



洛阳钼业

2019 Environmental Social and Governance Report



This photo was taken in the reclamation area of CMOC's Chinese operations.

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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 from January 1, 2019 to December 31, 2019. For more information about the company, please refer to the 2019 Annual Report issued by the company on the Shanghai Stock Exchange and the Hong Kong Stock Exchange.

The development of the report is based on the *Environmental Information Disclosure Guide* issued by the Shanghai Stock Exchange (SSE) in August 2008 and the *Environmental, Social and Governance Reporting Guide* (HK-Ex Reporting Guide), including conformance with the latter's "comply or explain" provisions, as published by Hong Kong Exchanges and Clearing Limited (HK-Ex) in December 2015. Information and data in the report come from official documents and statistics reports from CMOC as well as summaries and statistics provided by its affiliates. IXM, which was fully acquired by the company in July 2019, is not included in this report.

Data and information in this report reflect a reporting period of January 1, 2019 to December 31, 2019. Additional information that is relevant to the subject matter of this report and derived from events in 2020 prior to the publication date may also be included to ensure that investors have full access to material information. Any reports from 2020 are identified as they occur in the text. Please note that as a result of methodology changes or corrections, data from previous years may be updated. We encourage users of this report to contact our sustainability department for enquiries (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) and 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. In 2019, CMOC reviewed and updated its compliance and sustainability policies applicable to the whole group¹, including 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*. The sustainability policies mentioned in this report are applicable to CMOC and all of its directly or indirectly controlled or majority-owned subsidiaries. These policies can be found on and downloaded from the official website of the company (www.cmoc.com). In addition, the company has also integrated its sustainability functions at the executive level, which will be described in detail in the Governance section of this report. As in 2018, our external assurance this year still covers all three international mining sites (including Tenke Fungurume Mining in the Democratic Republic of the Congo, Copebras and Niobras in Brazil, and Northparkes in Australia).

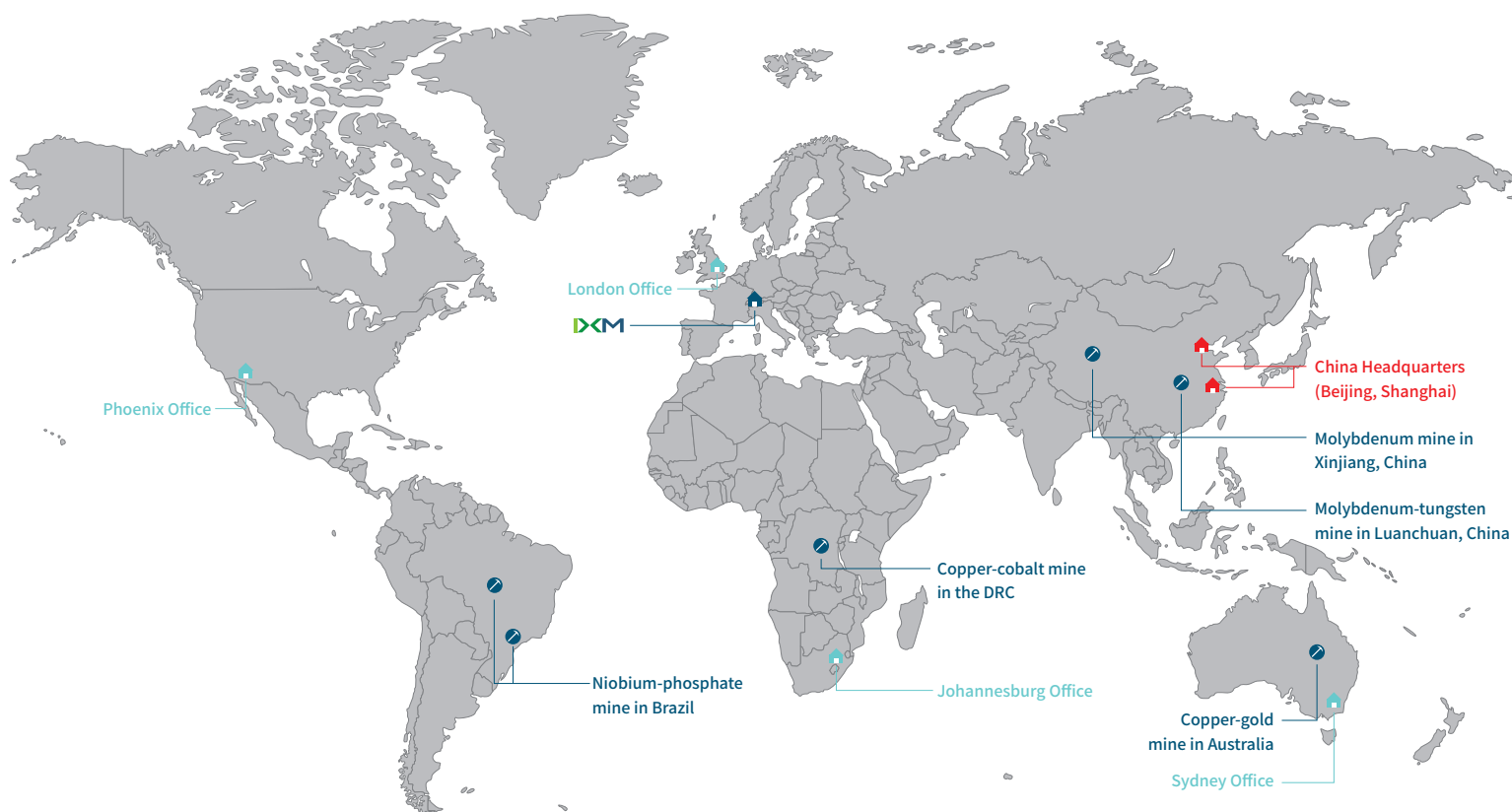
Global Reporting Initiative (GRI)

As in 2018, in addition to addressing disclosure requirements of the SSE and HK-Ex 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 mining operations. Some disclosures common to the HK-Ex Reporting Guide and GRI Standards come from the document *Linking the GRI Standards and HKEX ESG Reporting Guide*. Indexes to the HK-Ex ESG and the GRI content of this report are appended.

Cautionary Statement

This report includes forward-looking statements. All statements in this report, dated 27 March 2020, 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. The company's actual results or developments may differ materially from those indicated by these forward-looking statements because of various factors and uncertainties. The company undertakes no obligation or responsibility to update these statements, and do not constitute the company's substantive undertakings to investors. Investors are advised to pay attention to investment risks.

1. Some policies are promulgated in February, 2020.



About CMOC

China Molybdenum Co., Ltd., with headquarters in the People's Republic of China, specializes in the mining and trading of base and rare metals in the world. With its main business present in five continents: Asia, Africa, South America, Oceania and Europe, the company is one of the largest tungsten producers, the second largest cobalt and niobium producer, one of the top five molybdenum producers and a leading copper producer in the world. It is also the second largest producer of phosphatic fertilizers in Brazil. In terms of trading business, the company is among the third biggest non-ferrous metals merchants in the world. It is listed on the Shanghai Stock Exchange (SHA: 603993) and HKEx (HKEX: 03993).

The company's vision is to become the most respected international resources company. It focuses on building a corporate culture that features meritocracy, cost control, continuous improvement, and achievement sharing. The corporate strategies include: maintaining and strengthening competitive cost advantages of existing business; continuously managing and optimizing the balance sheet; creating synergy while ensuring stable domestic and overseas operations; focusing on value creation and structural and growth pattern transformation, continuing to acquire, develop and invest in resources projects.

As of December 31, 2019, the main mining assets of the company are located in the Democratic Republic of the Congo (DRC), China, Brazil, and Australia. The metal trading business covers 62 countries worldwide.

Tenke Fungurume Mining (TFM) in the Democratic Republic of the Congo. CMOC holds 80% equity in TFM, which engages in exploration, mining, processing, refining, and selling copper and cobalt in a mining concession that covers nearly 1,600 sq. km. Its products are copper cathode and cobalt hydroxide. TFM operates a large, high-grade copper deposit that also hosts one of the largest, high-grade cobalt deposits in the world.

Sandaozhuang Molybdenum and Tungsten mine in China. CMOC has the highest molybdenum-iron and molybdenum oxide production capacity in China. The Sandaozhuang Molybdenum and Tungsten Mine, wholly owned and operated by the company, has very large primary deposits of molybdenum and tungsten. CMOC is a very competitive, low cost producer of these metals.

Copebras Indústria Ltda ("CIL") and Niobras Mineração Ltda ("NML", both together called "CMOC Brasil") in Brazil. CMOC indirectly holds 100% equity in the phosphate business of CIL, which is the second largest producer of phosphate fertilizer in Brazil. CMOC indirectly holds 100% equity in the niobium business of NML, which is the world's second largest niobium manufacturer and engages in exploiting and processing niobium minerals. Its main product is ferroniobium.

Northparkes Copper and Gold Mine ("NPM") in Australia. The company also holds 80% equity in NPM, which utilizes advanced, fully automated extraction processes associated with the active block cave to produce copper concentrate and gold as by-product.

IXM headquartered in Switzerland. The company completed the acquisition of 100% of IXM's equity in July 2019. IXM is a top tier global non-ferrous metals merchant. Operating in more than 62 countries, IXM focuses on the merchandizing of copper, zinc, lead and precious metals concentrates as well as refined copper, zinc, aluminum and nickel. IXM's data are not included in this ESG report.

CMOC applies the PRC Generally Accepted Accounting Principles when consolidating information in its annual report. At the close of the reporting period there were 10,850 employees at our mining operations and corporate management sites, as well as 8,048 contractors at those same sites. Of this total of 18,898 personnel, 16,060 were male and 2,838 (approximately 15%) female.

External Initiatives

CMOC is a member of the Chairing Bureau of the China Mining Association, a member of the Executive Standing Committee of the China Nonferrous Metals Industry Association, and a member of the China Chamber of Commerce of Metals Minerals & Chemicals Importers & Exporters (CCCCMC). CMOC is also member of the Cobalt Institute, a non-profit trade association that is active in promoting sustainable sourcing and use of cobalt products.

| Product | Production Volume |
|---|-------------------|
| Copper metal, TFM (tonnes) | 177,956 |
| Copper metal, NPM (based on 80% equity interest) (tonnes) | 28,591 |
| Molybdenum metal (tonnes) | 14,918 |
| Tungsten metal (tonnes) | 10,722 |
| Cobalt metal (tonnes) | 16,098 |
| Niobium metal (tonnes) | 7,489 |
| Phosphate fertilizers (HA+LA) (tonnes) | 1,097,623 |
| Gold, NPM (based on 80% equity interest) (ounces) | 19,781 |

Production data from each of the operating sites as summarized on the left is provided in the CMOC annual report, which also contains consolidated financial statements of the company.

The table below provides a summary of CMOC's key economic contributions :

| FOR THE YEAR ENDED | | | | | | |
|--|---------|---------|---------|-----------|-----------------|--------|
| December 31, 2019(RMB MILLIONS) | CHINA | AFRICA | BRAZIL | AUSTRALIA | Other COUNTRIES | TOTAL |
| Payment to suppliers | 6,783.2 | 4,808.9 | 3,200.8 | 614.6 | 103.8 | 15,511 |
| Employee wages and benefits | 647.2 | 771.1 | 377.0 | 141.1 | 2 10.2 | 2,147 |
| Payment to providers of capital: | 3,640.4 | 11.1 | - | 71.4 | - | 3,723 |
| Dividends | 2,333.4 | - | - | - | - | 2,333 |
| Interest | 1,307 | 11.1 | - | 71.4 | - | 1,390 |
| (Refunds from) payments to governments | 1,083.1 | 2,885.3 | 892.4 | 41.4 | 63.0 | 4,965 |
| Community investments | 7.0 | 177.7 | 21.1 | 1.7 | - | 208 |
| Direct economic contributions | 12,161 | 8,654 | 4,491 | 870 | 377 | 26,346 |

Message from the Chairman of the Board of Directors

For CMOC, the year of 2019 was full of challenges. Escalating trade and geopolitical tensions have increased the uncertainty of the global economy, imposing negative impact on business confidence, investment decisions and globalization. In this context, CMOC adheres to its corporate culture of "meritocracy, cost control, continuous improvement and achievement sharing", identifying cost reduction opportunities while firmly pushing forward on the blueprint of sustainable development, and stepping further towards the vision of "growing into the most respected international resources company".

As an international resources company with business presence on five continents, we are facing varied challenges and risks due to different natural, socio-economic, cultural and regulatory environments where we operate. In recent years, the international community and host countries have put forward higher expectations and regulatory requirements for mining companies in aspects like environment, tailings, health and safety and responsible supply chain. Therefore, only by developing capacities, learning from good international practices and improving management skills, can we maintain our core competitiveness.

In 2019, according to the requirement and overall plan of the Board, its Strategy and Sustainability Committee and its Audit and Risk Committee, we reviewed and updated eight compliance and sustainability policies applicable to the whole group, which provide policy guidelines for all business segments. We set up a cross-departmental Sustainability Executive Committee with an eye to implement the Board's decisions and the Company's sustainability strategies at the executive level. In terms of health and safety, we realized zero fatalities. On environmental management, we refreshed our performance in greenhouse gas emissions and exhaust emissions compared with 2018. As for social responsibility, we continued to push forward active community investment (aide) policies, with a total investment of over RMB200 million in livelihood, health care, education, agriculture, infrastructure, resettlement, etc. In 2019, the total of CMOC's key economic contributions reached over RMB26 billion.

The COVID-19 pandemic broke out in China around early 2020 and is now spreading around the world. The management of the Company took immediate measures to actively coordinate the epidemic prevention work of all operations around the world, suspending all business travels involving China, adjusting working patterns, and closely tracking the health status of all employees. Overseas teams of the Company also mobilized manpower and resources to provide protective supplies to China at the early stages of the outbreak. Here I would like to thank all employees of the Company for their solidarity and mutual support to jointly guard the health and safety of everyone in the CMOC family.

This pandemic also tells us that sustainability risks sometimes arise like "black swan events". If we didn't raise awareness and carry out effective management, they would eventually affect the operation of the entire organization. Looking forward to 2020, the Company will continue to firmly implement the strategy of sustainable development, and continuously improve its risk management system to build a resilient enterprise; we will also continue to assume social responsibilities and share the fruits of development with our shareholders, investors, employees, community residents, host governments and all other stakeholders.

Finally, I would like to extend my sincere appreciation to all the employees of the Company for their hard work, and our shareholders, local governments and communities for their great support. I also want to express my thanks to our clients and partners for their trust. I would like to invite all stakeholders to join us and witness the future development of the Company.



Steele Li Chaochun
Chairman of the Board of Directors
Beijing, China
27 March 2020

Management Approach

As a company at the early stages of 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. Being a mining company controlled by private capital, we are facing increasing expectations and regulatory requirements in environment, tailings, health and safety, responsible supply chains and other areas. We must assume our responsibilities, minimize the impacts of our operations, and share the benefits of our activities with host countries and local communities. In this regard, we keep learning from international good practices and are continually improving the company's sustainability governance framework.

In 2019, CMOC engaged an internationally renowned law firm to review and update the compliance and sustainability policies applicable to the entire group. These policies include reference to international best practice frameworks, including: the sustainable development principles of the International Council on Mining and Metals (ICMM), International Finance Corporation (IFC)'s Environmental and Social Performance Standards, International Labor Organization (ILO) Conventions, International Charter of Human Rights, United Nations Guiding Principles on Business and Human Rights (UNGPs), Voluntary Principles on Security and Human Rights (VPSHR) and OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas (OECD guidance). These policies are signed by the Chairman of the Board of Directors and published on the company's website. Prior to this, the company's previous sustainability policies only applied to three international mining sites. After the update, the new policy framework covers the CMOC group and all of its directly or indirectly controlled or majority-owned subsidiaries. This is an important milestone in our journey to creating a unified sustainability management framework.

In 2019, the Group Senior Executives received a series of compliance and sustainability training provided by an international law firm, including anti-bribery and anti-corruption, sanctions and export controls, business and human rights, and environmental risks. All the directors of the Board and supervisors also reviewed the training materials.

External Assurance and Audits

In 2019 we continue to seek external assurance on implementation of the 10 sustainable development principles of the ICMM to all of our 3 international mining sites, as well as to progress on alignment with these principles by the Group management entity. CMOC has retained the services of Corporate Integrity, Ltd. for this purpose. Their assurance statements can be found annexed to this report.

In addition, given that the expectations of external stakeholders have been evolving in recent years, in 2019 TFM also conducted a self-evaluation against OECD Guidance and Responsible Minerals Initiative's Risk Readiness Assessment (RRA). This exercise was reviewed by our assurance provider.

All our 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 OSHAS18001.

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 Remuneration Committee. The Strategic and Sustainability Committee is responsible for formulating the company's sustainability strategy, reviewing non-financial material risks and reporting on these matters to the full board, and discussing with management the adequacy of measures in the identification and management of sustainability related material risks.

The Chairman of the Board of Directors and the Group Senior Executives are located in the company headquarters in China. Material sustainability matters are addressed at the senior executive level through the Board Secretary function. In September 2019, the company established the Sustainability Executive Committee, which is responsible for implementing the decisions of the Board and the company's sustainability strategies at the executive level. The committee is responsible to the Strategic and Sustainability Committee of the Board and reports its work directly to the Board Secretary. Its main responsibilities, including formulation of key policies, identification and management of sustainable risks, are described in detail in its *Detailed Working Rules of the Sustainability Executive Committee*. Users of this report can contact the CMOC sustainability team for more details about the Working Rules. The Sustainability Executive Committee is a multifunctional organization with current members nominated from the Board Office, HSE, Internal Control, Legal, Global Supply Chain, Human Resources and Business Development departments. The establishment and functioning of this committee also constitutes an important step in CMOC's continuous efforts to improve its sustainability governance framework.

CMOC Values

Our *Code of Business Conduct (CBC)*, *Anti-Corruption Policy* and *Supplier Code of Conduct* address CMOC positions on business ethics, including anti-corruption and conflicts of interest, as well as the promotion of safe and healthy workplaces. All staff are required to undergo regular compliance training on the CBC and the 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; and provide guidance for acting on that obligation, including use of the company's whistleblower channel.

Management of Sustainability Risks

With its operations spanning five continents, CMOC must meet the sustainability related challenges of the varying natural, social and human environments. Our NPM operation, located in a developed country, is regulated by a strict legal framework. NPM's main sustainability risk is the arid climate and its impact on mining activities and local communities. The Chinese and Brazilian operations are both in developing countries and face constantly evolving and tightening regulatory frameworks, such as environmental regulations in China and tailings regulations in Brazil, which is challenging in terms of compliance. The TFM operations choose to comply with international standards in areas where local laws and regulations are weak or missing. But the low level of socio-economic development and the weak infrastructure have always been challenging for industrial business operations. In recent years, the significant influx of migrants into the region has caused increasing pressure associated with artisanal mining and community development. In addition, international attention on the cobalt supply chain in the DRC has also resulted in greater scrutiny from external stakeholders where responsible supply is concerned.

Facing these various sustainability risks, the company at the corporate level and all its international sites maintain risk registers that address material business risks, including sustainability matters. These risks are incorporated into operational management processes through the development and implementation of action plans for the highest ranked risks. Risk registers undergo regular review by corporate and site management leadership, driving any corresponding updates to risk ranking and accompanying action plans and procedures. The corporate risk register is regularly presented to the Audit and Risk Committee of the Board for deliberation. In 2019, the CMOC sustainability team organized risk management training for TFM's new leadership in order to maintain and enhance TFM's sustainability governance capabilities.

Our materiality assessments, stakeholder engagement, grievance mechanisms and risk registers are processes that inform us of the effectiveness of our management systems.

Materiality

Materiality assessment is the process through which an organization determines the most important issues that reflect its impacts on stakeholders, the economy, the environment and society; as well as material risks to CMOC's business in terms of assuring access to capital, finance, markets and resources. In accordance with the HK-Ex 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 on site, 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 further identified in the table below. Material issues resulting from this information were then prioritized in a materiality matrix and vetted by the Sustainability Executive Committee, with the following results.

► Highly Material

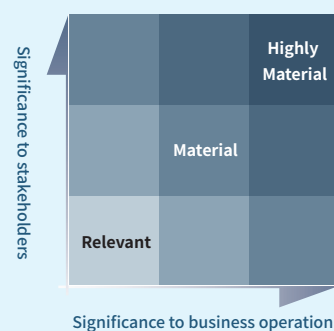
- Business ethics & transparency
- Employee health & safety
- Security & human rights
- Product stewardship
- Tailings Management
- Community relations
- Economic value generated
- Labor relations/workforce retention
- Closure planning/reclamation
- Water
- Financial performance
- Materials sourcing

► Material

- Biodiversity
- Energy
- GHG emissions
- Air quality

► Relevant

- Waste



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 engagement with our neighbors at the operating sites are described in the Community section of this report. Information on relations with stakeholders in the wider sense 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 building | <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 Workplace health and safety Benefits to stakeholder communities | <ul style="list-style-type: none"> Compliance reports Site visits and inspections Permit applications Meetings on compliance matters |
| Investors and Financial Institutions | <ul style="list-style-type: none"> Protect the rights and interests of shareholders Timely disclosures of relevant and accurate information Improve corporate governance Conduct 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 Employment Opportunities to furnish goods and services | <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"> Local development investment Participation in local community programs Environmental stewardship Human rights performance 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 | <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 community concerns and compliance issues, including environmental, community investment, human rights, land use and recruitment concerns. We have a whistleblower channel on our website through which we are able to receive reports and complaints against CMOC and its subsidiaries. The group's compliance team, consisting of members from the legal/compliance and the sustainability departments, is responsible for logging, tracking and resolving these complaints. All sites also maintain grievance systems that can receive and register concerns from employees, community and other stakeholders, which are then tracked through the 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, and a "Community Complaints Register" is updated on a monthly basis on the NPM website. 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. At our operations in Brazil employee and community grievances are received and addressed through a structured management system, which tracks, resolves and then gives feedback to complainants. Community grievances at our Sandaozhuang mining and processing site 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 visits.

In 2019 our sites received a combined 803 reported grievances and closed a combined total of 630. Of these totals approximately 96.5% were associated with the TFM operations. Of the TFM reported grievances approximately 80% were in the environment and resettlement category, which are further linked to the site's land acquisition and compensation processes. Land acquisition, including incidental damages associated with the mine's operations, may result in both legitimate as well as many opportunistic grievances. Another 20% in TFM's grievances were damages related to exploration, mine construction activities and environmental issues. TFM's community team is working jointly with Mine Development, geology teams and contractors to set up action plans in order to reduce the number of such grievances in the future.

| Reported Grievances | | | | | | | | | | | |
|---------------------|--------------|-------------|------------|---------|------------------|---------------|--------------|----------|------|-------|-------|
| Sites | Resettlement | Environment | Employment | Damages | Social/Community | Health/Safety | Human Rights | Security | Land | Other | Total |
| China | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 5 |
| NPM | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Brazil | 0 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 22 |
| TFM | 441 | 178 | 0 | 156 | 0 | 0 | 0 | 0 | 0 | 0 | 775 |
| Total | 441 | 199 | 0 | 156 | 1 | 0 | 0 | 0 | 1 | 5 | 803 |

Environment

CMOC reviewed in 2019 and updated in February 2020 its *Environmental policy* 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 and air quality. 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. 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, regulatory compliance and meeting standards. Every year, we invest in initiatives to improve production efficiencies and manage environmental risks. As a leading international mining company, we undertake our activities with a focus on our environmental obligations.

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.



Tailings

From the mine operations, mineralized rock (i.e. ore) 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 reagents and water. 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 the importance of responsible tailings management, and that standards 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.

In 2018, CMOC prepared a set of governance documents that incorporate the initiatives identified above, distributed to site staff as *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*. This Governance Standard came into force after being signed by the CMOC Chairman in February 2019, and is being implemented through 2019 and 2020.

CMOC's corporate standards 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 professionals on staff who are qualified in tailings management at both the operations and corporate levels; retaining qualified consultants and ensuring that an 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.

CMOC implements systematic Quantitative Performance Objective (QPO) reporting protocols for our TSFs, whereby QPOs are metrics that define the means of measuring performance against various project objectives, primarily associated with safety and risk management. Further, CMOC has a formal Tailings & Dams Stewardship Team (TDST) program at our operating mines in Australia, Brazil and the Democratic Republic of the Congo. The TDST consists of operations and corporate personnel, one or more third-party reviewers, and the EoR, and involves annual review and inspection of our TSFs. Stewardship is a management strategy employed throughout the life cycle of a TSF to identify and mitigate risks, while striving for continuous improvement and the implementation of recognized good practices to properly design, construct, operate, maintain, monitor and ultimately close the facility.



TSF in niobium operation of Brazil

Reclamation

In 2019 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.



China operation continues to carry out progressive reclamation and prevention of geological hazards. As of the end of the reporting period, the total area of vegetation recovered reached 1.43 million square meters.

Biological Diversity

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 a floral community adapted to soil conditions with naturally occurring high concentrations of metals. These 'metalophyte' 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; surface expressions of underlying high-grade ore deposits, leading to limited distribution (i.e. endemism) as well as direct threat from historic and active mining in the region. The conservation efforts of TFM with regard to metalophyte studies and preservation have pioneered and greatly furthered scientific knowledge about this unique plant life. In 2019 TFM continued its biodiversity programs. We constructed the artificial Katotu ecosystem in compliance with our commitment in the *Environmental and Social Impact Assessment* dealing with plant protection and ecosystem restoration, 3,500 copper flora plants have been produced and planted in different artificial areas as planned.



3,500 copper flora plants have been planted in the artificial ecosystem.

At our NPM operation in Australia, under the framework of the Kokoda Offset Voluntary Conservation Agreement (VCA) signed between Northparkes Mine and the Biodiversity Conservation Trust of New South Wales, work was started in 2019 with a focus on managing feral animal grazing by fencing the perimeter with high quality exclusion fencing. The use of infrared trail cameras during 2019 confirmed the presence of a range of feral animals. Revegetation works are planned in 2020 to regenerate open areas into a woodland ecosystem. In addition, due to prolonged drought in Australia, to ensure water is available for the range of native wildlife at the site, a new tank and trough system was installed in December 2019. The trial camera set up at the trough has shown that the local native animals have appreciated the availability of water. This has also reduced the need for animals to search for water in operational areas. NPM's biodiversity monitoring has been carried out for a number of years. The 2019 results showed that species richness has improved even with the ongoing drought conditions.



NPM mine using infrared cameras to identify local wildlife

At our Brazil operations, 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 compliance with the law. During the year 2019, about 33,750 native seedlings were planted in an area of approximately 27 ha. This activity is contributing to the revegetation of areas of permanent preservation and their surroundings, as well as to the conservation of plant and animal species.

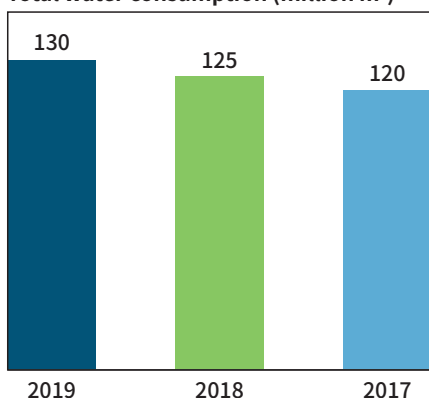
Resource Management

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.

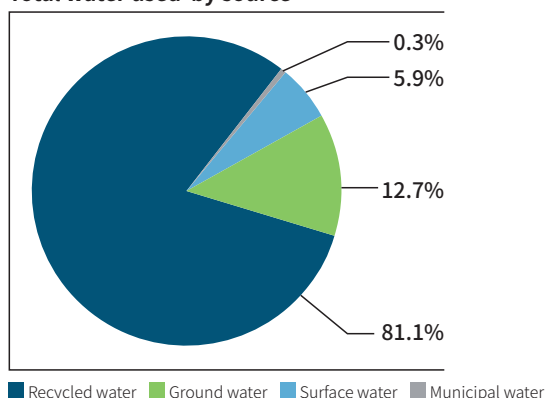
Water

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 key to our operations. A significant amount of water used on our sites is recycled water from our own operations, and other makeup water is from surface water, groundwater and municipal sources. In 2019, we consumed 130 million cubic meters of water, of which almost 81% of the water used by our operations was recycled water.

Total water consumption (million m³)



Total water used by source



Sourcing water for each operation varies according to regional availability and climate. Collectively, most of our water used is recycled, supplemented in order of volume by groundwater, then 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.

In 2019, at China site, we continued to carry out water-saving technology transformation, using a condensation recuperation system to recuperate water for reuse. We launched the APT Continuous Crystallization Filter Belt Washing Pipeline Transformation Project, and the replacement of ion-exchange tap water and demineralized boiler water with water produced through reverse osmosis, in order to effectively reduce freshwater consumption. In 2019, these measures allowed us to reduce the use of fresh water by 95,000 cubic meters.



In 2019, China site launched a project to replace ion-exchange tap water and demineralized boiler water with water produced through reverse osmosis, achieving a recovery rate of 250 cubic meters per day of water produced through reverse osmosis.



In March 2019, CMOC Brasil in celebration of the "Water Day", encourages the conscious use of water in operations and homes, and to report and resolve water leaks as soon as possible.



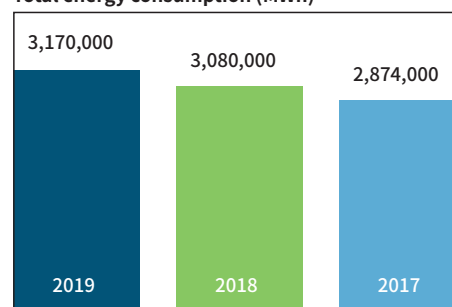
The company is committed to the protection of local surface and groundwater systems. Each of our operations employs a variety of techniques and strategies for water management with the primary objective of complying with applicable laws and regulations and the minimization of impact. These strategies may include the use of water monitoring programs, lined surface impoundments, stormwater controls and other physical or procedural systems for the protection of surface and/or ground water resources. Australia has suffered from prolonged drought, and water resources are increasingly scarce. In 2019, NPM improved its tailings thickener, increasing discharged tailings density. This increase in density reduces the volume of water lost to tailings, with estimated water savings of 200ML per year. In Brazil, the Copebras operation has prioritized the use of recycled water, reducing groundwater usage by about 38% compared to the previous year. The site has also carried out several infrastructure construction and renovation projects to protect land and water resources from pollution.

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 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 2.9% from 3,080,000 MWh in 2018 to 3,170,000 MWh in 2019. Of our direct energy consumption, 53.6% was from diesel and 19.6% from renewable energy sources. Of our indirect energy consumption, 53.2% was from renewable energy sources like hydropower.

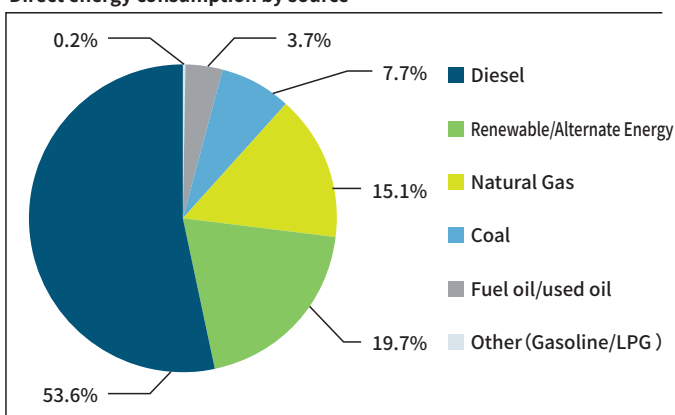
In 2019, the Chinese operations carried out a number of measures to diversify energy mix and increase renewable sourcing; for instance by using various energy-saving equipment such as solar panels for heating and hot water, by transforming multiple processes and equipment to reduce electricity consumption during production, and by producing electricity with water recycled from TSF, etc. By the end of the reporting period, the Chinese sites had saved a total of 7,000 MWh of electricity consumption. Both our DRC and Brazilian sites use cogeneration in their acid plants, with electricity production in 2019 reaching 98,000 MW and 68,000 MW respectively. The DRC operation uses on-site recycled waste oil instead of diesel for blasting, while in Brazil we use plantation eucalyptus wood chips to dry phosphate fertilizers. These measures have effectively reduced the use of fossil fuels.

Total energy consumption (MWh)

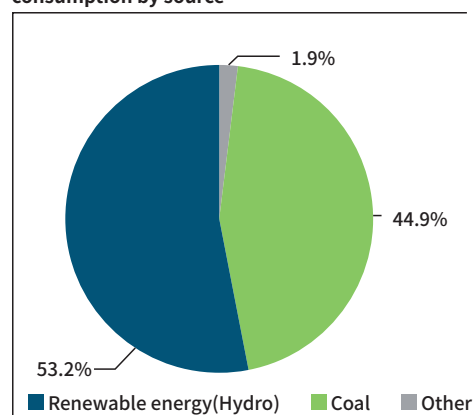


China operation uses solar power for office heating.

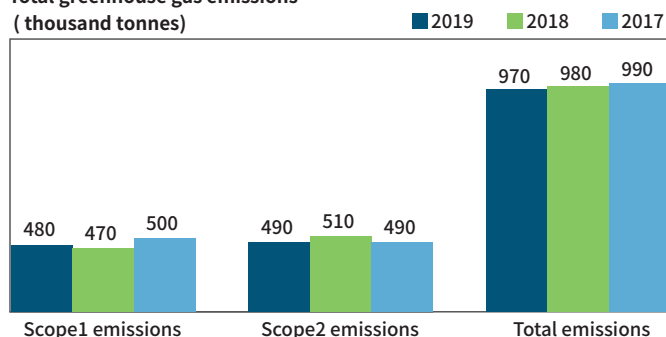
Direct energy consumption by source



Indirect energy (purchased electricity) consumption by source



Total greenhouse gas emissions (thousand tonnes)



Our Scope II indirect greenhouse gas emissions from purchased electricity in 2019 were approximately 490,000 t CO₂-e. More than half of the purchased electricity for our worldwide operations comes from renewable sources in the DRC and Brazil.

Our Scope I direct greenhouse gas emissions are mainly generated from diesel and natural gas. Diesel fuel is primarily used to power the haulage fleets at each of our operations, and natural gas is mainly used in the drying of our product in Brazil. Our total GHG emissions measured as carbon dioxide equivalent emissions in 2019 were approximately 970,000 t CO₂-e. About 20 % of our direct energy consumption is generated on site from cogeneration and renewable energy sources reducing our dependence on fossil fuels.

Emissions Management

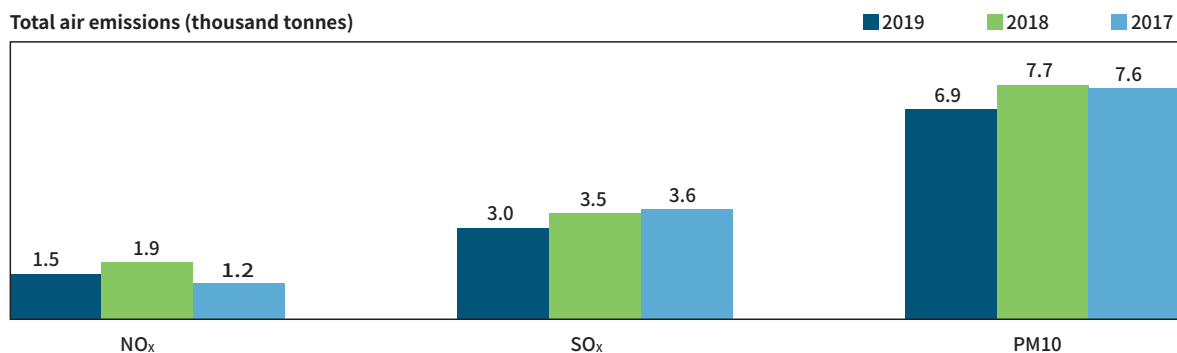
CMOC operations are committed to the process of continuous improvement through our environmental management systems and to pursuing new opportunities to reduce pollution and minimize environmental impact associated with air and waste emissions. We implement appropriate control measures for managing air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

In 2019 environmental fines or notices received by our operations were generally for minor non-compliance issues. Total fines received for all CMOC operations were less than RMB 260, 000.

The Australian site received two notices regarding the obtaining of approval for a regional air core drilling program, and the dumping of slurry in the dry bed of the Goonumbla Creek. For the first, NPM has made various process improvements to ensure approval is confirmed before work commences; for the second, NPM has added additional signage along the creek and removed those responsible from the site. The Chinese operation received a notice regarding abnormal emission data in the online monitoring system due to the negligence of third-party maintenance. In response, we actively carried out corrective measures, identified and analyzed weaknesses in the online monitoring equipment, and reinforced skills and risk management training for operators. We also strengthened the monitoring of the third-party maintenance provider, clarified responsibilities and improved their KPIs evaluation system. Notices received by the Brazilian operations were to do with licensing review, deforestation and SO_x emissions; all cases are currently under legal or administrative review.

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 other 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. The use of progressive reclamation at our Chinese and Australian operations has been effective in reducing the potential for wind-blown dust from tailings storage facilities. NPM uses a range of methods for managing tailings dust, with the most successful being sowing pasture species and cereal crops directly onto the surface of tailings facilities.

Through a similar approach, we continue to invest in strengthening the management of emission control systems and adopting various methods to minimize other air-borne emissions from our facilities. At our Chinese operations, we invested in recent years a total of RMB6.7 million for a series of equipment renovations, which effectively reduced the emissions of nitrogen oxides, sulfur oxides and malodorous gases.

Waste Management

Tailings and waste rock produced from our processing and mining activities form the largest volume of waste associated with our operations. In 2019, approximately 38 million tonnes of tailings and 98 million tonnes of waste rock were produced by our global operations; both figures increased compared to 2018 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.

Other wastes generated by our operations include 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 2019, the Chinese operation developed a new set of efficient eco-extraction technologies for complex tungsten associated resources, achieving the recycling of alkali and zero discharge of wastewater. This innovation won the "First Prize of Scientific and Technological Progress in Henan Province". NPM Australia uses a "permit to remove" process to ensure that waste is reused as much as possible rather than going directly to landfill. TFM also encourages waste recycling, including the use of waste oil in place of diesel for blasting, and the recycling of spent lead anodes used in electrowinning. In 2019, TFM recycled 784,000 litres of waste oil and 197 tonnes of lead anodes.



In Australia, farmers are placing their feed on old conveyor belts donated by Northparkes in order to minimize the loss of grain into the dirt and prevent their livestock ingesting dirt and stones. This also prevents premature teeth wear in sheep adding to the animals long-term health.

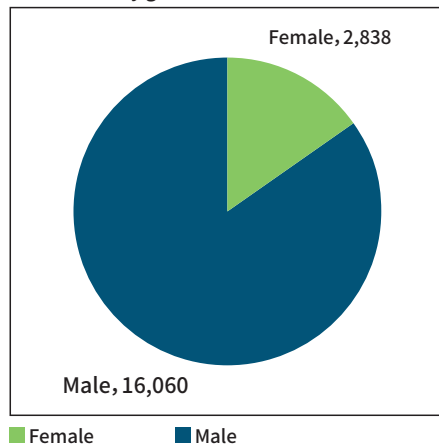
| Waste | 2019 Volume (thousand tonnes) | Percent Recycled | Type of Waste |
|---------------------|-------------------------------|------------------|---|
| Non-Hazardous Waste | 16.0 | 14% | Scrap metal, light industrial wastes, wood and general refuse |
| Hazardous Waste | 4.0 | 31% | Used oil and grease, mixed industrial waste, effluents, reagents, chemical containers or coolants |

Employees

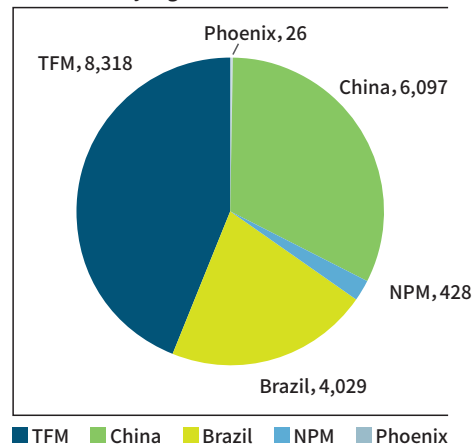
At the close of the 2019 reporting period, CMOC had 10,850 employees at our operating sites and management offices, as well as 8,048 contractors at the same locations. This workforce was made of approximately 85% male and 15% female staff.

In our labor relations CMOC aims to comply with the requirements of ILO Conventions and local labor laws and regulations, and establishes fair employment mechanisms. Though not all sites operate under collective bargaining agreements, all 10,850 employees in our worldwide operations have the right to freedom of association and collective bargaining. In 2019 5,266 employees of our global workforce were covered by collective bargaining agreements (49%). Collective bargaining agreements are developed in consultation with union leadership and include provisions which require further consultation regarding modifications to operating schedules that impact employees. At our remaining sites we provide employees with market-based wages and benefits and we value communication with, the participation of, and feedback from our employees.

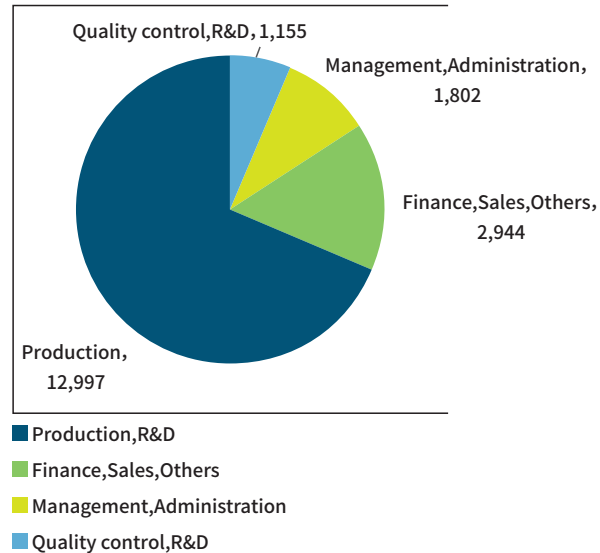
Number of permanent employees and contractors by gender



Number of permanent employees and contractors by regions



Number of permanent employees and contractors by job category



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 personal safety and occupational hazard events. In 2019, CMOC developed the *Health, Safety and Environment Policy* applicable to the whole group. This year there were no fatalities at any of our mining sites.

At the Sandaozhuang operation in China we uphold the concept of zero harm operations, a systematically complete safety management regime. We continue to implement the Ten Safety Principles and carry out regular safety inspections and special inspections. All identified and reported weaknesses are addressed through a closed-loop correction system. The site has an active training program to increase the safety awareness of all employees. In 2019, more than 4800 employees received this training. The safety management system in China is certified annually under the certification requirements for OHSAS 18001.



China site's high-tech project "autonomous mining equipment for open-pit mine based on 5G communication and key technologies for intelligent management and control integration" aims to improve employee safety by reducing human exposure to occupational hazards. The project was granted with 1st Prize of China Nonferrous Metals Industry Science and Technology of 2019.



Professionals from Brazil and Australia sites participated in the group internal audit at TFM

Health and safety practices at our Tenke Fungurume mine site are certified annually under the OHSAS 18001 management system; the site has procedures and programs to ensure compliance with the international safety standard. Compliance is monitored by internal audits, workplace inspections, manager inspections and other types of reviews. In 2019, the Group's HSE department also conducted an internal safety audit at TFM. The audit team was formed by professionals from the headquarters and other mining sites. After the audit a special action plan was developed and progress is monitored regularly.

At our Brazilian operations HSE systems are also certified annually under the OHSAS 18001 safety standard. In 2019, the Brazilian site established a unified fatal risk analysis and work permit process for all units, and conducted multiple training sessions and campaigns. The management tools "Safety Acts" have been improved to reinforce the employees' safe behavior practices. In addition, during education campaigns such as "Safety Day" and "Accident Prevention Week", the Brazilian site uses interactive training methods to enhance employees' understanding of the "Golden Rules". All health and safety processes and performance rates are benchmarked against Brazilian Chemical Industry Association standards and use external and internal audits to verify the effectiveness of controls related to health and safety certification.

Our Australian copper and gold mine has an integrated HSE system, a core aspect of the Zero Harm operations that have been underway since 2012, focusing on the safety of employees, equipment, environment and community. In 2019, NPM launched a new cultural program aiming at operational excellence called SHIFT. It is a per-person-per-shift awareness and behavioral response program with a strong focus on safety in order to build a safety culture during the next two years of capital project works that involves many contractors. In addition, NPM has also been making continuous improvements to the review and communication of critical controls to all workers. The HSE Management System at NPM mine is subject to recurring regulatory oversight which is more stringent than OHSAS standards.

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 2019 CMOC's TRIR per 1,000,000 hours worked was 1.62, based on 45,164,947 hours worked and 70 recordable incidents. The LTIR per 1,000,000 hours worked was 0.32 based on 14 lost time injuries.

In 2019 NPM launched SHIFT Program with a strong focus on safety.



Health

The complex and unique working environment of the mining industry can potentially put employees at risk of occupational illness. Therefore, we strive to help employees to stay both physically and mentally healthy by creating a safe working environment, carrying out health promotion and disease prevention programs, organizing various after-work activities, and enriching employees' lives in other aspects. At all sites we also pay for employees' basic medical insurance.

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. At our Chinese site, we established the *China Molybdenum Occupational Health Management System*, which takes into account our business activities, work environment and employee health, as well as a "Leading Group for Occupational Health Management". By finding out where employees are exposed to health risks, we have developed control measures based on the causes of occupational diseases. We manage occupational health risks mainly by periodic physical examination and job rotation.

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 the development of 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.



Employees must wear protective equipment such as dust respirators in appropriate circumstances.

Chronic exposure to noise from conveyance, 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 implementing the use of hearing protection.

Illness prevention for employees

With a focus on improving employees' physical and mental health, besides providing medical help for sick employees, we also invest in measures towards employee illness prevention, aiming to identify and address health problems at the early stages of sickness development and to eliminate causes of sickness.

Our workplaces are often far from cities and lack adequate medical resources. To provide convenient medical services for our employees in China, we have set up medical diagnosis rooms in cooperation with Luoyang Central Hospital. Medical experts in different fields provide weekly health consultation and diagnosis services. Employees also receive physical examinations every year to identify health problems as soon as possible. At the TFM operations in the DRC we have established medical facilities that are supported by referral relationships with hospitals and specialists in the region.

In January 2020 the coronavirus disease (COVID-19) broke out in China and is now spreading around the world. CMOC took immediate actions to ensure the health and safety of all employees, assuming its social responsibilities while maintaining the production stability of all operating units. A disease prevention and control steering group was quickly formed, with Mr. Steele Li, the Chairman of the Board, acting as the group leader. The steering group has clarified responsibilities and strengthened communication with and education campaigns in all operating sites. International and domestic business trips to and from China were immediately suspended. All operating sites also activated emergency plans and strengthened prevention measures, including the collection of employee information, and suspended all trips involving China.

At the early stages of the outbreak, seeing China was facing shortages of medical supplies such as protective masks, our overseas teams, including CMOC Brasil, Northparkes in Australia, the IXM headquarters in Geneva and its South America team, as well as our offices in Phoenix, London and Hong Kong, quickly mobilized resources to purchase supplies for the Chinese site and CMOC Headquarters. Their efforts allowed us not only to protect the health of our employees, but also to donate medical supplies to Luanchuan County and Luoyang Central Hospital. Readers can find the details of the donation in the Community section later in this report.

Due to the pandemic situation around the world, CMOC continues to monitor closely all employees' health status, to provide them with sufficient protective supplies, and to implement strict work and travel restrictions.

Employment

We place a strong emphasis on all aspects of employment, including fair labor relations, equal employment, and career development. We develop our employment policies, such as working hours and holidays, in accordance with local labor laws and ILO conventions.

Labor relations

In accordance with CMOC's core values and Human Rights Policy, we respect the rights of all employees, and strive to provide an environment that ensures fair treatment and good working conditions. Employees have access to internal grievance mechanisms through which they can report and resolve any workplace complaints or concerns. Our Human Rights Policy recognizes our employees' rights to freedom of association as well as collective bargaining. In the 2019 reporting period there were no labor disputes within the CMOC workforce that caused business interruption or production loss.

Equal employment

In keeping with the principle of equal employment, CMOC recruits and hires professionals through various means such as open recruitment and competitive employment and provides diversified and equal career development opportunities for employees. As stated in the *Code of Business Conduct, 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 valid job requirements, including compensation, training and promotion.



Career Development

We have a career development system that provides opportunities for internal training, posting to other CMOC sites and incentive-based development programs.

At our Chinese operations we constantly improve our training systems to help employees improve their professionalism, competence and efficiency so that they can have better career development. We have set up different 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 teachers, we try to combine internal and external resources for better results. In 2019, we formed a team of more than 60 internal trainers, making full use of internal resources for talent development and management.



TFM employees are being trained in mobile equipment operations.

At our TFM operations, employees receive new hire safety induction, as well as being trained and certified for jobs that involve high risks. Annual safety refresher courses are obligatory for all; over 99% of employees participated in 2019. Additional skills improvement programs include skills development in maintenance, process plant operations, mobile equipment operations and language skills, reaching another 7,498 participants. Our Brazil operations provide training in safety, regulatory compliance, technical competency, behavioral skills and professional development, ensuring that skills development is in line with company strategy; in 2019, the total number of training hours exceeded 75,000. Northparkes also strengthened its training programs, offering 128 structured courses and reaching 788 participants, which represented a growth of nearly 85% compared to the previous year.

Community

CMOC reviewed in 2019 and updated in February 2020 its *Community Policy* applicable to the entire group. 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 to evaluating community expectations and needs, which informs community development plans. At our NPM, Brazilian and DRC operations, stakeholder communications, community risk and 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 dialogue, 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.

Our community relations programs are guided by local laws and regulations and seek alignment with international best practice frameworks such as the International Finance Corporation and the ICMM sustainable development principles. 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 along with frequent public emergencies due to floods and landslides. Some areas remain under-developed. As an important company in Luanchuan County, we have long contributed to local development. In 2019 CMOC multi-year investment programs contributed to the host county close on a total of RMB 130 million in donations for social development, poverty alleviation, education, health and other domains. After years of effort, in 2019 Luanchuan County was officially taken off China's list of poorest areas. CMOC's contributions have been widely recognized by society, and we were awarded the "2019 Henan Provincial Award for Poverty Alleviation and Dedication" by the Henan Provincial Government.

In the DRC our operation is near rural villages, agriculture and two towns which have steadily undergone significant population influx and urbanization in recent years. According to our estimate, in the 1,600 km² concession area of TFM, the total urban and rural population reached around 400,000 in 2019, which has led to new challenges and problems for our community work. In recognition of TFM's responsibility to maximize local opportunities, 93% of employees at the TFM mine are DRC nationals. The sustainability programs at this site continued to address acute community development priorities while striving to balance the limited human and material resources of the company and the rapid growth of the migrant population. Therefore, we have strengthened communication and cooperation with local governments at all levels. In addition, TFM has strengthened control over social projects to maximize benefits for local people. TFM's community programs prioritize investments in five areas: education, infrastructure, community health, agriculture and capacity building.

Our mines in Australia and Brazil are sited in areas that are largely rural, with surrounding land uses dominated by agriculture. NPM and Brazil 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 have four key focus areas: economic development, education and training, health and safety, environment and cultural heritage. In our Brazilian operations, based on social diagnosis of community expectations and international good practices, we have prioritized investment in education and training, income generation, agriculture and livestock, infrastructure and environment. This approach allows us to maintain good neighborly relations, because communities feel benefits from our operations in ways that are important to them.

Community Liaison

CMOC mines are located in diverse settings where cultural and economic conditions are concerned. Therefore, active engagement with stakeholders near our mines is a common element in successful community relations and in managing related risk 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 sites maintain systems that can receive and register individual community concerns and grievances, which are then tracked through the stages of being addressed and resolved.

At our Chinese operations we have a community grievance mechanism. 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 people.

At our TFM site the company engages with stakeholders on a regular basis in order to better understand their interests, concerns and goals. 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. 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. Since inception in 2009 through to December 2019 this fund received contributions of US\$42.14 million to support its programs, of which US\$3.5 million was given in 2019. 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, including grievances, and serving as the primary communication channel between local residents and TFM.



At TFM, the Community Development Forum serves as a primary means of obtaining opinions from community stakeholders.



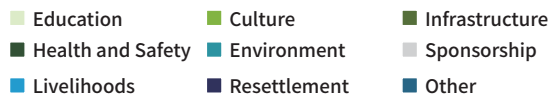
Brazil site's Community Journal is a channel of community engagement.

Our Brazilian operations continue to value and maintain dialogue with various stakeholders. External stakeholders in Brazil have access to communication channels through the company's external web page, links to which are also posted on social media pages maintained by the company. The external web page provides a standard contact page with phone numbers and an email portal for submitting general information requests, as well as a dedicated grievance portal, 'Hello CMOC', that is managed by an external third party. Staff in the social department review all submissions for content and priority according to site policies that provide procedures for timely response. Our Brazilian site also regularly publishes "CMOC Comunidade", a newspaper focusing on community engagement on key issues.

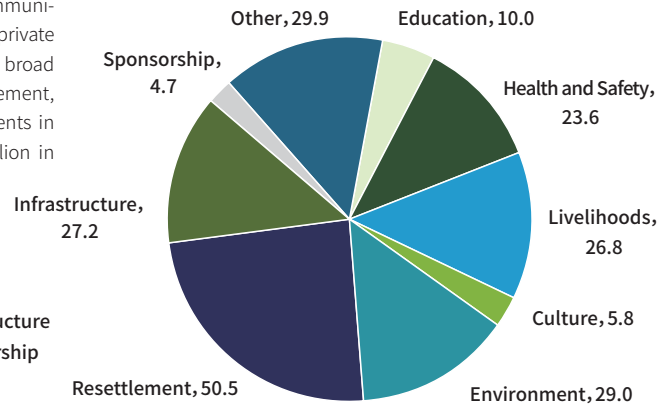
At our Northparkes mine in Australia, community relations staff continued engagement in 2019 with our stakeholders as identified in the site Stakeholder Communications Management Plan. Plan elements include a Community Consultative Committee and scheduled periodic meetings with key stakeholders, including the Neighbours Committee, the Wiradjuri Executive Committee, Mayors & Councilors of the Parkes & Forbes Town Councils, the Parkes Chamber of Commerce as well as federal, state and local political actors. NPM also participates in the Forbes, Peak Hill & Parkes Domestic Violence Committee, the Police Citizen Youth Centre Committee, the Parkes Aboriginal Elders Advisory Committee, the Parkes Sporting Committee and the Rural Fire Service.

Community development

The CMOC 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. Investments are typically made in the broad categories of education, health, livelihoods, resettlement, environment and infrastructure, with additional investments in cultural activities. Overall, CMOC invested RMB207.5 million in community projects in 2019.



Social investments by area (million RMB)



Education

Support for education from primary school through to university is high priority for stakeholder communities. In 2019 across all operations the company donated over RMB 10 million to educational programs.

In China the company believes that educational problems should be addressed first to promote regional development. In 2019, in areas surrounding our operations in China, we donated RMB2.67 million to education. We helped students from poor families in Xiaohe Village of Quipa Town, so that they could continue to go to school. In Tantou Town we donated school supplies such as books, basketballs and other gifts to the Second Experimental Primary School in order to improve the children's learning environment.



Our China site donates to children from poor families in Xiaohe Village.

At TFM the local community has longstanding concern about the lack of access to and the quality of basic education available to children in our mining concession area. In 2019, in response to the growing needs caused by population influx, TFM expanded the school in the New Mitumba resettlement area, and continued to sponsor six TFM schools by providing direct support to school operations and improving teacher capacity to provide quality education. In addition, in order to increase the enrollment rate and reduce the burden on families, TFM donated school supplies, such as books and stationery, to nearly 20,000 students in the entire mining concession during the September school season. TFM's Social Community Fund continued to provide high school scholarships and college scholarship programs, benefiting a total of 394 high school students and 15 college students in 2019. The Social Community Fund also continued its support of vocational education, with students completing courses in cosmetology, sewing, welding, culinary arts and woodworking. TFM also continued its village literacy program for the 2018-2019 cycle in 22 villages, with a total of 900 students taking part.

TFM supports vocational education, with students completing courses in cosmetology, sewing, welding, culinary arts and woodworking.





Northparkes mine provides scholarships for indigenous students

Our NPM operations provide scholarships annually for indigenous students who are interested in a career in mining, and those who wish to pursue a technical degree. Both technical and non-technical scholarship holders receive stipends from Northparkes, who also offer work placements both on site and throughout Australia.

In 2019, our Brazilian operations continued their education and training program "Formare" project, aiming to provide basic skills training to young people from disadvantaged socio-economic backgrounds and to help them enter the labor market. Through this project, 25 young people went through Production Assistant and Industrial Processes training courses, and about 60 employees of CMOC Brasil participated as Volunteer Educators or Tutors in their professional practice.

Community Health and Safety

CMOC invested nearly RMB23.6 million in community-based health projects in 2019, addressing a range of priority needs.

Communities near our TFM operation may suffer from illness and disease due to the lack of access to clean water and medical care. At sites with such conditions, our health support projects help address some very high priorities for local communities. In 2019, TFM constructed a new clinic in the New Mitumba resettlement area and added a maternity unit to the Amoni-Kiboko health center with drug supplies in order to respond to the growing needs of the local population, while also continuing to support and monitor other TFM constructed clinics. TFM provides facilities and drug start-up packages for three months and assistance to doctors and nurses sent by local government in all newly constructed clinics, with the aim that the clinics can become self-sufficient over time. We also continued to support the SafeTstop HIV prevention program targeting several thousand truck drivers, providing them with free HIV tests and prevention training.

In the DRC our drinking water programs serve both rural and urban populations and address chronic gastro-intestinal illnesses that contribute to high infant mortality. In 2019, TFM expanded the water distribution system in New Kyamba and added more water points in Fungurume in areas affected by cholera due to lack of access to clean drinking water. In order to encourage the local community to become self-sufficient, TFM helped local residents create a Water Management Collective, in which local people are organized to manage water points and collect fees. This experiment has proved fruitful; after three years of self-management the Collective has become an independent enterprise, and water fees paid by residents have been used to build new infrastructure such as public showers.

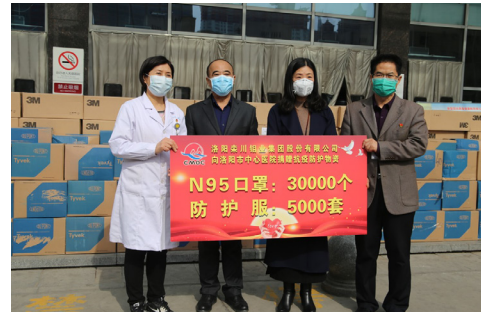
Our operations in Brazil launched a vaccination campaign against influenza in neighboring communities. Originally for employees only, we extended the vaccination program to our neighbors in rural areas, providing vaccination opportunities for those who are unable to travel to a town or city to get the public flu vaccine or who simply cannot afford it. 900 adults and children benefited directly from this campaign.

Also in 2019, CMOC Brasil carried out emergency simulations for the Niobras and Copebras dams, with the aim of testing available resources, escape routes, meeting points and response times of the population living in these areas. Over two days, about 750 people, including employees, contractors, local residents, public agencies representatives and visitors participated in the simulations.



750 people participated in Niobras and Copebras dams emergency simulations

In January 2020, when the outbreak of coronavirus disease (COVID-19) mentioned earlier started in China, CMOC took immediate action. Our overseas teams, CMOC Brasil, Northparkes in Australia, IXM headquarters in Geneva and its South America team, and our offices in Phoenix, London and Hong Kong, quickly mobilized resources to purchase supplies of protective equipment. In addition to protecting our employees, CMOC donated medical supplies to Luoyang Central Hospital and Luanchuan County, including 70,000 N95 masks, 11,000 sets of medical protective clothing, 20,000 medical masks, 20,000 pairs of medical gloves, and 1,000 pairs of goggles. Our DRC operation also participated in a donation organized by the DRC Association of Chinese Mining Companies, and donated medical protective clothing to Wuhan Union Hospital at the epicenter of the outbreak.



Donation of medical supplies to Luoyang Central Hospital

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. Therefore, 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 may focus on creating economic diversification. In 2019 CMOC invested nearly RMB26.8 million in projects directed towards 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. In 2019, TFM continued its maize credit project, providing training in planting techniques and loans for fertilizers and seeds to more than 600 farmers. Market-oriented vegetable production and animal husbandry projects also occurred: 267 farmers in 14 villages received poultry breeding training and vaccinations, and about 100 farmers were trained on goat breeding and received goats from TFM.



TFM's maize planting project promotes development of local small farmers

Our Brazilian operations have established close cooperation with neighboring small farms. Every week these farmers participate in the "Lá da Roça" fair in CMOC where they sell their products to our employees. The fair is an opportunity for income generation, about 40 small farmers benefiting directly from it.



CMOC employees buying peaches, which eases the sales pressure of local farmers.

In China, CMOC helps the local governments with targeted poverty relief measures based on the conditions of the surrounding areas. Over the years we have donated approximately RMB 60 million to the public housing project in Luanchuan County in order to improve the housing conditions of local residents living in remote or substandard housing. In addition, after CMOC formed its partnership with Xiaohe village for poverty alleviation, various projects have been launched to support local livelihoods and eco-tourism, such as the construction of lotus ponds and a lotus root starch factory, sweet corn crops, new vineyards, and orchards of American cherries and spring peaches. In 2019, in order to help local farmers generate income, CMOC bought 1,950 kg of peaches from village farmers, which helped ease their sales pressure and contributed to local economic development and poverty reduction.

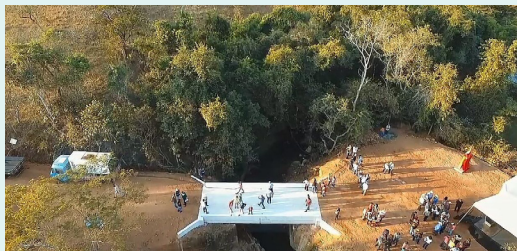
Infrastructure

CMOC believes that infrastructure plays a vital role in socio-economic development in local communities. Good infrastructure facilitates a better development of local economic drivers, allowing the local community to become self-sufficient, and helping to provide a stable workforce. Therefore, infrastructure is a priority in our community investment. In 2019, CMOC invested around RMB 27.2 million in infrastructure projects.

At our DRC operations, infrastructure in local communities is weak due to poor economic conditions. With the rapid growth of the local population in recent years, the demand for infrastructure has become more urgent. In 2019, TFM invested \$7 million to build a new substation and transmission lines for the town of Fungurume to address the serious local power shortage. After the amendment of the DRC Mining Code in 2018, a part of the mining royalties is now paid directly to local authorities. We have reinforced cooperation with local authorities at all levels in social investments. In 2019, TFM along with the provincial government of Lualaba invested in the Kasolondo Road asphalt paving project.



The Fungurume substation, once completed, will cover the electricity needs of 250 000 residents.



In 2019 CMOC Brazil sponsored the renovation of a bridge along an important road in the local community. Within the framework of a partnership with Catalão City Hall, we invested R\$12 million in infrastructure works in health, housing, education and urbanization. The resources have been used to renovate Catalão's two main public hospitals, increase the capacity of the municipal dental center, renovate squares and public spaces, and build public housing.

CMOC Brasil invested in the renovation of the Córrego Ribeirão bridge

Environment

CMOC pays great attention to the protection of the natural environment and community environments. In 2019, CMOC invested around RMB29 million in community environmental projects.

Where our Chinese operations are concerned, a volunteer team of more than a hundred people helps clean up garbage in gardens and develop green areas alongside the roads in Xiaohe Village, contributing to a better environment and the development of rural eco-tourism. TFM runs a "Clean Village Project", building public toilets and providing health education in local villages. Since 2010, 6,240 public toilets have been built in 80 villages. Our Brazilian operation carried out a series of activities in cooperation with the local environmental authority, including the construction of more than 170 rainwater containment basins in rural areas, sponsoring the management plan of Lagoa Stream (the main local water source), and sponsoring the municipal waste sorting and recycling system.



Parkes Elvis Festival, NPM employees and their families are invited dress up and jump on board our float to join in on all the fun.



TFM representatives participated in the celebration of Mwami Mwenda VIII.

Culture

CMOC acknowledges the importance of respecting cultural aspects of the communities where we operate. In 2019 the company invested nearly RMB5.8 million in projects that promote cultural activities of interest to our stakeholders, including programs and organizations supporting music and sports, as well as enhancing local cultural values.

Our volunteer committee in Brazil repaired the local library and donated books to the Arminda Rosa de Mesquita School on Children's Day. NPM Australia continues to support the annual Parkes Elvis Festival, where our employees and their families are invited to dress up and jump on board our float to celebrate alongside the locals. The festival also managed to raise funds for the Rural Fire Service, WIRES and the Red Cross. NPM also works with the Parkes Town Council to provide funding to local sports teams and clubs. In the DRC TFM also actively supports local cultural traditions and sent representatives to participate in the annual celebration of the great traditional chieftain Mwami Mwenda VIII, King of the Bayeke, in whose lands the TFM mining concession is located.

Land Acquisition and Resettlement

All 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. For all operations land acquisition methods reflect internationally accepted good practice principles of stakeholder consultation and negotiated settlement based on fair market valuation.

Continuous mine development may require the acquisition of land owned by residents living in the areas surrounding our operations in China. Therefore, we have 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 use agreements with the surrounding areas. Besides paying a certain amount of cash compensation, we have also employed local residents affected by our mining activities. In 2019, we employed an additional 30 people under this program, and in total over 1,000 local residents have been provided with a stable source of income through our land acquisition activities. In 2019 there were no cases of land acquisition requiring resettlement at our Chinese operations.

At our operations in Australia and Brazil surrounding land use includes extensive agriculture. In these cases, the need for additional land is met through strategic planning, enabling sufficient lead times for engagement and negotiation with land-owners, and 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 2019, as in China, neither Australia nor Brazil had cases of land acquisition requiring resettlement.

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 2019, TFM's main land acquisition project was the resettlement of 284 households near the Mambili-ma deposit. Since the beginning of its construction in 2006, TFM has relocated 1,182 households to newly built residential areas and assisted the resettlement of 440 households in Fungurume, Tenke and other towns. During the 2019-2020 agricultural year, we provided livelihood restoration to 1,790 displaced farmers. 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. In 2019 this audit did not happen due to the unavailability of the external auditor. TFM is now in the process of engaging a new auditor and will continue auditing from 2020.

TFM's resettlement areas are equipped with primary schools, drinking water facilities, and multi-years livelihood restoration projects.



Security and Human Rights

In 2019, CMOC reviewed and updated its *Human Rights Policy* with application to the entire group. All senior executives received human rights training provided by an international law firm.

Our operations have security programs appropriate to their needs, including the prevention of access to mine areas for public health and safety concerns as well as for protection of company assets.

At Northparkes the need for compliance training is identified according to role requirements. All inducted employees are assessed on their knowledge of the Northparkes code of conduct, which includes elements of anti-discrimination policy. Supervisors receive additional training on Fair Work legislation. All new employees and contractors in our operations in Brazil are also trained on the site code of conduct, including equal opportunity requirements and anti-discrimination prohibitions. At both sites violations of these policies lead to disciplinary action, including termination of employment or contract of work.

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 are a set of principles that 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 2019, 99% of TFM's 231 direct hire security employees and 1,293 private security contractors had VPSHR training.

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 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. Though disallowed from providing direct training to the PMH, TFM seeks opportunities to facilitate third party training in the VPSHR for police assigned to its concession.

In recent years, due to the 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, suffering from rising crime rates and fatal accidents associated with unsafe artisanal mining practices. In both April and June 2019, two fatal landslide accidents in artisanal mining galleries occurred at the TFM concession perimeter and in another private mining concession near Kowezi. The Congolese government decided to deploy the Armed Forces of the DRC (FARDC) in the region to persuade illegal miners to desist and to disperse them, as well as to address the problem of crime. 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 asked for the distribution and communication of the VPSHR to soldiers. TFM does not engage directly with the FARDC, does not participate in any military operations, and does not provide any assistance that can facilitate military operations. TFM's external relations team continues to communicate with the government on this issue.

According to information we have gathered, since June 2019, two incidents occurred within the TFM mining concession perimeter. The TFM legal team launched human rights investigations immediately after both incidents.

The first incident took place in the village of Kafwaya, situated within the mining concession perimeter. It was reported to TFM that on 23 June 2019, when the Army entered Kafwaya village to clear out illegal ore storage points, some of the tarpaulin roofs of the temporary homes and warehouses were burned. We have confirmed that at least one 3-year-old child suffered burns from a falling roof. The infant was treated at the Dipeta clinic, which is a medical facility that receives financial support from TFM. Based on the information gathered, the child is now fully recovered.

The second incident occurred on 18 August 2019. We understand that artisanal miners had gathered in large crowds in several places in Fungurume Town to protest against the confiscation by the local police of illegally stolen ore from private concessions. The protestors sought to block road traffic using large stones, pieces of dead wood, parts of wrecked vehicles, setting fire to car tyres, etc. The local police subsequently intervened, attempting to calm the protest by using non-lethal weapons, and the protestors retaliated by throwing rocks at the local police. We were informed that the local police sought reinforcements from the national police force, and that the local authority ordered support from the Army. In the events that followed, 14 people were seriously injured, and one woman died after being hit by a stray bullet. Some of the injured were treated in the ISOS medical center, also a medical facility that receives financial support from TFM.

CMOC and TFM reaffirm their sympathy to the individuals and families of those harmed in these incidents. Based on the information gathered, neither TFM personnel nor the Mines Police were involved in either incident, and were not involved in the decision of the authorities to call in the Army in either case. TFM remains committed to promoting and protecting human rights wherever it operates, strictly in accordance with CMOC's Human Rights Policy and the VPSHR. TFM will continue to engage with stakeholders and urge them to respect these values.

Product

Our mine 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 metallurgy of superalloys; cobalt primarily in lithium-ion batteries, essential for mobile phone and electric vehicles; copper is widely used in every aspect of our lives, and phosphate fertilizer is an indispensable material for agriculture. Our manufacturing streams also consume other products and services sourced from suppliers and contractors. The sourcing, manufacturing, transport and delivery of all these materials may pose environmental and social risks. We address these risks with policies and procedures at our operating sites.

Materials Sourcing

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. A series of sustainability policies applicable to the entire group, including the Supplier Code of Conduct, were reviewed in 2019 and published in February 2020, offering guidance on supplier management systems in all business operations in the areas of health and safety, human rights, anti-corruption, code of conduct, environment management and community relations. CMOC and its subsidiaries are now putting these policies into practice.

In China we have the *Suppliers Entry Management Guidelines* to ensure that qualified suppliers meet policy and regulatory requirements in terms of commercial reputation, necessary professional expertise and HSE considerations. We regard a supplier's environmental and social risks as an important factor in our assessments, motivating those with whom we do business to comply with laws and regulations on environmental protection, employment and operations.

Health, safety and environmental matters relating to the transportation of copper concentrates feature prominently in our management of transportation contractors at the Northparkes operation in Australia. Such matters are incorporated in the standard terms and conditions of contracts with vendors, which include reference to the site Code of Conduct as well as Key Performance Indicators for environmental matters.

At the TFM worksite in the DRC, human rights and corruption are pivotal areas of concern. As such, we conduct due diligence of suppliers and vendors to screen for violations of the applicable laws and CMOC policies dealing with anti-corruption or human rights. During the screening process, a subset of these contractors are subject to site visits during which safety, environmental and employment policies and programs (and their implementation) are reviewed. With respect to employment practices by contractors, TFM pays special attention to policies pertaining to the legal working age of their employees. 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. The TFM procurement team also maintains a preferred practice of sourcing service contracts in the host and neighboring provinces.

Our operations in Brazil rely on a supply chain policy that includes principles such as assessment of environmental risks associated with the supply chain and related vendor performance, safety risks and related vendor compliance and vendor support for local procurement. Site teams in the supply chain, technical and sustainability areas participate in the review of select vendor proposals that may present risks in material aspects. Brazil has a well-developed system to conduct monthly assessments and provide feedback to local suppliers, which includes the use of specific key performance indicators, a ranking of supplier performance, and public recognition of lead vendors in the key areas of safety, health and environmental performance. In 2019 the Brazilian operations adopted as part of their internal purchase procedures the consultation of the Brazilian Federal Government's List of National Register of Punished Companies(CNEP) and National Register of Ineligible and Suspended Companies (CEIS) when vetting potential suppliers.

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 and labelling in accordance with the Globally Harmonized System of Classification and Labelling 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 labelling 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.



Cobalt hydroxide product at TFM sealed and labelled for shipment to customers

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 high number of unregulated artisanal miners as well as customers for their product, a situation that has led to high profile international concerns around the risk 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 within 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 concessions. 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 outside of the DRC. CMOC has no tolerance for child labor or forced labor, employing only people who have reached the legal working age. In 2019, we found no violation of any laws and regulations regarding child or forced labor.

Due to the importance of monitoring and maintaining these procedures while managing TFM's mineral supply chain, TFM again received independent assurance of the company's product control and custody procedures for the 2019 period (see 'Assurance Statements'). In addition, in order to meet the evolving expectations of international stakeholders for a responsible cobalt supply chain, in 2019 TFM conducted a gap analysis and a 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 2019 CMOC retained its membership in the Cobalt Institute (CI), an industry-led trade association that promotes sustainable and responsible production and use of cobalt, and participated in sustainability-related initiatives and industry research with this organization. In 2019 CMOC continued to actively participate in the improvement and promotion of the Cobalt Industry Responsible Assessment Framework (CIRAF), a CI initiative to provide assurance of sustainable sourcing of cobalt in global markets.

Compliance is specifically directed toward the set of risk areas deemed by the CIRAF process as material for sustainable cobalt production. Further commitment is required to implement one or more of a suite of external standards appropriate to each of these risks. In each risk category there are several options presented for standards, from which companies can select one or more that are appropriate for their operations. The following table identifies the CIRAF external standards, disaggregated by those that TFM has chosen to apply either as primary drivers of risk management at the site or as guidance for additional alignment. The table further identifies the other standards offered by CIRAF with which TFM is materially aligned.

| Specific CIRAF Standards Applied at TFM | CIRAF Risk Categories→ | Env.Air/Water | Biodiversity | OH&S | Corruption | Security & Human Rights | Child Labor | ASM | Livelihoods | Resettlement |
|---|---|---------------|--------------|------|------------|-------------------------|-------------|-----|-------------|--------------|
| | ICMM 10 Sustainable Development Principles | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| | GRI Standards and MMS | ○ | | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| | Voluntary Principles on Security & Human Rights | | | | | ○ | | | | |
| | United Nations Guiding Principles | | | | | ○ | | | | |
| | National Compliance Framework | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| | Extractive Industries Transparency Initiative | | | | ○ | | | | | |
| | IFC-PS | ○ | ○ | | | ○ | ○ | | ○ | ✓ |
| | OECD Due Diligence Guidance (OECD-DDG) | | | | ○ | ○ | ○ | ○ | | |
| | Risk Readiness Alignment (RRA) | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ |
| | OHSAS 18001 | | | ✓ | | | | | | |
| | ISO 14001 | ✓ | | | | | | | | |
| TFM alignment with other CIRAF | UN Global Compact (UNGC) | ● | | ● | ● | ● | | | | ● |
| | Towards Sustainable Mining (TSM) | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| | Initiative for Resp. Mining Assurance (IRMA) | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| | Corporate Human Rights Benchmarks (CHRB) | | | | | ● | | | | |

✓ Standard that drives action
 ○ Deliberate alignment
 ● Material alignment

At our operations in China quality and safety issues related to our products are driven by various national regulations, as well as the ISO 9001 Quality Management System scheme, under which the Sandaozhuang mine is certified.

At our business 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 Northparkes operation completed its life cycle assessment in 2018, which led to an update of the site's Product Stewardship Risk Assessment relative to the dangerous and hazardous goods classification of our copper concentrate. In 2020 Northparkes will conduct a review of the Product Stewardship Risk Assessment in consultation with relevant stakeholders.

No breaches linked to our products in terms of health and safety, environment, labelling or social matters were reported in 2019 that resulted in impacts to CMOC.

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. CMOC reviewed in 2019 and updated in February 2020 its *Code of Business Conduct* and *Anti-Corruption Policy* with application to the entire group. 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, which included more than 630 personnel in 2019, of which 12% were from the Chinese operations, 40% from the Brazilian and 41% from the DRC. Employees, contractors and other stakeholders of all operational sites have access to the site-level grievance systems and to CMOC's whistle-blower channel to report all suspected cases of bribery or corruption. In December 2019, under the coordination of the Legal and Compliance Department, the senior executives of the Group also received anti-corruption training provided by an international legal firm, all the directors of the Board and supervisors also reviewed the training materials.



CMOC senior management participating in anti-corruption training.

In China we have set up a dedicated disciplinary inspection department to carry out internal supervision and inspection on various ethical matters inside the company in accordance with our corporate regulations. Through internal communications and training we help our employees to form values of integrity and self-discipline and continuously raise their awareness to comply with laws and regulations. We sign integrity agreements with suppliers in an effort to effectively control their risks of corruption.

At our Northparkes facility, all employees are required to complete the modules "Anti-Bribery and Corruption" and "Anti Money Laundering," and we maintain a SpeakUp program which encourages employees to report instances of misconduct to a "fair work officer." Our Brazilian operations follow an internal compliance manual and adhere to Brazilian law as well as their international equivalents.

At our operation in the DRC, the CMOC Legal and Compliance Department provided its annual anti-bribery and corruption training in November 2019 for staff occupying positions with potential risks. In total 259 employees were trained in this topic. TFM continues to be a member of the Extractive Industry Transparency Initiative (EITI) at the country level. A TFM representative is a member of the National Committee for EITI-DRC, which represents industry concerns, coordinating the preparation and submittal of disclosures regarding TFM payments to the national treasury and other government entities on an annual basis. In addition, TFM continues to publish payments to treasury and government on a quarterly basis in the form of press releases, which are made available to national print and online news services for further publication.

In 2019 there were no instances of corruption, bribery, blackmail, fraud or money laundering experienced by the Company notified to our internal legal group or through other channels of communication, nor were any lawsuits related to these behaviors filed against the company.

Data Overview

| EMPLOYMENT | 2019 | 2018 | 2017 |
|--|-----------|-----------|-----------|
| Total number of employees | 10,850 | 10,900 | 11,226 |
| Total number of contractors | 8,048 | 7,686 | |
| Total number of Female | 2,838 | 2,971 | |
| Total number of Male | 16,060 | 15,615 | |
| SAFETY | | | |
| Total recordable injuries | 70 | 60 | 58 |
| TRIR | 1.62 | 1.39 | |
| Total lost time injuries | 14 | | |
| LRIR | 0.32 | | |
| EMISSIONS | | | |
| Total greenhouse gas emissions (thousand tonnes) | 970 | 980 | 990 |
| GHG emissions- scope1 | 480 | 470 | 500 |
| GHG emissions- scope2 | 490 | 510 | 490 |
| Total air emissions (thousand tonnes) | 11.4 | 13.1 | 12.4 |
| Total NO _x emissions (thousand tonnes) | 1.5 | 1.9 | 1.2 |
| Total SO _x emissions (thousand tonnes) | 3.0 | 3.5 | 3.6 |
| Total PM emissions (thousand tonnes) | 6.9 | 7.7 | 7.6 |
| Total emissions of hazardous waste (thousand tonnes) | 4.0 | 4.0 | 5.2 |
| Total emissions of non-hazardous waste (thousand tonnes) | 16.0 | 11.4 | 15.3 |
| Total amount of tailings and waste rock (million tonnes) | 136.0 | 116.0* | 120.0* |
| Waste rocks | 98.0 | 78.0* | 82.0* |
| Tailings | 38.0 | 38.0* | 38.0* |
| WATER CONSUMPTION | | | |
| Total water consumption (million cubic meters) | 130.0 | 125.0 | 120.8 |
| ENERGY CONSUMPTION | | | |
| Total energy consumption(MWh) | 3,170,000 | 3,080,000 | 2,874,000 |
| COMMUNITY INVESTMENT | | | |
| Total (RMB millions) | 207.5 | 308.4 | 166.2 |
| Note: | | | |
| * Total amount of tailings and waste rocks restated from those published in 2017 and 2018 to reflect actual situation. | | | |

Index I —ESG Content Index

| 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 measures to mitigate emissions and results achieved | Environment |
| KPI A1.6 | Description of how hazardous and non-hazardous wastes are handled, reduction initiatives and results achieved | Environment |
| Aspect A2: Use of Resources | | |
| General Disclosure | Policies on the efficient use of resources, including energy, water and other raw materials | 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 initiatives and results achieved | Environment |
| KPI A2.4 | Description of whether there is any issue in sourcing water that is fit for purpose, water efficiency initiatives and results achieved | 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 |

| HKEX ESG Reporting Guide | Description | Location/Remarks |
|--|---|---|
| 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. | Employee |
| KPI B1.1 | Total workforce by gender, employment type, age group and geographical region | About CMOC; Employee |
| KPI B1.2 | Employee turnover rate by gender, age group and geographical region | Not mentioned: this is not a material issue for CMOC. |
| 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. | Employee |
| KPI B2.1 | Number and rate of work-related fatalities | Employee |
| KPI B2.2 | Lost days due to work injury | Not mentioned: this is not a material issue for CMOC. |
| KPI B2.3 | Description of occupational health and safety measures adopted, how implemented and monitored | Employee |
| Aspect B3: Development and Training | | |
| General Disclosure | Policies on improving employees' knowledge and skills for discharging duties at work. Description of training activities | Employee |
| KPI B3.1 | Percentage of employees trained by gender and employee category (e.g. senior management, middle management) | Not mentioned: this is not a material issue for CMOC. |
| KPI B3.2 | Average training hours completed per employee by gender and employee category | Not mentioned: this is not a material issue for CMOC. |
| 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 | Employee |
| KPI B4.1 | Description of measures to review employment practices to avoid child and forced labour | Employee |
| KPI B4.2 | Description of steps taken to eliminate such practices when discovered | Employee |
| 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 | Not mentioned: this is not a material issue for CMOC. |
| KPI B5.2 | Description of practices relating to engaging suppliers, number of suppliers where the practices are being implemented, how implemented and monitored | Product |

Index I —ESG Content Index

| HKEX ESG Reporting Guide | Description | Location/Remarks |
|--|---|---|
| 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 | 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 |
| 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, Employee |
| 102-9 | Supply chain | About CMOC |
| 102-10 | Significant changes to the organization and its supply chain | About CMOC |
| 102-11 | Precautionary Principle or approach | Management Approach, Environment, Community, Employee |
| 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, Employee |
| 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 |

Index II—GRI Content Index

| GRI Standard Title | Description | Location/ Remarks |
|--|--|---|
| Reporting Practice | | |
| 102-45 | Entities included in the consolidated financial statements | CMOC Annual Report 2019, 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 27, 2020 |
| 102-52 | Reporting cycle | About this Report |
| 102-53 | Contact point for questions regarding the report | Board Secretary' s Office |
| 102-54 | Claims of reporting in accordance with the GRI Standards | About this Report |
| 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 |
| GRI 203: Indirect Economic Impacts | | |
| 203-1 | Infrastructure investments and services supported | Community |
| GRI 205: Anti-corruption | | |
| 205-3 | Confirmed incidents of corruption and actions taken | N/A Products |
| 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. |
| GRI 302: Energy | | |
| 302-1 | Energy consumption within the organization | Environment |

| GRI Standard Title | Description | Location/ Remarks |
|--|---|--|
| 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 |
| GRI 305: Emissions | | |
| 305-1 | Direct (Scope 1) GHG emissions | Environment |
| 305-2 | Energy indirect (Scope 2) GHG emissions | 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 |
| GRI 307: Environmental Compliance | | |
| 307-1 | Non-compliance with environmental laws and regulations | Environment |
| 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 Employee Community |
| 103-2 | Management approach and its components | Management Approach Employee Community |
| 103-3 | Evaluation of management approach | Management Approach Employee Community |
| GRI 402: Labor Management Relations | | |
| 402-1 | Minimal notices regarding operational changes | Employee |
| 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 | Employee |
| GRI 404: Training and Education | | |
| 404-2 | Programs for upgrading employee skills and transition assistance programs | Employee |
| 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 | Employee |
| GRI 408: Child Labor | | |
| 408-1 | Operations and suppliers at significant risk for incidents of child labor | Employee Product |
| GRI 409: Forced or Compulsory Labor | | |
| 409-1 | Operations and suppliers at significant risk for incidents of forced or compulsory labor | Employee Product |

Index II—GRI Content Index

| GRI Standard Title | Description | Location/ Remarks |
|--|---|-------------------|
| GRI 410: Security Practices | | |
| 410-1 | Security personnel trained in human rights policies or procedures | Product |
| GRI 412: Human Rights Assessment | | |
| 412-1 | Operations that have been subject to human rights reviews or impact assessments | Community |
| GRI 413: Local Communities | | |
| 413-1 | Operations with local community engagement, impact assessments, and development programs | Community |
| GRI 414: Supplier Social Assessment | | |
| 414-1 | New suppliers screened using social criteria | Product |
| GRI 416: Customer Health and Safety | | |
| 416-2 | Incidents of non-compliance concerning the health and safety impacts of products and services | Product |
| 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 statements

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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), OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas Annex 1 and 2 (OECD DD) and the 10 Sustainable Development Principles of the International Council on Mining and Metals. 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, in 2019 TFM received independent assurance of the company's product control and custody procedures.'

Our approach involved:

- Interviews with relevant personnel at the site
- Review of procedures in place at the operation for control, custody and tracking of product and for implementation of the RRA, OECD DD and 10 Sustainable Development Principles
- Visit to the confiscated product disposal site
- Review of samples of documents used for recording and reporting the control, custody and tracking of product from the mine concession area.

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 correct.

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. The assurance statement provided by Corporate Integrity Ltd. is not intended to be used as advice or as the basis for any decisions, including, without limitation, financial or investment decisions.

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 ISEA3000 (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)
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Assurance statements

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ASSURANCE STATEMENT

The CMOC Environmental Social and Governance (ESG) Report for 2019 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 International Council of Mining and Metals (ICMM) principles for Sustainable Development (SD), and ICMM Position Statements. The operations covered by this review were:
 - TFM operations in the Democratic Republic of Congo (visited by Corporate Integrity);
 - Northparkes operations in Australia (desktop review and telephone interviews);
 - Niobras and Copebras operations in Brazil (desktop review and telephone interviews); and
 - Corporate activities relevant to the above operations (desktop reviews and telephone interviews).
2. A review of statements in relation to the above operations made in the CMOC ESG Report covering the 2019 reporting year including reporting against Global Reporting Initiative (GRI) Standards.

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 alignment with the ICMM principles for sustainable development in the mining and metals industry and ICMM Position Statements.
- That the information reported relating to the international operations in the CMOC ESG Report for 2019 and the related GRI disclosures have been materially mis-stated.

Methodology

The assurance process involved selective reviews of documents, interviews with site personnel, site-based reviews of the locations indicated above, and interviews with corporate personnel. It focused specifically on:

1. A review of CMOC policies and their alignment to ICMM's 10 SD principles and ICMM Position Statements.
2. A review of processes in place to identify and prioritise SD 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 SD risks and opportunities and to implement ICMM's 10 SD principles.
4. A review of statements made in the CMOC ESG Report for 2019.
5. A review and selective testing for accuracy of quantitative information and qualitative statements made in the CMOC ESG Report for 2019 and as referenced by the GRI Content Index.

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. The assurance statement provided by Corporate Integrity Ltd. is not intended to be used as advice or as the basis for any decisions, including, without limitation, financial or investment decisions.

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

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