the safety training provided by CMOC Brasil included HSE induction training and OHS compliance training for employees and contractors. A total of 10,258 people participated in training.

Our NPM mine in Australia has a comprehensive HSE system modelled on the zero-harm policy that we have been implementing since 2012, focusing on the safety of employees, equipment, the environment, and the community. Regular training is provided to improve employees' awareness of safety issues, and a safety assessment is conducted for all equipment, manufacturing processes, and work tasks. The HSE management system at our NPM mine meets ISO 450001 standards, and also complies with the more stringent requirements of local health and safety legislation. In 2021, NPM provided training on workplace investigations, key risks and fatigue management, which was attended by 24 employees.

The KFM mining site in the DRC is still in the early phases of development. Consequently, in 2021 priority was given to developing an HSE management system that complies with international standards. The company established an HSE committee, introduced an accountability and reporting system, and formulated a series of safety-related management procedures. It also introduced a dual prevention regime to control risks and eliminate potential hazards, and drafted an "HSE Risk Register" to define safety risks with a high probability of occurrence and serious consequences. KFM also provided safety inductions for new employees.



KFM has established a dual prevention regime to control risks and eliminate potential hazards. Under this new regime, the company conducts routine, targeted and monthly inspections to identify and eliminate potential hazards. Performance regulations are strictly implemented and there is a zero-tolerance approach to violations.

IXM also formulated and implemented its own HSE policy and provided safety training to employees on a range of safety-related issues, including safe conduct, fire safety, mental health and first aid.

Safety performance at CMOC is measured according to established benchmarks, such as our Total Recordable Incident Rate (TRIR) and Lost Time Injury Rate (LTIR). In 2021, CMOC reported 41 recordable incidents from a total of 55,764,038 hours worked, equating to a TRIR of 0.74 per million hours worked. There were 6 lost time injuries, equating to an LTIR of 0.11 per million hours worked. There were also 216 lost days due to work injury. No work-related fatalities occurred at any of the company's global operations.

The complex and unique working environment of the mining industry can potentially put employees at risk of occupational illness. As well as striving to create a safe working environment, we raise awareness of occupational illnesses and prevention measures, and pay for employees' basic medical insurance at all of our sites. In light of the ongoing Covid-19 pandemic, all of our sites have now implemented a permanent regime to protect the health of employees and ensure continued operations.

Covid-19

Covid-19 continued to dominate headlines around the world in 2021. Faced with the rapid spread of new variants, many countries continued to implement control measures and place restrictions on business travel. Following the rollout of vaccines, the challenge faced by the company has gradually shifted from dealing with a public health threat to mitigating the impact of business travel restrictions and disruptions to logistics. Pandemic-related travel restrictions continue to have a significant impact, especially on the ability of expatriate workers to commence work or return home on leave. To some extent, these restrictions have also resulted in delays to the delivery of materials and equipment for construction and modernization projects. The Group headquarters continued to maintain effective communication channels with all of the company's operations and made regular updates to response measures based on local circumstances. At the time of writing, the pandemic had not caused a material impact on the normal operations of any of the company's business segments.

In 2021, the Democratic Republic of Congo experienced three waves of Covid-19 infections, presenting significant challenges to pandemic response measures. At the TFM mine, we took a number of steps to establish clear standards on Covid-related measures for TFM and its contractors, such as by making continuous updates and improvements to TFM company regulations in accordance with the local epidemiological situation and local government policies on Covid-19 containment measures, and by publishing a new handbook (*Handbook on TFM Covid-19 Prevention and Control Measures, VO1.1*). The company continues to implement a strict mask mandate, social distancing requirements and other measures, and encourages employees to raise awareness of Covid prevention measures among family members, such as disinfecting surfaces, minimizing social contacts, mask wearing, avoiding markets and other crowded places, getting sufficient sleep, and other ways to strengthen the immune system.

The company also conducts regular inventory checks in order to maintain an adequate stockpile of medication, PPE and disinfectant. Employees with symptoms of Covid-19 are immediately quarantined and required to take a PCR test and cooperate with tracing efforts. Comprehensive care, treatment and mental health counseling is provided for all confirmed cases drawing on the clinical experiences of local healthcare professionals and advice from leading Chinese experts.

In addition, TFM mobilized a vaccination team and arranged for the TFM Base Camp Clinic to become an official government vaccination center. The company also promoted the vaccination campaign among employees and contractors. Since the start of the pandemic, TFM has performed 13,169 rapid antigen tests on employees and contractors. From a total of 245 confirmed cases, 231 have now recovered. Since 31 May 2021, in addition to public health vaccination campaigns, TFM has vaccinated 331 staff and contractors of various nationalities.



In Lualaba province, Fungurume was the second administrative region to launch a vaccination campaign (following the provincial capital Kolwezi). The TFM hospital is a designated vaccination center, and TFM has helped the local government to promote the Covid-19 vaccination campaign in Fungurume.

At the relatively small KFM mine, the company's Covid-19 prevention measures include a mask mandate, social distancing, frequent disinfection of surfaces at home and in the workplace, semimonthly PCR tests for employees (who are quarantined and treated in case of suspected or confirmed infection), and regular checks of personal protective equipment to avoid shortages.

At CMOC Brasil, the Covid-19 Crisis Committee continued to play an important role through effective reporting to Group headquarters and weekly inventory checks of personal protective equipment. The company continued to enforce a range of Covid prevention measures, including work-from-home arrangements, weekly testing and screening, frequent cleaning and disinfection, mask mandates, and social distancing. To raise awareness about Covid-19, the company operated a 24/7 digital channel through which it delivered emails containing Covid-19 prevention guidance and weekly news bulletins. The company also encouraged employees and contractors to

receive the Covid-19 vaccine. By the end of 2021, the vaccination rate for the phosphate business was 91% of employees and 76% of contractors, and for the niobium business, 97% and 34% respectively. Since the start of the pandemic, CMOC Brasil has performed 279,292 rapid antigen tests on employees and contractors, identifying a total of 1,121 confirmed cases, of which 1,102 have since recovered.

Owing to its rural location, the pandemic has caused minimal disruption to production at the NPM site in Australia. Nevertheless, under the growing threat of Covid-19, the site has taken proactive measures to mitigate potential risks. The company extended several control measures first introduced in 2020, while also introducing new measures as and where appropriate, including social distancing, mask mandates, hand washing, identification of high-risk individuals, vaccination and supported special leave, reduced social gatherings, work-from-home arrangements, and changes to shift patterns. The company also liaised closely with government departments to ensure compliance with public health directives.

At the start of the pandemic, CMOC headquarters and Chinese mining operations responded to the Chinese government's call to implement strict pandemic control measures. At the time of writing, all Chinese operations had formulated pandemic control measures in accordance with local government policies and were operating at normal capacity.

IXM's Safety and Health Committee together with the Group's Covid-19 Leadership Team closely monitored official recommendations in each of their 12 countries of operations. In collaboration with all business units, IXM managed to set appropriate measures for the safety of its workforce while achieving its business objectives.

Occupational health

Health management specialists at our operations identify, manage, and control potential causes of occupational illness, emerging health problems, and critical risks that threaten occupational health. In 2021, CMOC headquarters and all our operations implemented a range of occupational health measures in accordance with local requirements, including occupational health training, occupational health checks, and installing warning signs for job positions or work sites exposed to occupational hazards.

At our Chinese sites, we established a Leading Group for Occupational Health Management, as well as the CMOC China Occupational Health Management System, which takes into account our business activities, work environment, and employee health. We manage occupational health risks through technological improvement and innovation, regular physical exams and job rotation, and improving training on occupational health hazards. In 2021, the company carried out an evaluation and on-site testing of occupational hazards in the workplace, as well as comprehensive screening of deficiencies in occupational health management. In June 2021, following a visit to one of our Chinese smelting companies, the National Health Commission's Bureau of Inspection and Supervision commended our site for its use of innovative processes and technologies in positions exposed to occupational hazards.



The No. 2 Tungsten Ore Processing Company in China uses a sprinkler system to reclaim dust from the flotation chemicals preparation process. This greatly reduces labor intensity and improves the work environment in the chemicals workshop, reducing exposure to occupational hazards.

Dust, a leading threat to employee health, can be produced by blasting, ore loading and transport, crushing and other handling during the production process. Unprotected, long-term exposure to dust may lead to health issues. To reduce employees' exposure to harmful dust, some of our mitigation efforts include the wetting or sealing of roads, containment of dust-producing equipment, technical controls such as increasing automation in ore transportation, crushing, and packaging to reduce employees' exposure to dust, and procedural controls such as requiring employees to wear protective equipment such as dust respirators in appropriate circumstances.

Chronic exposure to noise from transportation, crushing, and milling of ores is another threat to employee health. To reduce employees' exposure to harmful noise, we take preventive measures such as reducing vibration in major noise sources, building plants with noise absorption materials, setting up sound-proofed rooms for employees, performing regular noise monitoring, and requiring the use of hearing protection.



At NPM, a range of noise reduction strategies were used, including the installation of an acoustic wall.

03 Employment

We are committed to offering a diverse, open, inclusive, and trusting workplace that respects the rights of employees, ensures equal employment, and promotes fair competition and personal development. We develop our employment policies, such as working hours and holidays, in accordance with local labor laws and ILO conventions. At CMOC, we have a corporate culture that aims to promote the career development of our employees.

Labor relations

In accordance with CMOC's *Employment Policy*, we respect the rights of all employees, and strive to provide an environment that ensures fair treatment and good working conditions. The company has a comprehensive compensation program that provides employees with a salary and benefits that are consistent with market standards and relevant laws and regulations, including but not limited to pension, medical, and unemployment plans as required by regional and national governments. We set working hours and holiday entitlements according to the law or collective bargaining agreement that apply in the relevant jurisdiction. Employees have access to internal grievance mechanisms through which they can report and resolve workplace complaints or concerns. Our *Employment Policy* recognizes our employees' rights to freedom of association and collective bargaining.

Equal employment

In keeping with the principle of equal employment, CMOC recruits and hires personnel through various means including open recruitment and competitive employment, and provides diversified and equal career development opportunities for employees. As stated in the *Employment Policy*, *Human Rights Policy*, and procedures at our operating sites, we do not allow any employment discrimination based on race, ethnicity, religion, gender, age, or other factors. We also adhere to the principle of fair employment and make employment decisions based on genuine job requirements, including remuneration, training, and promotion.

CMOC values workforce diversity and strives to offer an inclusive workplace where everyone is entitled to fair treatment. We integrate the strategies of localization and diversification in our employment practices to promote local employment and develop sustainable employment for the local economy. We respect different ways of life and encourage flexibility in exchanges and communications between locations and departments based on actual needs.

CMOC is committed to gender equality. We treat male and female employees equally, safeguard the health, safety, and wellbeing of all employees, promote women's career advancement by enhancing their education and training, and raise community awareness through community programs and campaigns.

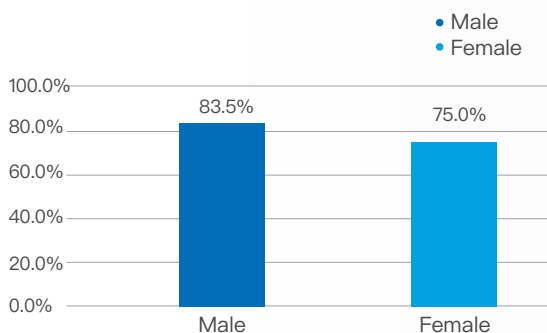
04 Training and Career development

In accordance with the *Employment Policy*, to broaden firm-wide internal exchanges, we operate a differentiated talent development program that provides our employees with in-house training, rotation across mines, incentive-based development plans, and internal mobility channels based on recruiting, internal competitive selection, and referral. Guided by people-oriented principles and the strategy of the Group, we offer multiple paths for career development with space, tools, and opportunities for growth.

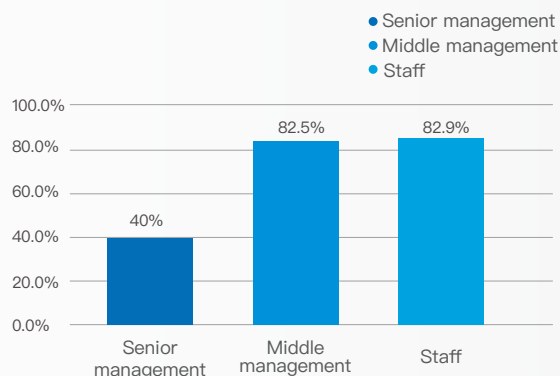
In 2021, 82.5% of CMOC's workforce received training, with each employee receiving an average of 20.9 hours of training.

In 2021, the CMOC Human Resources department communicated the company's talent development system in three steps. The first step was to establish a learning map for key positions. To achieve this, the Human Resources department organized "co-creation workshops" that brought together 106 technicians and specialists from diverse fields to create learning maps for key positions in 8 technical disciplines, including mining, processing, and metallurgy. The learning maps cover 288 different courses and provide a blueprint for talent development.

Percentage of employees and contractors who received training by gender



Percentage of employees and contractors who received training by job category



The second step was to identify and empower internal trainers. The Human Resources department launched an internal training-of-trainers program to enhance the course development and teaching skills of specialists in various technical disciplines. The program culminated in the development of 30 standard courses and the accreditation of 27 internal trainers. This team now has the skills to capture and communicate valuable experience within the organization.

The third step was to cultivate core talent. In order to nurture high-quality core talent, the company designed and implemented a series of targeted talent cultivation programs that are aligned with development paths for key positions. These included a global management trainee program, CMOC Talk business leaders forum, and the L.D.P leadership training program.

At our Chinese operations, we continued to improve our training systems to help our employees improve their professional skills and competence. We have set up targeted training programs for managers, skilled workers, and employees in functional departments to meet the needs of each department. In terms of training methods and training staff, we try to combine internal and external resources for better results. In 2021, we delivered a range of courses, including welding training for internal trainers, and skills and creative thinking training for middle to senior management. Our course attendance rate was 100%.

At our TFM operations in the DRC, 10,631 employees and contractors participated in training in 2021, or 94% of the total workforce. In addition to safety training, the company also organized other training courses for employees and contractors, including on mobile device operation, process plant equipment and skills, and equipment maintenance. The company also gave greater emphasis to the cultivation of internal trainers and skills transfer. At our KFM site, training in 2021 gave priority to inductions for new employees and HSE risk register training.

At our Brazil operations, employees receive mandatory training in occupational health and safety, technical competency, behavioral skills, and professional development, ensuring that skills are developed in line with the company's strategy. In 2021, 42% of employees at our Brazil operations received training. In addition, to keep employees connected and learning in an era of social isolation, the HR department in Brazil has launched the Gente CMOC program, which offers weekly online sharing sessions on technical and health topics. Over the past year, a total of 120 live sharing sessions were held with over 11,000 participants, greatly helping employees during the COVID pandemic. Over the course of 2021, NPM provided training and certification in 11 different modules, including health and safety, compliance, emergency response, high risk work licenses, management skills, underground blasting, and a wide range of other skills. 100% of employees received training in at least one module.



In July 2021, 45 graduates from top Chinese universities were enrolled on CMOC's global management trainee program. After 2 years of management training, they will assume important positions at our global operations.



In October 2021, TFM provided scaffolding training for 9 internal trainers and 29 contractors. The internal trainers were able to upgrade their skills and obtain certification, enabling them to effectively coach other employees and help prevent accidents.

Community

CMOC's *Community Policy* is applicable to all of the Group's operations. We are committed to conducting activities in a manner that promotes positive and open relationships with local communities. We continue our engagement with and investment in communities affected by our mining operations, using multi-channel grievance systems to collect their feedback and concerns. We develop infrastructure, support health, safety, and education efforts, and provide local employment and business development opportunities. Our goal is to build such partnerships at all levels of community, from local to national, by making long-term positive contributions and effectively mitigating adverse impacts from our operations. Stakeholder relations across the international portfolio are guided by a risk-based approach, wherein community development plans are formulated after evaluating the expectations and needs of communities. At our NPM, Brazilian, and DRC operations, stakeholder communications, community risk, impact management and community investment plans guide our external engagement efforts. At our Chinese site, the national priorities of the government also play a role in driving community relations and associated investments. In all cases, stakeholder engagement is based on mutual trust, communications based on transparent dialog, and the effective mitigation of impact coupled with the enhancement of positive effects from mine operations. CMOC understands that these aspects are material to the success of our mining business.

Community relations programs at CMOC's international sites are guided by local laws and regulations and seek alignment with international best practice frameworks such as the Performance Standard 5 of the International Finance Corporation and Risk Readiness Assessment (RRA) of the Responsible Minerals Initiative. Social engagement and community investment activities may also be governed by commitments made through the process of Environmental and Social Impact Assessment or their equivalents under national regulations.

Our operation in China closely aligns community spending with government development priorities and makes pertinent community investments to enhance performance in achieving those priorities. The Chinese operation is located in Luanchuan, a small mountain county in Henan province rich in minerals but with scarce agricultural resources. The county suffers from frequent floods and landslides, and some areas remain underdeveloped. As an important company in Luanchuan county, we have long contributed to local development. As of 2021, our multi-year investment programs have cumulatively contributed over RMB 160 million in donations to the county for urban-rural development, poverty alleviation, education, health, and other causes. Following many years of effort, in 2019, Luanchuan county was officially removed from China's list of impoverished counties. Currently, the community work of our Chinese mining operation is focused on a number of areas, including consolidating previous achievements in poverty alleviation, preventing members of the community from falling back into poverty, supporting the local tourism industry, providing stable job opportunities, and monitoring the progress of poverty alleviation projects.

In the DRC, our TFM operation is located near rural villages, agricultural land, and two towns which have steadily undergone significant population influx and urbanization in recent years. According to current estimates, the total urban and rural population of TFM's 1,500 km² concession area is around 400,000, which has presented increasing challenges for our community work. The sustainability programs at this site aim to address acute community development priorities and promote positive relations between community stakeholders and the company while balancing the limited human and material resources of the company with the needs of the rapidly growing migrant population. In order to achieve these goals, we have strengthened engagement and cooperation with all stakeholders. On January 20, 2021, in accordance with the requirements of the new DRC Mining Code of 2018 and following six months of negotiations, our TFM operation and the local community signed the *Scope Statement for Community Development*, which commits to invest US\$31 million in community development over the next five years, targeting eight priority needs: health, education, economic development, roads and bridges, electricity, sports, infrastructure, and telecommunications. In 2021, the TFM site launched five of the livelihood development projects outlined in the *Scope Statement*. These projects aim to support the establishment of community agricultural cooperatives, invest in local agriculture, and provide professional training for members of the community, as well as empower local women to generate an income, become more independent, and improve their status in the family.

Our KFM mining site in the DRC occupies an area of approximately 20 km². Consequently, there are fewer local communities that are impacted by our operations. When developing our community management system, we strive to integrate CMOC's *Community Policy* and international best practice frameworks such as the IFC Performance Standards. In 2019, KFM signed the *Scope Statement for Community Development* with the local community, which stipulates the villages due to be impacted by the new mining site, as well as the community investments to be made between the fourth quarter of 2019 and 2024. These investments will total US\$510,000 and target priority needs such as public health and sanitation, drinking water and electricity infrastructure, education, and economic development. Following our acquisition of the KFM mining site in December 2020, we continued to implement the investment plan outlined in the *Scope Statement*, and launched other assistance programs tailored to the needs of the local community. The KFM site has also appointed designated members of staff who are responsible for liaising with the local community, and maintains a comprehensive grievance system for handling community grievances. Community work is aimed at establishing positive partnerships with the local community and improving local livelihoods.

Our mines in Australia and Brazil are sited in areas that are largely rural, with surrounding land uses dominated by agriculture. NPM and CMOC Brasil continue to strengthen the effectiveness of community plans through transparent identification of impact, communication through stakeholder forums, and the maintenance of systems to register and respond to major community concerns. NPM's community programs provide support in a number of ways, including through community consultation committees, indigenous support projects, education, and community health projects. All local stakeholders participate in the implementation of our community programs.

At our Brazilian operations, we are committed to engaging with stakeholders including employees, the local community, and the government. Based on our assessment of community expectations and international best practices, we have defined a number of community investment goals, including promoting dialog and engagement with stakeholders, improving the management of social and environmental impacts, generating economic, social, and environmental value for local communities, contributing to quality of life and social and environmental sustainability, and strengthening the company's reputation and social license to operate. In 2021, CMOC Brasil's community programs focused on a diverse range of issues, including agriculture, community health, education, culture, and sports. The company also launched an evaluation and monitoring system in order to assess the effectiveness of community investment projects through measurable goals and targets.

As a metals trading company, IXM places community investment in its efforts to improve the minerals supply chain. In 2021, it joined the Better Mining initiative and the Fair Cobalt Alliance in order to support efforts to improve artisanal and small-scale mining (ASM) of cobalt in the DRC, as well as the living conditions of local communities that depend on artisanal mining.

01 Stakeholder engagement

CMOC's operations are located in diverse settings where cultural and economic conditions can vary greatly. Therefore, active engagement with stakeholders near our mines is a common element in successful community relations and in managing risk related to our operations. Community relations are managed at appropriate levels of engagement that may include local government agencies, non-governmental organizations (NGOs), the media, traditional leadership, community groups, and individuals that may have a broad array of interests in our operations.

An important aspect in maintaining effective community relations are our systems for logging and responding to community concerns, such as environmental, social investment, human rights, land acquisition, and recruitment of employees. All of our operations maintain systems that can receive and register individual community concerns and grievances, which are then tracked through the stages of being addressed and resolved. In addition, we establish committees with community stakeholders and define systematic procedures for stakeholder communication, which also constitute important channels for communicating with and collecting feedback from local communities. Community engagement committees have been established by all our operations in Brazil, Australia, and the DRC.

At our Chinese operations we have a community grievance mechanism, and staff are regularly trained to ensure that the mechanism operates effectively. We encourage local stakeholders to make full use of this mechanism to communicate with the company. When local residents have concerns, our community relations staff have the responsibility to verify and address them in a timely manner and report the results to local residents.

At our TFM site in the DRC, the company engages with stakeholders on a regular basis in order to better understand their interests, concerns, and goals. TFM's stakeholders include national authorities, chieftainships, and members of civil society. The Community Development Forum continues to serve as a primary means of gaining input on the community's priority development needs, with particular regard to the Social Community Fund (SCF). This forum consists of representative stakeholders from nearby communities. In 2021, TFM organized a total of six forum meeting sessions, which were attended by 36 representatives from Tenke, 52 representatives from Fungurume, and 55 chieftainships. These meetings provided the company with the opportunity to inform the community about its mining activities and construction projects, while for community representatives, they provided a platform for communicating questions regarding the implementation of TFM's *Scope Statement* and the SCF. The SCF was created through contributions from the TFM operation and responds directly to community priorities in the areas of infrastructure, education, health, and income generation. From its inception in 2009 through December 2021, the SCF has received contributions of US\$54.67 million, of which US\$7.72 million was given in 2021, a new annual record.

TFM also maintains a Community Liaison department, which staffs permanent liaison offices in the community. Each village has one TFM community liaison officer, who is responsible for holding routine meetings with key stakeholders, receiving community input on company actions, and serving as the primary communication channel between local residents and TFM. In addition, the company organizes negotiations and awareness campaigns for specific projects and for issues which are of concern to the community. In 2021, TFM raised awareness of several issues including land acquisition and relocation procedures, environmental protection, and road safety. TFM's community grievance system is operated by members of the Community Liaison department, and all community members including TFM employees may present grievances related to the impacts of our operations. All grievances are

received and tracked by an information management system. Community residents can also participate in the grievance resolution process through an independent mediation committee, 60 percent of whose members are local residents. In addition, TFM has strengthened its engagement with civil society organizations.

At our KFM site in the DRC, our dedicated community liaison staff have established clear procedures for day-to-day communications, meetings, and correspondence with eight neighboring villages in order to ascertain the needs of the local community and handle and respond to community grievances. The Scope Statement Local Monitoring Committee, which is comprised of local stakeholders, is responsible for conducting periodic reviews to monitor the implementation of KFM's commitments outlined in the *Scope Statement*.

At our NPM operation in Australia, community relations staff continued engagement with the internal and external stakeholders identified in the site's Stakeholder Communications Management Plan. NPM has a Community Consultation Committee that is comprised of local government and community representatives and chaired by an independent representative approved by a regulatory body. In 2021, the Community Consultation Committee convened three meetings, the minutes for which are available on the NPM website. In addition, representatives of the local indigenous community joined forces with NPM staff to establish the Wiradjuri Executive Committee, which convened five meetings over the course of 2021 and enabled the company to maintain contact with indigenous groups. NPM also maintains a dedicated grievance system. The complaints hotline is published on the NPM website and in local news reports, as well as in the NPM annual report.

Our Brazilian operations continue to value and maintain dialog with various stakeholders. External stakeholders in Brazil can contact the company through a range of channels, including the company website, social media, telephone, and email. Submissions made through the portal are reviewed by staff in the Social department for content and priority according to site policies that define procedures for timely response. The company attends meetings of the Cubatão Consultative Community Council and liaises with government departments in Catalão and Ouidor on a regular basis. CMOC Brasil also maintains regular contact with local committees representing young people and the elderly in order to develop projects which are beneficial to the local community, as well as with local civil defense and fire safety authorities to discuss the management of tailings dams. In 2021, the company continued to improve engagement with rural communities by making more frequent visits and telephone calls to local residents. It also launched a number of new communications channels, such as radio broadcasts and a bi-monthly magazine.



KFM's community liaison staff make regular visits to neighboring villages and liaise with members of the community committee.

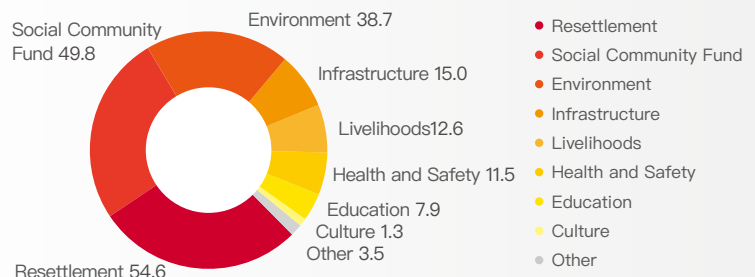


CMOC Brasil continued to improve engagement with rural communities by making more frequent visits to local residents.

02 Community development

CMOC's investment approach is based on priority community needs and includes direct investment, contributions to community foundations, and participation in government as well as private sector-led initiatives. Our community investments are also centered around the United Nations Sustainable Development Goals (SDGs). Investments are typically made in the broad categories of education, health-care, economic development, infrastructure, the environment, and resettlement. In 2021, CMOC invested a total of RMB 194.9 million in community projects.

Distribution of social investments by category (million RMB)



Education

Support for education from primary school through to university is a high priority for stakeholder communities. In 2021, across all operations the company donated over RMB 7.9 million to educational programs.

In China, the company believes that addressing educational problems is the key to promoting regional development. In 2021, we donated a further RMB 2 million to educational causes in Luanchuan county, including helping university students to finish their studies and ensuring that students from poor families in Xiaohe village, Quiba township can attend school. Over the past eight years, CMOC has donated a total of RMB 16 million to educational programs, which have benefited more than 6,000 students from Luanchuan county.

In the DRC, education is one of the key priorities of the TFM Social Community Fund (SCF), which has funded the studies of 74 university students (including 17 female students) through a university scholarship program. In October 2021, a further 15 secondary school graduates were admitted to the scholarship program. In addition to providing university scholarships, the TFM SCF also launched a secondary school scholarship program in 2018, which has funded the studies of over 1,200 secondary school students — an average of 400 students per year. TFM is also committed to improving educational infrastructure. Since its establishment in 2010, the TFM SCF has funded the construction of ten schools and handed over to the local community. In 2021, the SCF built another five schools, which will be handed over to local authorities in the near future. TFM continues to support educational facilities and resources at schools within the mining concession area. In 2021, the company donated 600 school desks to twelve local schools.



At the end of October 2021, the first cohort of scholars from the SCF scholarship program successfully completed their university studies. Among the eleven graduates, five majored in mining studies, two in industrial chemistry, two in electronics, one in telecommunications, and one in international relations. Most of the graduates have decided to continue their studies with a master's program.

Education is also a priority for our KFM site. In 2021, the company assisted with the construction of a primary school in Mayba village, building eight classrooms with 300 m² of teaching space to give local children access to an education. In addition, as part of its commitments under the *Scope Statement*, KFM also provided training for the local community to improve literacy skills and raise awareness of health issues.

Our NPM operations continued to provide scholarships annually for indigenous students and those who wish to pursue a technical degree. Our Brazilian operations continued their "Formare" education and training program, which aims to provide basic skills training to young people from disadvantaged socio-economic backgrounds and to help them enter the labor market. This year, 25 young people went through production assistant



A number of Wiradjuri aboriginals still live at the NPM mining site. In order to give back to the community, NPM signed an agreement with the Wiradjuri Executive Committee (WEC) to provide regular scholarships to fund the studies of Wiradjuri residents.

and industrial processes training courses, and about 50 employees of CMOC Brasil participated as volunteer educators or tutors in their professional practice. Since the inception of the program, a total of 70 young people have received training, and about 150 employees have participated as volunteer tutors.

Community health and safety

In 2021, CMOC invested approximately RMB 11.5 million in community-based health projects, addressing a range of priority needs.

Communities near our TFM operation may suffer from malaria and other diseases due to the lack of medical and healthcare facilities. The lack of medical assistance can also lead to other illnesses that affect the health of local residents and TFM employees. Our health support projects help to address the urgent needs of local communities. In 2021, TFM continued to support measures to improve public health, including expanding access to clean drinking water, assisting with malaria prevention efforts (through the spraying of mosquito repellent and distribution of

mosquito nets), donating medication and medical equipment to healthcare providers, and taking effective measures to control dust and air pollution.

Expanding access to clean drinking water is one of the UN Sustainable Development Goals, and is an effective means to prevent cholera and other waterborne diseases. Following many years of effort, the rural areas within the TFM mining concession area now have access to more than 170 wells, including numerous newly developed water sources. The towns of Fungurume and Tenke have a large water distribution network, and all water collection points are connected to the pumping station built by TFM. A water quality test covering microorganism analysis, chlorine content, and pH value is conducted at the pumping station on a daily basis by on-site service staff to ensure that the local drinking water meets international standards. According to current estimates, 89% of people within the 1,500 km² TFM mining concession have access to safe drinking water. In Tenke, local residents have established a local water cooperative (CGET) to manage water collection points and utility fees, enabling the local community to become self-sufficient. The cooperative has also built public shower facilities using the utility fees paid by the town's residents. In Fungurume, TFM handed over management of the town's water supply system to the local government in December 2020.

Communities near our KFM mining site face similar community health issues. In 2021, KFM built a drinking water station for a local village, and provided malaria prevention and health training to neighboring villages. It also donated mosquito nets and other sanitary supplies to local residents.

In recent years, following the growth of the DRC copper mining industry and the subsequent influx of migrants and economic development, road safety has become an issue of key concern for the local community, and has the potential to affect the company's operations. In 2021, TFM collaborated with the non-governmental organization CRED to organize training for 462 motorcycle taxi drivers covering modules such as traffic regulations and road signs, roadside first aid, driver hygiene, and COVID-19 prevention measures.

In 2021, our operations in Brazil continued its campaign to provide influenza vaccinations for members of neighboring rural communities who are unable to travel to cities. A total of 200 adults and children received vaccinations. CMOC Brasil also made use of government tax incentives to contribute to several sports, health, and cultural projects in the state of Goiás.

Every year, NPM provides funding to the Parkes Sports Grants and Life Education initiative so that every school-age child has access to education about healthy lifestyles.



In the two major towns of Tenke and Fungurume, all water collection points are connected to the pumping station built by TFM. Fungurume's daily supply of drinking water now amounts to approximately 600 cubic meters.



In 2021, CMOC Brasil continued its influenza vaccination campaign in neighboring rural communities.

Environment

The mining industry has a direct environmental impact on the local community. CMOC attaches great importance to the protection and continuous surveillance of the natural environment and neighboring communities. In 2021, we invested approximately RMB 38.7 million in environmental governance measures to protect local communities and the natural environment.

TFM's environment team works closely with the community team to resolve environmental grievances and help the local government respond to environmental crises. The national road from Lubumbashi to Kolwezi suffers from year-round traffic congestion and regular accidents involving overturned trucks. In 2021, the TFM environment team helped the local government to clear two spillages caused by overturned chemical trucks.

In Australia, our NPM operation continued to engage and cooperate with the local community to improve environmental performance. For example, before blasting commences, we liaise with residents who may be impacted and install vibration monitors and noise barriers to minimize the impact of noise or vibrations. In addition, the mining site continued to plant local perennial plant species at tailings storage facilities in order to reduce dust from mine tailings. NPM also collaborated with the local cancer charity Can Assist by purchasing saplings, which helped to raise funds for local cancer patients.



In 2021, NPM purchased 3,000 saplings from the cancer charity Can Assist. The saplings were planted on either side of McClintocks road to the southeast of the mining site, and helped to raise AU\$6,000 for local cancer patients.

Economic development and livelihoods

As the majority of our workforce comes from local communities, self-sufficient communities where people's economic needs are met are important for providing a stable workforce and ensuring business continuity. For this reason, a leading issue for all communities near our mine operations is the creation of new opportunities for economic development. Our programs are directed at building capacity to address existing economic drivers, such as agriculture and local business development, including vendor opportunities to the mine itself. Other initiatives focus on creating economic diversification. In 2021, CMOC invested approximately RMB 12.6 million in projects directed towards economic development and the enhancement of livelihoods.

Given that our TFM operation is in an area where agriculture is important to the local economy and to household food security, one of our key areas of developmental support is in the agricultural sector. TFM continued its maize credit project in 2021. During the peak farming season between 2020 and 2021, the project provided support to 644 farmers and 640 hectares of agricultural land. It is estimated that this will be expanded to 1,500 hectares in 2022. With the help of TFM's agronomists, local crop yields have soared from 0.8 tonne per hectare at the inception of the project to 6.8 tonnes today, an 800% increase.



After the 2021 harvest, Chryso Kasongo, a farmer from Amoni village remarked: "This year's harvest was good. I produced 122.5 sacks of maize, each weighing 50 kg, so I won't have any problems repaying my TFM maize credit loan." Chryso will use profits from the harvest to pay his children's school fees, reinvest in agricultural projects, and cover other household expenses.

In 2021, TFM also launched five livelihood projects included in its *Scope Statement for Community Development*. Over the coming five years, these projects plan to invest US\$ 7.61 million to establish local agricultural cooperatives, purchase agricultural inputs, and provide technical training, as well as boost the status and earning power of women. These livelihood projects include: (i) setting up integrated agricultural development centers, including establishing technical schools for farmers, factories for agricultural inputs and improved seeds, cultivation of improved hen and tilapia breeds, and production of tree seeds and organic fertilizer; (ii) organizing agricultural and livestock cooperatives, building warehouses and farm machinery workshops, and providing tractors, tractor implements, and maintenance facilities; (iii) providing loans to cooperatives to increase maize production, including enough seed and fertilizer to cultivate 1,500 hectares of land every year as and when required; (iv) helping communities to raise livestock, including by providing animal husbandry skills training, funding, equipment, tools, and fish fry, chicks, piglets, and goat kids to livestock

farmers in four regions; and (v) assisting cooperatives with female economic activity to promote women's independence, including by organizing and supporting income-generating activities and establishing savings groups for local women from villages in the mine area.

After conducting socio-economic diagnosis of rural communities in 2019, CMOC Brasil stepped up investment in rural communities. In 2021 CMOC Brasil continued with its three-year "Nossa Terra" program, which provides technical assistance and training, and helps rural families to boost their incomes and economic independence by starting their own business. As part of the program, farmers will form a cooperative and supply CMOC Brasil with dairy, horticultural, and other agricultural products. In 2021, the program provided technical assistance to 71 local families. In addition, CMOC Brasil continued to run its "In the Field with CMOC" events, which provide small-scale agricultural services to help local communities develop agriculture, boost incomes, and protect and restore the environment. In 2021, CMOC Brasil held 83 events at 45 farms in 10 local villages, with a total investment of approximately R\$225,000. The main services CMOC provided included water treatment, small dam construction, establishment of pasture, fence repair, sapling donations, soil fertilization for planting, and food donations.

NPM's agricultural operations have been running successfully for more than 20 years. NPM owns 10,314 hectares of land in the Central West region of New South Wales, of which mining operations occupy 1,630 hectares. The remainder of the land is used for commercial purposes, agriculture, and logistics. In 2021, NPM conducted a soil amelioration trial, during which we applied a soil ameliorant made of gypsum, lime, chicken manure, biosolids, compost, and ripping treatments to local paddocks. Although the trial primarily targeted soil sodicity, NPM also expects to see nutritional benefits from the organic material treatments. In mid-2021, NPM engaged StevTech to produce NDVI imagery of the crop. This showed a positive response to all treatments in terms of dry matter production.



A CMOC employee helps to plant local plants. Through its "In the Field with CMOC" events, CMOC Brasil helps local communities to protect and restore the environment.

In China, the focus of CMOC's community work is to build on past poverty alleviation achievements, continue to drive rural revitalization, promote employment stability among people lifted out of poverty, and develop rural tourism. CMOC helped Xiaohe village to obtain more than RMB 2 million of government funds for a renovation project for a high-quality guest house, two industrial upgrading projects, and three landscape enhancement projects which contributed to the transformation of Xiaohe into a "demonstration village" for rural revitalization. The construction of these projects will enhance rural tourism, improve infrastructure, create local jobs, and increase the collective economic income of the village, helping to make rural revitalization a reality.

Infrastructure

CMOC believes that infrastructure plays a vital role in the socio-economic development of local communities. Good infrastructure facilitates better development of local economic drivers, allowing the local community to become self-sufficient and helping to provide a stable workforce for our mining operations. In addition, according to Sustainable Development Goal 9, CMOC should develop quality, reliable, sustainable and resilient infrastructure to support economic development and human well-being, with a focus on affordable and equitable access for all. Infrastructure is therefore a priority in our community investment strategy. In 2021, CMOC invested approximately RMB 15 million in infrastructure projects.

In the summer of 2021, Henan province in China was hit by record heavy rains that affected 14 towns in Luanchuan County. CMOC donated RMB 10 million to the county government for use in flood control, disaster relief, and reconstruction.

At our DRC operations, infrastructure in local communities is poor due to the low level of economic development. With the rapid growth of the local population in recent years, the demand for infrastructure, and in particular access to electricity and road repair, has become more urgent. In 2021, the TFM Social Community Fund completed a road resurfacing project in Tenke, including the paving of 6 km of clay roads and 2 km of asphalt roads. It also announced that it would begin work on a 5.5-kilometer-long trunk road that would link Tenke with the national road to Kolwezi. The TFM power project installed a 10 MW substation and over 21 km of medium voltage power lines in the town of Fungurume, which became operational in January 2021. The power network has so far performed well and improved electricity access for residents. TFM is currently undertaking a feasibility study for a power project in the town of Tenke. TFM's *Scope Statement* includes plans for road construction in the mine area. This includes provisions for over 7 km of asphalt roads in Fungurume and over 8 km of clay roads in Tenke. In addition, TFM will also assist with the construction of over 100 km of rural roads to facilitate the transportation of agricultural products, which will promote the long-term development of agriculture in the area.



The TFM SCF power project has boosted the socioeconomic development of Fungurume and its surrounding area. The entire town and national road are now lit up at night.

03 Land acquisition and resettlement

All of our mining operations require significant amounts of land to accommodate mining, processing, and administrative needs. The acquisition of land follows procedures derived from site policies that in turn reflect relevant laws and regulations in the areas where operations are located. Across all of our operations, land acquisition methods reflect internationally accepted good practice principles of stakeholder consultation and negotiated settlement based on fair market valuation.

In China, continuous mine development may require the acquisition of land owned by residents living in the areas surrounding our operations. We have therefore formulated the *CMOC Implementation Measures for Recruiting Residents impacted by Land Acquisition* and developed land acquisition procedures including consultation, negotiated settlement, and fair compensation. We have signed land acquisition agreements with neighboring communities in which we made provisions for compensating affected residents. We also employ local residents affected by our mining activities. In 2021, CMOC we employed an additional 32 people under this program, which has provided a stable source of income to a total of more than 1,000 residents. In 2021, there were no cases of land acquisition requiring resettlement at our Chinese operations.

At our operations in Australia and Brazil, surrounding land is mainly used for extensive agriculture. In these cases, the need for additional land is met through strategic planning. This ensures sufficient lead times for engagement and negotiation with land-owners, and is in compliance with well-defined internal and regulatory processes. At our Brazilian site, resettlement follows an internal policy that calls for pre-impact socio-economic analysis, including vulnerability assessments that drive subsequent, multi-year monitoring until pre-impact conditions are reestablished. In 2021, there were no cases of land acquisition requiring resettlement at our Australian and Brazilian operations.

At our TFM operation in the DRC, land acquisition is guided by international good practices, notably Performance Standard 5 of the International Finance Corporation (IFC), which helps protect the livelihoods and rights of affected populations that are vulnerable due to poverty and lack of formal title to the lands they occupy. In 2021, TFM's main land acquisition was parcels of land covering 2,085 hectares that were acquired for construction work. In total, 139 project affected households were resettled in other communities with assistance from TFM. In addition, 3,382 project affected persons received economic compensation for their land and other resources, but were not required to relocate. Since the beginning of construction in 2006, TFM has physically displaced 1,321 households, of which 742 households have been relocated to newly built residential areas. An additional 579 households have been assisted with resettlement in Fungurume, Tenke, and other communities. During the 2021 agricultural year, we helped to restore the livelihoods of 2,225 displaced farmers under our livelihood restoration program. As part of our broader social and environmental mitigation plan for TFM, resettlement action plans are an activity with inherent risk, and so the TFM program is subject to external audit on an annual basis, during which performance is evaluated in terms of alignment with internal and external policies, continuous improvement, redress of issues, and overall community acceptance of our resettlement program. Due to business travel restrictions introduced in response to Covid-19, the 2021 audit has been postponed until the first half of 2022.

In 2021, the KFM site in the DRC acquired land and resettled residents to meet future construction needs. Because the KFM mine was only recently established, all resettlement work there is currently being overseen by TFM's Land Acquisition and Resettlement team, who follow the same requirements and procedures as at the TFM site. In 2021, KFM resettled 24 project affected households (38 people in total) in the village of Adek, who all agreed to the company's assisted self-settlement model. As of December 31, 2021, all 24 households had used the compensation they received to buy a new home in Fungurume. In addition, KFM compensated the households for losses to crops, trees, and family assets. KFM has also developed a three-year Livelihood Restoration Plan that provides agricultural income and training to displaced families. This is consistent with one of the objectives of Performance Standard 5 of the International Finance Corporation (IFC), namely to improve, or restore, the livelihoods and standards of living of displaced persons. At the end of 2021, KFM distributed fertilizer, bean seeds, and corn seeds to displaced families before the rainy season, and the families attended our agricultural training courses on how to identify and use fertilizer and plant seeds.



The Land Acquisition and Resettlement team take field measurements in the village of Adek at the KFM site and explain to villagers how to claim crop compensation.

04 Human rights

In 2021, CMOC updated its *Human Rights Policy*, which is applicable to the entire Group, and formally published the updated policy in January 2022, so as to better meet evolving stakeholder expectations.

At corporate level, supplier due diligence procedures were updated with additional questions on suppliers' human rights policies and practices, including their use of security and armed personnel. At NPM, the need for compliance training is identified according to role requirements. All new employees are assessed on their knowledge of the NPM code of conduct, which includes elements of anti-discrimination policy. Supervisors receive additional training on the *Australian Fair Work Act*. In terms of supplier management, NPM mainly investigates the legal compliance of suppliers, as Australia's legal system can effectively prevent human rights issues such as child labor and slavery. IXM's *Sustainability Policy* also includes provisions on human rights, especially with regard to suppliers in conflict-affected and high-risk areas where IXM endeavors to take appropriate measures to implement the due diligence framework outlined in the OECD Guidance.

In 2021, all employees and contractors at CMOC Brasil received training in human rights policies. At our Brazilian operations, we employ 67 contract security staff who are primarily responsible for controlling access points. All of these staff are unarmed and have received training in human rights. All service agreements at our Brazilian operations include an appendix with provisions on human rights. The company investigates and deals with all human rights violations which are reported to the "Allo CMOC" hotline.

All TFM employees and contractors are required to complete induction training, which includes a module on the company's human rights policy. In 2021, TFM's training department updated the human rights module and, in particular, drew attention to the issue of forced labor and the availability of a complaints hotline. All employees and contractors are made aware of the complaints hotline and encouraged to report human rights violations immediately. The company has appropriate procedures in place for investigating and dealing with reported violations. Human rights grievance and investigation procedures are also applied to the local community. In 2021, TFM provided human rights training to 90 employees in key risk areas and 4,902 contractors. In addition, human rights provisions are contained in all of TFM's contracts and the *TFM Supplier Code of Conduct*. In 2020, TFM's contract department incorporated the evaluation of social indicators such as supplier safety, environmental performance, and human rights into its supplier rating system. CMOC's *Human Rights Policy* and TFM's *Zero Tolerance Rules* treat employees and contractors as equals. The *Zero Tolerance Rules* contain a number of specific provisions for behavior relating to personal safety, fighting, or violent assault.

With the TFM expansion project now underway, a large number of construction contractors have moved onto the mine site since 2020. We are fully aware of the increased occupational health, safety, and human rights risks associated with contractors. Therefore, TFM has taken extra steps in the following areas to further mitigate human rights risks for contractors: (i) Relevant functional departments at TFM have strengthened the inspection and supervision of all contractors, including in relation to employee codes of conduct, labor contracts, salary payments, working hours, labor unions and employee communication, safety training and distribution of protective equipment, and compliance training; (ii) TFM has stepped up the use of incremental penalties that depend on the results of regular inspections or degree of supplier risk exposure, including written warnings, regular corrective action, temporary suspension and corrective action, and contract termination; (iii) TFM has strengthened training on and promotion of the company's *Human Rights Policy*, *Zero Tolerance Rules*, and complaints hotline; and (iv) TFM has encouraged contractors to enshrine employees' right of free association and right to earn a living wage in their contracts.

To further raise awareness about human rights protection and human rights expertise among TFM employees and promote peaceful coexistence with local communities, TFM invited officials from the United Nations Peacekeeping Mission in Congo (MONUSCO), the Military Prosecutor's Office of Kolwezi, and Lubumbashi High Court to give a four-day human rights training course in April 2021. The course was attended by over 90 TFM employees and contractors, including from the Land Acquisition and Resettlement department, TFM Social Community Fund, Community Development department, Legal Affairs department, Publicity department, Community Liaison department, and Security department. In addition, representatives of the local mine police, local police, and Armed Forces of the Democratic Republic of Congo also attended the training. The course contained several modules and systematically detailed the categories of human rights issues common in the extractive industries, how to support the development of neighboring communities, and how to promote good relations between businesses and local communities. Participants also took the opportunity to raise their concerns, discuss implementation challenges, and engage in fruitful exchanges with trainers.



In April 2021, representatives of the local mine police, local police, and Armed Forces of the Democratic Republic of Congo were invited by TFM to attend human rights training provided by MONUSCO.

Security & human rights

All of our operations develop needs-based security solutions in order to prevent unauthorized personnel from entering our mining sites, protect public health and safety, and safeguard the company's assets.

In the copper mining region of southeastern DRC, significant artisanal mining takes place, which also occurs illegally around and within the TFM mine concession. To protect company assets and personnel and to maintain access control for our active operations, TFM employs security agents and private security contractors within its workforce. These agents and private contractors are unarmed, have no law enforcement capacity, and are primarily engaged in surveillance and the operation of access control points.

TFM implements the *Voluntary Principles on Security and Human Rights* (VPSHR), which help guide companies in maintaining the safety and security of their operations while encouraging respect for human rights. TFM provides training to its security staff and to the personnel of private security contractors on key elements of the VPSHR. Private security firms are also subject to due diligence at the contracting stage, including human rights aspects. In 2021, 83% of TFM's 107 direct hire security employees and 1,258 private security contractors received VPSHR training. This was 20% higher than in 2020, when training sessions had to be postponed or canceled as a result of Covid-19.

Enforcement of national mining law within the TFM concession, with reference to the legal extraction of minerals, is the responsibility of the Mines and Hydrocarbons Police (PMH), a branch of the national police. Though autonomous in their operations, the PMH operate under terms of a contract with TFM's security contractor that addresses concerns such as the nature of support provided by TFM. The contract makes explicit reference to TFM adoption of the VPSHR, including directives on how to follow up on allegations of human rights violations. In 2021, a total of 142 PMH officers were stationed in the TFM concession, of which 107 received VPSHR training.

In recent years, due to a massive influx of migrants, TFM and the surrounding communities have been facing the challenge of increasing illegal mining in our concession and adjacent areas. This has led to a sharp deterioration of security in local areas due to rising crime rates and fatal accidents associated with unsafe artisanal mining practices. In June 2019, the DRC government decided to deploy the armed forces in the region to disperse illegal miners and address the problem of crime. As of December 2021, there were still approximately 172 soldiers stationed at the TFM concession and in adjacent areas. Fully aware of the potential human rights risks associated with the military deployment, TFM contacted the government and military leaders to communicate its human rights policy, including its adherence to the VPSHR, and requested the distribution and communication of the VPSHR to newly stationed soldiers. TFM does not engage directly with the armed forces, does not participate in any military operations, and does not provide any assistance that can facilitate military operations.

TFM's Security, Community, and External Relations departments continually track and record all security incidents at the concession, and provide humanitarian assistance and conduct human rights investigations when necessary.

As part of its efforts to promote and implement the VPSHR, TFM regularly participates in the meetings of the Lubumbashi VPSHR Working Group, and exchanges information and views with the various stakeholders involved. This working group, composed of government representatives, mining companies, and human rights NGOs aims to facilitate communication among stakeholders, create a climate of mutual trust, and adopt coordinated and participatory solution to address security and human rights challenges at mining sites.

In addition, to address potential security and human rights issues caused by the influx of illegal ASM miners, CMOC and TFM have stepped up communication and cooperation with all stakeholders. In 2021, CMOC joined the Better Mining program and Fair Cobalt Alliance to support their continuous monitoring of safety, environment, human rights, and compliance performance on artisanal and small-scale mine sites and improve the economic conditions of surrounding communities. TFM has maintained close communication with local stakeholders about artisanal mining. In November 2021, TFM, UNICEF, the German Agency for International Cooperation (GIZ), and other organizations attended a meeting hosted by Lualaba Province on the "Future of Artisanal Mining", where they discussed the impact of the DRC's establishment of the Entreprise Générale du Cobalt on artisanal mining. At the meeting, TFM called on the government to establish more legal ASM mining areas, and described the company's efforts to diversify the local economy and give incentives to illegal miners to pursue legal economic activities.



Product

Our mining and processing operations produce refined metal as well as intermediate and final composite products that are essential to the global economy: Molybdenum, tungsten, and niobium are mainly used in the metallurgy of super alloys; cobalt primarily in lithium-ion batteries, essential for mobile phone and electric vehicles; copper is widely used in every aspect of our lives, and is an important component of the clean energy transition, including the development of solar panels, wind turbines, energy storage, electric vehicles, and supporting infrastructure; and phosphate fertilizer is an indispensable material for agriculture. Our manufacturing streams also consume other products and services sourced from suppliers and contractors.

Our trading platform IXM's expert local teams provide global coverage for tailored sourcing, risk management, logistics and financing solutions to its wide and established network of clients in the metals industry. IXM is also part of a leading group of companies across the supply chain of EV critical minerals contributing to collective actions aimed at improving sustainability and transparency in the mining industry.

The sourcing, manufacturing, transport, and delivery of all these metal materials may pose environmental and social risks. We address these risks, as well as those in the upstream and downstream value chain, with policies and due diligence procedures at our operating sites.

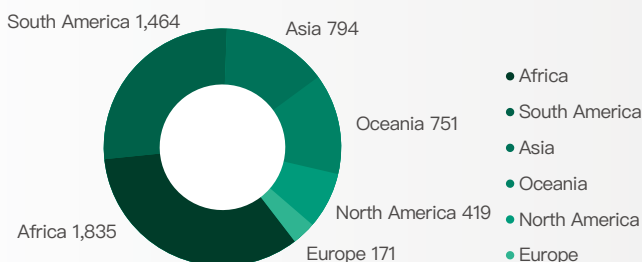
01 Supply chain management

Supply chain management in mining business

We consider environmental and social risks in the company's supply chain where we need to source input materials and services to support our operations. CMOC's sustainability policies serve as guidelines for supplier management systems across all operations, covering matters such as health and safety, human rights, anti-corruption, codes of conduct, employment practices, environmental management, and community relations. In 2021, CMOC and its subsidiaries continued to execute these policies. All operations developed and improved procedures and systems for managing business partners in accordance with risk exposure.

Total number of suppliers by geographical region⁽¹⁾

⁽¹⁾ IXM not included



At CMOC headquarters, the global supply chain department is mainly responsible for the centralized purchasing of products and services from suppliers in China for overseas operations. In 2021, we continued to improve our supply chain management systems. Currently, third-party platforms are used for supplier vetting and due diligence, which includes checks on environmental and ethical compliance. In addition, in our supplier due diligence checks, we focus on the verification of their compliance with national environmental and safety standards. All new suppliers and customers have been informed of CMOC's *Code of Business Conduct*, *anti-corruption policy*, and other compliance requirements. We also give priority to suppliers that use environmentally friendly products and services. For example, on a construction project in the DRC, we chose a supplier that used aluminum silicate insulation, which is more environmentally friendly than rock wool insulation. In 2021, CMOC launched its Ariba cloud-based procurement platform, which was initially used at the Group headquarters, and for copper and cobalt projects in the DRC. The platform enabled the digitization of CMOC's procurement system and increased transparency and compliance across all processes.

In China we have implemented *Procurement Management Procedures*, *Supplier Management Procedures*, *Tender Management Procedures*, and other controls to ensure that qualified suppliers meet policy and regulatory requirements concerning commercial reputation, required professional expertise, and HSE considerations. We regard a supplier's environmental and social risks as an important factor in our assessments and strictly require those with whom we do business to comply with laws and regulations on environmental protection, employment, and operations. We regularly review and conduct annual evaluations of suppliers and pay special attention to due diligence on suppliers of hazardous chemicals and those with an environmental impact. In 2021, our Chinese business fully implemented a centralized procurement system that further strengthened supplier controls.

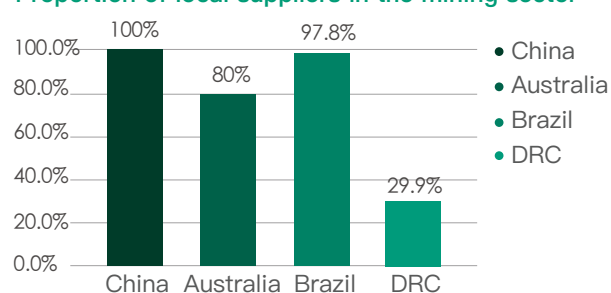
Australia already has robust government laws and regulations to prevent child labor, slavery, corruption, and other social and environmental problems. For this reason, NPM mainly performs environmental and social screening by conducting compliance reviews of suppliers. In addition, tendering procedures must comply with NPM's *Procurement Policy*, *Commitment Policy*, and *Contracts and Purchasing Procedure*. NPM manages suppliers through contractor management systems, contract performance reviews, and HSE pre-qualification vetting to ensure that they understand and conform to our *Code of Conduct* and HSE requirements.

At our TFM mine in the DRC, human rights and corruption are still pivotal areas of concern. We conduct due diligence of suppliers and contractors to screen for violations of applicable laws and CMOC policies dealing with anti-corruption or human rights. During the screening process, a subset of these contractors is subject to site visits during which safety, environmental, and employment policies and programs (and their implementation) are reviewed. The screening phase site visits also provide valuable insights into the practical aspects of equipment, tools, and readiness to perform the proposed scope of work. With respect to employment practices by contractors, TFM pays special attention to policies pertaining to the legal working age of their employees, and their compliance with the Labor Law of the DRC. As construction at TFM proceeds, the number of engineering contractor personnel at the mine site has increased significantly since 2020. We are fully aware of the challenges this brings to site management and are constantly improving our contractor management systems. TFM strengthened hierarchical management of on-site contractors and introduced an annual assessment mechanism that tracks HSE performance, human rights, and other social indicators. TFM's HSE, administrative, engineering contract, and other departments regularly conduct joint inspections of on-site contractors and apply incremental penalties depending on their inspection outcome and risk exposure. Penalties include written warnings, regular corrective action, temporary suspension and corrective action, and contract termination. In 2021, TFM strengthened labor management and human rights training, monitoring, and inspections for contractors, concluded a *Statement of Responsibility for Contractor Employee Management Objectives* with all on-site contractors, further clarified the responsibilities and duties of contractors, and monitored contractor compliance with standardized employee management practices to reduce the labor risks, community risks, and reputational risks pertaining to contractors.

Our Brazilian operations have implemented a monthly supplier assessment plan. Under the plan, key contract suppliers are assessed and receive feedback on a monthly basis. These assessments draw on key environmental and social performance indicators such as a supplier's environmental and waste management capabilities, their engagement with local communities, and whether or not they support volunteering and professional qualifications. The plan aims to give public recognition to suppliers with outstanding HSE and social performance to encourage them to continue to improve their performance in these areas. With respect to supplier compliance management, when vetting suppliers, our Brazilian operations use the Brazilian federal government's National Registry of Punished Companies (CNEP) and Registry of Ineligible and Suspended Companies (CEIS) to identify whether potential suppliers have a history of corruption, human rights abuses, or other issues. After we establish cooperation with a supplier, we perform monthly compliance checks throughout the duration of their contract. In the event of any irregularities, the supplier will be suspended, delayed payment, or otherwise penalized according to the terms of their contract.

CMOC encourages the use of local suppliers in its global operations in order to maximize opportunities for local employment and economic development. The following table shows the use of local suppliers in CMOC's mining operations. This year, we defined local suppliers as those based in the country of operations. The proportion of suppliers in the DRC is lower than other regions because it is relatively less developed. CMOC will continue to promote the development of local economies, and in particular small and medium-sized community businesses, through methods such as tax contributions, community investment, and local tendering.

Proportion of local suppliers in the mining sector



Supply chain management in trading business

As a global company involved in the trading of metals commodities around the world, IXM recognizes the risks associated with its mineral supply chain, and incorporates ESG factors into its business decisions to reduce risk and meet expectations of its stakeholders.

IXM commits to responsible sourcing and has implemented a Sustainability Policy (publicly available on IXM website www.ixmetals.com) which defines the key principles and the risk management approach that IXM applies globally. This policy is consistent with the standards set forth in the OECD's Due Diligence Guidance for responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas (the OECD Guidance).

IXM's supply chain management is aligned with the Joint Due Diligence guide (JDD) and has adopted the RRA (Risk Readiness Assessment) issued by the RMI (Responsible Mineral Initiative) that provides a comprehensive due diligence framework across all relevant ESG areas. The JDD is derived from the OECD Due Diligence Guidance for Responsible Supply Chains from Conflict-Affected and High-Risk Areas. Efforts are in place to implement the OECD 5-step due diligence process in IXM's portfolio due diligence and to apply a risk-based approach to the assessment.

To implement this policy, IXM established robust management systems to identify and assess risks associated with ESG issues including human rights abuses, bribery & corruption, as well as environment, health and safety issues. It consists of systematic risk-based due-diligence of IXM's suppliers and is regularly supported by desktop research, engagement with the supplier, consultation with other stakeholders, and — depending on materiality of potential red flag — on-site visits or independent third-party audit.

In an effort to continuously improve its operational processes, IXM has mandated a leading consultant to undertake a Gap Analysis of its responsible minerals sourcing practices and IXM will then develop a program to close gaps identified over time.

IXM Due Diligence Approach

IXM Counterparty Due Diligence (CDD) process is applicable to all commercial counterparties (suppliers/customers) globally and follows a risk-based approach where IXM is primarily looking for below (non-exhaustive) list of red flags:

- Material origin, transit, or destination is linked to Conflict-Affected and High-Risk Areas (CAHRA), or to an area neighboring CAHRA, or to an area with no/low metal resources.
- Counterpart sources material from 3rd parties operating in CAHRAs
- Counterpart is linked to serious human rights abuses, bribery and fraud, money laundering, tax evasion, or direct or indirect support to armed groups
- Counterpart is linked to adverse media or positive hits in KYC screening tools

When a red flag is identified/confirmed, IXM performs an Enhanced CDD to mitigate any red flags, which can consist of:

- Screening of counterparty, shareholders, directors in KYC screening tools to check for potential hits against sanctions lists, previous legal/regulatory enforcements, political exposure, adverse media, potential affiliation with military or state-owned entities, etc.
- Submission and review of ESG questionnaire
- Identification and review of upstream suppliers of counterpart
- Verification of counterparty's countries of operation, as well as origin, transit, destination countries of material
- Review of counterparty's code of conduct, sustainability policy/report, or any policy/report related to anti-bribery&corruption, anti-money laundering, environment, community, etc.
- Desktop and/or on-site 3rd party due diligence.

IXM Sustainability Initiatives

In 2021, IXM announced that it successfully signed for the first time a Revolving Credit Facility (RCF) aligned with Sustainability-linked loan principles. This was made possible after IXM earned its first EcoVadis rating for Sustainability performance. EcoVadis ratings measure corporate social responsibility performance in four key areas: Environment, Labor & Human Rights, Ethics, and Sustainable Procurement. IXM scored a silver rating, which places the company in the top 25% of its industry (ISIC category), and we are working to improve this year-on-year to achieve a successful completion of the KPI within the RCF (syndicate of 19 banks).

In parallel, IXM also launched a 1-year pilot project on supply chain carbon emissions with one of its main financing banks and Carbon Chain. For more information on this project, please refer to the section "Environment — GHG emissions" of this report.

Alongside CMOC, IXM continues to support artisanal and small-scale mining (ASM) formalization efforts. IXM and CMOC are members of both the Fair Cobalt Alliance and Better Mining. Both organizations aim to assist in the professionalization of the ASM cobalt sector to eventually facilitate the sale of ASM material to mainstream clients, and to help improve the lives in DRC mining communities.

02 Product stewardship

Management systems at our international sites dealing with product stewardship address the quality, compliance, and sustainability risks associated with our products and processes, including occupational health and safety, environmental management, quality control/quality assurance, traceability, and labeling in accordance with the Globally Harmonized System of Classification and Labeling of Chemicals. These systems ultimately protect the interests of our clients and may enhance access to preferred markets for CMOC products.

In the DRC, our product assurance is largely driven by compliance needs derived from international trade, transport, and material classification schemes of the countries and regional associations through which product is transported and consumed, with special regard to cobalt hydroxide. The Registration, Evaluation, Authorization, and Restriction of Chemicals (REACH) regulation of the European Union, for example, addresses the production and use of chemical substances and their potential impacts on both human health and the environment. REACH requirements directly drive the classification and labeling processes of our cobalt hydroxide, which also considers the requirements of up to 12 additional countries that may be involved in the transport and final disposal of our product.

Our operation in the DRC also has a set of special responsibilities related to product stewardship associated with the sustainability of its supply of cobalt hydroxide to global markets. The DRC hosts a large number of unregulated artisanal miners as well as customers for their product, a situation that has led to high-profile international concerns around the risks of child labor, workplace health and safety, and human rights in the cobalt supply chain from that country. The TFM operation manages this risk through a set of product control and custody procedures to ensure that it mines, processes, and sells only those minerals that originate from its mining concessions and that are mined by its own operations. These procedures are in turn guided by the requirements of responsible and sustainable management as described in this report. TFM does not purchase or process ore from any other source. These procedures include specific actions to dispose of illegally mined ore confiscated by government authorities within the TFM concession. After being confiscated by mines police, the company stores, reports, and periodically buries illegally mined ore in waste rock piles. These burial sites are unmarked and cannot be identified by any other means, ensuring that the ore cannot be recovered for another purpose. TFM has a complete system to track the copper and cobalt products produced at its operations through the points of transfer and to the ultimate point of delivery to its customers. CMOC has no tolerance for child labor or forced labor, employing only people who have reached the legal working age. In 2021, we found no violation of any laws or regulations regarding child or forced labor.

Due to the importance of monitoring and maintaining these procedures while managing TFM's mineral supply chain, TFM regularly undertakes independent assurance of the company's product control and custody procedures (see "Assurance Statements"). In addition, in order to meet the evolving expectations of international stakeholders for a responsible minerals supply chain, in 2021 TFM updated its self-evaluation against the OECD Due Diligence Guidance on Conflict Affected and High-Risk Areas (OECD Guidance) and Responsible Minerals Initiative (RMI)'s Risk Readiness Assessment (RRA). This exercise was reviewed by our assurance consultants and TFM has developed corresponding action plans. Users of this report can contact CMOC's sustainability team for more details of this self-evaluation.

In addition, we strongly believe that higher transparency along the value chain will increase the sustainability of the cobalt supply, which is essential for the battery industry. In order to achieve this goal, in 2019 CMOC and its trading



At our TFM site in the DRC, all of our copper and cobalt is labelled with barcodes to enable traceability from the mine to the process plant.

platform IXM joined Glencore and ERG in the Re|Source consortium, which uses a blockchain platform to trace the origins of cobalt and ensure responsible procurement. The Re|Source consortium was subsequently joined by Umicore, and has received support from other companies in the materials sector including Norilsk Nickel and Johnson Matthey, as well as the Responsible Mining Initiative and the Cobalt Institute. The blockchain technology employed by Re|Source extends from upstream materials suppliers in the DRC to downstream battery and electric vehicle manufacturers, and has launched several pilot projects at mining sites in the DRC and Europe, including our TFM site.

At our operations in China, quality and safety issues related to our products satisfy various national regulations, as well as the ISO 9001 Quality Management System scheme. In addition, as tungsten is covered by regulations related to “conflict minerals” in the United States and the European Union, in 2021 the CMOC tungsten operation was audited against the Responsible Minerals Assurance Process (RMAP) of the RMI. At the time of writing, our tungsten company was on the list of RMAP Conformant Tungsten Smelters.

At our operations in Brazil, procedures are in place to manage health, safety, environmental, and quality risks associated with a suite of 28 distinct phosphate products consumed domestically, as well as ferroniobium products that are exported. The Brazil operations are also certified to ISO 9001 quality standards.

Product stewardship is embedded into the Northparkes Management System. The Environmental Aspects and Impacts Register includes risks and controls relating to our copper concentrate after it leaves our site. There is also a range of risks and controls relating to other aspects such as waste. During 2021 a product stewardship audit of the primary general and hazardous waste contractor was carried out to ensure our waste products were being managed in accordance with Northparkes and regulatory requirements once they left our site. In 2022 we have a product stewardship audit planned for the copper concentrate port to ensure risks are being managed once our concentrate has left the site.

In 2020, IXM completed its registration under the European Union's regulation for the Registration, Evaluation, Authorization, and Restriction of Chemicals (REACH). In terms of product quality, IXM's sales contracts specify the elemental composition used to determine a blend plan, and the company must guarantee to provide customers with mixed concentrate that is consistent with that plan.

No breaches linked to our products in terms of health and safety, environment, labeling, or social matters were reported in 2021 that resulted in impacts to CMOC.

03 Business ethics and transparency

CMOC is committed to a high level of business ethics practices. We affirm our commitment to act with integrity at all times and to respect the laws and regulations of wherever we do business. In 2021, CMOC continued to implement its *Code of Business Conduct* and *Anti-Corruption Policy* with application to the entire group, and issued the *Anti-Money Laundering Policy* and *Global Privacy Policy* in January 2022. As stated in our *Code of Business Conduct*, “Corruption and bribery will not be tolerated and will result in disciplinary action, including termination, as well as possible civil and criminal consequences for the offending individual(s)”. CMOC annually trains employees and suppliers to abide by international and local laws and regulations that forbid bribery of government officials and others, including the United States Foreign Corrupt Practices Act, the China Anti-Corruption Law, and the United Kingdom Bribery Act. Training is mandatory for all CMOC employees deemed as occupying positions having potential for corruption risk. In 2021, due to Covid-19, CMOC continued to deliver its *Anti-Corruption Policy* and *Code of Business Conduct* training courses online for staff at the Group headquarters and our DRC and Brazilian sites. The training courses were attended by 74 personnel from CMOC headquarters, 350 from TFM, 52 from KFM, and 361 from our Brazilian operations. In addition, our China, NPM, and IXM operations conducted a range of compliance training courses, which were attended by 280 personnel from our China operations, 73 from our Australian operations, and 106 from IXM. Employees, contractors, and other stakeholders across our operations have access to CMOC's whistle-blower channel and site-level grievance systems to report any suspected cases of bribery or corruption.

In China, we have set up a dedicated disciplinary and integrity inspection department to carry out internal supervision and inspection on various ethical matters inside the company in accordance with our corporate regulations. In 2021, our China operations updated the *Interim Regulations on Improving Surveillance Measures* and *Interim Regulations on Disciplinary Measures for Management Personnel*, which strengthened measures for monitoring and responding to disciplinary offences by management personnel. We also provided legal training for managers and employees working in key positions.

At NPM, the *Business Integrity Policy* prohibits bribery and corruption in all their forms, while the *Code of Conduct* sets out provisions for the acceptance of gifts by employees, contractors, the leadership, and managers, as well as specific provisions for fraud and misconduct. In 2021, 28 personnel participated in anti-corruption training, including 14 senior management staff and 3 mid-level management staff.

CMOC Brasil's operations follow an internal compliance manual and adhere to Brazilian laws as well as their international equivalents. Every year, the Governance Department organizes integrity training to strengthen the promotion and implementation of the company's integrity policy. Employees must complete the training and pass a test to demonstrate that they have an understanding of integrity-related issues. In 2021, a total of 859 personnel attended integrity policy training, of which 650 were employees and 209 contractors.

Policies such as TFM's *Facilitation Payment Policy*, *Bribery and Extortion Policy*, *Charitable Donations Policy*, *Regulations on Business Travel Support for Government Officials*, and the *Regulations on Administrative Fees* clearly define rules for the acceptance of gifts, dining and entertainment, charitable donations, and direct support for government officials. In addition, TFM continues to be a member of the Extractive Industry Transparency Initiative (EITI) at the national level, and submits information on payments to the national treasury and other government agencies each year in accordance with EITI–DRC requirements. TFM also continues to disclose taxation payments and information on the company's operations on a quarterly basis. A TFM representative is a member of the EITI–DRC National Committee, which represents industry concerns and participates in EITI reporting projects and disclosure work.

IXM complies with the United States Foreign Corrupt Practices Act, the United Kingdom Bribery Act, and other anti-corruption laws applicable to the jurisdictions in which it operates. All stakeholders can report suspected cases of corruption anonymously via a designated email address.

In 2021, CMOC received no lawsuits against the Group pertaining to corruption, bribery, blackmail, fraud, or money laundering.



Data Overview

EMPLOYMENT	2021	2020	2019	2018	2017
Total number of employees	11,472	10,956	10,850	10,900	11,226
Total number of contractors	13,222	10,684	8,048	7,686	
Number of employees and contractors by gender					
Female	3,081	3,025	2,838	2,971	
Male	21,613	18,615	16,060	15,615	
Number of employees and contractors by age					
Under 30 years old	6,049	3,760			
30~50 years old	14,761	14,574			
Over 50 years old	3,884	3,306			
Number of employees and contractors by region					
China	6,054	6,368			
Australia	431	467			
Brazil	4,303	3,880			
DRC	13,478	10,541			
IXM	428	384			
Turnover rate					
Turnover rate of employees ^[1]	8.1%	24.2%			
Turnover rate of contractors ^[1]	22.4%				
Turnover rate of employees and contractors by gender					
Female	10.7%	9.3%			
Male	17.1%	26.6%			
Turnover rate of employees and contractors by age					
Under 30 years old	25.8%	16.4%			
30~50 years old	13.4%	19.7%			
Over 50 years old	9.8%	6.9%			
Turnover rate of employees and contractors by region					
China	7.6%	3.8%			
Australia	19.7%	14.8%			
Brazil	16.2%	32.1%			
DRC	19.8%	37.2%			
IXM	10.6%	12.0%			

SAFETY	2021	2020	2019	2018	2017
Fatalities	0	2	0	3	1
Total recordable injuries	41	52	70	60	58
TRIR	0.74	1.25	1.62	1.39	
Total lost time injuries	6	12	14		
LRIR	0.11	0.29	0.32		

TRAINING	2021	2020	2019	2018	2017
Rate of employees and contractors trained	82.5%	91.4%			
Rate of employees and contractors trained by gender					
Female	75.0%	86.0%			
Male	83.5%	92.3%			

TRAINING	2021	2020	2019	2018	2017
Rate of employees and contractors trained by job category					
Senior management	40.0%	60.3%			
Middle management	82.5%	84.0%			
Staff	82.9%	91.9%			
Training hours of employees and contractors					
Training hours of employees and contractors	20.9	28.8			
Training hours of employees and contractors by gender					
Female	38.9	13.1			
Male	18.3	31.4			
Training hours of employees and contractors by job category					
Senior management	4.0	13.0			
Middle management	25.8	57.2			
Staff	20.8	27.6			

EMISSIONS AND DISCHARGES	2021	2020	2019	2018	2017
Total greenhouse gas emissions (thousand tonnes)	920	1,030	970	980	990
Intensity of total GHG emissions (tonnes per tonne of processed ore)	0.020	0.025			
GHG emissions– scope1	360	530	480	470	500
GHG emissions– scope2	560	500	490	510	490
Total NOx emissions (thousand tonnes)	2.3	1.8	1.5	1.9	1.2
Total SOx emissions (thousand tonnes)	3.0	2.4	3.0	3.5	3.6
Total PM emissions (thousand tonnes)	6.8	5.4	4.4	4.8	4.9
Total emissions of hazardous waste (thousand tonnes)	26.0	7.0	7.0	4.0	5.2
Intensity of hazardous waste (tonnes per tonne of processed ore)	5.717x10 ⁻⁴	1.667x10 ⁻⁴			
Total emissions of non-hazardous waste (thousand tonnes)	21.0	19.0	16.0	11.4	15.3
Intensity of non-hazardous waste (tonnes per tonne of processed ore)	4.617x10 ⁻⁴	4.524x10 ⁻⁴			
Total amount of tailings and waste rock (million tonnes)	175.0	150.0	136.0	116.0	120.0
Waste rocks	132.0	111.0	98.0	78.0	82.0
Tailings	43.0	39.0	38.0	38.0	38.0

WATER CONSUMPTION	2021	2020	2019	2018	2017
Total water consumption (million cubic meters)	133.0	128.0	128.0	127.0	121.0
Intensity of water consumption (cubic meters per tonne of processed ore)	2.924	3.048			

ENERGY CONSUMPTION	2021	2020	2019	2018	2017
Total energy consumption (MWh)	3,800,000	3,290,000	3,170,000	3,080,000	2,874,000
Intensity of energy consumption (MWh per tonne of processed ore)	0.084	0.078			

COMMUNITY INVESTMENT	2021	2020	2019	2018	2017
Total (RMB millions)	194.9	156.4	207.5	308.4	166.2

SUPPLY CHAIN MANAGEMENT	2021	2020	2019	2018	2017
Total number of suppliers	5,434	4,009			
Number of suppliers by region					
Asia	794	648			
Africa	1,835	1,582			
South America	1,464	814			
North America	419	420			
Europe	171	152			
Oceania	751	393			

Note:

[1] The turnover rate of employees and contractors has been broken down to reflect actual situation.

Standards and methodologies used in calculation:

1、Greenhouse gases include carbon dioxide, methane, nitrous oxide and sulfur hexafluoride. The data calculation was based on the *Greenhouse Gas Emission Accounting Methodology and Reporting Guidelines for Mining Companies (for Trial Implementation)* issued by the National Development and Reform Commission of China, the *Greenhouse Gas Equivalencies Calculator* issued by the U.S. Environmental Protection Agency, the *National Greenhouse and Energy Reporting Scheme* issued by the Australian Department of Environment and Energy, and the *2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories* issued by the United Nations Intergovernmental Panel on Climate Change.

Scope 2 GHG is calculated by region based on the average CO₂ emission factors of China's regional power grids published by the National Development and Reform Commission of China, the *National Greenhouse and Energy Reporting Scheme* published by the Australian Department of Environment and Energy, and the average CO₂ emission factors published by the Brazilian Ministry of Science, Technology, Innovation and Communication.

2、NO_x、SO_x、PM data sources were monitoring systems installed or third-party commissioned for monitoring. The calculation was based on factors from the *EMFAC-HK Vehicle Emission Calculation* issued by the Hong Kong Environmental Protection Department, the *Technical Air Pollution Resources* issued by the U.S. Environmental Protection Agency, the *National Pollutant Inventory* issued by Australia and the DRC, and the *2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories* issued by the United Nations Intergovernmental Panel on Climate Change.

3、The Hazardous waste was classified according to "hazardous waste" as stipulated in the *Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal* as mentioned in the *Guidelines on Reporting of Environmental Key Performance Indicators* published by the HKEX. The data sources were the relevant records and ledgers.

4、The non-hazardous waste was all waste that does not fall within the definition of "hazardous waste" of the *Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal*. The data sources were the relevant records and ledgers.

5、Water consumption: the data sources were monitoring systems installed or third parties commissioned for monitoring.

6、Energy consumption: the calculation was based on purchased electricity and fuel consumption, with relevant conversion factors provided by the *National Greenhouse and Energy Reporting Scheme* issued by the Australian Department of Environment and Energy and those issued by the International Energy Agency.

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HKEX ESG Reporting Guide	Description	Location/Remarks
A.Environment		
Aspect A1 Emission		
General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to air and greenhouse gas emissions, discharges into water and land, and generation of hazardous and non-hazardous waste	Environment
KPI A1.1	The types of emissions and respective emissions data	Environment
KPI A1.2	Greenhouse gas emissions in total (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility)	Environment
KPI A1.3	Total hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility)	Environment
KPI A1.4	Total non-hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility)	Environment
KPI A1.5	Description of emission target(s) set and steps taken to achieve them	Environment
KPI A1.6	Description of how hazardous and non-hazardous wastes are handled, and a description of reduction target(s) set and steps taken to achieve them.	Environment
Aspect A2: Use of Resources		
General Disclosure	Policies on the efficient use of resources, including energy, water and other raw materials Note: Resources may be used in production, in storage, transportation, in buildings, electronic equipment, etc.	Environment
KPI A2.1	Direct and/or indirect energy consumption by type (e.g. electricity, gas or oil) in total (kWh in '000s) and intensity (e.g. per unit of production volume, per facility)	Environment
KPI A2.2	Water consumption in total and in intensity (e.g. per unit of production volume, per facility)	Environment
KPI A2.3	Description of energy use efficiency target(s) set and steps taken to achieve them.	Environment
KPI A2.4	Description of whether there is any issue in sourcing water that is fit for purpose, water efficiency target(s) set and steps taken to achieve them.	Environment
KPI A2.5	Total packaging material used for finished products (in tonnes) and, if applicable, with reference to per unit produced	Not mentioned: this is not a material issue for CMOC.
Aspect A3: The Environment and Natural Resources		
General Disclosure	Policies on minimising the issuer's significant impact on the environment and natural resources	Environment
KPI A3.1	Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them	Environment
Aspect A4: Climate Change		
General Disclosure	Policies on identification and mitigation of significant climate-related issues which have impacted, and those which may impact, the issuer.	Environment
KPI A4.1	Description of the significant climate-related issues which have impacted, and those which may impact, the issuer, and the actions taken to manage them.	Environment

B.Social**Aspect B1: Employment**

General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to compensation and dismissal, recruitment and promotion, working hours, rest periods, equal opportunity, diversity, anti-discrimination, and other benefits and welfare.	Employees
KPI B1.1	Total workforce by gender, employment type, age group and geographical region	About CMOC; Employees
KPI B1.2	Employee turnover rate by gender, age group and geographical region	Employees; Data overview

Aspect B2: Health and Safety

General Disclosure	Information on: (a) policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to providing a safe working environment and protecting employees from occupational hazards.	Employees
KPI B2.1	Number and rate of work-related fatalities occurred in each of the past three years including the reporting year.	Data overview
KPI B2.2	Lost days due to work injury	Employees
KPI B2.3	Description of occupational health and safety measures adopted, how implemented and monitored	Employees

Aspect B3: Development and Training

General Disclosure	Policies on improving employees' knowledge and skills for discharging duties at work. Description of training activities	Employees
KPI B3.1	Percentage of employees trained by gender and employee category (e.g. senior management, middle management)	Employees
KPI B3.2	Average training hours completed per employee by gender and employee category	Employees; data overview

Aspect B4: Labour Standards

General Disclosure	Information on: (a) policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to preventing child and forced labour	Employees; Product
KPI B4.1	Description of measures to review employment practices to avoid child and forced labour	Employees
KPI B4.2	Description of steps taken to eliminate such practices when discovered	Employees

B.Social**Aspect B5: Supply Chain Management**

General Disclosure	Policies on managing environmental and social risks of the supply chain	Product
KPI B5.1	Number of suppliers by geographical region	Product
KPI B5.2	Description of practices relating to engaging suppliers, number of suppliers where the practices are being implemented, how implemented and monitored	Product
KPI B5.3	Description of practices used to identify environmental and social risks along the supply chain, and how they are implemented and monitored.	Product
KPI B5.4	Description of practices used to promote environmentally preferable products and services when selecting suppliers, and how they are implemented and monitored.	Product

Aspect B6: Product Responsibility

General Disclosure	Information on: (a) policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to health and safety, advertising, labelling and privacy matters relating to products and services provided and methods of redress	Product
KPI B6.1	Percentage of total products sold or shipped subject to recalls for safety and health reasons	Not mentioned: this is not a material issue for CMOC.
KPI B6.2	Number of products and service-related complaints received and how dealt with	Not mentioned: this is not a material issue for CMOC.
KPI B6.3	Description of practices relating to observing and protecting intellectual property rights	Not mentioned: this is not a material issue for CMOC.
KPI B6.4	Description of quality assurance process and recall procedures	Product
KPI B6.5	Description of consumer data protection and privacy policies, how implemented and monitored	Not mentioned: this is not a material issue for CMOC.

Aspect B7: Anti-corruption

General Disclosure	Information on: (a) policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to bribery, extortion, fraud and money laundering	About CMOC; Product
KPI B7.1	Number of concluded legal cases regarding corrupt practices brought against the issuer or its employees during the reporting period and the outcomes of the cases	Product
KPI B7.2	Description of preventive measures and whistle-blowing procedures, how implemented and monitored	Product
KPI B7.3	Description of anti-corruption training provided to directors and staff	Product

Aspect B8: Community

General Disclosure	Policies on community engagement to understand the needs of the communities where the issuer operates and to ensure its activities take into consideration the communities' interests	Community
KPI B8.1	Focus areas of contribution (e.g. education, environmental concerns, labour needs, health, culture, sport)	Community
KPI B8.2	Resources contributed (e.g. money or time) to the focus area	Community

Index II — GRI Content Index

GRI Standard Title	Description	Location/ Remarks
GRI 100: Universal Standards		
GRI 102: General Disclosures		
Organizational Profile		
102-1	Name of the organization	About this Report
102-2	Activities, brands, products, and services	About CMOC
102-3	Location of headquarters	About CMOC
102-4	Location of operations	About CMOC
102-5	Ownership and legal form	About CMOC
102-6	Markets served	About CMOC
102-7	Scale of the organization	About CMOC
102-8	Information on employees and other workers	About CMOC, Employees
102-9	Supply chain	About CMOC, Product
102-10	Significant changes to the organization and its supply chain	About CMOC, Product
102-11	Precautionary Principle or approach	Management Approach, Environment, Community, Employees
102-12	External initiatives	About CMOC
102-13	Membership of associations	About CMOC
Strategy		
102-14	Statement from senior decision-maker	Message from the Chairman
Ethics and Integrity		
102-16	Values, principles, standards, and norms of behavior	Management Approach
Governance		
102-18	Governance structure	Management Approach
Stakeholder Engagement		
102-40	List of stakeholder groups	Management Approach, Community
102-41	Collective bargaining agreements	Management Approach, Employees
102-42	Identifying and selecting stakeholders	Management Approach
102-43	Approach to stakeholder engagement	Management Approach
102-44	Key topics and concerns raised	Management Approach
Reporting Practice		
102-45	Entities included in the consolidated financial statements	CMOC Annual Report 2021 About CMOC
102-46	Defining report content and topic Boundaries	About this Report
102-47	List of material topics	Management Approach
102-48	Restatements of information	About CMOC
102-49	Changes in reporting	About this Report
102-50	Reporting period	About this Report
102-51	Date of most recent report	March 18, 2022
102-52	Reporting cycle	About this Report
102-53	Contact point for questions regarding the report	CMOC Board Office
102-54	Claims of reporting in accordance with the GRI Standards	About this Report

GRI 100: Universal Standards**Reporting Practice**

102-55	GRI content index	Index II
102-56	External assurance	Management Approach Assurance statement

GRI 200: Economic**GRI 103: Management Approach**

103-1	Explanation of the material topic and its Boundary	Management Approach
103-2	Management approach and its components	Management Approach
103-3	Evaluation of management approach	Management Approach

GRI 201: Economic Value Generated and Distributed

201-1	Direct economic value generated and distributed	About CMOC
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GRI 203: Indirect Economic Impacts

203-1	Infrastructure investments and services supported	Community
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GRI 204: Procurement Practices

204-1	Proportion of spending on local suppliers	Product
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GRI 205: Anti-corruption

205-3	Confirmed incidents of corruption and actions taken	Product
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GRI 300: Environment**GRI 103: Management Approach**

103-1	Explanation of the material topic and its Boundary	Management Approach Environment
103-2	The management approach and its components	Management Approach Environment
103-3	Evaluation of the management approach	Management Approach Environment

GRI 301: Materials

301-1	Materials used by weight or volume	Not mentioned: this is not a material issue for CMOC.
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GRI 302: Energy

302-1	Energy consumption within the organization	Environment
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GRI 303: Water

303-1	Water withdrawal by source	Environment
303-3	Water recycled and reused	Environment

GRI 304: Biodiversity

304-2	Significant impacts of activities, products, and services on biodiversity	Environment
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GRI 305: Emissions

305-1	Direct (Scope 1) GHG emissions	Environment
305-2	Energy indirect (Scope 2) GHG emissions	Environment
305-4	GHG emissions intensity	Environment
305-7	Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	Environment

GRI 306: Effluents and Waste

306-2	Waste by type and disposal method	Environment
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GRI 307: Environmental Compliance

307-1	Non-compliance with environmental laws and regulations	Environment
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GRI 308: Supplier-Environmental-Assessment

308-1	New suppliers screened using environmental criteria	Product
308-2	Negative environmental impacts in supply chain and actions taken	Product

GRI 400: Social

GRI 103: Management Approach

103-1	Explanation of the material topic and its Boundary	Management Approach, Employees, Community, Product
103-2	Management approach and its components	Management Approach, Employees, Community, Product
103-3	Evaluation of management approach	Management Approach, Employees, Community, Product

GRI 402: Labor Management Relations

402-1	Minimal notices regarding operational changes	Employees
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GRI 403: Occupational Health and Safety

403-2	Types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities	Employees
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GRI 404: Training and Education

404-2	Programs for upgrading employee skills and transition assistance programs	Employees
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GRI 407: Freedom of Association and Collective Bargaining

407-1	Operations and suppliers where the right to freedom of association and collective bargaining may be at risk	Employees
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GRI 408: Child Labor

408-1	Operations and suppliers at significant risk for incidents of child labor	Employees, Product
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GRI 409: Forced or Compulsory Labor

409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	Employees, Product
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GRI 410: Security Practices

410-1	Security personnel trained in human rights policies or procedures	Community, Product
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GRI 412: Human Rights Assessment

412-1	Operations that have been subject to human rights reviews or impact assessments	Community
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GRI 413: Local Communities

413-1	Operations with local community engagement, impact assessments, and development programs	Community
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GRI 414: Supplier Social Assessment

414-1	New suppliers screened using social criteria	Product
414-2	Negative social impacts in supply chain and actions taken	Product

GRI 416: Customer Health and Safety

416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	Product
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GRI 417: Marketing and Labeling

417-1	Requirements for product and service information and labelling	Product
417-2	Incidents of non-compliance concerning product and service information and labelling	Product

Assurance Statement: Product Control and Custody at TFM

The management of Tenke Fungurume Mining S.A. (TFM), asked Corporate Integrity Ltd to review product control and custody procedures at the TFM concession in the Democratic Republic of Congo (DRC) and to provide assurance over the following statement:

“Tenke Fungurume Mining S.A. (TFM), an industrial copper and cobalt mine in southeastern DRC and an affiliate of CMOC, is committed to apply a duty of care in product stewardship commensurate with the concerns of its customers in the international minerals supply chain.

TFM implements robust product control and custody procedures to ensure that it mines, processes and sells only those minerals that originate within its mining concession and that are mined by its own operations. These procedures include specific actions to dispose of illegally mined ore confiscated by government authorities within the TFM concession. TFM does not purchase or process ore from any other source. TFM maintains a system to track the copper and cobalt products produced at its operations through the points of transfer, and to the final point of delivery to its customers.

TFM is implementing policies and procedures to meet the requirements of the Responsible Minerals Initiative’s Risk Readiness Assessment (RRA) and OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas Annex 1 and 2 (OECD DD). This implementation is a demonstration of the company’s commitment to a responsible mining operation and supply chain, further aligning with other international good practice frameworks that seek elimination of child labor, forced labor and gross violations of human rights.

Due to the importance of monitoring and maintaining these procedures in managing TFM’s mineral supply chain, TFM engages independent assurance of the company’s product control and custody procedures.”

Our approach involved

- Confirmation that procedures in place at the operation for control, custody and tracking of product are materially the same as procedures reviewed and validated on site in multiple years prior to COVID19; and
- Confirmation that procedures in place at the operation for the confiscation and disposal of illegally mined ore in the area are materially the same as procedures reviewed and validated on site in multiple years prior to COVID19.
- Site visits to physically verify the current practice of these procedures. However, health risks and travel restrictions did not permit ground truthing of the above statement for the 2021 year before the publication date of this report. At the time of publication, a site visit had been scheduled for April 2022 at which a site-based verification will be conducted.

Our Findings

Based on our review, its scope and limitations, nothing has come to our attention that prevents us from concluding that TFM’s assertions in the above statement are fair and reasonable.

Limitations of the Work Performed

This work has been carried out by checking samples of information and documents that have been made available during the period of assurance activity by TFM. Our evidence gathering procedures have been designed to obtain a limited level of assurance on which to base our conclusions. Corporate Integrity excludes any liability, including liability for negligence, for any loss, including indirect or consequential damages arising from or in relation to the use of the information contained in this report.

Statement of Independence

The independence of our team has been reviewed and none of the Corporate Integrity Ltd. assessors involved in this project presents a conflict of interest to the integrity of this assurance statement.

Standard Applied to This Engagement

International Standard on Assurance ISAE3000 (revised) – Assurance Engagements other than Audits & Reviews of Historical Financial Information’ issued by the International Auditing and Assurance Standards Board (IAASB).

David Shirley (Director) and Raj Aseervatham (Director)

15th March 2022

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ASSURANCE STATEMENT

The CMOC Environmental Social and Governance (ESG) Report for 2021 has been prepared by the management of China Molybdenum Co. Ltd. (CMOC), who are responsible for the collection and presentation of this information.

Scope

Corporate Integrity Ltd., in accordance with CMOC management's instructions, was asked to perform:

1. A review of policies and systems in place at the CMOC's international operations in relation to CMOC's commitment to align with the Responsible Minerals Initiative's Risk Readiness Assessment (the RRA). The operations covered by this review were the TFM operations in the Democratic Republic of Congo, the Northparkes operations in Australia; and the CMOC Brasil operations.
2. A gap review of IXM's policies and processes for responsible procurement of minerals in relation to CMOC's commitment to align with the OECD guidelines.
3. A review of statements in relation to the above operations made in the CMOC ESG Report covering the 2021 reporting year.

This included selected corporate activities relating to the above sites. All other operations are excluded from the scope of this assurance statement.

Key Findings

Based on our review, its scope and limitations, nothing has come to our attention which causes us to believe:

- That the policies and systems in place at the international operations are not in material alignment with the RRA.
- That the information reported relating to the international operations in the CMOC ESG Report for 2021 and the related have been materially mis-stated.

Methodology

The assurance process involved selective reviews of documents submitted for each international operation and corporate, and interviews with corporate personnel. It focused specifically on:

1. A review of CMOC policies and their coverage of and alignment with the RRA.
2. A review of processes in place to identify and prioritise ESG risks and opportunities during the reporting period, and the results of that process.
3. A review of the systems and approaches that CMOC is using to manage its identified material ESG risks and opportunities.
4. A review of statements and assertions made in the CMOC ESG Report for 2021.

At the time of the printing of this report, COVID19 health risks and travel restrictions had resulted in the temporary deferral of site assessments at the operations listed in the scope, scheduled for completion by mid-2022.

Limitations of the Work Performed

This work has been carried out by checking samples of information and documents that have been made available during the period of assurance activity by CMOC. Where such information was deemed independently verified by other third parties commissioned by CMOC, this was not subjected to re-verification by Corporate Integrity Ltd. Our procedures have been designed to obtain a limited level of assurance upon which to base our conclusions, and our assurance findings are conditional upon fact-checking at sites. Corporate Integrity excludes any liability, including liability for negligence, for any loss, including indirect or consequential damages arising from or in relation to the use of the information contained in this report.

Statement of Independence

The independence of our team has been reviewed and none of the Corporate Integrity Ltd. assessors involved in this project presents a conflict of interest to the integrity of this assurance statement.

Standard Applied to This Engagement

International Standard on Assurance ISAE3000 (revised) - Assurance Engagements other than Audits & Reviews of Historical Financial Information' issued by the International Auditing and Assurance Standards Board (IAASB).

David Shirley (Director) and Raj Aseervatham (Director)

15th March 2022

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