



**中國有色礦業有限公司**  
China Nonferrous Mining Corporation Limited

(Incorporated in Hong Kong with limited liability under the Companies Ordinance)

Stock Code: 01258

## Environmental, Social and Governance Report

# 2023



# ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

## Definitions

In this report, unless the context otherwise requires, the following terms shall have the meanings set out in the table below. The English or Chinese translations for company names are for reference only.

“CCS”	Chambishi Copper Smelter Limited (謙比希銅冶煉有限公司*), a company incorporated in Zambia on 19 July 2006 and a subsidiary of the Company
“CNMC”	China Nonferrous Metal Mining (Group) Co., Ltd* (中國有色礦業集團有限公司), a state-owned enterprise incorporated under the laws of the PRC in 1997 with operating history dating back to 1983, directly administered by SASAC, and the ultimate controlling shareholder of the Company
“CNMC Huachin Mabende”	CNMC Huachin Mabende Mining SA (中色華鑫馬本德礦業股份有限公司*), a joint venture established in the DRC on 9 November 2012 and a subsidiary of the Company
“CNMHK”	China Nonferrous Mining Hong Kong Holdings Limited (中色礦業香港控股有限公司), a company incorporated in Hong Kong on 6 October 2015, a subsidiary of the Company and the holding company of Huachin Leach and CNMC Huachin Mabende
“Company” or “we” or “our” or “us”	China Nonferrous Mining Corporation Limited (中國有色礦業有限公司), a company incorporated in Hong Kong on 18 July 2011 with limited liability under the Companies Ordinance and, except where the context otherwise requires, all of its subsidiaries or where the context refers to any time prior to its incorporation, the business which its predecessors or the predecessors of its present subsidiaries were engaged in and which were subsequently assumed by it
“ESG”	Environmental, Social and Governance
“ESG Guide”	Environmental, Social and Governance Reporting Guide set out in Appendix C2 to the Listing Rules
“ESG Report” or “Report”	Environmental, Social and Governance Report
“Group” or “we” or “our” or “us”	the Company and its subsidiaries or any of them, or where the context so requires, in respect of the period before the Company became the holding company of its present subsidiaries, the present subsidiaries of the Company
“Huachin Leach”	Huachin Metal Leach SA (中色華鑫濕法冶煉股份有限公司*), a company incorporated under the laws of the DRC on 17 December 2010 and a subsidiary of the Company
“Kambove Mining”	Kambove Mining SAS (剛波夫礦業簡易股份有限公司*), a company established in the DRC on 8 June 2017 and a subsidiary of the Company
“Listing Rules”	The Rules Governing the Listing of Securities on the Stock Exchange



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“Lualaba Copper Smelter”	Lualaba Copper Smelter SAS (盧阿拉巴銅冶煉股份有限公司*), a company established in DRC on 21 June 2017 and a subsidiary of the Company
“Luanshya”	CNMC Luanshya Copper Mines PLC (中色盧安夏銅業有限公司*), formerly Luanshya Copper Mines PLC, a company incorporated in Zambia on 10 July 2003 and a subsidiary of the Company
“NFCA”	NFC Africa Mining PLC (中色非洲礦業有限公司*), a company incorporated in Zambia on 5 March 1998, and a subsidiary of the Company
“Reporting Period” or “Year”	From 1 January 2023 to 31 December 2023
“SML”	Sino-Metals Leach Zambia Limited (贊比亞謙比希濕法治煉有限公司*), a company incorporated under the laws of Zambia on 3 December 2004 and a subsidiary of the Company
“Stock Exchange”	The Stock Exchange of Hong Kong Limited

\* Translation of English or Chinese terms for reference purpose only

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# ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

## I. About the Report

### 1.1 Overview

For the first time, the Group has adopted the practice of independently publishing an environmental, social and governance report for the year 2023 (the “Report”), with the aim of demonstrating to our stakeholders our approach to, and performance of, environmental, social and governance, so as to help various stakeholders better understand our sustainability philosophy and performance.

### 1.2 Scope of Reporting

The Report covers the head office of the Group and its subsidiaries including NFCA, Luanshya, CCS, SML, Huachin Leach, CNMC Huachin Mabende, Lualaba Copper Smelter and Kambove Mining, as well as the Group’s products including blister copper, copper anode, copper cathode, sulfuric acid, liquid sulphur dioxide and cobalt hydroxide.

Unless otherwise stated, the Report covers the period from 1 January 2023 to 31 December 2023, which is consistent with the Group’s financial year. At the same time, in order to enhance the comparability and completeness of the Report, part of the contents may be appropriately backdated to the relevant contents of previous years.

### 1.3 Basis of Preparation

The Report has been prepared by the Group with reference to and in compliance with the ESG Reporting Guide set out in Appendix C2 to the Main Board Listing Rules on The Stock Exchange of Hong Kong Limited.

The Report has been in compliance with all mandatory disclosure requirements and the “comply or explain” provisions under the ESG Guide and on the basis of four reporting principles of materiality, quantification, balance and consistency.

Reporting Principles	Feedback from the Group
Materiality	The Group identifies the material issues related to the Group through stakeholder survey and materiality assessment, including inviting internal and external stakeholders to prioritize the material issues, and presenting them in the form of materiality matrix in the Report.
Quantification	The Group has disclosed in the Report the quantitative KPIs and the standards, methodologies, assumptions and calculation references used, including the source of major conversion factors.
Balance	The Report shall present the Group’s performance during the Reporting Period in an unbiased manner, and avoid selections, omissions, or presentation formats that may inappropriately influence a decision or judgment by the readers.
Consistency	The Report uses consistent calculations used in previous reporting periods to allow readers to make meaningful comparisons of ESG information over the Reporting Period. If there are any changes, we will note and explain the changes in the footnotes.

# ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT



## 1.4 Reliability Assurance

The Board of Directors of the Company (the “Board”) is responsible for formulating ESG strategies and for the contents of the Report. The information and cases disclosed in the Report are from the Group’s internal documents, statistical reports or relevant public information. The Company assures that the contents of the Report, for which the Company accepts full responsibility for its truthfulness, accuracy and completeness, are free from any false statements, misleading representations or material omissions.

## 1.5 Access and Feedback to the Report

This is the first time that the Group discloses its environmental, social and governance (ESG) report independently. The Report is available in both English and Chinese. If there is any ambiguity in the meaning of the Report, the Chinese version shall prevail.

The electronic copy of the Report is available on the website of the Stock Exchange (<https://www.hkexnews.hk>) and the official website of China Nonferrous Mining Corporation Limited (<http://www.cnmc.net>).

Your valuable feedback is critical to our continuous improvement. If you have any enquiries and suggestions, please call 852-9519 7870.

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## II. Introduction

### 2.1 The Board Speech

As an important pillar of the global economy, the development in the environmental, social and governance (ESG) aspects of the mining industry has received unprecedented attention. Well aware of its major responsibilities as an important participant in the global non-ferrous metal industry, China Nonferrous Mining has been constantly improving its ESG management level, adjusting and optimizing the Company's ESG goals and measures, in pursuit of a balance between short and medium-term interests and long-term sustainable development. Adhering to the principle of "development of resources, contributions to the society", we strive to provide more environment-friendly and efficient non-ferrous metal resources for society. We believe that enterprise development lies in creating economic values for shareholders and shouldering more extensive social responsibilities as well.

In 2023, we strengthened intrinsic safety by vigorously carrying out the Three-year Special Actions for Promoting Green and High-quality Development with Science and Safety and Environmental Protection and "Intelligent Mine Construction Campaign", and carefully organizing the special rectification for major hidden hazards and environmental protection facilities in production safety. We carried out technological innovation, equipment renovation and process optimization, continuously improved processes, saved costs, enhanced efficiency and reduced emissions, in order to promote industrial upgrading and green transformation. We adopted strict environmental protection measures, which enhanced the resource utilization efficiency, reduced waste emissions and promoted the balance of the ecological environment.

We are greatly concerned about the well-being of our employees, partners and community residents and always adhere to the principles of human rights protection. We follow internationally recognized human rights standards and guidelines, provide equal work opportunities and promote the career development of our employees. We provide training on vocational skills and safety for its employees to enhance their career development opportunities and resolutely oppose all forms of forced labour and child labour. We actively participate in community building, support the sustainable development of the local economy, and make great contributions to improving infrastructure and healthcare conditions and supporting local education. In 2023, the charitable donation amounted to US\$1.53 million.

We adhere to high-standard business ethics. The Group has established a supervision mechanism covering all subsidiaries, strengthened business ethics and anti-corruption supervision and management, and continued to build a clean and honest corporate culture, in order to build a healthy enterprise ecology.

Looking into the future, the Group will accelerate scientific and technological innovation and industrial upgrading and promote the transformation and upgrading of traditional manufacturing technology following the development concept of "innovative, coordinative, green, open and sharing", in order to guarantee the stable improvement in production and economic benefits. We firmly believe that we will better tackle future challenges, make greater contributions to the realization of sustainable development objectives and create a bright future with the concerted efforts of all the stakeholders.



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## 2.2 2023 Key Operating Results and ESG Performance

China Nonferrous Mining Corporation Limited (HKEX stock code: 01258. HK) is a leading copper producer in the world, possessing abundant copper and cobalt resources and advanced and reliable copper and cobalt mining, processing and metallurgical technologies, and is an internationalized mining company integrating the mining, processing, metallurgical and sales of copper and cobalt, with a complete industrial chain.

Economic performance			
Revenue	US\$3,606 million	continued to operate at high loads and decreased by 11.9% compared to 2022 as restated	
Net profit	US\$381 million	decreased by 1.0% compared to 2022 as restated	
Profit attributable to owners of the Group	US\$278 million	increased by 4.2% compared to 2022 as restated	
Annual production	Blister copper and copper anode	Copper cathode	Cobalt contained in cobalt hydroxide
	285,733 tonnes	142,423 tonnes	1,520 tonnes
	Sulfuric acid	Liquid sulphur dioxide	Processed copper products
	955,360 tonnes	11,971 tonnes	89,843 tonnes

Environmental Performance	
Intensity of hazardous wastes	0.0001 tonnes/US\$'000
Intensity of non-hazardous wastes	15.2 tonnes/US\$'000
Total energy consumption	1,979,677.1 MWhs
Intensity of comprehensive energy consumption	64.7 kg standard coal/US\$'000

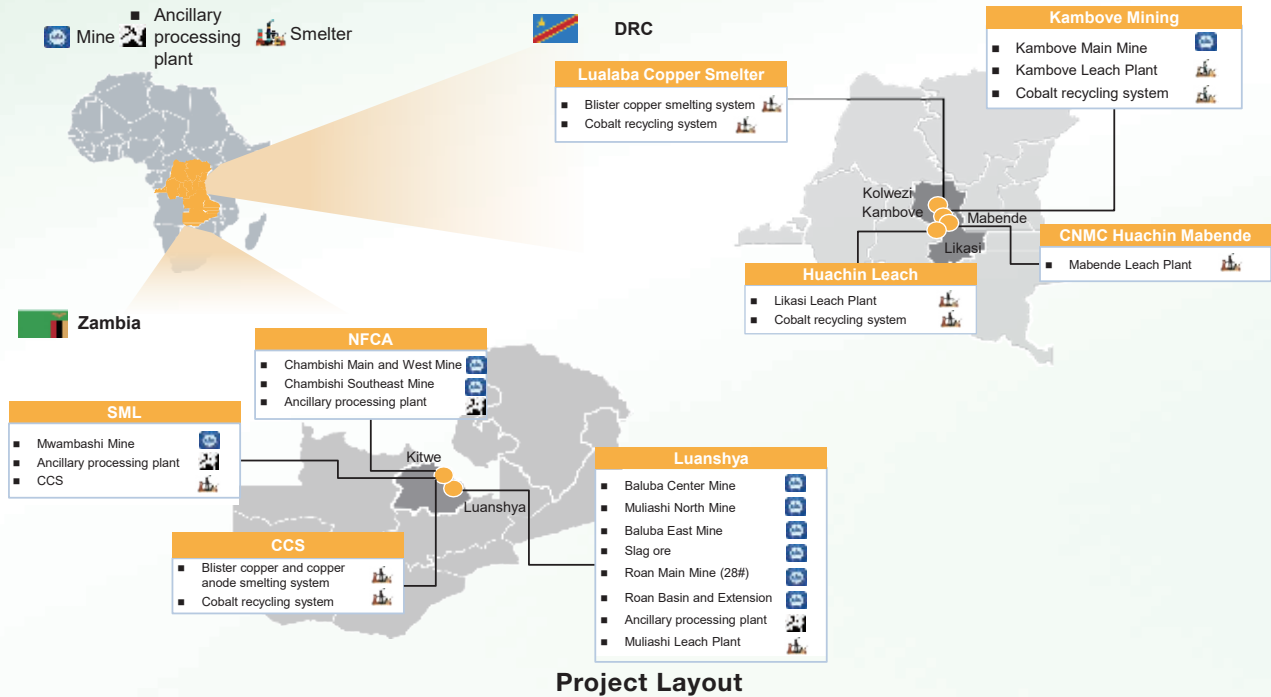
Social Performance	
Total employees	8,683
Percentage of Chinese employees	10.30%
Percentage of Zambian employees	58.29%
Percentage of the employees from the Democratic Republic of the Congo	31.41%
Charitable donation in total	US\$1.53 million



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## 2.3 Main Operating Locations

As a world-leading vertical comprehensive copper manufacturer, the Group's growth rate of comprehensive copper output takes the lead in the market. Our business is mainly distributed in the Copperbelt Province of Zambia, Upper Katanga Province and Lualaba Province of the DRC. We carry out production and operation through eight subsidiary entities, covering the whole industrial chain of copper and cobalt industry such as mining, pyrometallurgy and hydrometallurgy.



## 2.4 Sustainable Development Highlights

With the increasing severity of global climate changes, sustainable development has received constantly increasing concern from all over the world. As a responsible mining company, the Group also incorporates environment, society and governance into its strategic governance planning. The highlights of our strategic arrangement and practice for sustainable development are as follows.

### Diversified Development of the Board of Directors

The Group firmly believes that the diversity of the Board is of vital importance to the Company to maintain effective governance and decision-making. In 2023, the Company adjusted the structure of the Board and appointed a new female non-executive director, in order to bring different perspectives and thoughts to the management of the Board.

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## Expansion of Overseas Digital Mine Construction

The Group proactively promotes “digital mine construction”, and all the subsidiaries have established or appointed institutions for intelligent mine construction to further promote sustainable development. NFCA formulated the overall implementation plan for digital and intelligent mine construction, actively built digital mines in the Southeast Mine, constantly explored and optimized mining methods, and improved the operation efficiency of mines, realizing stable improvement in the level of mine management. Meanwhile, the VR practical training on mine safety enabled first-line operators to experience the harm brought forth by the unsafe behavior in the mine production, which provided safety warnings, offered effective guidance for standardized operation and greatly improved mine safety. During the Reporting Period, the Group upgraded the video monitoring in major parts, 3D management and control system and personnel positioning system in the Southeast Mine, and optimized the ore removal procedures of automatic scrapers. Focusing on the intelligent security system of the main mines, Kambove Mining conducted real-time monitoring and supervision on the management problems and hidden safety hazards in the daily operation of the mining fields by installing GPS positioning chips on mining trucks, adding monitoring and identification in key parts and other technical means; real-time 3D refined models for main mines through radar monitoring system to conduct online video monitoring on the stability of side slopes of main mines. Technical means such as UAV inspection system and intelligent security system were introduced to SML to enhance the efficiency and accuracy of safety management.



Production and Operation Central Control Room of NFCA



Radar monitoring system of the side slope stability of Kambove Mining

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## Contributions to the Development of Local Communities

The Group attaches great importance to the improvement in the Company's localized operation capabilities, hires local employees, continuously strengthens the training of local talents, and enriches employment opportunities. Subsidiaries in Zambia actively carry out social responsibility donation projects and provide assistance for local schools and hospitals from time to time every year, which improves the education and medical standards of local communities. Subsidiaries in the DRC also actively make investments in the public-benefit projects of local communities, to solve problems of drinking water for the local community.



Luanshya donated agricultural capital to Luanshya communities



Public-benefit well water project of Kambove Mining



Foundation-stone laying ceremony of primary school donation projects of Huachin Leach

## Active Improvement in ESG Governance and Management

In response to national policies and international tendencies, the Group has made phased and strategic arrangements for ESG work, including communication with stakeholders, assessment of material issues, extensive ESG risk assessment, review on progress of environmental objectives and scenario analysis on climate changes, in order to improve the corporate ESG governance through scientific and professional procedures. During the Reporting Period, we identified 11 material issues according to suggestions from various stakeholders; conducted quantitative evaluations on ESG risks of different businesses, and noted down corresponding countermeasures to better tackle ESG risks; recorded the operation in the environmental objectives in five directions, and made active responses in the Report; classified the potential climate risk lists and made (qualitative) scenario analysis on climate changes.

# ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

## III. Sustainable Development Management

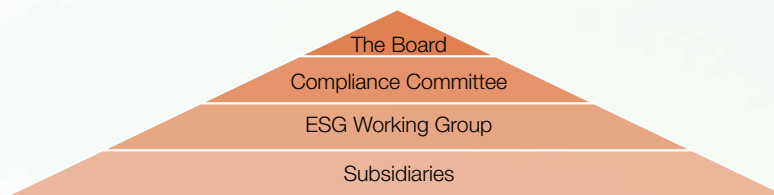
### 3.1 ESG Governance Structure

The Group is always committed to integrating sustainability into our corporate governance and daily operations.

In our ESG governance structure, the Board, as the highest decision-making body, is responsible for overseeing and ultimately making decisions on the Group's ESG matters. A Compliance Committee has been set up under the Board and has included ESG responsibilities in its terms of reference. An ESG working group has been set up under the Compliance Committee to assist our subsidiaries in the implementation of ESG initiatives, including the management of ESG objectives, regular review of progress against ESG objectives and adjusting or re-setting of objectives as necessary for the effective governance and oversight of ESG matters. We continue to optimize our ESG management model and review the effectiveness of our governance structure in accordance with the requirements of the Stock Exchange and taking into account the actual situation of the Group.

The Group has established a comprehensive and prudent risk management and internal control system, which is maintained and improved by the Board, and designed and implemented by the management. Among which, the Board is responsible for determining, evaluating, prioritizing and managing ESG-related risks, and guaranteeing the effectiveness of ESG risk management and internal control systems. The Company has integrated ESG-related risks into the risk management system, where the monitoring process includes internal environment, risk assessment, control activities, information and communication, and internal supervision. The Board is responsible for maintaining a sound and effective internal control system, and performs regular evaluations on the effectiveness of internal control.

During the Reporting Period, the Company held 2 shareholders' meetings and 42 board meetings. Two regular reports and 42 ad hoc announcements were published.



### 3.2 ESG Risk Assessment and Management

With reference to and analysis of international macro trends, international mainstream industry sustainability standards, mapping of major industry issues released by international rating agencies, as well as the integration of industry trends, we have updated our ESG risk database for 2023 and assessed the impact of relevant risks on the Group.

During the Reporting Period, the Group prioritized ESG risks by analyzing and assessing the impact of different ESG risks from multiple perspectives to ensure that ESG risks critical to its operations and business during the Reporting Period were effectively identified and relevant management measures were reviewed to ensure that such risks were effectively controlled.

During the Reporting Period, the Group has identified four material ESG risks. Considering that our subsidiaries are located in different geographic locations and carry out different businesses, they are exposed to different risks, and the disclosure of relevant management measures will be made in the Report according to the specific circumstances.

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Material ESG risks	Impact of risks on enterprises	Management measures
Energy Crisis	<p>The Group's main operating locations are in Africa, where the energy crisis has led to unstable power supply, which in turn has led to production stoppages and higher operating costs, and has further put pressure on the Group to manage its resources.</p>	<p>Luanshya</p> <ul style="list-style-type: none"> <li>The installation of power compensation devices at the Baluba copper mine and processing plant was completed. After installation, each set of capacitor compensation devices is automatically controlled by a controller to switch on the vacuum contactors according to the reactive power demand of the system, and each set of compensation devices is equipped with an automatic/manual switching function, which improves the power factor compensation and achieves the effect of energy saving;</li> <li>The Muliashi Leach Plant utilizes solar streetlights for the living area of the employees and part of the production area.</li> </ul> <p>NFCA</p> <ul style="list-style-type: none"> <li>The unstable power supply system in Zambia leads to power outages from time to time. The main west mine of NFCA belongs to a large water mine, and a power outage of more than one day may lead to a flooding accident in the mine, which is a source of great danger. We have strengthened the emergency plan drill for blocking water in the main west mine, equipped sufficient water blocking materials and tools, and installed waterproof gates in the main underground transportation tunnel. We have enhanced communication and interaction to ensure timely and sufficient supply of emergency power, so as to safeguard the drainage safety.</li> </ul> <p>SML</p> <ul style="list-style-type: none"> <li>Used solar street lamps in the living area.</li> </ul> <p>Huachin Leach</p> <ul style="list-style-type: none"> <li>Completed the detailed slot management in the electrowinning workshop to improve the efficiency of electric current;</li> <li>Developed new material application research to realize energy saving, consumption reduction and target enhancement.</li> </ul> <p>CNMC Huachin Mabende</p> <ul style="list-style-type: none"> <li>Optimized the production organization by combining the production process with the equipment and facilities to improve the efficiency of power usage and reduce the data target of electricity consumption per tonne of copper.</li> </ul>

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		<p>Lualaba Copper Smelter</p> <ul style="list-style-type: none"> <li>• Purchased more high iron, sulfur and copper concentrates as far as possible to increase the iron and sulfur content of the materials in the furnace to meet the smelting demand of the smelting furnace and to reduce coal consumption;</li> <li>• Enhanced the management of the steam system to reduce leakage and increased the recovery rate of steam, which can be used for power generation and reduce the demand for purchased electricity;</li> <li>• Reasonably controlled the amount of raw materials entering the plant, reduced the amount of open-air raw material stockpiling, and reduced fuel consumption.</li> </ul>
Resource Shortage	<p>When critical resources are in short supply, the production capacity of enterprises is restricted and prices rise, which may lead to higher costs and lower profits. In addition, in resource-poor regions, competition and disputes between different stakeholders may occur, and resource shortages may also lead to social tensions and conflicts.</p>	<ul style="list-style-type: none"> <li>• Mining enterprises extended the service life of their mines through continuous prospecting depth and margin area;</li> <li>• Smelting companies ensured the security of long-term production raw material supply by signing long term contracts;</li> <li>• Expanded the resource reserves of the Company through cooperation and mergers and acquisitions.</li> </ul>
Geopolitical and Economic Risks	<p>Geopolitical instability may trigger local armed conflict, which may affect market stability, thereby challenging enterprises with lower sales, slower investment and more restrictive market access. At the same time, political and economic volatility may also affect the stability of the supply chain, leading to shortages of raw materials, cost increases and delivery delays.</p>	<p>Subsidiaries</p> <ul style="list-style-type: none"> <li>• Built good relationships with local governments and stakeholders to gain better risk intelligence and support, while increasing resilience in times of geopolitical and economic change;</li> <li>• Monitored geopolitical and economic changes and establish an effective monitoring and analysis mechanism, including tracking changes in government policies, regional conflicts, trade restrictions, etc., as well as changes in economic indicators and market trends.</li> </ul>



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<p>Supply Chain Management Risks</p>	<p>Supplier delays or interruptions can lead to production line downtime and product delivery delays, which in turn affects customer satisfaction and sales. Logistical and quality problems may result in inventory backlogs, product damage or returns, increasing costs and damaging brand reputation. In addition, factors such as political instability and natural disasters may lead to supply chain disruptions, unavailability of goods or damage to supply chain nodes, resulting in serious economic losses and business chain reactions. Changes in the global economy, such as fluctuations in exchange rates, changes in trade policies and fluctuations in the prices of raw materials, may also create uncertainties and risks in the supply chain.</p>	<p>Subsidiaries</p> <ul style="list-style-type: none"> <li>• Formulated the Supplier Management Measures, stipulated the organization management structure and responsibilities, and carried out classification management, assessment and evaluation, and source investigation of suppliers;</li> <li>• The selection of suppliers took into account the supplier’s environmental, social and governance performance, including but not limited to the supplier’s acquisition of relevant qualifications;</li> <li>• Prioritized local suppliers;</li> <li>• Enhanced routine communication with key suppliers.</li> </ul>
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# ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

## 3.3 Communication with Stakeholders and Relationship Maintenance

The Group has been actively maintaining good relationships with stakeholders. We have established effective and comprehensive communication channels to understand the expectations and suggestions of stakeholders on a timely basis and review the potential risks and opportunities related to ESG, so as to effectively promote the sustainable development of the Group.

The table below shows the expectations of various stakeholders on the Group and the Group's daily communication channels with them:

Stakeholders	Expectations on the Group	Means of communication	Frequency of communication
Governments and regulatory authorities	Obeying disciplines and laws Compliance operation Paying taxes according to law	Policy formulation Work report Information disclosure	On a regular/ irregular basis
Shareholders and investors	Operational performance Profit of the Company Corporate governance	Shareholders' meeting Periodic report Results announcement Roadshow	On an annual/quarterly/ irregular basis
Employees	Remuneration and benefits Health and safety Vocational training	Employees' meeting Labour contract Employees' activity	On a regular/ irregular basis
Clients	Quality control Service assurance	Contract and agreement Customer service Website of the Company	On an annual/quarterly/ irregular basis
Suppliers	Fairness and justice Mutually beneficial cooperation	Contract and agreement Work meeting Evaluation from the supplier	On a regular/ irregular basis
Communities	Protecting community environment Harmonious development	Community communication Charitable donation	On a regular/ irregular basis

## 3.4 Analysis on Material Issues

During the Reporting Period, the Group has updated the material issues database for the current year by taking into account the characteristics of the industry and the specific circumstances of the subsidiaries and with reference to the aspects of the material issues database for previous years, the disclosure requirements of the regulatory authorities, the United Nations' sustainable development goals and the issues of concern to the rating agencies, for the use of assessment of the internal and external stakeholders covered or involved in the Group's head office and subsidiaries by way of a questionnaire survey.

During the assessment process, we analyzed the two dimensions of each issue, i.e. "significance to China Nonferrous Mining" and "significance to stakeholders", to assess and select material ESG issues during the Reporting Period, and arrived at the materiality analysis results. The analysis results were reviewed by the Board of the Group and the material ESG issues finally determined will be highlighted in the Report.

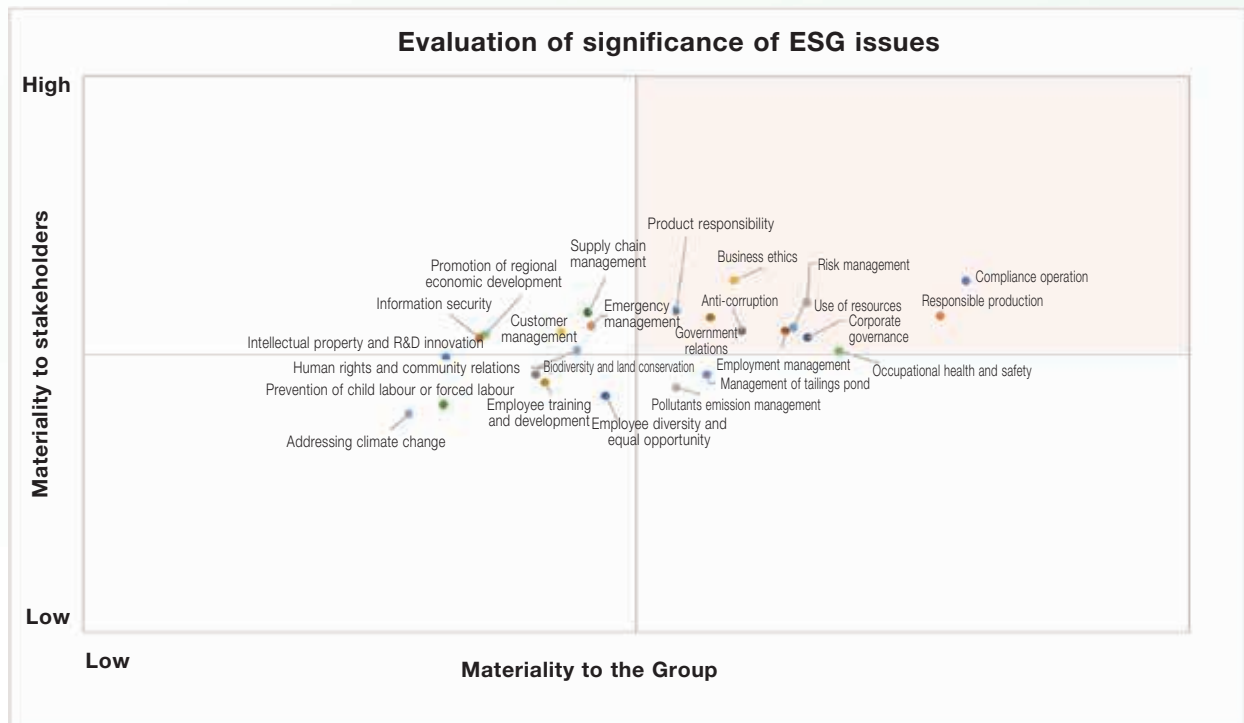


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The Group's material issue assessment process includes four major steps as follows:

(1) ESG issues identification	To identify the potential material issues that can reflect the effects of business of the Group on the environment and society and influence stakeholders' assessment and decision on the Group through background research, including internal management system, benchmarking analysis of our peers and other relevant documents.
(2) ESG issues ranking	To invite internal and external stakeholders to rank the materiality of potential ESG issues through anonymous online questionnaires, and to collect their opinions and expectations on the Group's ESG governance. Based on the survey results, to select the material issues.
(3) Review of material issues	The Board reviews the material issues selected by stakeholders, confirms the impact of these issues on the Group and ultimately determines the 2023 ESG material issues.
(4) Response to material issues	To determine the key issues for disclosure in the Report based on the ranking of materiality, to analyze key concerns of the stakeholders and prepare ESG management measures.

We actively invited the internal and external stakeholders to participate in this survey on material issues so as to understand the concern and attention that they attach to the ESG issues of the Group. We received a total of 664 responses to the questionnaire in this survey, and based on the analysis results, we formed the following matrix of material issues. The materiality analysis matrix of ESG issues of the Group in 2023 is demonstrated as below.



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We determined the material issues at half or more of the level of significance for both “significance to China Nonferrous Mining” and “significance to stakeholders” as the material issues for the Year. Following this, the Board considered, reviewed and determined the results of the material issues analysis in terms of sustainability contribution, general concerns of stakeholders, management and risk control of business operations and the needs of strategic development, and finally selected the following 11 material ESG issues (in descending order of significance). Those issues will serve as an important factor taken into account for the sustainable development management and strategic planning, and are also the key content for disclosure in the Report.

<b>Rank</b>	<b>Material Issues</b>	<b>Key Response Sections</b>
1	Compliance Operation	Regulated Operation
2	Responsible Production	Safety Management
3	Risk Management	Sustainability Management Regulated Operation Safety Management
4	Business Ethics	Regulated Operation
5	Use of Resources	Green Development
6	Occupational Health and Safety	Safety Management
7	Corporate Governance	Sustainability Management
8	Employment Management	Harmonious Enterprise
9	Anti-corruption	Regulated Operation
10	Government Relations	Harmonious Enterprise
11	Product Quality and Responsibility	Safety Management



# ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

## IV. Regulated Operation

### 4.1 Compliance Governance and Operation

The principal operations of the Group are concentrated in Zambia and the DRC. We have always complied with the laws and regulations of the places where we operate, including Mainland China, Hong Kong, Zambia and the DRC. At the same time, we consistently improved our management system, and abided by business ethics to enhance the Group's competitiveness in the international market. The implementation rate of the general counsel system, the establishment rate of legal affairs organizations, and the formulation rate of the legal compliance system of the Company's head office and subsidiaries all reached 100%.

In accordance with relevant requirements including the Hong Kong Companies Ordinance and the Listing Rules, we have developed a series of internal management systems, including the Rules of Procedure of General Meetings, and the Meetings of the Board of Directors and the President Office of China Nonferrous Mining Corporation Limited (《中國有色礦業有限公司股東大會、董事會暨總裁辦公會議事規則》), the Administrative Rules of General Meetings and the Board of Directors of Investees of China Nonferrous Mining Corporation Limited (《中國有色礦業有限公司出資企業股東會、董事會管理規則》), the Internal Control Management Manual of China Nonferrous Mining Corporation Limited (《中國有色礦業有限公司內部控制管理手冊》) and the Guidelines for Legal and Compliance Management of China Nonferrous Mining Corporation Limited (《中國有色礦業有限公司法律與合規管理工作指引》), to clarify the implementation rules for corporate governance.

At the same time, we have conducted internal control during the Reporting Period and compiled the document named Risk Management and Internal Control Review Report of China Nonferrous Mining Corporation Limited.

# ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

Nomination Committee, Remuneration Committee, Compliance Committee and Audit Committee have been set up under the Board of the Group, which are responsible for managing and maintaining the structure of the Board, the rights and interests of directors and senior management, operational compliance and monitoring of the Company's financial reporting process, internal controls and risk management, respectively. Meanwhile, the Group has set up a compliance officer/corporate general counsel and the legal and compliance department to better adapt to the legal systems of Zambia and the DRC and ensure our overseas production and operation activities being compliance with local laws and regulations.

## 4.2 Product Quality and Responsibility

In line with our objectives of “sustainable utilization of resources” and “realization of high-quality development”, we focus on improving quality, efficiency and core competitiveness, attach importance to responsible production, and expect to achieve resource sustainability and standardized management of product quality and responsibility. We have established a series of goals, including improving resource utilization, safe and clean production, reducing production costs, and improving product quality and economic efficiency. These goals reflect our commitment to protecting the environment, ensuring sustainable resource utilization, and providing quality products to our customers while pursuing economic development.



Determination of Fe-containing elements in copper concentrates by titration at Lualaba Copper Smelter Laboratory



Determination of Cu in product blister copper by electrolytic gravimetric method at Lualaba Copper Smelter Laboratory

Our product quality inspection follows the international or national inspection and quality standards, and we are committed to providing high quality products to our customers. For the production of blister copper and copper anode, we strictly follow the relevant inspection and quality standards. For the production of copper cathode, we follow the standards of BS EN 1978:1998 Copper Cathodes, GB/T 467-2010 Copper Cathode and ASTM B115-10 Electrolytic Copper Cathode standards. The quality of our copper cathodes is tested based on the National Standards GB/T467-2010 for Copper Cathode in the People's Republic of China, while the quality of copper concentrate is tested with the standard for Method of Scientific Analysis on Copper Concentrate under the National Standards GB/T3884.1-3884.10-2000 in the People's Republic of China.

The Group emphasizes on the improvement of product quality management system and we have high expectation on product quality. During the Reporting Period, the London Metal Exchange (“LME”) issued a circular stating that “CLM” grade A copper cathode produced by Luanshya was formally entered into the list of LME registered grades, and some of its subsidiaries will plan to apply for LME registration.

# ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

Luanshya's "CLM" grade A copper cathode was successfully registered on LME

In order to strengthen the quality of our products, Luanshya has set up the LME Registration Work Leadership Group, and in compliance with the latest requirements of LME Registration Guidelines, in July 2022, we passed the ISO 45001 and ISO 14001 international standard system certification on the basis of the stable operation of the ISO 9001:2015 quality management system. In November 2022, we also passed the LME's certification audit of registration documents. Subsequently, during the Reporting Period, i.e. in January 2023, the LME Copper Committee issued an announcement to all members, announcing that the grade A copper cathode produced by Luanshya entered the testing stage. on 27 December 2023, Luanshya obtained the certificate of registration from LME, a leap forward from a product to a brand name.



Copper cathodes produced by Luanshya

# ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

Huachin Leach and CNMC Huachin Mabende carried out “6S” site management.

CNMHK, the controlling parent company of Huachin Leach and CNMC Huachin Mabende, has actively responded to the “6S” management deployment of CNMC, and has taken the “6S” as an important hand in improving the site environment, management enhancement and strengthening the safety production management, to effectively manage the production site personnel, materials, equipment and other content, including organization, straightening, cleaning, cleaning, quality and safety. The company actively organizes company leaders, production technicians and site managers to participate in online training organized by group company, and actively organizes the dissemination of training and learning materials on “6S” to increase employees’ knowledge and understanding of the same. CNMHK compiled and published the document CNMHK “6S” Site Management Key Points and Implementation Reference Standards for Various Elements to build up a management system, and deployed all production units to carry out “6S” management and site environment improvement work according to the actual situation. CNMC Huachin Mabende selected the grinding workshop as the company’s “6S” site management implementation program, and launched a series of activities to improve the site operating environment in light of the actual production, so as to improve the site management; Huachin Leach comprehensively sorted out the large scope of areas that need to be remediated in the whole plant and took the lead in remediation, which have organized and sorted out 27 remediation projects, and selected the electrowinning workshop as a pilot unit, exploring and advancing in a point-to-point manner.

The Group also attaches great importance to the service experience of customers and undertakes to constantly improve customer service. The subsidiaries have put in place a series of complaint management measures. For example, NFCA has formulated a series of complaints management measures, and employees must follow relevant guiding principles when handling client complaints. In the principle of commitment, employees need to actively make commitments to the provisions and implementation of the complaint handling process; in the principle of objectivity, employees shall treat each complaint equally, objectively and without prejudice in the complaint handling process. Once received complaints from clients, the Group will immediately arrange relevant responsible departments to deal with them, report them to the management, and make understanding to the relevant departments, put forward solutions, and communicate with customers in a timely manner.

The Group attaches great importance to information security and privacy protection. In the course of our daily operations, we keep important non-public information of our partners and customers strictly confidential. When signing contracts and agreements involving commercial secrets, “confidentiality clauses” will be stipulated in the contracts or separate confidentiality agreements will be signed, and letters or numbers will be used instead of key project name information to prevent leakage of sensitive information. During the Reporting Period, there was no leakage of company and customer privacy. For example, during the Reporting Period, NFCA formulated the Network Security Management System of NFCA and signed confidentiality agreements with its customers to ensure the security of confidential matters.

During the Reporting Period, the Group did not receive any complaints or involve in legal proceedings relating to its products and services and there were no cases of recall of products sold or shipped due to safety and health reasons.



# ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

## 4.3 Norms and Construction of Integrity-based Governance

### Policy Setting

The Group maintains a “zero tolerance” attitude towards corruption and any unethical business practices. We have formulated a series of management rules including the Related Party Transaction Management Rules, Reporting and Complaints Management Rules and the Implementation Measures for Corruption Risk Prevention and Control to prevent fraud and strengthen the Group’s governance and internal control, so as to minimize the legal risks, regulate business practices and safeguard the sustainable and healthy development of the Company.

The Group adopts strict management measures for key anti-corruption links such as bidding and procurement, and clearly sets relevant anti-corruption clauses in the procurement contract to ensure the openness and transparency of the bidding process, and strictly prevent all kinds of fraudulent acts. We require all suppliers and contractors to comply with the Group’s business ethics policy.

For example, during the selection of suppliers, Lualaba Copper Smelter has formulated a strict avoidance system for specific related persons, and required partners (including cooperative merchants in procurement, sales, transportation and services) to actively identify personnel who have certain relations with the procurement, sales and other positions of Lualaba Copper Smelter through files, and to abstain from business cooperation.

For example, Luanshya has developed a Code of Ethics, which clearly sets out Luanshya’s compliance with local Zambian anti-corruption laws and regulations. During the Reporting Period, Luanshya developed a Supervision Checklist for 2023, which sets out the requirements for supervision of anti-corruption activities in the procurement process and at external suppliers.

### Whistleblower Protection

The Group has made reference to and implemented the Measures for the Management of Complaints via Letters and Visits and Stability Maintenance of China Nonferrous Metal Mining (Group) Co., Ltd. By regulating the works relating to complaints via letters and visits, the Group maintains the order of the same and protects the legitimate rights and interests of the informants. We strictly oppose any retaliatory action against whistleblowers and adopt various means to ensure the anonymity of whistleblowers and limit the spread of reported information. We emphasize communication and coordination in our work to maintain stability and better address the interests of all parties. We always ensure that the rights and interests of our employees and the public are legally protected, and we do a good job of preventing and resolving all kinds of conflicts and disputes.

# ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

## Anti-Corruption Training

The Group has included integrity information in its daily training, and continuously enhanced the employees' awareness of integrity by regularly organizing middle and senior employees to learn anti-corruption policies, carry out anti-corruption education, integrity talks and other activities. During the Reporting Period, the Group actively conducted training on anti-corruption.

SML conducted an educational meeting on norms and construction of integrity-based governance



During the Reporting Period, there was no litigation against or corresponding penalty imposed on the Group due to bribery, blackmail, extortion and money laundering and no corruption proceeding concluded.

## 4.4 Technology R&D and Innovation

The Group has been conducting research on new technologies to effectively and continuously improve the use efficiency of resources and product quality. At the same time, as we also own a number of technology patents, we attach great importance to the protection of our intellectual property rights, including patents, trademarks, copyrights and trade secrets. The subsidiaries of the Group have developed relevant rules in respect of intellectual property rights, including the Interim Measures for Patent Application Process and Awards of China Nonferrous Mining Hong Kong Holdings Limited, the (Interim) Measures for Legal Protection of the Intellectual Property of CNMC Luanshya Copper Mines PLC and the Measures for Legal Protection of the Intellectual Property of Chambishi Copper Smelter Limited (Trial), which specify the infringement of the Group's intellectual property rights, the legal protection of patent rights, and the patent application procedures and reward standards, etc., so as to standardize the intellectual property rights work of the Group and comprehensively enhance the competitiveness of enterprises.

For example, NFCA makes extensive investment in scientific research every year. In order to avoid intellectual property disputes, the ownership of intellectual property rights will be set out in each scientific research contract in detail.



# ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

NFCA leads high-quality development with scientific and technological innovation and pioneers overseas digitalized mine construction

NFCA is a resource-based enterprise, and the Chambishi copper mine has been called a “landmark project of China-Africa cooperation”. Since 2012, NFCA has been actively promoting the construction of “digital mine”, and the development of the mine has been changing day by day, which has become a vivid practice to promote the construction of China-Africa community with a shared future in the new era.

NFCA vigorously pushes forward the comprehensive innovation with scientific and technological innovation at its core, accelerates the formation of new quality productivity, completes the construction of the transformed digital mine of the “main west mine” and continuously improves and upgrades the newly-built digital mine of the “southeast mine” by focusing on “safety, greenness and high efficiency”, and realizes the change of mining business and process through the means of digitization to push forward the substantial increase of the level of “mechanization, automation and intellectualization”.

Firstly, it combines intelligent large-scale equipment with mining technology. The southeast mine adopts the world’s leading automated equipment and technology, and regards the high-efficiency and low-cost mining model as the core, realizing the automation of mining operations and solving the safety problem of high mine runout in medium and deep hole mining.

Secondly, the adoption of an advanced production platform is integrated with the management model. The southeast mine utilizes the four modules of the Optimine system, namely, monitoring and control, positioning and tracking, task planning and task management, as the main production process management system to realize remote control of the main underground production equipment, such as remote-controlled shovels, and to realize visualization and real-time monitoring and management of the production process.

Thirdly, high standard system construction was utilized in conjunction with production. The southeast mine has built the world’s largest depth of explosives vertical lowering system and Africa’s largest depth of fuel oil vertical lowering system, which have been successfully put into operation. While reducing the pressure of transportation in the auxiliary shaft, the safe, efficient and low-cost supply of fuel oil and explosives has been realized.

Finally, an efficient automation system is integrated with the ore processing technology. The expert system built at the processing plants of the southeast mine realizes unattended automatic optimization control of the flotation process indicators. The system not only ensures that the grinding particle size meets the process requirements, but also increases the processing capacity of the grinding workshop. Daily processing capacity was stabilized and average copper metal recovery and copper concentrate grades were increased.



# ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

## 4.5 Supply Chain Management

The Group maintains long-term and stable cooperative relationships with its suppliers and expects them to adhere to high standards of governance. We have developed a sound supplier management system to regulate the code of conduct of suppliers. Subsidiaries will develop their own management systems in accordance with the systems established by the Group and taking into account their own circumstances.

When selecting suppliers, we comprehensively take into consideration their performance including the compliance status, the quality of products supplied, the delivery period, product prices, after-sale services and other factors. The Group will arrange personnel to conduct on-the-spot investigation and reviews according to relevant regulations of the management measures and based on actual conditions of the Company before entering into contracts with new suppliers, thus to ensure that the quality and operations of suppliers meet the requirements of the Group. The Group conducts reviews on suppliers' performance annually and requires them to fill in the Qualified Supplier Review Form.

In addition, we attach importance to suppliers' environmental and social performance, including their sustainable development management standards, environmental management, employment of child labour or forced labour, etc., and include them into the scope of assessment. The unqualified suppliers will be warned or disqualified based on the degree of violation.

In evaluating our suppliers, we attach great importance to their environmental and social risks. We assess suppliers' risks on a case-by-case basis at the tender or review stage. Subsidiaries will require bidders and judges to fill in the Integrity and Discipline Commitment (《廉潔守紀承諾書》) at the bidding stage to ensure that all parties have complied with the principles of business ethics at the first step of the screening process. We will require suppliers to present certificates corresponding to their qualifications, such as certifications related to quality, safety and environmental protection systems, proven capabilities to perform contracts, business operations and major relevant performance certificates.





# ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

At the same time, the Group has understood the importance of promoting multiple use of environmentally friendly products or services when selecting suppliers. In the future, we will actively consider how to cope with the actual business conditions, optimize and improve the procurement process of suppliers and products, and increase the adoption rate of environmentally friendly products and services.

Subject to its selection standards, the Group will prioritize local suppliers and establish long-term and stable cooperative relationship to promote local employment and economic development. We also help suppliers improve their management level and quality of products and services, and urge them to fulfil their environmental and social responsibilities, so as to achieve win-win cooperation. We select suppliers who share our values and meet our internal standards to establish long-term partnerships by understanding their performance in compliance with laws and regulations, safety, environmental and health management systems and anti-corruption laws. Besides, for suppliers who provide special and important products, we will organize field inspection personnel to conduct on-site review according to actual needs and issue a written report after the inspection, which details the overall situation of the inspected suppliers, to effectively identify and reduce the potential environmental and social risks of the suppliers.

As at the end of the Reporting Period, the Group's subsidiaries had a total of 675 key suppliers, of which 608 were from Zambia and the DRC, and 67 were from outside of Zambia and the DRC.

## V. Safety Management

The Group has been adhering to the concepts of “safety production is paramount” and “intrinsic safety and active safety”, aiming at “zero injury”, and enhancing the overall safety level. We have been adhering to the safety production policy of “safety first, prevention-oriented, and comprehensive management”, insisted on the problem, objective and result-oriented approaches, and conducted safety hazard investigation on a regular basis to ensure the safety and stability of the Company's production. In 2023, there was no major or above production safety accidents in the Group.

### 5.1 Safety Management System

In terms of policies and systems, the Group strictly implements the relevant management measures formulated by CNMC, the controlling shareholder, including the Measures for Safety Production Management (《安全生產管理辦法》), the Regulations on the Responsibility System for Safety Production at Headquarters (《總部安全生產責任制規定》), the Measures for Appraisal of Safety Production Performance of Investees (《出資企業安全生產績效考核辦法》), the Measures for Extraction and Use of Safety Production Expenses (《安全生產費用提取和使用辦法》), the Measures for Safety Production Training (《安全生產培訓管理辦法》), and the Accountability Measures for Production Safety Accidents (《生產安全事故責任追究辦法》), so as to effectively manage its production activities and safety issues. The subsidiaries of the Group have also formulated occupational health systems and assessment measures for occupational health and safety target responsibilities. Subsidiaries involved in the management of tailings ponds have also established a safety production management system for tailings ponds and formulated relevant management systems and emergency plans in response to the safety management of tailings ponds.

# ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

In order to further improve the safety production management system, the subsidiaries are gradually establishing a management system in accordance with the internationally recognized ISO 45001 occupational health and safety management system standard, and employ qualified third parties for certification. Among them, Luanshya has obtained ISO 45001: 2018 certification during the Reporting Period.



In terms of safety management and operation, the Group has been constantly improving the safety management system and promoting systematic, normalized, standardized and scientific safety management in six major scopes, including management organization, performance assessment, inspection and rectification, emergency management, education, training and occupational health protection. The safety management work of the Group is as follows.

<p>Safety management organization</p>	<ul style="list-style-type: none"> <li>• It establishes safety management organizations such as safety and environmental protection committees at all levels, and the chairman, the general manager or qualified mine manager are the first responsible persons for safety production; set up the responsible persons and safety directors to conduct comprehensive supervision and guidance and comprehensive full-time management; and clarified the responsibilities step by step in accordance with the requirements of “three managements and three musts”.</li> <li>• It establishes a safety and environmental protection department as special safety management function and allocates a reasonable number of full-time safety management personnel to form a safety management system covering the chairperson, the general manager, the responsible person, the safety director, the safety and environmental protection department, workshops and grass-root teams to guarantee production safety.</li> </ul>
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# ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

<p>Safety performance assessment</p>	<ul style="list-style-type: none"> <li>The Group establishes the production safety performance system and assessment mechanism for persons in charge of units at all levels and conducts overall appraisal on safety management system, safety accident performance, potential hazards inspection and rectification as well as education and training on safety to increasingly improve safety management performance.</li> </ul>
<p>Safety inspection and rectification</p>	<ul style="list-style-type: none"> <li>The Group follows the principle of “potential hazards amount to accidents” and pays continuous attention to safety inspection and rectification. It actively conducts identification, assessment and control on sources of danger and forms a multi-level safety inspection and rectification management model with self-inspection of departments, monitoring and inspection by the safety and environmental protection department, company-level safety production inspection, “cross-inspection” among enterprises, and supervision and inspection by higher-level institutions.</li> <li>It carries out closed-loop management and publishes the contents of safety inspection and the rectification results to promote monitoring and management, discover and eliminate potential hazards in time and prevent and reduce safety accidents.</li> </ul>
<p>Safety emergency management</p>	<ul style="list-style-type: none"> <li>Based on the characteristics of production and operation, the Group establishes a mining rescue team, formulates various emergency plans and proactively conducts exercises, effectively improving the capability of the rescue team and relevant departments to cope with safety incidents.</li> <li>All subsidiaries carry out evacuation and escape drills at least once a year, and enterprises in high-risk industries carry out evacuation and escape drills at least once every six months, so that all employees are familiar with escape routes, safety exits and emergency response requirements, form a normalized drill mechanism, and improve the overall self-rescue and mutual rescue capabilities of employees level.</li> </ul>
<p>Safety education and training</p>	<ul style="list-style-type: none"> <li>It strictly implements the induction training for new employees and the “three-level education” mechanism, carries out professional training, operating procedure training, warning education and training, etc., and effectively improves the safety awareness and ability of all employees.</li> </ul>
<p>Occupational health protection</p>	<ul style="list-style-type: none"> <li>In addition to ensuring that its plants conform to local occupational health standards, the Group consistently improves working conditions and environment. It also regularly assesses risk factors relating to occupational diseases.</li> <li>It provides appropriate labour protective supplies and occupational health examination to staff exposed to occupational disease risks to prevent them from occupational diseases.</li> </ul>

# ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT



CCS held the Occupational Health, Safety and Environmental Protection Conference of the Mining Association successfully in the second quarter of 2023

## 5.2 Safety Culture Development

The Group adheres to the principle of “Safety First, Life First” and the policy of “precaution as focus and combination of precaution and control”. We have adopted several management systems and comprehensive health management services to manage the physical and mental health of our employees, so as to prevent, control and eliminate occupational disease hazards, prevent and control occupational diseases, and protect the physical and mental health of labors. We will monitor the effectiveness of the systems on an on-going basis, update and amend them from time to time.

For example, Huachin Leach and CNMC Huachin Mabende has fully implemented the approach of safety production and work, among which, the leadership team has made it a point to “talk about safety at every meeting”, conveyed the relevant deployments of the holding group in a timely manner, notified the accidents of safety and production, and learnt and discussed the knowledge of safety production. Through special training, warning education case study, operating procedures learning and training, skills training, emergency drills and other forms of education and training, the awareness and skills of safety production and emergency management capabilities of all staff were enhanced.



Safety slogan of SML plant area

# ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

## Policies and Regulations

The Group hopes to enhance the workers' awareness in the safety and environmental protection, prevent safety and environmental protection accidents and mitigate occupational hazards through diversified health and safety training. The Group has formulated the Measures for Safety Production Training (《安全生產培訓管理辦法》), which aims to improve the safety skills of employees engaged in high-risk industries as a whole, as well as to ensure that all the on-the-job and newly recruited employees of each subsidiary receive the training on production safety knowledge and skill improvement, and achieve 100% passing in training assessment; and 100% of special operators are certified to work.

Due to different business types and geographical locations, the subsidiaries of the Group, according to the local laws and regulations, have compiled occupational health and safety related systems and emergency plans including the Regulations on Emergency Management of Production Safety (《安全生產應急管理規定》), the Open Pit Safety Procedure (《露天安全管理規定》), the Road Safety Rules (《道路安全規定》), the Procedure for Emergency Response-Chemical Spillage (《化學洩露緊急響應預案》), the Administrative Measures on Industrial Injury Accidents (《工傷事故管理辦法》), the Administrative Measures on Labour Protective Supplies (《勞動防護用品管理辦法》), the Administrative Measures on Staff Health Examinations (《員工體檢管理辦法》), and the Occupational Safety and Health Management Measures (《職業安全健康管理辦法》), the contents of which include warning and notification of occupational disease hazards, routine annual medical testing for employees exposed to dust, occupational disease prevention education, maintenance of protective equipment and facilities, monitoring and evaluation of hazards, reporting of hazard incidents and emergency rescue, and so on.

Huachin Leach and CNMC Huachin Mabende established online safety education and training system.

CNMHK, the holding parent company of Huachin Leach and CNMC Huachin Mabende, has established an online safety education and training examination system and improved the safety education and training effect evaluation system. Through the platform "Questionnaire Star", we have provided the "Examination" license, selected materials from laws and regulations, industry standards, rules and regulations, operating procedures, etc., compiled examination question banks for different positions and categories, uploaded them, and set up online examination papers according to needs. After the employees answer the questions and submit them, the system automatically marks the papers and assesses them. If they fail to pass the examination, they will take a make-up examination again until they pass the examination. Through repeated study and examination, all employees' awareness and mastery of safety production knowledge will be further improved. At the same time, CNMHK has revised the Chinese-French bilingual version of the Compilation of Safety Technology Operating Procedures (2023 Revision) (《安全技術操作規程彙編(2023年修訂)》), covering four major parts: the wet copper smelting, cobalt hydroxide production, sulfur-based acid production, and open-pit mining, totally 48 items, which facilitate the education, training and comparative study of Chinese and the DRC employees in the production line of Huachin Leach and CNMC Huachin Mabende.

# ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

## Indicators and targets

The subsidiaries of the Group set occupational health and safety targets and indicators to effectively manage the implementation of their safety production and operation systems.

Luanshya regularly conducts statistics and summaries of occupational health indicators on an annual basis.

During the Reporting Period, Luanshya regularly conducts statistics and summaries of occupational health indicators on an annual basis, including but not limited to new occupational diseases, system construction of occupational health management institutions, occupational health education and training, occupational hazard detections, and occupational health inspections.

### **New occupational diseases**

During the Reporting Period, the case number of new occupational diseases, occupational pneumoconiosis, acute occupational poisoning, chronic occupational poisoning and other occupational diseases in Luanshya all was 0.

### **System construction of occupational health management institutions**

Luanshya's occupational health management organization is jointly managed by the Company's Safety and Environmental Protection Department, Human Resources Department and Mine Hospital. During the Reporting Period, there were 3 full-time occupational health management personnel, and 76 part-time occupational health management personnel.

### **Occupational health education and training**

In terms of occupational disease prevention and control, Luanshya organized all its cadres and employees to watch and study the Law on the Prevention and Control of Occupational Diseases (《職業病防治法》) and other related occupational health education and training content. During the Reporting Period, Luanshya carried out a total of 2 relevant trainings, with a total of 320 attendees receiving education.

At the same time, Luanshya conducted training and learning in strict accordance with the relevant laws and requirements of the Zambia Mine Safety Bureau on occupational disease prevention and control. During the Reporting Period, Luanshya carried out a total of 12 relevant trainings, with 446 attendees receiving education.

### **Occupational hazard detections, and occupational health inspections**

During the Reporting Period, Luanshya conducted inspections on occupational hazard factors, including dust, chemical and physical factors, which didn't exceed the standards throughout the year. During the Reporting Period, Luanshya also conducted occupational health inspections on occupational disease hazards, with a total of 596 people inspected and 0 abnormal inspections.



# ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

## CCS Set occupational health, safety and environmental target responsibility assessment measures

According to the relevant regulations and requirements of the CCS's Implementation Measures for Production and Operation Performance Evaluation (《謙比希銅冶煉有限公司生產經營業績考核實施辦法》), the CCS's Safety and Environmental Protection Production Responsibility System (《謙比希銅冶煉有限公司安全環保生產責任制》) and the CCS's Key Points of Occupational Health, Safety and Environmental Protection Work (《謙比希銅冶煉有限公司職業健康安全環保工作要點》), and combined with the actual safety and environmental protection of the Company, CCS has formulated the assessment measures for occupational health, safety and environmental responsibility.

In order to ensure the scientific, fair and rigorous assessment measures for occupational health and safety and environmental target responsibilities, CCS has set safety and environmental protection difficulty coefficients according to the specific work responsibilities and requirements of different departments, and conducted safety and health performance assessments on a monthly and annual basis. These assessment results were linked to the performance of employees.

In addition to the above cases, other subsidiaries of the Group have also formulated health and safety targets according to different businesses and specific conditions, and each subsidiary has signed the Safety and Environmental Protection Responsibility Letter (《安全環保責任書》), and summarized the safety production work of different health and safety-related indicators during the Reporting Period.

## Safety and Health Protection

The Group conducts regular inspections on safety protective equipment and educates employees on the proper use of personal protective equipment. Employees who enter production or construction areas must wear relevant protective gear.

With respect to potential injury accidents, each department is delegated with clear functions and responsibilities, and rescue and first-aid work will be carried out as early as possible when accident occurs. The person in charge shall count the number of casualties and report it to the Group and consulate overseas within 6 to 24 hours depending on the severity of the accidents upon receiving the report of the occurrence of accidents. An investigation team will be set up to investigate accidents, analyse the cause and publish a report on that; propose rectification measures, draw lessons from the accidents that have occurred, and strive to reduce the risks of the occurrence of potential accidents at the mine area.

# ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

The Group has continuously improved our occupational safety and health protection system, purchased social insurance, medical insurance and other commercial insurance for eligible staff, offered health examinations every year and set up health record for our employees, to create a safe, healthy and comfortable working environment for employees.



Daily routine of local employees in Lualaba Copper Smelter

## NFCA Team won the annual championship of Zambia Mine Rescue Competition

NFCA has built the most advanced safety warning education center in Africa, introducing VR virtual technology to provide real-scene virtual warning education on common mine accidents. Employees in China and Zambia actively participated in safety training, accident emergency rescue and actual scene training. During the Reporting Period, we regularly organized special drills to improve emergency response capabilities, improved a total of 6 emergency plans, and carried out 8 company-level emergency drills with 570 participants, and each production unit carried out one accident emergency rescue drill every quarter, with a total of 44 times in the Year. At present, the first-aid certificate holding rate of front-line Zambian employees has reached 100%.

The Company has established a mine emergency rescue team equipped with professional equipment and tools to carry out emergency rescue drills for various accidents and emergencies in a long period of time, and the mine emergency rescue team develops outstanding rescue capabilities. During the Reporting Period, NFCA won the general champion of the 2023 Zambia Mine Rescue Competition and represented Zambia in the International Mine Emergency Rescue Competition. NFCA attaches great importance to safety management, and promotes “intrinsic safety of objects” through the construction of “digital mines” to improve the safety factor of employees’ job operations; by carrying out multi-level, multi-dimensional and multi-form employee safety training, it effectively improved the safety awareness and skills of employees.



Africa Chambishi Mine rescue team celebrating after being crowned 2023 Zambia Mines Rescue Final Heat Competition winners Livingstone. Picture by KELVIN MUDENDA

# ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

## 5.3 Safety Production and Operation

The Group adheres to the principle of safety first and is committed to maintaining safety production and operation. By adopting advanced, mature and reliable process and equipment, and formulating targeted standard operating procedures on process and equipment, we make every effort to build a sound safety production system. Safety management and shift responsible persons hold a meeting before changing shift every day to explain key potential risk points before each operation and conduct operation protection.

For special operation such as mine construction, safety management will check special operation files, operators' qualification and on-site equipment safety on time. We will set eye-catching safety signs for the areas and equipment prone to accidents or endangering the safety and health of personnel so as to remind employees and contractors.

We attach great importance to the safety behaviour and performance of our contractors. It requires contractors to abide by local laws and regulations as well as relevant safety rules of the Group. Prior to the construction of projects, we assist contractors in preparing the risks assessment report to clarify their safety responsibilities and safety protection measures. During the construction of projects, we regularly or irregularly visit contractors' site and conduct safety quality check for critical sections. After the construction of projects, we conduct completion acceptance and overall assessment on contractors covering their safety performance and other indicators.

During the Reporting Period, the Group had 7 accidents related to general equipment with 48 lost days due to work-related injury.

Year	2023	2022	2021
Number of work-related fatalities	0	0	0
Rate of work-related fatalities <sup>1</sup>	0%	0%	0%

<sup>1</sup> The rate of work-related fatalities = (the number of work-related fatalities/number of workers)\*100%

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During the Reporting Period, two underground general safety production accidents occurred at contractors who providing service to NFCA, with two contractor's employees died at work. The accidents were mainly due to improper management by contractors on site and failure to strictly implement relevant safety operating procedures. After the relevant accident occurred, NFCA immediately set up an investigation team to find out the cause of the accidents on the scene, severely punished the person responsible for the accidents, implemented 8 rectification measures, and terminated the contract with Southeast Mine with poor safety management effect according to law, making up for the shortcomings of safety management.

## Luanshya's "Special Investigation and Rectification of Major Accident Hazards" Activities

In June 2023, Luanshya carried out in-depth self-examination and self-correction of major accident hazards. Firstly, it organized the investigation and rectification of key equipment and facilities and major hazards. All relevant responsible units and departments of the Company carried out comprehensive investigation and rectification of special equipment such as pressure boilers, pressure pipes, hoisting machinery, and in-plant vehicles, as well as major hazards such as tailings ponds, environmental protection facilities, substations, and hazardous chemical storage areas or key facilities with relatively high risks. Secondly, it organized the investigation and rectification of key dangerous operations. The relevant responsible units of Luanshya focused on the pre-operation approval, the implementation of protective measures at the operation site and the safety monitoring of operation site for fire-related work, confined space operation, blind plate plugging operation, lifting operation and large-scale equipment maintenance operation within their jurisdiction. Thirdly, it organized special investigations and rectifications on the safety management of outsourced operations. In order to find out the current situation of safety production management of outsourced operations and the implementation of safety production responsibilities, fill in loopholes in safety management of outsourced operations, strengthen safety supervision of outsourced operation units, and effectively prevent and curb accidents in outsourced units, relevant departments of the Company focused on inspecting the safety management of outsourcing units, including qualification conditions, outsourcing employment and contract signing, safety management, safety training, site management, emergency management, etc.

## NFCA launched the safety month campaign.

In June 2023, NFCA launched the safety month campaign based on the actual situation in Zambia, so as to further improve the safety awareness of all non-mining employees and promote the improvement of the overall safety management level of the enterprise.

Focusing on the campaign theme of "everyone pays attention to safety and everyone meets emergency response", NFCA has formulated a detailed safety month campaign plan to help various outsourcing units and production departments of the Company to carry out a series of activities in turn. Through publicity, learning, training and drills, it has created a working atmosphere for safety production, thus greatly improving the safety awareness of front-line employees, and their abilities in the investigation and handling of potential safety hazards as well as response to emergencies.



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## VI. Green Development

We aim to become an environment-friendly enterprise. Adhering to the principles of “protection priority, prevention first, comprehensive governance, public participation, accountability for damage”, we actively carry out energy conservation and emission reduction, and strengthen the supervision and monitoring of pollution emissions. Sustainable use of resources is also one of our top priorities. We introduce environmentally friendly equipment and advanced technology, which has enhanced the recycling and utilization rate of resources and further strengthened the environmental management system. We are also glad to communicate with the public, and promote the fulfillment of our environmental and social responsibilities by understanding and responding to the opinions of various stakeholders.



Gécamines visited the garden-style wet-process plants in Kambove Mining

### 6.1 Environmental Management System

The Group attaches great importance to environmental protection, and adheres to relevant environmental management measures of the holding group including the Administrative Measures for Protection of the External Investment and Cooperation Environment, General Principles of the Environmental Protection and Risk Management and Emergency Plan for Environmental Emergencies. In order to guarantee the effective implementation of environmental management, the Group established the safety and environmental protection department to take charge of daily management of the environment and supervision, and assigned responsibilities to designated personnel in key areas to ensure full coverage. We divided the environmental emergencies into three different levels, and made different emergency plans in rapid response to emergencies, minimizing the negative impact. Meanwhile, we also stepped up our on-going efforts in environmental inspection with a focus on the operation of pollution prevention and treatment facilities and made timely rectifications for the problems identified. In 2023, the Group had zero environmental emergency.

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In order to promote the green and sustainable development, we have formulated internal policies such as the Administrative Measures for Environmental Protection, which sets out systematic guidance on environmental protection management, clarifies management responsibilities, and establishes environmental assessment goals. A comprehensive plan for environmental emergencies has also been developed in response to environmental emergencies. Luanshya has formulated a series of measures for resource management, including the Measures for Appraisal on Load Utilization, the Measures for Appraisal on Consumption of Ancillary Vehicles of the Company, the Measures for Management of Energy Utilization, the System for Management of Energy Saving and Emission Reduction, the Administrative Measures for Energy Saving and the Administrative Measures for Ecological Environmental Protection, continuing to contribute to energy saving and emission reduction goals.

For instance, Luanshya states in the Administrative Measures for the Ecological Environmental Protection that it is required to minimize the significant impact on the environment and natural resources during land development of construction projects. The feasibility study report or pre-feasibility study report shall comply with Zambian laws and regulations on ecological environment protection, and analyze and propose prevention measures to evaluate possible impacts on the surrounding environment. Meanwhile, during the construction of the project, Luanshya shall guarantee the construction site is not located in areas that are legally designated as nature reserves, scenic areas, drinking water reserves or other areas that require special protection in compliance with environmental planning requirements of Zambia. During the construction of projects on newly acquired land, a survey of environmental background value will be conducted and filed with the Zambian environmental authorities. All construction projects are strictly controlled and subject to Zambia's environmental impact assessment system to ensure that projects are developed in a way that minimizes the impact on environmental resources. The Group has formulated a series of environmental management measures according to the requirements of CNMC, including the Administrative Measures for Protection of the External Investment and Cooperation Environment, General Principles of Environmental Protection and Risk Management and Emergency Plan for Environmental Emergencies. In order to guarantee the effective implementation of environmental management, the Group has assigned responsibilities to designated personnel in key areas to ensure full coverage of supervision and management. During the Reporting Period, NFCA completed a total of 47 reports on the groundwater level, groundwater quality, dust monitoring, noise and blasting vibration monitoring, and surface settlement monitoring in the mining fields, which showed that non-mining production and operation activities did not affect the surrounding environment and communities.

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During the Reporting Period, the Group set relevant directional targets in five environmental aspects: air pollutant emission, greenhouse gas emission, waste generation and management, use of energy and use of water resources. The details of environmental targets are as follows.

Category of targets	Environmental targets	Indicators	Progress and time limits	Action records
Air pollutant emission	Improve the utilization efficiency of air pollution prevention and control facilities	Obtain the latest information on environmental technology	Undergoing Long-term (5-10 years)	<ul style="list-style-type: none"> <li>Learnt and abided by local laws, regulations and various information on environmental protection</li> <li>Participated in the World Environment Day organized by the local government</li> </ul>
	Reduce air pollutant emission	Increase the frequency of monitoring and analysis of pollutant emission	Undergoing Long-term (5-10 years)	<ul style="list-style-type: none"> <li>Entrusted the third-party professional organization with testing and monitoring of the ecological environment in the mining fields</li> <li>Formulated clear schemes for the quality inspection of tail gas and wastewater discharge</li> <li>Enlarged transparency and promptly made public the testing results</li> </ul>
		Beef up measures to curb dust	Undergoing Long-term (5-10 years)	<ul style="list-style-type: none"> <li>Installed dust removal equipment, and sprinkled water for dust reduction in the mining fields regularly</li> <li>Entrusted the third-party professional organization to monitor the dust in the dust-producing sites</li> </ul>
Greenhouse gas emission	Reduce carbon emission	Establish the management system for carbon emission reduction	Undergoing Long-term (5-10 years)	<ul style="list-style-type: none"> <li>Estimated greenhouse gas emission</li> </ul>
		Determine quantitative emission reduction targets	Undergoing Long-term (5-10 years)	<ul style="list-style-type: none"> <li>Luanshya gradually set its emission reduction targets according to relevant laws and regulations of Zambian environmental authorities based on actual situations of the Company</li> </ul>
		Increase tree planting rate	Undergoing Long-term (5-10 years)	<ul style="list-style-type: none"> <li>The Company established a nursery garden for the cultivation of vegetation and then transplanted the plants to the factory area; each unit carried out greening construction in the respective management area</li> <li>Plants of each branch of Lualaba Copper Smelter carried out green construction, planted lots of vegetation to improve the environment, and increased the greening area by approximately 500 square meters.</li> </ul>
Waste generation and management	Increase the amount of waste recovery	Promote waste recycling	Undergoing Long-term (5-10 years)	<ul style="list-style-type: none"> <li>Continuously promoted waste-related work and strengthened the management of hazardous waste in accordance with the laws and regulations as well as environmental licensing requirements of Zambia and the DRC.</li> <li>CCS adopted “three significant and one large-amount” treatment system (reduction, classification, reutilization and harmless treatment) for the classification, storage and transfer of solid and liquid waste produced, and handed them over to local qualified hazardous waste treatment companies, in order to realize waste recovery and reduction, and reduce pollution and negative impacts</li> </ul>

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Category of targets	Environmental targets	Indicators	Progress and time limits	Action records
				<ul style="list-style-type: none"> <li>• CCS established a sound waste management system, standardized production, storage, transportation, disposal and recycling of waste, and formulated regulations on whole-process management and supervision including hazardous waste management</li> <li>• CCS strengthened hazardous waste management, separated hazardous waste from common waste for storage, conducted whole-process management and supervision of hazardous waste, and standardized its storage, transportation, disposal and destruction processes in accordance with Zambian laws and regulations on environmental protection</li> <li>• CCS regularly made public the environmental protection data</li> <li>• Luanshya established ledgers (name and number, output stage, output quantity, storage quantity, mode of disposal, disposal quantity, etc.) for solid waste (used batteries and tires) and waste oil, and summarized all the ledgers every six months and bound them into books for record and reference, and entrusted qualified local contractors to carry out recovery and disposal throughout the company</li> <li>• Kambove Mining recycled waste oil and waste slag, and reused waste oil drums and tires as anti-collision road piles for roads and dam crest roads in the tailings pond</li> <li>• Lualaba Copper Smelter established the waste management system, and realized classified management and designated storage of waste; transferred valuable waste to local qualified hazardous waste treatment companies as raw materials</li> </ul>
	Implement the reduction of waste at source	Reduce the use of disposable materials	Undergoing Long-term (5-10 years)	<ul style="list-style-type: none"> <li>• Luanshya phased out the use of disposable materials in procurement/construction with uncertain reduction times/reviewed the project stage (process) to remove unnecessary packaging materials.</li> </ul>
	Reduce solid waste	Increase the filling rate of waste rocks	Short-term targets completed, long-term targets undergoing Short-term (1-2 years) Undergoing Long-term (5-10 years)	<ul style="list-style-type: none"> <li>• During the Reporting Period, Luanshya initiates the damming project of the west dam of Muliashi tailings ponds to stabilize the dam body and prevent safety risks. Currently, the project has passed inspection upon completion.</li> <li>• The paste backfilling technology was adopted in all the mines of NFCA, and the deepest paste backfilling system in Zambia was completed in the Southeast Mine, which reduced the tail discharge to the tailings pond, effectively prevented surface subsidence and reduced environmental damage.</li> </ul>
Use of energy	Promote the development of green energy	Increase the use ratio of renewable energy	Undergoing Long-term (5-10 years)	<ul style="list-style-type: none"> <li>• Adopt photovoltaic street lamp lighting system in living quarters and mining areas of NFCA, Kambove Mining and Lualaba Copper Smelter</li> <li>• CCS, Lualaba Copper Smelter used the waste heat boiler to recycle the waste heat of flue gas for electricity generation by steam turbines</li> <li>• Lualaba Copper Smelter added sulfur into the production process, in order to reduce coal consumption and increase the sulfuric acid output</li> </ul>



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Category of targets	Environmental targets	Indicators	Progress and time limits	Action records
	Increase the efficiency of energy use	Regularly follow up the energy consumption of energy-consuming equipment	Undergoing Long-term (5-10 years)	<ul style="list-style-type: none"> <li>Luanshya made a maintenance plan at the beginning of each year, and will conduct renovation and upgrading of machines in the mine according to schemes made through the investigation of the intelligent mine construction and Three-year Actions with Science, Safety and Environmental Protection, so as to optimize energy efficiency</li> <li>NFCA conducted inspection and maintenance regularly according to relevant standards, and planned for upgrading and renovation of old high energy consumption equipment</li> <li>CCS, Kambove Mining and Lualaba Copper Smelter conducted monthly inspections and preventive maintenance, as well as annual inspections during the suspended production</li> </ul>
		Formulate and improve resource management measures	Undergoing Short-term (1-2 years) Long-term (5-10 years)	<ul style="list-style-type: none"> <li>Luanshya formulated the Measures for the Management of Mineral Resources of CCS, and determined productive prospecting principles and tasks by frequently summarizing and analyzing changes in the resource quantity and levels, which provided a reliable quantity of geological resources for the long-term development normal production arrangements of mines, and ensured the correct formulation of mine excavating plans</li> </ul>
		Low energy consumption equipment penetration rate	Undergoing Long-term (5-10 years)	<ul style="list-style-type: none"> <li>Luanshya used major energy-consuming equipment consistent with the relevant standards and requirements according to actual situations</li> <li>Power compensation devices were installed in the Baluba Copper Mine and its processing plant of Luanshya, which improved the power factor by approximately 8% and reduced energy consumption</li> <li>SML mastered the equipment operation conditions and formulated equipment maintenance or replacement plans through three-level spot checks</li> <li>SML conducted the upgrading and modification of the semi-autogenous mill end body liner in the processing workshop, and replaced the original alloy liner with rubber alloy liner, which reduced the self-operation load of equipment and saved the power consumption per tonne of processing by over 2 kWh. Assuming the annual processing capability is 600,000 tonnes, a total of 1.2 million kWh can be saved a year.</li> <li>Lualaba Copper Smelter conducted regular spot checks, maintenance and preventive maintenance system to enhance the operation efficiency of equipment</li> </ul>

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Category of targets	Environmental targets	Indicators	Progress and time limits	Action records
		Establish an energy-saving management leading group	Undergoing Long-term (5-10 years)	<ul style="list-style-type: none"> <li>Under the leadership of the Safety and Environmental Protection Department, the Electrical and Mechanical Operation Department and the Manufacturing Technology Department of Luanshya conducted special inspections on energy conservation and environmental protection on a quarterly basis, and included the hidden hazards in the dynamically updated Five Confirmations in Safety Inspection and Innovation of Luanshya Copper Mines. Relevant units in charge completed the rectification as required, and the Safety and Environmental Protection Department conducted whole-process supervision and closed-loop management</li> <li>NFCA established a leading group for energy conservation and emission reduction. It is responsible for developing the Company's energy conservation and emission reduction strategies, setting targets and indicators to achieve sustainable development goals and reduce environmental impacts; supervising and promoting the implementation of energy conservation and emission reduction plans within the Company to ensure the realization of strategic objectives; regularly evaluating the implementation effect of energy conservation and emission reduction strategies, and making suggestions for improvement to continuously optimize the Company's environmental performance and sustainable development strategies</li> <li>CCS set up an energy-saving management leading group by stages to formulate energy-saving management work plans and measures, which promoted energy conservation and consumption reduction, and enhanced the sustainable development of the Company</li> <li>SML has set up an energy-saving management leading group and is actively formulating energy-saving plans and measures</li> </ul>
Use of water resources	Increase investment in water-saving facilities	Regularly inspect and maintain water pipes and water supply systems	Undergoing Long-term (5-10 years)	<ul style="list-style-type: none"> <li>Strengthen the inspection and daily maintenance of the water supply system</li> </ul>

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Category of targets	Environmental targets	Indicators	Progress and time limits	Action records
	Reduce average water consumption	Restrict high water consumption projects Undergoing	Undergoing Short-term (1-2 years) Long-term (5-10 years)	<ul style="list-style-type: none"> <li>CCS formulated the water use management system, implemented the responsibilities of each unit in the management of raw water use, clean water production and use, included water consumption in the company's performance assessment, regularly inspected the water use points and pipelines in the plant area, disposed of waste on the spot, repaired and replaced faulty pipelines and valves, highlighted standard unit water consumption, and treated unit water consumption as an important economic and technical indicator of the company; constantly kept pace with the advanced peers by improving production processes, and implementing technological transformation measures for water consumption reduction</li> <li>Kambove Mining strengthened the inspection of water supply system, and replaced the pipes with serious corrosion in the water supply network;</li> <li>Lualaba Copper Smelter inspected water supply systems and pipelines, reported and dealt with problems in a timely manner, and checked and summarized the water use situation every month.</li> </ul>
		Improve the utilization rate of water cycle	Undergoing Short-term (1-2 years) Long-term (5-10 years)	<ul style="list-style-type: none"> <li>CCS set up special recycling facilities for employees' bathing water and washing water in the sulfuric acid and purification area and reused it in the slag cooling system; by-pass filtration devices were installed in each cooling tower tank to reduce the replacement rate of the tank and greatly reduced the amount of new water used; the water quality of each cooling tower was regularly tested, drugs were added, the water quality was adjusted, and the amount of new water used was reduced</li> <li>SML practiced the circulating water system in the industrial production process, in which waste water or cold water was treated and reused, and high-efficiency water-saving technology and equipment were adopted to reduce water consumption in the production process</li> <li>Kambove Mining's waste water was not discharged outside, and the production water was discharged to the tailings pond for circulation</li> <li>Lualaba Copper Smelter set washing water recovery devices in the sulfuric acid purification area and by-pass filtration devices were installed in each circulating water system to regularly remove miscellaneous objects from the water and reduce the frequency of water changes</li> </ul>
		Improve employee's awareness of water-saving	Undergoing Long-term (5-10 years)	<ul style="list-style-type: none"> <li>Incorporated water-saving training into the safety training for new employees</li> <li>According to the needs of different branches, CCS organized the steam workshop and safety and environmental protection department to conduct targeted water-saving training by stages and levels so that employees could understand the relevant water-saving knowledge, regulations and technologies, established water-saving management system and demonstration projects, and reward and punishment system</li> </ul>

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## 6.2 Pollutant Emission

The Group is committed to reducing pollution at the source and carries out pollution prevention and control in accordance with the principle of “prevention-recycling-treatment-disposal”. We have developed detailed environmental protection management measures, including in respect of exhausts, sewage and solid waste produced in the mining process.

In terms of exhausts management, the Group used copper leaching process in some of its projects, and there was no SO<sub>x</sub>, NO<sub>x</sub> or other emissions during the production process, avoiding the generation and emission of exhausts at source. For copper smelting production process, we stabilised the conditions of smelting furnace to control smoke emission and reduce emission of exhausts. At the same time, we strengthened the control over preparation of strong sulphuric acid to enhance sulfur utilisation ratio, and installed electrostatic precipitators and online monitoring equipment to reduce and detect the emission of pollutants in order to ensure the emission indicators reaching the requirements of the environmental protection authorities of Zambia. In addition, we strengthened dust control by sweeping, watering, covering and other means to effectively reduce dust in mining, vehicle transportation, storage on stock ground and other operations. For example, Lualaba Copper Smelter has adopted the following measures in respect of exhausts emission in its operations:

- Increasing the oxygen concentration of the melting furnace to reduce the smoke emission;
- Adding a certain proportion of sulfur to the feeds in the furnace to increase the sulfur content in the furnace charge, increase the heat, and reduce the coal consumption in the smelting process;
- According to the capacity of the silo, reasonably arranging the arrival time of various materials to reduce the stockpile of open-air raw materials;
- Cutting down vehicle movement volume to reduce fuel consumption.

With respect to the solid waste, we insist on the principle of “workplace cleaning at the end of the work, minimising the use of materials, and site clearing after completion”. Materials are used in a rational way according to site conditions to minimize the generation of solid waste. Regarding non-hazardous waste, the production workshop uses the sedimentation tank to effectively use and recycle the residue, and the production workshop uses the sedimentation tank to effectively use the residue for recycling. For unusable waste, when going through pressure filtration treatment, its filter residue will be transported to the designated storage point for unified treatment, and the filtrate will be discharged to the sewage pipe.

In order to further standardize the management of hazardous waste, effectively prevent environmental pollution caused by hazardous waste and protect human health, our Subsidiaries have developed the Hazardous Wastes Management System. For example, according to this System, Lualaba Copper Smelter requires all units to build special facilities and sites for proper preservation. In accordance with the relevant provisions, these units must treat and dispose of the hazardous waste by themselves or hand it over to units with corresponding capacity for collection, transportation, storage, treatment and disposal. In the process of treatment and disposal, measures must be taken to reduce the volume, weight and level of risk of hazardous waste. Furthermore, we require the use of the Hazardous Waste Management Ledger to record the amount of hazardous waste generated in details. At the same time, Lualaba Copper Smelter hopes to achieve resource recovery, and therefore requires each unit to give priority to recycling when handling hazardous waste to reduce the burden of subsequent treatment and disposal. Hazardous waste that cannot be recycled must be disposed of by units with the appropriate capacity as required by us.



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In terms of wastewater management, the Group adopts the principle of maximized recycling. For copper leaching process, Luanshya covers the tailings pond with high-density polyethylene (HDPE) film and has built an integrated sewage recycling system to fully recycle the metallurgical sewage generated in production, thus saving water resources and achieving “zero” emission. For the copper smelting process, most production sewage enters the slag flotation workshop before evaporation in the tailings pond. For example, SML invited the Zambia Environmental Management Agency to supervise the installation of automatic water quality monitoring equipment, realizing the real-time monitoring and recording of indicators, such as PH value, ammonia nitrogen, chemical oxygen demand, solid particle content, and electrical conductivity, for water discharged from the agitation leaching workshop.

The Group has built a risk inspection system for safety and environmental protection of tailings pond with a specially-assigned person in charge, strengthened the tailings pond inspection to deal with the problems immediately, reducing the environmental risks of the enterprises. The office and sanitary sewer enter septic tanks and are discharged after treatment. The subsidiaries regularly sample and submit inspections of the water surrounding the plant monitor well water from a groundwater source, and compare and analyze them according to the standards of the area where the project is located. We issue an analysis report and make improvements based on it.

In addition, our subsidiary CCS has obtained the wastewater discharge permit from the environmental management authority of Zambia, NFCA has obtained the wastewater discharge permit and permits for mine drainage and water usage from the environmental management authority of Zambia. They submit two reports annually to the environmental management authority of Zambia and the Mine Safety Department on the condition of wastewater discharged to the natural environment.

### 6.3 Use of Natural Resources

The Group firmly adheres to the corporate mission of “development of resources, contributions to the society”. We solemnly promise to shoulder social responsibility while developing our business to achieve comprehensive sustainable development of environment, enterprise, industry, and society. To this end, the Group adopts strict resource management measures in respect of operations and office life, and strives to reasonably use resources and improve the utilisation ratio of resources in mining, ore processing and smelting. We are convinced that through these efforts, we can create greater value for society and leave a beautiful legacy of sustainable development for future generations.

#### Operation Management

As for process production, the Group comprehensively utilises waste ore to enhance ore recovery and effectively prolong the life time of mine, thoroughly sorting through underground recoverable reserves by areas in the production. The Group also prepared production technology transformation plan, aiming at reducing the energy consumption of high energy-consumption and equipment including ball mill and pump and improve the operational stability of waste heat power station, Isasmelt furnace and other critical equipment and continuously improved production processes, equipment and facilities. For example, Lualaba Copper Smelter has adopted the following measures in its operations

- Using waste heat boilers to recycle waste heat from smelting flue gas to generate electricity, and produce high-temperature and high-pressure steam for power generation by using steam turbine to reduce the demand for power resources;

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- Adding a certain amount of sulfur to the feeds in the smelting furnace to increase the sulfur content in the furnace charge, increase the heat in the smelting process, and reduce the demand for coal;
- Deploying steam turbines in the production process to generate electricity using high-temperature and high-pressure steam to replenish the demand for power resources

In terms of daily operations, the Group's main operating site is located in Africa at a south altitude of 13 degrees, with a temperature between 5 degrees Celsius and 35 degrees Celsius most of the time, and a large amount of solar radiation, with an annual radiation of about 7,000MJ/m<sup>2</sup>, which is very conducive to the use of solar energy. Thus, the Group's subsidiaries use the solar energy lighting system in their daily operations and life. Solar energy lamps are used in the living areas of each subsidiary to further boost energy conservation and reduction of greenhouse gas emissions such as carbon dioxide.

## Energy Efficiency

As for energy efficiency, in order to enhance energy consumption management at multiple levels, the Group has formulated monthly production plans and control targets of total energy consumption, and implemented strict performance appraisals for them. The Group's subsidiaries have in place a range of applicable measures. For example, SML conducts statistical analysis and assessment of power consumption on a monthly basis for each workshop, and conducts statistical analysis and assessment of fuel consumption on a monthly basis for various types of vehicles, and NFCA:

- Formulated the Mechanical and Electrical Energy Assessment Measures, which adopts the actual use load as the assessment indicator of relevant departments according to the actual situation. During the Reporting Period none of the entities under assessment went beyond the planned indicators, effectively reducing energy consumption;
- Formulated the Electric Energy Measurement Management System to further improve the electric energy measurement management level, give full play to the role of the electric energy management and control system, scientifically and reasonably control peak loads, and control internal electric energy consumption. The system regulates the supervision procedures for electric energy measurement, including that various measuring instruments shall be submitted for inspection on time;
- Certified the testing data of various electric energy measuring instruments through random inspection;
- Periodically checked the electric energy measuring instruments in use, and if they were unqualified, they should be promptly reported for replacement;
- Carefully made various original records, kept them properly, and shall not be arbitrarily altered or lost;
- Further conducted comprehensive quality control and economic accounting based on the electrical energy metering data, and used the data to detect the completion of the operating indicators of each unit.

At the same time, the Group's subsidiaries operated in Zambia and the DRC in Africa, mainly using local clean energy for operation and production. According to a study by the International Energy Agency, Zambia and the DRC have abundant hydropower resources, and the local area mainly relies on hydroelectric power generation, which belongs to clean energy.



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## Office and Life Management

As for office and life management, the Group required the installation of light-operated switches, time switches and other intelligent switches. It adopted natural lighting for production workshops wherever possible, used natural light for office lighting wherever possible, and made sure that lights stay off when no one is around in the offices to avoid energy waste. The Group also conducted publicity and education on energy saving and posting labels on energy conservation and emission reduction, and encouraged employees to do their part and to use resources wisely.

As for the use of water resources, the Group has not encountered any problems in obtaining suitable water sources due to its rich underground water yield of mine. In order to effectively use water resources and avoid wasting the same, the Group diverts the underground water to the surface pool with the volume capacity of 10,000 tonnes. After clarification in the surface pool, the water will be used for production in processing plant and mine lot and certain underground water will be further purified and then used for domestic purposes. At the same time, we set environmental targets related to water resources in 2022 and followed up with the relevant targets during the reporting period, as detailed in Section 8.1.1 Environmental Management System.

## 6.4 Development of Green Mine

Considering the Group's mine development business, we have established relevant systems to reduce the environmental impact brought by the development of mines. We focus on the up-to standard pollutants emission, environmental risk prevention and control of the tailings ponds and ecological restoration of mines and actively carry out the control and governance of the ecological environment, so as to ensure the continuous improvement of the ecological environment of mines.

We regularly monitor and analyze pollutant emissions, provides early warning, formulates corresponding control measures. Meanwhile, we carry out environmental risk inspection of the tailings ponds and monitors the surrounding soil conditions to ensure that no pollution occurs. In addition, we carry out afforestation annually in accordance with the plan to reduce the surface area of bare ground. Through these measures, we are committed to minimizing the environmental impact of mine development and consonantly improving the ecological environment of mines.

Luanshya has formulated the Administrative Measures for Ecological Environmental Protection, which requires to protect the geological environment of mines, reduce the damage to the geological environment of mines caused by mineral resources exploration and mining activities, and meet the requirements of green mine construction. Luanshya will ensure that existing mines meet the construction standards of green mines, and new mines should be constructed based on the green mine standards, and proactively carry out self-evaluation of green mine construction and accept the spot checks and audits by the governmental regulatory authorities in Zambia and the Group.

Luanshya's Muliashi tailings pond is a flat-type tailings pond, which is an important supporting environmental protection and safety facility of the wet copper smelter, with a designed final height of 1,248 meters, a total storage capacity of 32.95 million cubic meters, and a service life of 15 years. Such tailings pond is a third-class pond. The storage materials in the pond are acidic medium, and the high-density polyethylene (HDPE) membrane was paved in the pond to prevent contamination of groundwater by seepage. The liquid in the pond has "zero discharge and zero pollution" to the environment. Some of the liquid is pumped to the heap and dump leaching system by acid-resistant pumps for reuse, and some of the liquid is maintained in balance by natural evaporation. The displacement monitoring point was set up in the Muliashi tailings pond and a hydrological observation well was set up in the downstream to regularly test water quality, making it the highest safety level and the most stringent environmental standard tailings pond in Zambia.

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Meanwhile, the Group put emphasis on land reclamation. NFCA conducted reclamation for abandoned waste rock dumps and tailings ponds in the mine, which provide habitats for aquatic animal, small terrestrial animal and bird and protect species diversity. In addition, NFCA has also planted grass and protected slopes surrounding the tailings ponds to prevent soil erosion, and actively participated in various activities on protection of species diversity organized by the Zambia Environmental Management Agency. For example, taking advantage of local wild chrysanthemums and other vegetation, CNMC Huachin Mabende carried out greening work on the dam slope of the tailings pond to strengthen the soil consolidation of the dam while green the environment. Luanshya gave priority to the protection and maintenance of the ecological environment of flora and fauna in the mining permit area, and carried out restoration and intervention in the disturbed habitat in order to gradually complete the land restoration work and control the undisturbed areas, as detailed in the following cases.

## Luanshya's biodiversity conservation measures<sup>2</sup>



- **Compliance and capital investment**  
Under Zambian laws and regulations, mining companies are required to contribute to environmental protection via the Environmental Protection Fund (EPF)<sup>3</sup> administered by the Zambian government. Luanshya strictly complies with the laws and fulfills its obligations of EPF contribution. At the project initiation and approval stage, the Company is required to carry out relevant surveys, assessments and reviews, including identification of flora, fauna and endangered species.
- **Adherence to policy guidelines**  
At the corporate level, Luanshya's top management is responsible for formulating and implementing the biodiversity policy and delegating the implementation of the biodiversity program to the relevant departments such as safety and environment. At the local government level, Luanshya develops its policies in accordance with guidance from designated organizations such as the Zambia Environmental Management Agency and the Ministry of Mines and Mining Development. Luanshya implements relevant biodiversity conservation policies in accordance with treaties and protocols ratified by Zambia as an international stakeholder, such as the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). Biodiversity conservation commitments are part of the Environmental Impact Assessment (EIA) guided by international treaties to which Zambia is a signatory. The relevant security and environmental protection authorities are responsible for the fulfillment of biodiversity conservation commitments and shall engage in the development and implementation of local community policies.

<sup>2</sup> The practice case of Luanshya was also included in the Preliminary Study on Biodiversity Conservation in Mining Industry.

<sup>3</sup> The Environmental Protection Fund (EPF) is designed to prevent future environmental degradation in mineral development areas.



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- Practices

Luanshya has set up signs in the mining permit area requiring local community members to refrain from any activity that may disturb the balance of the ecosystem; conducted experimental analyses of wastewater generated during the mining process; reduced dust on roads by spraying water; and operated a zero-emission tailings storage facility within the mine, which protects surrounding aquatic and terrestrial organisms from the impact of potentially contaminated mining wastes.

In 2022, Luanshya initiated an ecological reclamation project for the open-air mine after the completion of resource extraction. Eventually, herbaceous, shrub and tree species will re-emerge on the land and further attract animals such as birds and insects that are prevalent in the local ecosystem. In addition, Luanshya has spared great efforts to protect the local natural ecosystem by developing locally adapted biodiversity conservation measures based on specific conditions with an endeavour to avoid the introduction of exotic plants and animals into the operating area. Within the project area defined in the Environmental Impact Assessment (EIA), the experts of the assessment team assessed the local biodiversity, and study and summarize indicators for the identification and recording of both flora and fauna (especially for birds). Meanwhile, the assessment team gathered local knowledge and information on flora, fauna and key biodiversity sites through questionnaires and on-site interviews with local people. Luanshya strategically restricted the removal of vegetation from the actual mining area so that disturbed flora and fauna can migrate to undisturbed areas in a shorter distance. Considering that the soil may contain herbaceous, shrub and tree species, Luanshya spread the soil into the restoration area to achieve swift and effective results. Luanshya also protected endemic plants identified in the permit area through measures such as non-disturbance of habitat, such as *Batopedina linearifolia*, which grows in the crevices of the Muva Mountains in Luanshya. The plant is a species in the Rubiaceae family, which is native to India, Sri Lanka and Burma, and commonly found in grasslands and open forests. It is used in traditional medicine to treat fever, headaches and stomach ailments, and is also grown in gardens as an ornamental plant.

The associated conservation program initiated by Luanshya includes laboratory testing and effective treatment of pollutant emissions to ensure that pollutants are properly treated before discharged into the environment, which is subject to extreme intervention. This program has been implemented throughout the life cycle of the project for effective protection of aquatic habitats. At the same time, Luanshya used equipment with noise reduction mechanism to avoid affecting the ecology of the species in the surrounding environment. Luanshya also monitored and restored abandoned areas (abandoned during the previous holder period) where mining was not planned. The enterprise worked with local stakeholders such as tribal leaders, local authorities and environmentally-based community representatives to implement biodiversity conservation program. The involvement of these groups will ensure that the surrounding local communities produce an ownership awareness of the project and provide the necessary support for the implementation of the biodiversity conservation plan.

To sum up, the key conservation actions designed by Luanshya include: 1) Increased engagement and awareness of local communities on the importance of biodiversity and its role in the sustainable implementation of conservation interventions; 2) Making commitments in accordance with the environmental impact assessment of the Muliashi Project and the current operational environmental assessment; 3) Monitoring of terrestrial, aquatic and avian organisms through third parties 4) Biodiversity conservation in partnership with tribal leaders and local communities; 5) Implementation of restoration of disturbed areas.

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In terms of ecological vegetation protection and reclamation, the production and operation of the subsidiaries of the Group can meet the requirements of ecological conservation red lines, environmental quality benchmarks, resource utilization caps and ecological environment access lists. For instance, in terms of improving the ecological environment of the mine area, building green mines, establishing a green industrial chain and protecting biodiversity, Luanshya formulated policies including the Administrative Measures for Ecological Environmental Protection of CNMC Luanshya Copper Mines PLC, Mandatory Actions of Environmental Management and Environmental Regulations on the Mining Industry and Minerals. Luanshya's main measures include: firstly, optimized and protected the ecological space for mineral exploitation; secondly, strictly controlled the discharge of "three wastes" in mines, engaged the third-party evaluation agency to conduct relevant assessments every two years, and carried out environmental renovation and ecological restoration in the mine area according to the assessment reports; thirdly, cherished precious mineral resources and realized comprehensive utilization of resources.



Ecological restoration area of No.14 Mine of Luanshya and vegetated dam in the tailings pond

The subsidiaries of the Group regularly conduct environmental assessments. Meanwhile, the Company invests environmental protection expenses according to environmental protection standards outlined in the environmental assessment reports and the requirements of local authorities for environmental protection on an annual basis, and reserves budgets for later periods fully considering factors such as land restoration and employee placement after closing mines.

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## 6.5 Addressing Climate Change

In recent years, global climate change has become increasingly severe, which will probably affect the daily operation and production of the mining industry. The issue has also received attention from international figures and departments. Meanwhile, the Group proactively identifies climate risks that have a significant impact on its business, and formulates corresponding measures to reduce the impact of various climate risks. The Group has laid down the Notice on Preparing the Action Plan for Carbon Peak of Group Companies to standardize the statistics and management of data and reports related to carbon emissions of subsidiaries.

During the Reporting Period, the Group sorted out the potential climate risk inventories by analyzing the status quo of risk disclosure by international guiding organizations such as Intergovernmental Panel on Climate Change (IPCC) and Task Force on Climate-Related Financial Disclosure (TCFD) and relevant industries.

The Group published the impacts of different actions on climate change according to IPCC's 6th assessment report. Based on the industrial characteristics and its specific situations, the Group selected the SSP1-2.6 scenario<sup>4</sup> and SSP3-7.0 scenario<sup>5</sup> as the potential climate change risks under different climate scenarios after analyzing the status quo of risk governance of climate-related change.

We identified corresponding countermeasures for the following climate risks based on SSP1-2.6 scenario, SSP3-7.0 scenario, TCFD's suggestions and the Group's industrial characteristics.

Climate risks			Scope of application	Influence	Countermeasures
Physical risk	Acute physical risks	Flood disasters	Luanshya Kambove Mining	Flood disasters may cause the water level to rise in mines, and then affect the exploitation and production activities in mines. Floods can inundate mining facilities, damage equipment and infrastructure, and cause production disruptions and loss of resources. In addition, floods may also cause mudslides, increasing geological disaster risks in mines.	Luanshya <ul style="list-style-type: none"> <li>Dredging river channels, repairing drainage facilities, and improving the drainage capacity of drainage facilities in the mine area</li> </ul> CNMC Huachin Mabende, Kambove Mining <ul style="list-style-type: none"> <li>Installing fixed drainage facilities in the mining fields, and strengthening early warnings on hidden hazards of side slopes via the radar monitoring system</li> </ul>

<sup>4</sup> SSP1-2.6 scenario is a relatively optimistic sustainable development path in the SSP (Shared Socioeconomic Pathways) framework, aiming to control the global warming, and limiting the rise in average global temperature within 2 centigrade.

<sup>5</sup> SSP3-7.0 scenario is a relatively pessimistic scenario path in the SSP (Shared Socioeconomic Pathways) framework, representing a future with high carbon emission and unsustainable development.

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Climate risks			Scope of application	Influence	Countermeasures
		Landslides	SML Kambove Mining	Landslides may directly threaten the safety of mining facilities. Firstly, they can cause large-scale movement of soil and rock, causing severe damage to mine buildings, equipment and infrastructure, potentially leading to production disruptions and loss of resources. Secondly, they may trigger mudslides, causing serious geological disasters to mine areas. Mudslides may inundate mine areas, disrupt exploitation and production activities, and impede the exploitation and transportation of mineral resources.	SML <ul style="list-style-type: none"> <li>Outdoor mining fields and waste dumps shall be constructed as designed, in order to ensure construction technology and technical parameters of the mining fields in compliance with the design requirements, smooth and effective drainage system, and stable side slopes and waste dumps, and prevent the occurrence of landslides</li> </ul> Kambove Mining <ul style="list-style-type: none"> <li>Strengthening early warnings on hidden hazards of side slopes via the radar monitoring system</li> </ul>
		Mountain fire	NFCA Kambove Mining	Mountain fire may directly threaten the safety of mine facilities. Severe mountain fires can quickly spread and trigger fires in mine areas, causing serious damage to mine buildings, equipment and infrastructure, and leading to production disruptions and loss of resources.	NFCA <ul style="list-style-type: none"> <li>There are miscellaneous trees around the southeast mine, and the grass burning is common in Zambia. Relevant departments burn the grass in the mine area regularly to remove fire hazards; adequate safe isolation belts shall be cleared outside each plant of the Company before the dry season</li> </ul> Kambove Mining <ul style="list-style-type: none"> <li>Purchasing fire fighting equipment, setting up a part-time fire team, and promptly sending the police to eliminate risks of mountain fire</li> </ul>
Transition risk	Policy and legal risk	Litigation risk	Luanshya Kambove Mining	Companies that fail to comply with environmental and social regulations or take proper environmental and community protection measures may face litigation risks. This may result in companies being required to pay huge fines, suspend work for rectification or assume the responsibility for environmental or community restoration.	Luanshya <ul style="list-style-type: none"> <li>Conducting governance and operation in strict accordance with relevant provisions in the Mines and Minerals Act, Environmental Management Act, Mining Regulations, and Mines and Minerals (Environment) Regulations, in order to prevent environmental pollution events and relevant litigation risks</li> </ul> Kambove Mining <ul style="list-style-type: none"> <li>Protecting the environment and communities in accordance with local laws</li> </ul>

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Climate risks		Scope of application	Influence	Countermeasures
Market and technical risk	Inadequate supply of fossil fuels	Kambove Mining	Increasing global emphasis on sustainable energy and emission reduction targets has required the transformation of mining companies. An inadequate supply of fossil fuels will further encourage mining companies to accelerate the energy transition and seek alternative energy. This may increase the transition cost and technical challenges of enterprises, posing risks to the enterprise's operation and competitiveness.	Kambove Mining, CNMC Huachin Mabende <ul style="list-style-type: none"> <li>Actively seeking hydroelectric resources, and exploring photovoltaic projects to supplement the energy shortage</li> </ul>
	Electricity price fluctuation	Luanshya NFCA CCS Kambove Mining	Electricity price fluctuation can lead to uncertain production costs for African mining enterprises. Mining companies usually require a large amount of electricity supply during exploitation and production, and if the electricity price has violent or unpredictable fluctuation, it will be difficult for companies to accurately estimate and control production costs.	Luanshya, NFCA and CCS <ul style="list-style-type: none"> <li>Cooperating with other mining enterprises and the mining industry association to reflect difficulties in the enterprise operation to the local government and having negotiation</li> </ul> CCS <ul style="list-style-type: none"> <li>Replacing high-power consumption equipment with low-power consumption equipment; using other energy sources (such as solar energy) to meet the electricity demand of the enterprise; maintaining the long-term stable operation of waste heat generator; studying the feasibility of converting other waste heat resources into electric energy; actively seeking external power plants as partners or building its own power plants</li> </ul> Kambove Mining <ul style="list-style-type: none"> <li>Actively seeking hydroelectric resources, and reducing the dependence on diesel</li> </ul> Huachin Leach and CNMC Huachin Mabende <ul style="list-style-type: none"> <li>Maintaining good communication with the local power supply department, dispatching construction teams to cooperate with the power supply department in the maintenance of power facilities, and striving for more power supply quotas</li> </ul>

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Climate risks			Scope of application	Influence	Countermeasures
	Reputation risk	Reputation risk	Luanshya SML Kambove Mining	The operation activities of African mining companies are generally involved in environmentally sensitive issues such as land exploitation, water use and waste disposal. If a company has poor performance in environmental protection, the society and stakeholders may raise concerns about its environmental impacts, doubting its sustainability and social responsibility, thus affecting the Company's reputation.	<p>Luanshya</p> <ul style="list-style-type: none"> <li>Actively fulfilling corporate social responsibilities via the annual social responsibility project plan: maintaining regular communication with local governments, local communities, local tribes and other stakeholders</li> </ul> <p>SML</p> <ul style="list-style-type: none"> <li>Obtaining various licenses as required by local government in compliance with management requirements</li> </ul> <p>Kambove Mining</p> <ul style="list-style-type: none"> <li>Repairing old facilities and recycling waste resources, in order to reduce the impacts of waste on the environment, and protect the Company's reputation</li> </ul> <p>Huachin Leach and CNMC Huachin Mabende</p> <ul style="list-style-type: none"> <li>Continuously investing more manpower, material resources and funds in building roads, repairing schools, drilling wells and repairing power lines to help local governments, communities and people out of difficulties</li> </ul>

## VII. Harmonious Enterprise

The Group's philosophy of "people-oriented" is at the core of the Group's corporate governance. We adhere to an equal and standardized employment policy, fully respect the background culture of our employees and are committed to protecting the rights and interests of our employees. We continue to improve our talent management system, recruiting talents in a fair and equal manner while ensuring that the legitimate rights and interests of our employees are safeguarded, and providing competitive remuneration and benefits packages. In addition, the Group attaches great importance to talent cultivation and actively establishes an effective incentive mechanism to provide employees with diversified training programs and a favorable growth environment for their personal and professional development. We are committed to creating a healthy and harmonious working environment and providing an equal, open and inclusive working atmosphere to enable our employees to fully display their talents and realize their self-worth.



Daily life of Kambove Mining's employees

### 7.1 Employment Management

The Group has formulated a series of employment policies including Administrative Measures for Labour Contracts with Employees, Administrative Measures for Recruitment of Employees, Administrative Measures for Resignation of Employees, Measures for the Management of Employee Performance, so as to ensure legal compliance of the employment.

#### Remuneration and performance appraisal

The subsidiaries of the Group have formulated the Wage Management Measures, Measures for the Management of Employee Performance, and Administrative Measures for the Selection and Appointment of Cadres, Administrative Measures for the Career Path of Employees, and other internal management measures, to provide employees with competitive remuneration systems and open and transparent appraisal and promotion mechanisms.

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As a mining enterprise, the Group attaches great importance to the safety and health of its employees and has included safety and health related indicators in its salary and performance assessment system. The Group has put in place the Implementation Measures for Safety and Environmental Protection Risk Collateral, which will provide incentive payments to employees who have achieved the safety targets and performance.

The performance appraisal systems of the Group's subsidiaries vary according to the nature of their work and business. For example, CCS has put in place the Administrative Measures for the Assessment of Occupational Health, Safety and Environmental Targets and Responsibilities, whereby standards are set for the relevant indicators based on the actual situation of the work, and assessments are conducted on a monthly and annual basis, so as to effectively link the performance of employees with the performance of the indicators.

## Recruitment

The subsidiaries of the Group have formulated the Administrative Measures for Employment of Chinese Employees to standardize the appointment and management of Chinese employees, and to form a mechanism for selecting and employing candidates by ability, suitability, achieving full potential and merit. The system specifies the recruitment principle of "openness, equality, competition and merit selection", the recruitment and hiring process, the rights of hired staff and the management of promotion. Employees are given room for promotion, and we will conduct an intra-grade floating appraisal and adjustment for employees at the end of each year according to their annual performance appraisal results.

## Dismissal

According to the relevant regulations, if an employee applies for termination on his or her own initiative, he or she shall submit a written resignation application signed by him or her to the person in charge of the unit where he or she works, and the Human Resources Department shall go through the subsequent termination procedures.

## Holiday benefits

Due to the differences in the countries and regions in which the Group's subsidiaries are located and the contents of their work, each subsidiary ensures that the working hours of its employees do not exceed the statutory working hours in accordance with the laws and regulations of the country (region) in which it is located.

Aside from statutory holidays, it also provides employees with paid holidays including annual leave, sick leave, maternity leave, marriage leave and bereavement leave. At the same time, we offer overtime compensation, night shift allowances and high-temperature subsidies to further improve employees' welfare, protect the legitimate rights and interests of employees and promote their work-life balance.

## Employment equity

The Group believes that maintaining employee diversity, upholding the principles of equal treatment and anti-discrimination is fundamental to employee management. We believe that only by establishing a fair and reasonable talent management system can strengthen the sustainable development of the Group. The Group continues to promote the implementation of the "talent internationalization and localization" strategy, treat employees of different nationalities, races, and genders equally. We treat staff with sincerity, respect the culture and custom of staff from different countries and with different religious belief. We will give priority to local staff in Zambia and the DRC in respect of employment to increase the proportion of localized staff in the Group, which reached 89.69% in 2023.



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The Group has “zero” tolerance for child labour and forced labour. During the recruitment process, we will strictly review the identity information of candidates to ensure that they reach the legal age for employment and are eligible for employment, and adhere to strict prohibition of child labour and all forms of forced labour. In case of any child labour or forced labour found, the Group will immediately dismiss the relevant person and hold the recruiter accountable. After confirming the employment, all employees will sign a labour contract with us, which specifies the remuneration, position and reasons for termination of employment, guarantee their legitimate interests. For example, NFCA has signed recognized agreements with a number of trade unions in the areas where it operates to ensure that each employee receives reasonable treatment and that the legitimate rights and interests of all employees are safeguarded in a practical manner.

For example, Luanshya explicitly states in the Employment Screening Rules that the employment of child labour or any minor under the age of 18 is prohibited. NFCA also sets up a labour union, and conducts collective bargaining with the union every year to ensure that labour issues can be properly resolved.

During the Reporting Period, there was no violation of any laws and regulations related to employment or labour practices, and there was no child labour or forced labour in the Group.

As at the end of the Reporting Period, the number of staff of the subsidiaries of the Group and employee turnover rate by gender, age group, employment type and geographical region are set out as follows:

		2023		
		Number of staff (Persons)	Turnover Rate	
Total		8,683	9.20%	
By gender	Male	8,265	9.38%	
	Female	418	5.74%	
By age group	30 years old and below	2,323	9.60%	
	30-50 years old	5,635	8.61%	
	50 years old and above	725	12.55%	
By employment type	Full-time staff	8,683	–	
	Part-time staff	0	–	
By geographical region	Chinese staff		895	7.37%
	Local staff	Zambian staff	5,061	6.99%
		Staff from the Democratic Republic of the Congo	2,727	13.90%

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## 7.2 Employee Care

In addition to a good employment management system, the Group also attaches great importance to the physical and mental health of employees and their families. Therefore, we insist on providing various benefits to employees and their families annually, and we also carry out diversified employee care activities.

The Group provides staff with pension, medical, housing, transportation and other welfare and subsidies and actively improves its medical security capabilities. Meanwhile, we strengthen the local promotion, prevention, monitoring, and treatment of epidemic diseases including malaria, dengue and AIDS, and regularly organize physical examinations for employees to ensure employees' physical health and necessities in life. In order to enrich the leisure life of employees, we specially build stadiums for them, such as basketball courts, football fields and so forth, and provide sports equipment. We actively organize various holiday activities, such as basketball games, badminton games, tug of war, etc., improving the health of employees, whose leisure and cultural life are thus enriched. Therefore, there are enhanced communications and team cohesion between Chinese and foreign employees.

In order to perfect employee benefits, aside from the employees themselves, we also offer medical services to family members of registered staff. We regularly organize open day activities for employees' family, inviting their family members to participate in Company activities and learn about the development of the Group. In addition, we also render aid for the children of employees and provide opportunities for senior management staff in Africa to go to China for exchange and learning to increase employees' sense of belonging to the Company. We continued to strengthen the protection of the rights of female employees. For example, Kambove Mining provides commuter buses for employees living in designated locations; has set up a medical clinic in the company and provides medical services to employees and their families; it gives out foods, housing and student subsidies at the end of each month.

### Kambove Mining Hosted 2023 Employee Spring Festival Party

On 21 January 2023, the 30th day of the Chinese New Year, at the spring festival party of Kambove Mining themed "China and the DRC are one family, working together towards the future", local and Chinese employees sang and danced together to celebrate the festive season.



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## Lualaba Copper Smelter Celebrated International Women's Day with Its Employees

On the occasion of International Women's Day, nearly 40 Chinese and DRC women from Lualaba Copper Smelter took photos of themselves amongst the flowers and plants wearing traditional Chinese dresses called "horse-face skirt".



## Huachin Leach Hosted Corporate Open Day Activity

On 27 May 2023, Huachin Metal Leach SA held a corporate open day activity, inviting the children of the employees from the DRC to visit their parents' workplace, the production and operation situation, and to experience the corporate culture of "Innovation, Commitment, Sincerity, and Win-Win" together. The activity also prepared a series of wonderful activities and gifts for the children of DRC staff, so that the children spent a happy, unforgettable and meaningful Children's Day at their parents' workplace.



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## 7.3 Talent Development

The Group regards the employee capability development as the cornerstone of its long-term success. Adhering to the principle of “bolstering enterprise with talents” as one of key strategy, we attach great importance to the long-term employee development, and also build diversified and comprehensive training programs to meet the needs of employees’ personal development and the Group’s business development. We expect employees to continuously improve their personal capabilities through training and grow together with the Group. During the Reporting Period, the Group had a total of 143 senior engineers, 155 intermediate engineers, 43 assistant engineers and 85 technicians.

Each of the Group’s subsidiaries has formulated its own unique system and methodology for the cultivation of human resources in line with its specific circumstances due to the different nature of production business and specific circumstances. For example, NFCA has formulated education management methods for staff training, which include but are not limited to induction training, post base rotation training, safety training, daily training, specialized training, academic education and specialized training. In view of the actual situation of seeking business training and lack of overseas education resources, NFCA actively expands training channels. For Chinese employees, they are encouraged to participate in short-term professional training organized by professional organizations during their holidays in China, so as to absorb the advanced professional and technical experience and the best management practice in China. At the same time, NFCA provides a certain amount of subsidy for training expenses for those who have training needs.

For example, CCS has formulated the Staff Training Management Measures to further standardize its staff training and improve its staff ability and quality. CCS mainly carries out competency-oriented training and practical problem-oriented training, and its human resources department will prepare the training work plan and budget plan for next year every December.

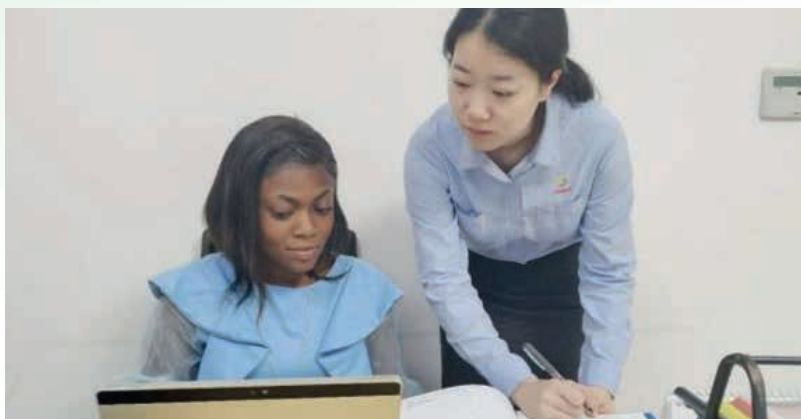
The Group’s subsidiaries actively conducted management and safety skills improvement training. For example, NFCA carried out training on human resources policy, emergency rescue and blasting; CCS conducted training on conflict management, quality inspection and verification and leadership skills; SML carried out first aid training, and Huachin Leach carried out three-level safety education and workshop security team education for new employees; CNMC Huachin Mabende conducted training on typical accident case warning, etc.; and Lualaba Copper Smelter carried out training on fire safety, production safety first aid knowledge, general work technology and so on.

Through professional knowledge cultivation and all-round skills training, the Group has practically improved the comprehensive quality, work technology skills, safety awareness and management ability of its staff, thus providing sufficient talents for the Group’s safety management. For example, Luanshya operates the China-Zambia Technical College, which nurtures high-quality talents for the local community; CCS encourages its employees to make use of their spare time to participate in nationally recognized continuing education to improve their academic qualifications in accordance with their own qualifications and position needs as well as their career development plans. After their applications for the relevant qualifications have been approved by the department, the employees will be awarded with self-education awards to reward them for their achievements. The Group actively promotes vocational education in China to go abroad and facilitates international exchanges.

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CNMHK actively liaises with the University of Lubumbashi and the University of Likasi to carry out cultural exchanges and introduce graduates

CNMHK has actively contacted the University of Lubumbashi and the University of Likasi to strengthen school-enterprise cooperation and deepen cultural exchanges. For example, graduates of the University of Lubumbashi majoring in monetary economics are now working in the supply and marketing department of CNMHK, which is the fruit of friendly cooperation and exchange between the university and the enterprise.



The number of staff trained, the coverage rate, the training hours and the average training hours of the staff of the Group's subsidiaries by gender and employment type during the Reporting Period are as follows.

Employment type		Number of staff trained (Persons)	Coverage rate	Training hours (Hour)	Average training hours (Hour)
By gender	Male	7,989	95.20%	279,518	34.97
	Female	403	4.80%	10,212	25.34
By employment rank	Senior management	59	0.70%	1,920	32.54
	Mid-level management	324	3.86%	7,428	22.93
	General staff	8,009	95.44%	280,382	35.01

## VIII. Community Integration

### 8.1 Upholding Human Rights

In terms of policies and regulations, the Group attaches great importance to respect human rights and strives to comply with the International Labour Convention and incorporates human rights into the Group's risk management system and induction training. The Group's subsidiaries also strictly comply with local laws and regulations, such as the Mines and Minerals Development Act No. 11 of 2015 of Zambia, to protect the interests of the PRC and local employees. We expect every employee to understand the importance of respecting human rights, continue to promote social and cultural diversity and equal opportunities, and provide equal opportunities for our employees regardless of their gender or nationality. The Group practices and upholds the concept of respecting human rights in their daily work so as to promote sustainable development.

With the philosophy of "win-win cooperation and mutual development", the Group has been actively communicating with the communities where we operate. We took the initiative to strengthen communication and contacted with stakeholders such as local government departments, regulatory agencies, social service agencies, and community members, and set up a public relations department to manage the relationship between the company and the local community.

We responded to the development needs of the community through visits, press conferences, interviews and daily reports, and responded to community concerns in a timely manner. At the same time, we fully respected the religious beliefs and cultural traditions of the regions where each project was located, encouraged and held cultural exchange activities, and promoted exchanges and understanding with the local people.

In order to maintain good relations with the local community, we actively encouraged our staff to participate in activities organized by the local community and to communicate and interact with the community. Through this way, we have established a relationship of mutual trust and co-operation with the community, under which we work together to realize the development and prosperity for the community.

### 8.2 Community Support

The Group has been committing to discharging its corporate social responsibilities, and giving back to the society by way of different forms of public welfare activities held in communities. Our subsidiaries have formulated the Administrative Measures on External Donation in light of the demand from communities where we operate and the realities of the Group, to standardize the principle, types, channels, approval process, supervision and administration for charitable donation.

At the beginning of each year, we formulate a detailed schedule of external donations, including the purpose, targets, channels and budgeted amount of donations, etc., and summarize the actual completion of such donations at the end of the year in order to strengthen our management. Within the scope of our ability, the Group actively participates in social welfare donation activities and establishes friendly relationships with local people and social organizations, which provides a favorable external environment for our operations.

# ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

Our community benefit work focuses on the following areas: upgrading community infrastructure, improving community healthcare and sanitation, and supporting local medical and educational endeavors. We have helped some of our project sites build new water wells, repair and improve public facilities in the community, hospitals and agricultural markets, assisted the local electricity bureau in repairing electrical circuits and improving the condition of roads, and are actively involved in the prevention and treatment of diseases such as AIDS and malaria.

In addition, we also actively support local education by building school buildings, providing education subsidies to poor students, and donating books and stationery to orphanages. Furthermore, we also make donations on important festivals such as Youth Day, Women’s Day, Labour Day, Teachers’ Day and World Environment Day, so as to continue to contribute to local public welfare undertakings.

## NFCA Undertook the Clinic and Aided Projects of Southern Province of Zambia

The Group made an active response to the “Hundred Enterprises and Thousand Villages” initiated by the Alliance of Chinese Business in Africa for Social Responsibilities. During the Reporting Period, NFCA undertook the clinic and funded school projects of Southern Province in Bweengwa Constituency of Southern Province and the neighboring Gweembe Constituency with a total investment of over RMB1.9 million.

Covering an area of 228.60 square meters, the project consists of three classrooms and two storage rooms. Construction will commence in the middle of April 2023 and be completed on 25 July 2023. On 4 August 2023, NFCA handed over the project on behalf of the Group to the local government, and the Director of the Department of Primary Education, Ministry of Education of Zambia received the project on behalf of the Minister of Education. Also present at the handover ceremony were members of Parliament (MP) from Gweembe Constituency, district commissioners (DC), Secretary of the Education Committee of Gweembe Constituency, local municipal officials, a delegation from NFCA, representatives from Zambia’s mainstream media and others.



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### Luanshya Created “Going Out” Demonstration Project of Vocational Education, and Deepening Sino-African Cooperation in the “Belt and Road Initiative”

Under the guidance of the national “Belt and Road Initiative”, Luanshya actively undertook the mission of “going out” of vocational education and provided coordination in the “going out” pilot projects of vocational education, in order to practice the “Belt and Road Initiative” education action of the Ministry of Education. Under the overall planning of the Group, in collaboration with 10 domestic vocational schools, we initiated China’s first “going out” pilot project of vocational education in Zambia to explore the international cooperation model of vocational education for mutual development with production capacity cooperative countries. Over the past eight years, the pilot work has achieved good results, forming a new model of international school running that can be replicated and promoted, and providing an important path for the training of like-minded builders of the Belt and Road Initiative.

The Group established Sino-Zam Vocational College of Science and Technology in cooperation with various pilot schools on the basis of the upgrading and renovation of Luanshya Technical School. The college mainly provides secondary and higher vocational education for high school graduates in Zambia, and technical training for local employees of the enterprise. Initiating the new mode of school-enterprise cooperative running of overseas schools, the college becomes the first higher vocational college offering academic education in overseas countries.

As at the end of the Reporting Period, there were 721 students and 43 Chinese and Zambian teachers in the school. It has 11 secondary schools, offering 10 majors including mechanical manufacturing and automation, mining engineering, architecture, and mechatronics. The college has trained more than 3,000 qualified graduates, about 900 of whom have joined China Nonferrous related companies.

In recent years, Luanshya has provided full support for the construction and operation of Sino-Zam Vocational College. The management of the Company pays close attention to the deployment and arrangement of the teaching qualification, school scale, conditions, buildings and venues of the college, and provides professional support in the major setting, faculty arrangement, curriculum design, internship scenes and other aspects.

During the Reporting Period, in order to improve the school environment and expand the enrollment scale, the Company invested more than RMB13 million in the expansion of the new campus of the school, and allocated the sports venues and other venues belonging to Luanshya to the school management, contributing to the high-quality development of the college.



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# ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

## Luanshya Provided Support for the Restoration of Local Infrastructure in Zambia

On 15 May 2023, the opening ceremony of the Urban Center Road Maintenance Project of Luanshya City of Zambia was held on the construction site of the project.

The Urban Center Road Maintenance Project of Luanshya City will greatly enhance the level of infrastructure construction of Luanshya City, serve as the window of external display of Luanshya City, and promote the economic development of Luanshya City.

Sino-Zambia relationship is a benchmark of Sino-Africa friendship. The two countries have cooperated in the infrastructure construction and achieved fruitful results. Since its establishment in 2009, Luanshya has been unswervingly fulfilling its social responsibilities by supporting the infrastructure construction in Luanshya. Having learned that the road maintenance project in Luanshya City could not be commenced as scheduled due to lack of funds, the Company resolutely donated 2,500,000 kwacha, and promised to continue to provide equipment, materials and other support during the project construction process. Luanshya will continue to implement Zambia's 8th National Development Plan in response to the appeal of Zambian governments at all levels, contributing to the realization of Zambia's 2030 Vision.



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## CNMHK Signed the Social Responsibility Letter to Fund the Local Primary School in the DRC

During the Reporting Period, CNMHK held the opening ceremony of the funded primary schools in Vietnam Village of Mabende City and Kakontwe Village of Likasi City of the DRC, which was an important measure in deepening cooperation between China and the DRC, fulfilling social responsibilities and promoting the Belt and Road Initiative.



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## IX. Appendix

### 9.1 Laws and Regulations with Significant Impact on the Group

Laws and Regulations with Significant Impact on the Group <sup>6</sup>	Compliance of the Group
<b>Environmental</b>	
<b>Aspect A1: Emissions</b>	
<ul style="list-style-type: none"> <li>• Environmental Protection Law of the People’s Republic of China</li> <li>• Mine Safety Law of the People’s Republic of China</li> <li>• Guidelines for Environmental Protection in Outbound Investment and Cooperation</li> <li>• Environmental Protection and Pollution Control Act (Chapter 204 of the Laws of Zambia)</li> <li>• The Mines and Minerals Development Act, 2015</li> <li>• The Mines and Minerals Act (Chapter 213 of the Laws of Zambia)</li> <li>• Air Pollution Control (Licensing and Emission Standards) Regulations, 1996</li> <li>• The Water Pollution Control (Effluent and Waste Water) Regulations, 1993</li> <li>• The Water Resources Management Act, 2011</li> <li>• The Forest Act, 2015</li> <li>• The Hazardous Waste Management Regulations, 2001</li> <li>• The Solid Waste Regulation and Management Act, 2018</li> <li>• Laws No.007/2002, the Mining Code</li> </ul>	<p>During the Reporting Period, the Group did not violate any laws and regulations related to air emissions, discharges into water and land, generation of hazardous and non-hazardous waste listed in Appendix 9.1.</p>
<b>Social</b>	
<b>Aspect B1: Employment</b>	
<ul style="list-style-type: none"> <li>• Labour Law of the People’s Republic of China</li> <li>• Labour Contract Law of the People’s Republic of China</li> <li>• The Industrial and Labour Relations Act (Chapter 269 of the Laws of Zambia)</li> <li>• The Minimum Wages and Conditions of Employment Act (Chapter 276 of the Laws of Zambia)</li> <li>• The Employment Act (Chapter 268 of the Laws of Zambia)</li> <li>• The Labour Code, 2002</li> <li>• The Occupational Health and Safety Act, 2010</li> </ul>	<p>During the Reporting Period, the Group did not violate any laws and regulations related to compensation and dismissal, recruitment and promotion, working hours, rest periods, equal opportunities, diversity, anti-discrimination, and other Benefits and welfare listed in Appendix 9.1.</p>

<sup>6</sup> The Group’s operations are in compliance with the laws and regulations, which include but not limited to those set out in Appendix 9.1.

# ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

Laws and Regulations with Significant Impact on the Group <sup>6</sup>	Compliance of the Group
<b>Aspect B2: Health and Safety</b>	
<ul style="list-style-type: none"> <li>• The Mines and Minerals Development Act, 2018</li> <li>• The Factories Act (Chapter 441 the Laws of the Zambia)</li> <li>• Law No.001/2018, the Mining Code)</li> </ul>	<p>During the Reporting Period, the Group did not violate any Laws and regulations related to providing a safe working environment and protecting employees from occupational hazards listed in Appendix 9.1.</p>
<b>Aspect B4: Labour Standards</b>	
<ul style="list-style-type: none"> <li>• Law of the People’s Republic of China on the Protection of Minors</li> <li>• Provisions on the Prohibition of Using Child Labour</li> <li>• CODE DU TRAVAIL, 2002</li> </ul>	<p>During the Reporting Period, the Group did not violate any laws and regulations related to preventing child labour and forced labour listed in Appendix 9.1.</p>
<b>Aspect B6: Product Quality and Responsibility</b>	
<ul style="list-style-type: none"> <li>• Product Quality Law of the People’s Republic of China</li> <li>• Patent Law of the People’s Republic of China</li> <li>• Trademark Law of the People’s Republic of China</li> <li>• Copyright Law of the People’s Republic of China</li> </ul>	<p>During the Reporting Period, the Group did not violate any laws and regulations related to health and safety, advertising, labelling and privacy relating to products and services listed in Appendix 9.1.</p>
<b>Aspect B7: Anti-corruption</b>	
<ul style="list-style-type: none"> <li>• Anti-Unfair Competition Law of the People’s Republic of China</li> <li>• The Anti-Corruption Act, 2012</li> <li>• Corruption, Illegal income, Influence Peddling and Misconduct of Civil Servant (section 7 under chapter 9 of part 2 of the Criminal Code of the DRC)</li> </ul>	<p>During the Reporting Period, the Group did not violate any laws and regulations related to bribery, extortion, fraud and money laundering listed in Appendix 9.1.</p>

# ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

## 9.2 Data Overview

### Environmental Data

Emission

Type of emission	Unit	2023	2022
Air pollutant emissions			
Emissions of sulfur oxide <sup>7</sup>	Tonne	<b>4,258.1</b>	4,209.2
Emissions of nitric oxide <sup>7</sup>	Tonne	<b>0.1</b>	0.1
Emissions of dust <sup>7</sup>	Tonne	<b>110.1</b>	131.3
Greenhouse gases emissions <sup>8</sup>			
Total emissions of greenhouse gases	Tonne	<b>281,061.8</b>	266,544.7
Emissions of greenhouse gases (scope 1)	Tonne	<b>278,368.3</b>	223,758.7
Emissions of greenhouse gases (scope 2)	Tonne	<b>2,693.5</b>	2,796.0
Intensity of greenhouse gases	Kg/US\$'000 <sup>9</sup>	<b>77.9<sup>10</sup></b>	55.3
Waste discharge			
Amount of hazardous wastes <sup>11</sup>	0'000 tonnes	<b>0.04</b>	0.03
Intensity of hazardous wastes	Tonne/US\$'000	<b>0.0001</b>	0.0001
Treatment ratio of hazardous wastes	%	<b>100</b>	100
Amount of non-hazardous wastes <sup>12</sup>	0'000 tonnes	<b>5,482.3</b>	5,907.2
Intensity of non-hazardous wastes	Tonne/US\$'000	<b>15.2</b>	14.4
Treatment ratio of non-hazardous wastes	%	<b>100</b>	100
Mining wastewater <sup>13</sup>	0'000 tonnes	<b>1,757.9</b>	1,404.5
Intensity of mining wastewater	Tonne/US\$'000	<b>4.9</b>	3.4
Other wastewater	0'000 tonnes	<b>32.7</b>	33.5
Intensity of other wastewater	Tonne/US\$'000	<b>0.1</b>	0.1

<sup>7</sup> The data involved are derived from the data recorded by the subsidiaries of the Group and based on past performance, or the most reliable conservative estimates made by reference to similar facilities.

<sup>8</sup> GHG emissions are based on the 2006 IPCC Guidelines for National Greenhouse Gas Inventories issued by the Intergovernmental Panel on Climate Change.

<sup>9</sup> The denominator is the Group's annual gross income per thousand US dollars. The total revenue of the Group in 2022 was US\$3,606.4 million, and the total revenue in 2022 was US\$4,094.7 million.

<sup>10</sup> The increase in GHG emissions intensity during the Reporting Period was mainly due to the use of diesel for power generation in order to safeguard production for the reason of a significant increase in the duration of power outages and limitations in the DRC, and a decrease in total revenues for the Year.

<sup>11</sup> Including waste lubricating oil (including motor oil), waste lead batteries, waste catalysts and other hazardous wastes.

<sup>12</sup> Including waste slag, scrap steel, mining waste ore, mining filling waste, domestic and office waste and other nonhazardous waste.

<sup>13</sup> Including wastewater produced from mining, beneficiation and smelting.

# ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

## Use of Resources

Type of resource	Unit	2023	2022
Energy consumption			
Total energy consumption	MWh	<b>1,631,163.7</b>	1,889,812.0
Direct energy consumption <sup>13</sup>	MWh	<b>639,364.8</b>	516,866.1
• Diesel	Litre	<b>30,117,567.3</b>	25,287,829.5
• Gasoline	Litre	<b>194,074.0</b>	181,118.0
• Coal	Tonne	<b>45,734.3</b>	33,238.9
• Coke	Tonne	<b>1,777.6</b>	3,378.0
• Acetylene	Kg	<b>21,368.4</b>	27,444.0
• Liquefied petroleum gas	Kg	<b>23,115.0</b>	18,690.0
Indirect energy consumption	MWh	<b>991,798.9</b>	1,372,946.0
• Purchased electricity	MWh	<b>991,798.9</b>	1,372,946.0
Comprehensive energy consumption equivalent to standard coal	Tonne of standard coal	<b>233,289.6</b>	221,012.2
Intensity of comprehensive energy consumption	Kg standard coal/US\$'000	<b>64.7</b>	54.0
Water consumption			
Consumption of fresh water	0'000 Tonnes	<b>1,428.5</b>	1,339.2
Intensity of fresh water	Tonne/US\$'000	<b>4.0</b>	3.3

## Social Data

### Employment and Labour Practices

		2023			
		Number of staff (Persons)	Percentage	Turnover rate	
Total		8,683	–	9.20%	
By gender	Male	8,265	<b>95.00%</b>	9.38%	
	Female	418	<b>5.00%</b>	5.74%	
By age group	30 years old and below	2,323	<b>26.75%</b>	9.60%	
	30-50 years old	5,635	<b>64.90%</b>	8.61%	
	50 years old and above	725	<b>8.35%</b>	12.55%	
By employment type	Full-time staff	8,683	<b>100.00%</b>	–	
	Part-time staff	0	<b>0.00%</b>	–	
By geographical region	Chinese staff		895	<b>10.31%</b>	7.37%
	Local staff	Zambian staff	5,061	<b>58.29%</b>	6.99%
		Staff from the Democratic Republic of the Congo	2,727	<b>31.41%</b>	13.90%

<sup>13</sup> Direct energy consumption data refer to the Calculation Method and Reporting Guidance on Greenhouse Gas Emission by Other Industrial Enterprises (Trial) and the Guidance for Compiling Provincial GHG Emission Inventory (Trial) for the calculation of the relevant conversion factors.

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## Health and Safety

Year	2023	2022	2021
Number of days lost due to work-related injury (days)	48	30	127
Number of work-related fatalities (persons) <sup>14</sup>	0	0	0
Rate of work-related fatalities <sup>15</sup>	0%	0%	0%

## Development and Training

Type of employment		2023			
		Number of staff trained (Persons)	Coverage rate <sup>16</sup>	Training hours (Hour)	Average training hours (Hour) <sup>17</sup>
By gender	Male	7,989	95.20%	279,518	34.97
	Female	403	4.80%	10,212	25.34
By employment rank	Senior management	59	0.70%	1,920	32.54
	Mid-level management	324	3.86%	7,428	22.93
	General staff	8,009	95.44%	280,382	35.01

## Supply Chain Management

	Unit	2023
<b>Total number of key suppliers</b>	Supplier	675
Key suppliers in Zambia	Supplier	459
Key suppliers in the DRC	Supplier	149
Key suppliers outside Zambia and the DRC	Supplier	67

<sup>14</sup> The number of work-related fatalities does not include the number of contractors.

<sup>15</sup> The rate of work-related fatalities = (the number of work-related fatalities/number of workers)\*100%.

<sup>16</sup> The coverage rate is calculated by dividing the number of staff trained under each class by the total number of staff trained ×100%.

<sup>17</sup> The average training hours is calculated by dividing the training hours of staff under each class by the total number of staff trained under that class.



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## 9.3 HKEX ESG Indicator Index

### Part B: Mandatory disclosure requirements

Mandatory disclosure requirements	Description	Corresponding section in the Report or other descriptions
Governance Structure	<p>A statement from the board containing the following elements:</p> <ul style="list-style-type: none"> <li>(i) a disclosure of the board’s oversight of ESG issues;</li> <li>(ii) the board’s ESG management approach and strategy, including the process used to evaluate, prioritise and manage material ESG-related issues (including risks to the issuer’s businesses); and</li> <li>(iii) how the board reviews progress made against ESG-related goals and targets with an explanation of how they relate to the issuer’s businesses.</li> </ul>	ESG Governance Structure
Reporting Principles	<p>A description of, or an explanation on, the application of the following Reporting Principles in the preparation of the ESG report:</p> <p><b>Materiality:</b> The ESG report should disclose: (i) the process to identify and the criteria for the selection of material ESG factors; (ii) if a stakeholder engagement is conducted, a description of significant stakeholders identified, and the process and results of the issuer’s stakeholder engagement.</p> <p><b>Quantitative:</b> Information on the standards, methodologies, assumptions and/or calculation tools used, and source of conversion factors used, for the reporting of emissions/energy consumption (where applicable) should be disclosed.</p> <p><b>Consistency:</b> The issuer should disclose in the ESG report any changes to the methods or KPIs used, or any other relevant factors affecting a meaningful comparison.</p>	Basis of Preparation
Reporting Boundary	<p>A narrative explaining the reporting boundaries of the ESG report and describing the process used to identify which entities or operations are included in the ESG report. If there is a change in the scope, the issuer should explain the difference and reason for the change.</p>	Scope of Reporting

# ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT



## Part C: “comply or explain” provisions

### A. Environmental

General disclosures and key performance indicators (“KPIs”)	Description	Corresponding section in the Report or other descriptions
<b>ENVIRONMENT</b>		
<b>Aspect A1: Emissions</b>		
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.	Environmental Management System Development of Green Mine Pollutant Emissions
KPI A1.1	Types of emissions and respective emissions data.	Data Overview
KPI A1.2	Direct (Scope 1) and energy indirect (Scope 2) greenhouse gas emissions (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	Data Overview
KPI A1.3	Total hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	Data Overview
KPI A1.4	Total non-hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	Data Overview
KPI A1.5	Description of emissions targets set and steps taken to achieve the targets.	Addressing Climate Change
KPI A1.6	Description of how hazardous and non-hazardous wastes are handled, and description of waste reduction goals set and the steps taken to achieve the targets.	Environmental Management System Pollutant Emissions

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General disclosures and key performance indicators (“KPIs”)	Description	Corresponding section in the Report or other descriptions
<b>Aspect A2: Use of Resources</b>		
General disclosure	General disclosure of policies on the efficient use of resources, including energy, water and other raw materials.	Use of Natural Resources
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)	Data Overview
KPI A2.2	Water consumption in total and intensity (e.g. per unit of production volume, per facility).	Data Overview
KPI A2.3	Description of energy use efficiency target(s) set and steps taken to achieve them.	Environmental Management System
KPI A2.4	Description of whether there is any issue in sourcing water that is fit for purpose, water efficiency targets set and steps taken to achieve the targets.	Environmental Management System
KPI A2.5	Total packaging materials used for finished products (in tonnes) and, if applicable, with reference to per unit produced.	Due to the nature of the Group’s products and business, we are not involved in the use of packaging materials.
<b>Aspect A3: The Environment and Natural Resources</b>		
General disclosure	Policies on minimizing the issuer’s impact on the environment and natural resources.	Development of Green Mine
KPI A3.1	Description of significant environmental and natural resources impacts and actions taken to manage them.	Development of Green Mine
<b>Aspect A4: Climate Change</b>		
General disclosure	Policies on identification and mitigation of significant climate-related issues which have impacted, and those which may impact, the issuer.	Addressing Climate Change
KPI A4.1	Description of the significant climate-related issues which have impacted, and those which may impact, the issuer, and the actions taken to manage them.	Addressing Climate Change

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## B. Social

General disclosures and key performance indicators (“KPIs”)	Description	Corresponding section in the Report or other descriptions
<b>Employment and Labour Practices</b>		
<b>Aspect B1: Employment</b>		
General disclosure	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.	Employment Management
<b>Employee Care</b>		
<b>Talent Development</b>		
KPI B1.1	Total workforce by gender, employment type (for example, part-time or full-time), age group and geographical region.	Employment Management
KPI B1.2	Employee turnover rate by gender, age group and geographical region.	Employment Management
<b>Aspect B2: Health and Safety</b>		
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 providing a safe working environment and protecting employees from occupational hazards.	Safety System
<b>Safety Production and Operation</b>		
KPI B2.1	Number and rate of work-related fatalities occurred in each of the past three years including the reporting year.	Safety Production and Operation
KPI B2.2	Lost days due to work injury.	Safety Production and Operation
KPI B2.3	Description of occupational health and safety measures adopted, how they are implemented and monitored.	Safety System Safety Production and Operation Safety Production and Operation
<b>Aspect B3: Development and Training</b>		
General disclosure	Policies on improving employee knowledge and skills for discharging duties at work. Description of training activities. Note: Training refers to vocational training. It may include internal and external courses paid by the employer.	Talent Development
KPI B3.1	Percentage of trained employees, by gender and category (e.g. senior management, middle management).	Talent Development
KPI B3.2	Average training hours completed per employee, by gender and category.	Talent Development

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General disclosures and key performance indicators (“KPIs”)	Description	Corresponding section in the Report or other descriptions
<b>Aspect B4: Labor Standards</b>		
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 preventing child and forced labour.	Employment Management
KPI B4.1	Description of measures to review employment practices to avoid child and forced labour.	Employment Management
KPI B4.2	Description of steps taken to eliminate such practices when discovered.	Employment Management
<b>Operating Practices</b>		
<b>Aspect B5: Supply Chain Management</b>		
General disclosure	Policies on managing environmental and social risks of the supply chain.	Supply Chain Management
KPI B5.1	Number of suppliers by geographical region.	Supply Chain Management
KPI B5.2	Description of practices relating to engaging suppliers, number of suppliers where the practices are being implemented, how they are implemented and monitored.	Supply Chain Management
KPI B5.3	Description of practice for identifying environmental and social risks at each stage of the supply chain, and how they are implemented and monitored.	Supply Chain Management
KPI B5.4	Description of practices used to promote environmentally preferable products and services when selecting suppliers and how they are implemented and monitored.	Supply Chain Management
<b>Aspect B6: Product Responsibility</b>		
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 health and safety, advertising, labelling and privacy matters relating to products and services provided and methods of redress.	Product Quality and Responsibility
KPI B6.1	Percentage of total products sold or shipped subject to recalls for safety and health reasons.	Product Quality and Responsibility
KPI B6.2	Number of products and service-related complaints received and how they are dealt with.	Product Quality and Responsibility

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General disclosures and key performance indicators (“KPIs”)	Description	Corresponding section in the Report or other descriptions
KPI B6.3	Description of practices relating to observing and protecting intellectual property rights.	Product Quality and Responsibility Technology R&D and Innovation
KPI B6.4	Description of quality assurance process and recall procedures.	Product Quality and Responsibility
KPI B6.5	Description of consumer data protection and privacy policies, how they are implemented and monitored.	Product Quality and Responsibility
<b>Aspect B7: Anti-corruption</b>		
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 bribery, extortion, fraud and money laundering.	Norms and Construction of Integrity-based Governance
KPI B7.1	Number of concluded legal cases regarding corrupted practices brought against the issuer or its employees during the reporting period and the outcomes of the cases.	Norms and Construction of Integrity-based Governance
KPI B7.2	Description of preventive measures and whistleblowing procedures, how they are implemented and monitored.	Norms and Construction of Integrity-based Governance
KPI B7.2	Description of anti-corruption training provided to directors and staff.	Norms and Construction of Integrity-based Governance
<b>Aspect B8: Community Investment</b>		
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.	Upholding Human Rights Community Support
KPI B8.1	Focus areas of contribution (e.g. education, environmental concerns, labor needs, health, culture, sport).	Community Support
KPI B8.2	Resources contributed (e.g. money or time) to the focus area.	Community Support

# ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

## 9.4 Reference Index System for ESG Special Reports of Central State-owned Enterprises Holding Listed Companies<sup>18</sup>

ENVIRONMENTAL			
Indicator			Corresponding section in the Report or other descriptions
E.1 Resource Consumption	E.1.1 Water Resources	E.1.1.1 Fresh Water Consumption	Data Overview
		E.1.1.2 Recycled Water Consumption	Not available
		E.1.1.3 Percentage of Recycled Water Consumption	Not available
		E.1.1.4 Water Consumption Intensity	Data Overview
	E.1.2 Materials	E.1.2.1 Non-renewable Material Consumption	Data Overview
		E.1.2.2 Toxic and Hazardous Material Consumption	Data Overview
		E.1.2.3 Material Consumption Intensity	Not available
	E.1.3 Energy	E.1.3.1 Fossil Energy Consumption	Data Overview
		E.1.3.2 Non-fossil Energy Consumption	We operate in Zambia and the DRC, and our primary energy source is clean energy
		E.1.3.3 Proportion of Non-fossil Energy Usage	
		E.1.3.4 Total Energy Consumption	Data Overview
		E.1.3.5 Energy Consumption Intensity	Data Overview
	E.1.4 Packaging Materials	E.1.4.1 Packaging Material Usage	N/A
		E.1.4.2 Lightweight and Reduction of Packaging Materials	N/A

<sup>18</sup> This table is compiled for the disclosures in the Report only.

# ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT



ENVIRONMENTAL			
Indicator			Corresponding section in the Report or other descriptions
E.2 Pollution Prevention and Control	E.2.1 Wastewater	E.2.1.1 Wastewater Discharge Compliance	Pollutant Emission
		E.2.1.2 Wastewater Management and Discharge Reduction Measure	Pollutant Emission
		E.2.1.3 Amount of Wastewater Discharge	Data Overview
		E.2.1.4 Amount of Discharged Wastewater Pollutant	Data Overview
		E.2.1.5 Wastewater Pollutant Discharge Concentration	Data Overview
	E.2.2 Exhaust	E.2.2.1 Exhaust Emission Compliance	Pollutant Emission
		E.2.2.2 Amount of Air Pollutant Emission	Data Overview
		E.2.2.3 Air Pollutant Emission Concentration	Data Overview
	E.2.3 Solid Waste	E.2.3.1 Legal Compliance in Solid Waste Disposal	Pollutant Emission
		E.2.3.2 General Industrial Solid Waste Management	Pollutant Emission
		E.2.3.3 General Industrial Solid Waste Disposal Volume	Data Overview
		E.2.3.4 Hazardous Waste Management	Pollutant Emission
		E.2.3.5 Hazardous Waste Disposal Volume	Data Overview



# ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

ENVIRONMENTAL			
Indicator			Corresponding section in the Report or other descriptions
E.3 Climate Change	E.3.1 Greenhouse Gas Emissions	E.3.1.1 Sources and Types of Greenhouse Gas Emissions	Data Overview Addressing Climate Change
		E.3.1.2 Greenhouse Gas Emission Management	Addressing Climate Change
		E.3.1.3 Scope 1 Emissions	Data Overview
		E.3.1.4 Scope 2 Emissions	Data Overview
		E.3.1.5 Scope 3 Emissions	Not available
		E.3.1.6 Greenhouse Gas Emission Intensity	Data Overview
	E.3.2 Emission Reduction Management	E.3.2.1 Greenhouse Gas Emission Reduction Management	Environmental Management System Addressing Climate Change
		E.3.2.2 Amount of Greenhouse Gas Emission Reduction	Environmental Management System
	E.3.3 Environmental Equity Transactions	E.3.3.1 Participation in Carbon Emission Trading Market	Not available
		E.3.3.2 Participation in the Energy, Water and Sewage Rights Trading Markets	Not available
		E.3.3.3 Participation in Green Power Trading	Not available
	E.3.4 Climate Risk Management	E.3.4.1 Climate Risk Management	Addressing Climate Change
	E.4 Biodiversity	E.4.1 Impact of Production, Services, and Products on Biodiversity	E.4.1.1 Impact of Production, Services, and Products on Biodiversity

# ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT



ENVIRONMENTAL			
Indicator			Corresponding section in the Report or other descriptions
E.5 Resource And Environmental Management System Measures	E.5.1 Formulation of Low-Carbon Development Goals and Strategic Measures	E.5.1.1 Formulation of Low-Carbon Development Goals and Strategic Measures	Environmental Management System Addressing Climate Change
	E.5.2 Resource Management Measures	E.5.2.1 Water Resource Usage Management	Pollutant Emissions Use of Natural Resources
		E.5.2.2 Material Usage Management	Use of Natural Resources
		E.5.2.3 Energy Usage and Energy Efficiency Management	Environmental Management System Addressing Climate Change
	E.5.3 Energy Conservation and Carbon Reduction Statistical Monitoring and Assessment Reward and Punishment System	E.5.3.1 Energy Conservation and Carbon Reduction Monitoring, Statistical Report, and Assessment System	Not available
	E.5.4 Green Environmental Protection Actions and Measures	E.5.4.1 Clean Production	Development of Green Mine
		E.5.4.2 Green Technology Transformation and Recycling	Environmental Management System
		E.5.4.3 Green Building Renovation	Not available
		E.5.4.4 Green Office and Operations	Use of Natural Resources
		E.5.4.5 Green Procurement and Green Supply Chain Management	Supply Chain Management
		E.5.4.6 Environmental Protection Public Welfare Activities	Community Support
	E.5.5 Green and Low Carbon Certification	E.5.5.1 Environmental Management System Certification	Environmental Management System
		E.5.5.2 Green and Low Carbon Enterprise Certification	Not available
		E.5.5.3 Green and Low Carbon Products and Services Certification	Not available
	E.5.6 Legal Compliance in the Environmental Field	E.5.6.1 Emergency Response Plan for Environmental Emergencies	Environmental Management System
		E.5.6.2 Violations and Irregularities in the Environmental Field	Laws and Regulations with Significant Impact on the Group

# ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

Social			
Indicator			Corresponding section in the Report or other descriptions
S1 Employee Rights	S1.1 Employee Recruitment and Employment	S1.1.1 Corporate Recruitment Policies and Implementation	Employment Management
		S1.1.2 Employee Structure	Employment Management
		S1.1.3 Avoiding Child Labor and Forced Labor	Employment Management
	S1.2 Employee Compensation and Benefits	S1.2.1 Compensation Philosophy and Policy	Employment Management
		S1.2.2 Working Hours and Rest and Vacation	Employment Management Employee Care Talent Development
		S1.2.3 Compensation and Benefits Guarantee Situation	Employment Management
		S1.2.4 Employee Democratic Management	Employment Management
	S1.3 Employee Health and Safety	S1.3.1 Employee Occupational Health and Safety Management	Safety Production and Operation
		S1.3.2 Employee Safety Risk Prevention and Control	Safety Production and Operation
		S1.3.3 Response to Safety Accidents and Work-related Injuries	Safety Production and Operation
		S1.3.4 Employee Care and Assistance	Employee Care
	S1.4 Employee Development and Training	S1.4.1 Employee Incentive and Promotion Policies	Employment Management
		S1.4.2 Employee Education and Training	Employment Management
		S1.4.3 Employee Career Planning and Job Change Support	Talent Development
	S1.5 Employee Satisfaction	S1.5.1 Employee Satisfaction Survey	Communication with Stakeholders and Relationship Maintenance
S1.5.2 Labor Disputes		Employment Management	
S1.5.3 Employee Turnover Situation		Employment Management	

# ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT



<b>Social</b>			
<b>Indicator</b>			<b>Corresponding section in the Report or other descriptions</b>
S2 Product and Service Management	S2.1 Product Safety and Quality	S2.1.1 Production Specification Management Policies and Measures	Compliance Governance and Operations
		S2.1.2 Quality Management	Product Quality and Responsibility
		S2.1.3 Product Recall and Withdrawal	Product Quality and Responsibility
		S2.1.4 Negative Events of Products or Services	Technology R&D and Innovation
	S2.2 Customer Service and Rights	S2.2.1 Customer Satisfaction	Product Quality and Responsibility
		S2.2.2 Customer Complaints and Handling	Product Quality and Responsibility
		S2.2.3 Customer Information and Privacy Protection	Product Quality and Responsibility
	S2.3 xxx	S2.3.1 Research and Development and Innovation Management System	Technology R&D and Innovation
		S2.3.2 Research and Development Investment	Technology R&D and Innovation
		S2.3.3 Innovation Achievements	Technology R&D and Innovation
		S2.3.4 Intellectual Property Protection	Technology R&D and Innovation
	S3 Supply Chain Security and Management	S3.1 Supplier Management	S3.1.1 Supplier Selection and Management
S3.1.2 Supplier Quantity and Distribution			Supply Chain Management
S3.2 Supply Chain Link Management		S3.2.1 Supply Chain Management Policies and Measures	Supply Chain Management
		S3.2.2 Supply Chain Security and Emergency Preparedness	ESG Risk Assessment and Management
		S3.2.3 Significant Risks and Impacts (Supply Chain)	ESG Risk Assessment and Management
S4 Social Contributions		S4.1 Payment of Taxes and Fees	S4.1.1 Payment of Taxes and Fees
	S4.2 Community Building	S4.2.1 Policy Measures for Local Community Building Participation	Community Support
		S4.2.2 Contributions and Impact on the Local Community	Community Support
	S4.3 Social Welfare Activities	S4.3.1 Policy Measures for Participation in Social Welfare Activities	Community Support
		S4.3.2 Investment and Effectiveness in Social Welfare Activities	Community Support
		S4.3.3 Barrier-Free Environment Construction	Community Support
	S4.4 National Strategic Response	S4.4.1 Industrial Transformation	Technology R&D and Innovation, Development of Green Mine
		S4.4.2 Rural Revitalization and Regional Coordination Development	Community Support
		S4.4.3 Belt and Road Initiative and Overseas Responsibilities Fulfillment	Community Support
		S4.4.4 Industry Characteristics and Other Social Responsibility Performances	Community Support

# ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

Governance			
Indicator			Corresponding section in the Report or other descriptions
G1 Governance Strategy and Organizational Structure	G1.1 Governance Strategy and Processes	G1.1.1 Governance Strategy Formulation	ESG Governance Structure
		G1.1.2 Governance Strategy Monitoring Process	ESG Governance Structure
		G1.1.3 Governance Strategy Approval and Review Process	ESG Governance Structure
	G1.2 Organizational Structure and Functions	G1.2.1 Ownership Responsibilities	Annual Report – Management Discussion and Analysis
		G1.2.2 Board of Directors, Supervisory Board, and Management Structure and Functions	Annual Report – Corporate Governance Report
		G1.2.3 Appointment Procedures and Composition of the Board of Directors, Supervisory Board, and Management	Annual Report – Corporate Governance Report
	G1.3 Compensation Management	G1.3.1 Compensation Plans for Directors and Supervisors	Annual Report – Corporate Governance Report, Report of the Directors
		G1.3.2 Transparency of Board Remuneration	Annual Report – Report of the Directors
		G1.3.3 Reasonableness of Management compensation	Annual Report – Report of the Directors, Notes to the Consolidated Financial Statements
G2 Standard Governance	G2.1 Internal Control	G2.1.1 Internal Audit	Compliance Governance and Operations
		G2.1.2 Internal Control Structure, Mechanisms, and Processes	Compliance Governance and Operations
	G2.2 Integrity Building	G2.2.1 Norms for Integrity Building Systems	Norms and Construction of Integrity-based Governance
		G2.2.2 Effectiveness of Integrity Building Measures	Norms and Construction of Integrity-based Governance
	G2.3 Fair Competition	G2.3.1 Norms for Fair Competition Systems	Norms and Construction of Integrity-based Governance
		G2.3.2 Effectiveness of Fair Competition Measures	Norms and Construction of Integrity-based Governance




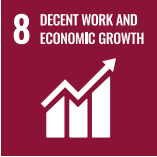
# ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT



Governance				
Indicator			Corresponding section in the Report or other descriptions	
G3 Investor Relations Management and Shareholder Rights	G3.1 Investor Relations Management	G3.1.1 Investor Relations Management Strategy	Not available	
		G3.1.2 Investor Communication	We actively communicate with investors through organizing and participating in investor conferences, shareholders' meetings, results announcements and roadshows every year.	
		G3.1.3 Investor Relations Management Department Establishment	The Board Office of the Company is responsible for investor relations management. We also disclose our investor-focused corporate culture and initiatives in various sections of our annual report, such as the Corporate Governance Report	
	G3.2 Shareholder Rights	G3.2.1 General Meeting of Shareholders	Annual Report – Corporate Governance Report	
		G3.2.2 Shareholder Communication Situation	Annual Report – Corporate Governance Report	
		G3.2.3 Shareholder's right to know and Participation in Decision-Making	Annual Report – Corporate Governance Report	
	G3.3 Creditor Rights	G3.3.1 Creditworthiness	The Company has made disclosures in the Annual Report regarding credit conditions, such as identifying and addressing credit risks. For details, please refer to Annual Report – Notes to the Consolidated Financial Statements	
			G3.3.2 Bond Market Performance	Not available
	G4 Information Disclosure Transparency	G4.1 Information Disclosure System	G4.1.1 Financial Information Disclosure	About China Nonferrous Mining
			G4.1.2 Non-Financial Information Disclosure	All disclosures made in the Report are non-financial disclosure
G4.2 Information Disclosure Quality		G4.2.1 Regular Supervision, Audit, and Evaluation of All Disclosure Information	Not available	
G5 Compliance Governance and Operations and Risk Management	G5.1 Compliance Governance and Operations	G5.1.1 Compliance Governance and Operations System	Compliance Governance and Operations	
		G5.1.2 Compliance System Establishment	Compliance Governance and Operations	
		G5.1.3 Specific Compliance Review Process	Compliance Governance and Operations	
	G5.2 Risk Management	G5.2.1 Risk Identification and Early Warning	ESG Risk Assessment and Management	
		G5.2.2 Risk Control and Tracking	ESG Risk Assessment and Management	
		G5.2.3 Risk Reporting and Management	ESG Risk Assessment and Management	




# ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

## 9.5 Sustainable Development Goals (SDG) Comparison Table

United Nations Sustainable Development Goals (SDG)	Definition of the goals	Actions taken by the Group	Relevant chapters in the Report
 <p><b>3</b> GOOD HEALTH AND WELL-BEING</p>	Ensure healthy lives and promote wellbeing for all at all ages.	<ul style="list-style-type: none"> <li>• Provided medical benefits and allowances to our employees and their family, and strengthened the promotion, prevention, monitoring and treatment of epidemic infectious diseases with high incidence in part regions of Africa</li> <li>• Formulated and implemented road safety related policies, and established environmental protection management measures against exhaust gas, sewage and solid waste during the mining process to control pollution emissions from the source</li> </ul>	Employee Care Upholding Human Rights Community Support
 <p><b>4</b> QUALITY EDUCATION</p>	Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.	<ul style="list-style-type: none"> <li>• Formulated and implemented internal policies in relation to employee training, carried out training adapted for different fields, and set up post self-study awards</li> <li>• Provided opportunities for the children of outstanding local employees to study in China</li> <li>• Supported local communities in the education cause in and provided educational subsidies to impoverished students</li> </ul>	Talent Development
 <p><b>6</b> CLEAN WATER AND SANITATION</p>	Ensure availability and sustainable management of water and sanitation for all.	<ul style="list-style-type: none"> <li>• Followed the principle of recycling, and recycled and evaporated, after filtration of scum, production sewage, respectively, through copper leaching process and copper smelting process</li> <li>• Discharged office and domestic sewage after treatment to reduce pollution</li> </ul>	Environmental Management System Development of Green Mine Pollutant Emissions Use of Natural Resources
 <p><b>8</b> DECENT WORK AND ECONOMIC GROWTH</p>	Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.	<ul style="list-style-type: none"> <li>• Eliminated use of child labor and forced labor, signed labor contracts with employees, and protected the legitimate rights and interests of employees</li> <li>• Signed recognition agreements with many labor unions to ensure equal opportunities for employees</li> <li>• Provided priority employment opportunities to the local society</li> <li>• Formulated and implemented internal policies and emergency plans in relation to occupational health and safety</li> <li>• Equipped employees with personal protective equipment, strengthened occupational safety training, conducted hazard monitoring and assessment, and purchased insurance for employees</li> </ul>	Employment Management Employee Care



# ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT



United Nations Sustainable Development Goals (SDG)	Definition of the goals	Actions taken by the Group	Relevant chapters in the Report
	<p>Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.</p>	<ul style="list-style-type: none"> <li>• Formulated and implemented internal policies in relation to patent application and intellectual property protection</li> <li>• Intensified R&amp;D and innovation of mining process, and formulated corresponding mining plans</li> <li>• Encouraged production and management personnel to put forward constructive opinions on issues in production links such as quality control and high energy consumption</li> <li>• Assisted some local communities in improving infrastructure construction, including well drilling, community maintenance and reconstruction, emergency repair of circuits, road repairs, etc</li> </ul>	<p>Safety Production and Operation Technology R&amp;D and Innovation</p>
	<p>Reduce inequality within and among countries.</p>	<ul style="list-style-type: none"> <li>• Made continuous improvement in the corporate management system, and specified corporate management rules in accordance with relevant regulatory requirements</li> <li>• Adhered to the principles of equality, diversity and anti-discrimination, and treated employees of different nationalities, races, and genders equally</li> <li>• Provided priority employment opportunities to the local society</li> <li>• Formulated and implemented internal policies in relation to community donation</li> </ul>	<p>Compliance Governance and Operations Norms and Construction of Integrity-based Governance Community Support</p>
	<p>Ensure sustainable consumption and production patterns.</p>	<ul style="list-style-type: none"> <li>• Took business sustainability into consideration during operation, and disclosed relevant information to the public</li> <li>• Formulated and implemented internal policies in relation to environmental management</li> <li>• Established management measures on waste gas, sewage, solid waste and ecological environment to reduce the impact of business operations on the environment</li> <li>• Carried out resource management in terms of business operation, office and life, and improved the comprehensive utilization of resources in all aspects of the business</li> <li>• Attached importance to R&amp;D and innovation, and made relentless efforts to improve the mining process</li> </ul>	<p>Product Quality and Responsibility</p>



# ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

United Nations Sustainable Development Goals (SDG)	Definition of the goals	Actions taken by the Group	Relevant chapters in the Report
 <p><b>15</b> LIFE ON LAND</p>	<p>Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.</p>	<ul style="list-style-type: none"> <li>• Monitored the water quality of surrounding rivers</li> <li>• Carried out afforestation activities</li> </ul>	<p>Environmental Management System Development of Green Mine Pollutant Emissions Use of Natural Resources</p>
 <p><b>16</b> PEACE, JUSTICE AND STRONG INSTITUTIONS</p>	<p>Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels.</p>	<ul style="list-style-type: none"> <li>• Formulated and implemented internal policies in relation to anticorruption</li> <li>• Provided employees with training on anti-corruption</li> <li>• Established a reporting and complaint mechanism to report misconduct within the enterprise</li> </ul>	<p>Upholding Human Rights Community Support</p>



**中國有色礦業有限公司**  
China Nonferrous Mining Corporation Limited