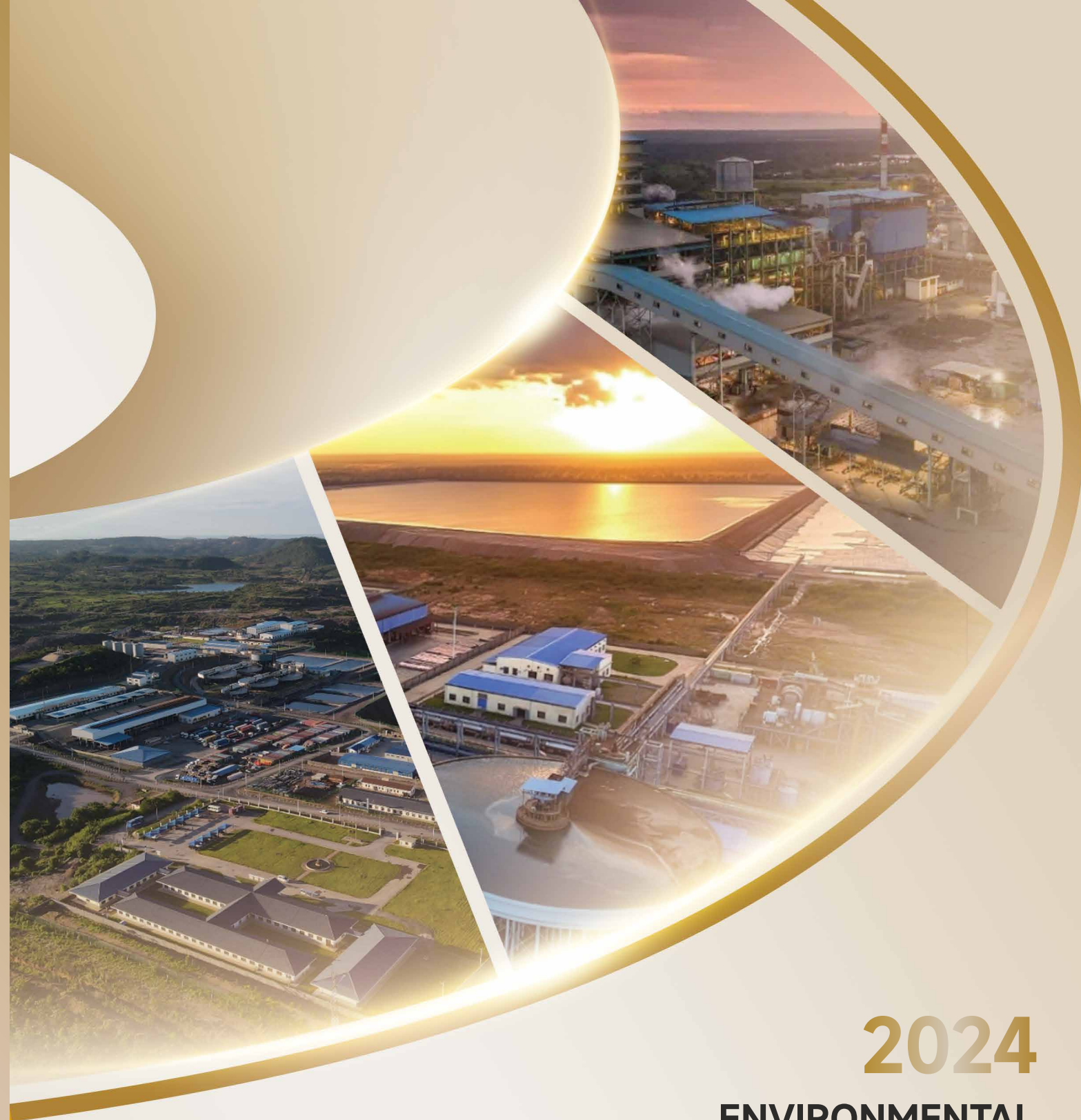




China Nonferrous Mining Corporation Limited



# 2024

## ENVIRONMENTAL, SOCIAL AND GOVERNANCE (ESG) REPORT

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China Nonferrous Mining Corporation Limited

China Nonferrous Mining  
(Stock code: 01258.HK)



# I About this report

## Overview

This report is an environmental, social, and governance (ESG) report for the year 2024 released by China Nonferrous Mining Corporation Limited (hereinafter referred to as “China Nonferrous Mining” or “Corporation”) to the public, 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.



## Basis of preparation

This report has been prepared by the Corporation with reference to and in compliance with the “Environmental, Social and Governance Reporting Code” set out in Appendix C2 to the Main Board Listing Rules on The Stock Exchange of Hong Kong Limited. This 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	Answer
Importance	The Corporation identifies the material issues related to the Corporation 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 this report.
Quantization	The Corporation has disclosed in this report the quantitative KPIs and the standards, methodologies, assumptions and calculation references used, including the source of major conversion factors.
Balance	This report presents the performance of the Corporation during the reporting period in an impartial manner to avoid choices, omissions or presentation formats that may improperly affect the decision or judgment of the report readers.
Consistency	This 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.

## Report scope

Unless otherwise specified, this report covers the ESG-related activities of China Nonferrous Mining Corporation Limited and its wholly-owned and controlled subsidiaries including NFCA, Luanshya, CCS, SML, Huachin Leach, CNMC Huachin Mabende, Lualaba Copper Smelter and Kambove Mining. The information boundaries align with those of the Corporation’s annual report.

The period covered by this report is from January 1, 2024 to December 31, 2024. To enhance the comparability and prospectiveness of this report, some content may trace back to previous years or include forward-looking descriptions.

## Reliability assurance

The Board of Directors of the Corporation is responsible for formulating ESG strategies and for the contents of this report. The information and cases disclosed in this report are from the Corporation’s internal documents, statistical reports or relevant public information. The Corporation pledges that the report contains no false records, misleading statements or major omissions, and bears liabilities for the authenticity, accuracy and integrity of the report.

## Access and response to this report

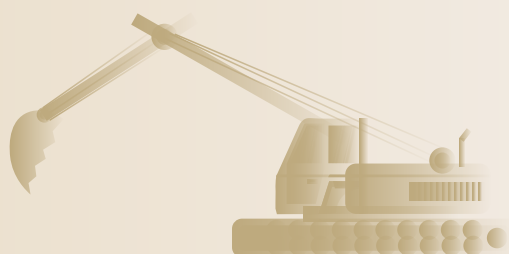
This report is available in both English and Chinese. If there is any ambiguity in the meaning of this report, the Chinese version shall prevail.

The electronic copy of this 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.cnmccl.net>).

Your valuable feedback is critical to our continuous improvement. If you have any enquiries and suggestions, please call 852-95197870.



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# 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.

“CNMC”	Refers to	China Nonferrous Metal Mining (Group) Co., Ltd., 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 Corporation
“Corporation” or “we” or “us”	Refers to	China Nonferrous Mining Corporation Limited, a company incorporated in Hong Kong on July 18, 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
“CCS”	Refers to	Chambishi Copper Smelter Limited, a company incorporated in Zambia on July 19, 2006 and a subsidiary of the Corporation
“CNMC Huachin Mabende”	Refers to	CNMC Huachin Mabende Mining SA, a joint venture established in the DRC on November 9, 2012 and a subsidiary of the Corporation
“CNMHK”	Refers to	China Nonferrous Mining Hong Kong Holdings Limited, a company incorporated in Hong Kong on October 6, 2015, a subsidiary of the Corporation and the holding company of Huachin Leach and CNMC Huachin Mabende
“Huachin Leach”	Refers to	Huachin Metal Leach SA, a company incorporated under the laws of the DRC on December 17, 2010 and a subsidiary of the Corporation
“Kambove Mining”	Refers to	Kambove Mining SAS, a company established in the DRC on June 8, 2017 and a subsidiary of the Corporation

“Lualaba Copper Smelter”	Refers to	Lualaba Copper Smelter SAS*, a company established in DRC on June 21, 2017 and a subsidiary of the Corporation
“Luanshya”	Refers to	CNMC Luanshya Copper Mines PLC, formerly Luanshya Copper Mines PLC, a company incorporated in Zambia on July 10, 2003 and a subsidiary of the Corporation
“NFCA”	Refers to	NFC Africa Mining PLC, a company incorporated in Zambia on March 5, 1998 and a subsidiary of the Corporation
“SML”	Refers to	Sino-Metals Leach Zambia Limited*, a company incorporated under the laws of Zambia on December 3, 2004 and a subsidiary of the Corporation
“Stock Exchange”	Refers to	The Stock Exchange of Hong Kong Limited
「ESG」	Refers to	Environmental, social and governance
“ESG Guide”	Refers to	“Environmental, Social and Governance Reporting Guide” set out in Appendix C2 to the Listing Rules
“ESG report” or “report”	Refers to	Environmental, Social and Governance (ESG) Report in 2024 of China Nonferrous Mining
“Listing Rules”	Refers to	The Rules Governing the Listing of Securities on the Stock Exchange
“Reporting period” or “Year”	Refers to	January 1, 2024 December 31, 2024





# Address by the Board of Directors

Amid the waves of global economic fluctuations and industry transformation, China Nonferrous Mining has demonstrated responsibility through action, driven development through innovation, and integrated sustainable development into its strategies, which delivers an impressive performance in implementing the “carbon peaking and carbon neutrality” strategy, promotes green transformation in the industry, and empowers community prosperity.



**We paint a new picture of mining industry with green as the bottom color.** Guided by the “carbon peaking and carbon neutrality” goals and driven by the three-year special actions in “science and safety and environmental protection”, we have built a whole-chain green management system to promote the deep integration of resource development and ecological protection. In the development of green mines, Kambove Mining, planted African daisies on abandoned dumps during the rainy season, restoring over 12,000 m<sup>2</sup> of mining area ecology throughout the year, re-greening the mine. It also innovated waste water recycling technology and achieved “zero emission” of production waste water, which set a benchmark for water resource intensification in the industry. Facing energy challenges, we have accelerated the deployment of clean energy. The 8MW (photovoltaic) + 4MWh (energy storage) microgrid project in Mabende jointly completed by CNMHK and Huawei was connected to the grid, which reduced carbon dioxide emissions by 119 tons annually, and set a model for global mining energy transition. We have systematically identified climate risks and implemented flood control, drainage, and slope monitoring projects in Zambia, the DRC, and other regions, to minimize the impact of extreme weather on production.

**We jointly forge concentric circles of development with responsibility as the bond.** We write a warm chapter by taking safety as the basis, talents as the foundation, and community as the root. We strengthen safety management by implementing the “6S” management model, embedding safety culture deeply into our employees’ hearts. We provide diverse growth channels for employees, and support outstanding employees from the DRC to China for exchange and learning. CNMHK signed a school-enterprise cooperation agreement with the renowned local universities, which injected vitality into localized development. We enhance supply chain management. Kambove Mining passed the “AA-level Responsible Management” certification, and Luanshya shared experiences at the OECD forum, which demonstrated our international responsibility. We actively participate in community building. The employment rate of graduates from Sino-Zam Vocational College of Science and Technology has reached 100%. From the completion of the Kashengenneke Health Station in the DRC to 15 consecutive years of agricultural donations in Luanshya, Zambia, and from the provision of “water” to thousands of households by Lualaba Copper Smelter to the operation of the Kolwezi 220KV

substation, we practice the philosophy of “the Belt and Road” initiative for extensive consultation, joint contribution and shared benefits, which benefits tens of thousands of people and spreads the warmth of mine across mountains and seas.

**We solidify the soul of a century-old enterprise by taking norms as the cornerstone.** We establish an ESG management architecture covering the Corporation’s headquarters and subsidiaries, integrating ESG risks into the comprehensive risk management system. We revise and improve the institutional system and conduct compliance training. In the field of anti-corruption, we maintain a “zero tolerance” stance to corruption, with no corruption lawsuits throughout the year, which earns market trust through transparent governance.

Looking ahead, global energy transition and resource demand bring new opportunities to the mining industry, as well as new missions for us. We will continue to write a chapter on the picture of sustainable development by taking technological innovation as the pen and social responsibility as the ink. We are willing to join hands with all parties to explore the path of green mining and embrace a promising future together!





# About us

## Company overview

China Nonferrous Mining Corporation Limited is a stable and promising integrated copper producer, possessing abundant copper and cobalt resources and advanced and reliable copper and cobalt mining, possessing 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. Our business is mainly distributed in the Copperbelt Province of Zambia, Upper Katanga Province and Lualaba Province of the DRC.

Our main products include blister copper, anode copper, cathode copper, sulfuric acid, cobalt hydroxide, and liquid sulfur dioxide. In 2024, the accumulated production of blister copper and anode copper was 285,930 tons, representing a year-on-year increase of 0.1%; the accumulated production of cathode copper was 126,141 tons; the accumulated production of cobalt hydroxide containing

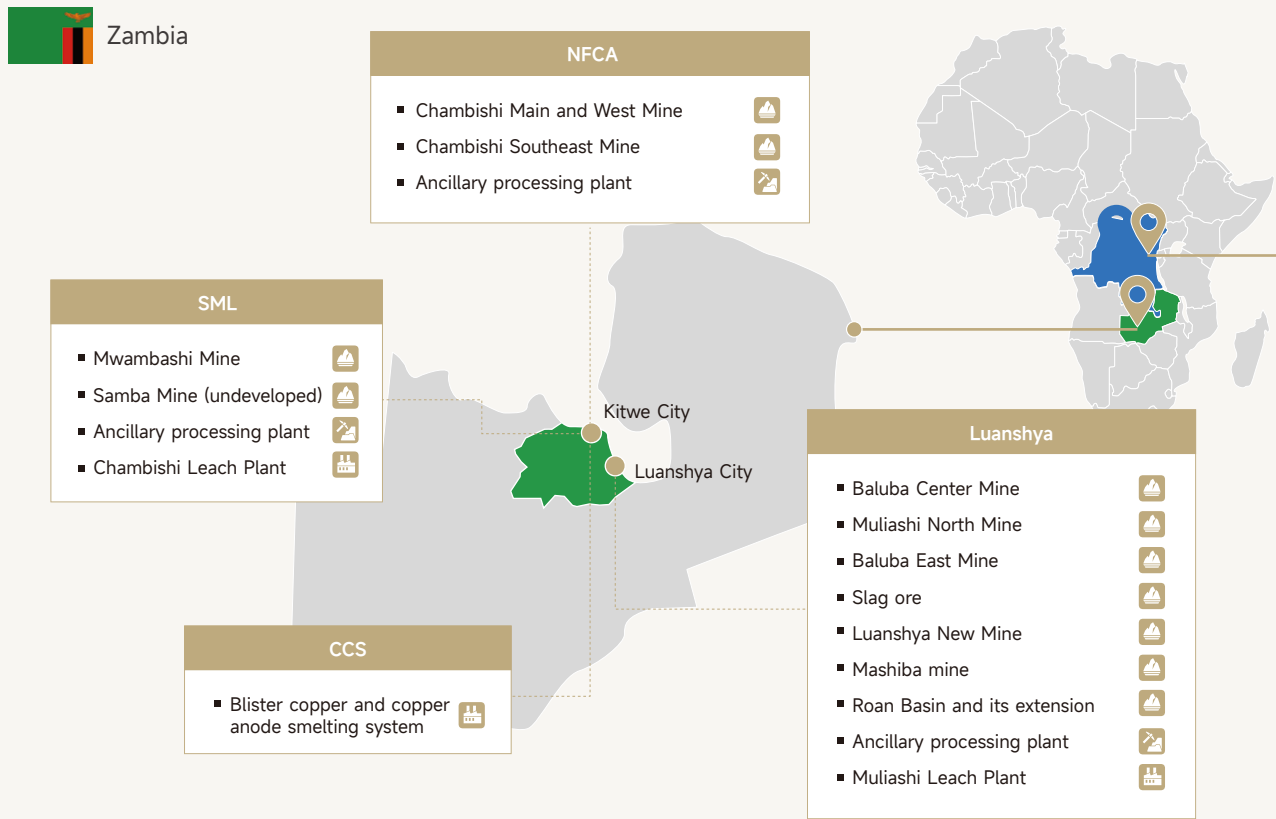
cobalt was 1,010 tons; the accumulated production of sulfuric acid was 1,056,035 tons, representing a year-on-year increase of 10.5%; the accumulated production of liquid sulfur dioxide was 15,993 tons, representing a year-on-year increase of 33.6%; the accumulated processing of copper products for enterprises outside the Corporation was 111,901 tons, representing a year-on-year increase of 24.6%.

We adopt an integrated business model, and carry out production and operation through eight project companies in Zambia and the DRC, which covers the whole industry chain of copper and cobalt industry such as mining, pyrometallurgy and hydrometallurgy. Each subsidiary is positioned at different stages of the industry chain, with diversified profit models. The diversified business model helps enhance the profitability stability of the listed company and effectively reduces the impact of local fluctuations in the industry chain on the Corporation's overall profitability.

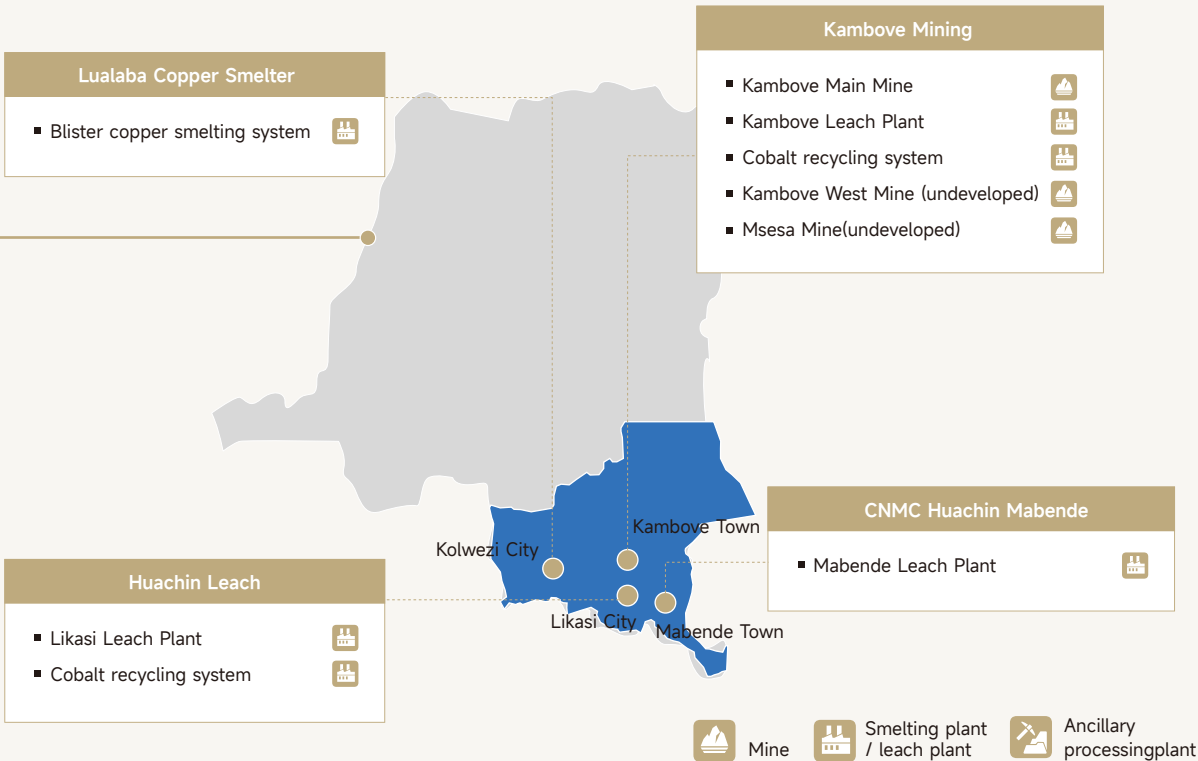
## Honor



## Business layout



## Democratic Republic of the Congo

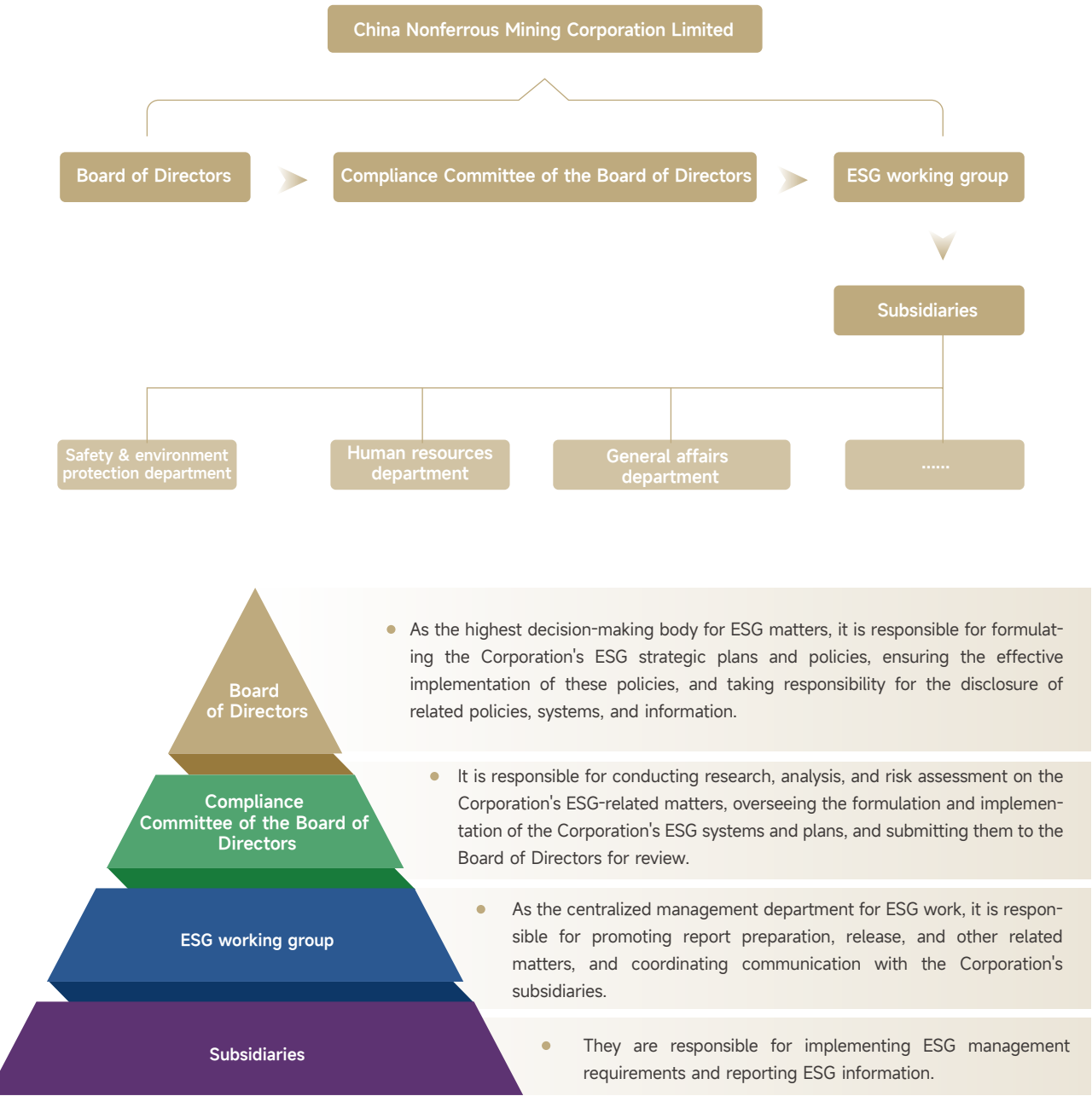




# ESG management

## ■ ESG management architecture

The Corporation is always committed to integrating sustainability into its corporate governance and daily operations, establishing a comprehensive ESG management architecture covering the Corporation’s headquarters and subsidiaries. The Corporation continuously optimizes its ESG management model in accordance with the requirements of the Stock Exchange and its own circumstances, regularly evaluating the effectiveness of the governance architecture.



The Corporation has established a comprehensive and prudent risk management and internal control system, which is designed and implemented by the management team. Among which, the Compliance Committee of the Board of Directors is responsible for determining, evaluating, prioritizing and managing ESG-related risks, and guaranteeing and regularly evaluating the effectiveness of the internal control system. The Corporation 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.

## ■ 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 2024 and assessed the impact of relevant risks on the Corporation.
- During the reporting period, the Corporation 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 Corporation 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 this report according to the specific circumstances.

Major ESG risk	Impact of risks on enterprises	Management measures
Energy crisis	The Corporation'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 Corporation to manage its resources.	<p><b>Luanshya</b></p> <ul style="list-style-type: none"><li>Improve the management system for energy conservation and emission reduction;</li><li>Promote the use of high-efficiency energy-saving equipment and technologies.</li></ul> <p><b>CCS</b></p> <ul style="list-style-type: none"><li>Develop management systems such as the Energy Saving Management Measures;</li><li>Strictly implement 6S management, electricity saving, and related systems.</li></ul> <p><b>Huachin Leach</b></p> <ul style="list-style-type: none"><li>Use solar street lamps and organize energy conservation promotional activities.</li></ul> <p><b>CNMC Huachin Mabende</b></p> <ul style="list-style-type: none"><li>Newly introduce 6 diesel generators, import electricity from Zambia;</li><li>Promote the implementation of photovoltaic power generation projects.</li></ul> <p><b>Lualaba Copper Smelter</b></p> <ul style="list-style-type: none"><li>Formulate energy management measures and implement centralized management by a department;</li><li>Improve system operation and load rates, increase oxygen concentration in the smelting process, and reduce fuel consumption.</li></ul> <p><b>Kambove Mining</b></p> <ul style="list-style-type: none"><li>Accelerate the development of the photovoltaic project and increase the use of clean energy.</li></ul>





Major ESG risk	Impact of risks on enterprises	Management measures
Lack of resources	When critical resources are in short supply due to limited mineral reserves in mines and shortages of external mineral resources for smelters, the production capacity of enterprises is restricted and prices rise, which may lead to higher costs and lower profits.	<ul style="list-style-type: none"><li>• Increase investment in resource exploration and develop new mine projects, such as Luanshya Shaft 28 OreBody, Kambove Mining West Mine, Msesa Mine, and SML Mwambashi Mine. The copper resources at Luanshya Copper Mine have increased significantly by 81.73% to 2.6237 million tons;</li><li>• Develop new cooperative mines to provide copper concentrate;</li><li>• Optimize mining plans to improve recovery rates;</li><li>• Strengthen resource recycling and enhance tailings utilization.</li></ul>
Geopolitical and economic risks	Geopolitical instability may trigger local armed conflict, which may affect market stability and the enterprise's normal production and operations, 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.	<ul style="list-style-type: none"><li>• Build good relationships with local governments and stakeholders to gain better risk intelligence and support;</li><li>• Actively participate in community development, carries out public welfare activities, and provide employment opportunities;</li><li>• Monitor geopolitical and economic changes and establish an effective monitoring and analysis mechanism and contingency plans, including tracking changes in government policies, regional conflicts, trade restrictions, etc., as well as changes in economic indicators and market trends;</li><li>• Explore evacuation routes for extreme scenarios and establish a reserve mechanism for emergency living supplies.</li></ul>
Supply chain management risk	Suppliers affected by energy shortages may experience delayed or interrupted supplies, which 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.	<ul style="list-style-type: none"><li>• Achieve full-process information management of the supply chain;</li><li>• Set safety inventory for bulk materials and critical spare parts directly related to tracking of contract execution , ensure inventory turnover time, prioritize execution, and closely track execution and logistics status;</li><li>• Identify primary suppliers while determining alternative suppliers to ensure production needs are met and the risk of supply disruption is prevented.</li></ul>

■ Communication with stakeholders and relationship maintenance

The Corporation is committed to promoting sustainable development and maintaining good relationships with stakeholders. We have established 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. The table below shows the expectations of various stakeholders on the Corporation and the Corporation's daily communication channels with them:

Stakeholder	Expectations on the Corporation	Communication methods	Frequency of communication
 Government bodies and supervisory authorities	<ul style="list-style-type: none"><li>• Compliance with law and discipline</li><li>• Compliance management</li><li>• Tax payment according to laws</li></ul>	<ul style="list-style-type: none"><li>• Making policies</li><li>• Work report</li><li>• Information disclosure</li></ul>	<ul style="list-style-type: none"><li>• Regular/irregular</li></ul>
 Shareholders and investors	<ul style="list-style-type: none"><li>• Performance</li><li>• Company profits</li><li>• Company governance</li></ul>	<ul style="list-style-type: none"><li>• Shareholders' meeting</li><li>• Regular report</li><li>• Earnings release Roadshow</li></ul>	<ul style="list-style-type: none"><li>• Annual/quarterly/irregular</li></ul>
 Employee	<ul style="list-style-type: none"><li>• Remuneration and welfare</li><li>• Health and safety</li><li>• Vocational training</li></ul>	<ul style="list-style-type: none"><li>• Employee meeting</li><li>• Labor contract</li><li>• Employee activities</li></ul>	<ul style="list-style-type: none"><li>• Regular/irregular</li></ul>
 Customer	<ul style="list-style-type: none"><li>• Quality management</li><li>• Service guarantee</li></ul>	<ul style="list-style-type: none"><li>• Contract agreement</li><li>• Customer service</li><li>• Company website</li></ul>	<ul style="list-style-type: none"><li>• Annual/quarterly/irregular</li></ul>
 Supplier	<ul style="list-style-type: none"><li>• Fair and just</li><li>• Mutually beneficial cooperation</li></ul>	<ul style="list-style-type: none"><li>• Contract agreement</li><li>• Work meeting</li><li>• Supplier evaluation</li></ul>	<ul style="list-style-type: none"><li>• Regular/irregular</li></ul>
 Community	<ul style="list-style-type: none"><li>• Protecting community environment</li><li>• Harmonious development</li></ul>	<ul style="list-style-type: none"><li>• Community communication</li><li>• Charity donations</li></ul>	<ul style="list-style-type: none"><li>• Regular/irregular</li></ul>

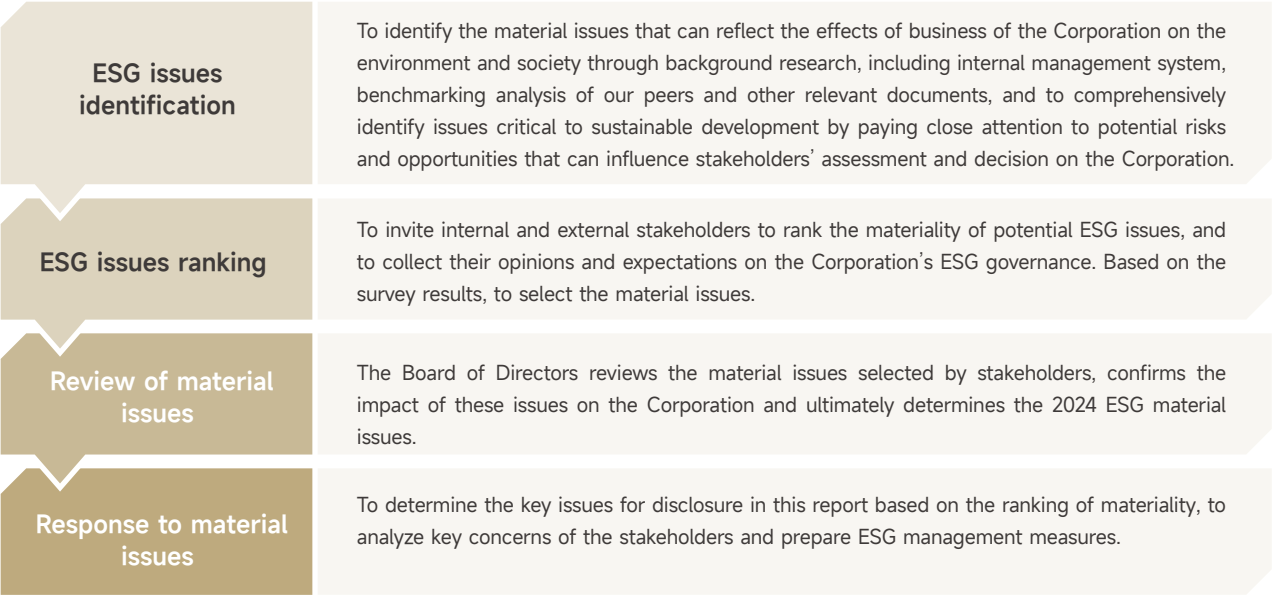




■ Analysis on material issues

The Corporation 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 supervisory 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 Corporation’s headquarters and subsidiaries by way of a questionnaire survey.

We analyzed the two dimensions of each issue, i.e. “significance to China Nonferrous Mining” and “significance to stakeholders”, to assess and select material issues during the reporting period, and arrived at the materiality analysis results. The analysis results were reviewed by the Board of Directors. The Corporation’s material issue assessment process includes four major steps as follows.



The Corporation 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. The importance analysis matrix of the Corporation’s ESG issues for 2024 is as follows.



Following this, the Board of Directors considered and evaluated 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 determined the following 14 material ESG issues (in descending order of significance). Those issues will serve as a guide for the sustainable development management and an important reference for strategic planning, and are also the key content for disclosure in this report. Compared with the evaluation results of the materiality issues in 2023, we have placed greater emphasis on the prevention and control of safety risks during the production process, and have elevated the ranking of the "Occupational Health and Safety" issue. At the same time, we have added three new material issues, namely "Green Actions and Measures", "Development of Green Mine", and "Democratic Management", in order to better address the concerns of stakeholders.

No.	Material issues	Key response sections
1	Use of resources	Resource conservation and utilization
2	Occupational health and safety	Safety management
3	Compliance management	Regulated operation
4	Responsible production	Cutting-edge products
5	Risk management	Regulated operation
6	Business ethics	Regulated operation
7	Company governance	Regulated operation
8	Employment management	Employee development
9	Anti-corruption	Regulated operation
10	Relations with governments	Harmonious society
11	Product quality and responsibility	Cutting-edge products
12	Green actions and measures	Pollutant emission control Resource conservation and utilization Mineral resources development Combat with climate change
13	Development of green mine	Development of green mine
14	Democratic management	Employee development

# 01/ Environment

Implement the carbon peaking and carbon neutrality strategy and collaborate for green development

Environment management system .....	019
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Adhering to the principles of “protection priority, prevention first, comprehensive management, public participation, and responsibility for damages”, the Corporation actively promotes energy conservation and emission reduction, and comprehensively strengthens the monitoring and management of pollutant emissions. With a focus on the sustainable use of resources, it actively introduces advanced environmental protection equipment and process technologies for the improvement of resource recycling efficiency. It always interacts with the public with an open attitude, listens carefully and responds promptly to the opinions of various stakeholders, promotes the fulfillment of corporate responsibilities to the environment and society, and empowers the construction of environmentally friendly enterprises.

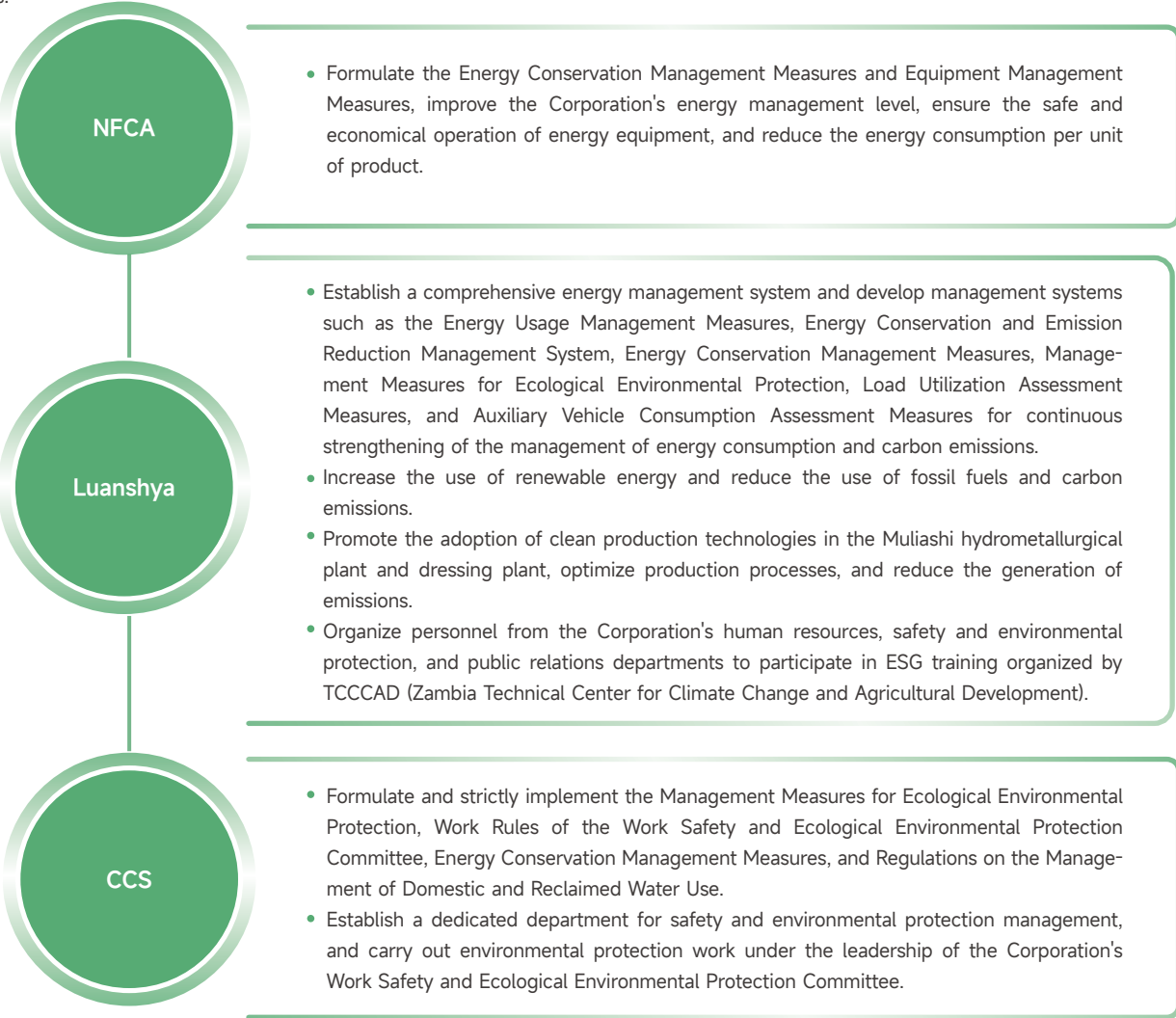




# Environment management system

“The Corporation attaches great importance to the construction of environmental management systems, strictly follows the relevant system requirements of CNMC including the Supervision and Management Measures for Ecological Environmental Protection of External Investment and Cooperation Projects, Management Measures for Ecological Environmental Protection, Emergency Plan for Environmental Emergencies, Energy Conservation Management Measures, and Equipment Management Measures, guides subsidiaries to formulate their respective Management Measures for Ecological Environmental Protection, Environmental Assessment Rules, Energy Conservation Management Measures, and Equipment Management Measures in accordance with local laws and regulations and production and operation practices, and signs Safety and Environmental Protection Responsibility Letters, to further standardize the environmental protection management work of subsidiaries. In addition, through three-year special actions in “science and safety and environmental protection”, the Corporation's environmental compliance management capabilities are continuously improved.”

The Corporation implements a hierarchical and classified management system for environmental emergencies to enhance the ability to respond quickly to environmental emergencies and minimize the negative impact of such emergencies on the Corporation's production and operations. It also continuously strengthens environmental inspections, pays special attention to the operation of pollution prevention equipment, and takes timely corrective measures to resolve issues. In 2024, the Corporation did not experience any environmental emergencies.



Flocks of Migratory Birds are Happily Feeding and Playing at Luanshya Tailings Pond



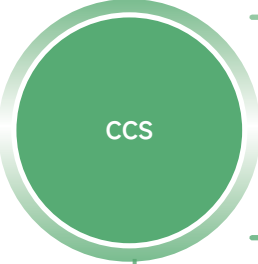


# Pollutant emission control

“The Corporation is committed to reducing pollution at the source and carries out pollution prevention and control in an orderly manner in accordance with the principle of “prevention-recycling-treatment-disposal”. Based on the actual conditions of the project locations, subsidiaries formulate relevant management measures for pollutant emissions, and strive to achieve comprehensive control of waste water, exhaust gas, and solid waste generated during mining, processing, and smelting processes.”



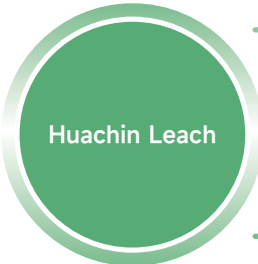
- Waste water management**
- Continuously sample and monitor seven major pollution source monitoring points, and pay real-time attention to changes in waste water emission targets. All sample testing indicators meet the emission standards of the Zambia Environmental Management Agency.
- Solid waste management**
- Establish registers of solid waste (used batteries, tires) and waste oil and bind them into volumes for filing, and entrust qualified local contractors for recycling and disposal of these waste.
  - Optimize mining processes for reduction of waste rock generation.
  - Dispose of waste rock through road construction, construction of tailings pond waste rock embankment, and other engineering measures.
  - Use clean production technologies. Promote the adoption of clean production technologies in the Muliashi hydrometallurgical plant and dressing plant, optimize production processes, and reduce the generation and emissions.



- Waste gas management**
- Strictly comply with permit requirements for sulfur dioxide emissions.
- Solid waste management**
- Sell all generated waste to qualified third-party companies.



- Waste water management**
- Build comprehensive waste water treatment facilities, ensure that the effluent meets the requirements of the Zambian environmental protection department; establish a waste water recycling system to maximize water resource reuse; regularly monitor waste water quality indicators and report monitoring data to the local environmental protection department; establish a water quality anomaly warning mechanism.
  - Achieve resource recycling through waste water reuse treatment and waste resource utilization: improve the waste water treatment system for up-to-standard waste water discharge; recycle and utilize the waste generated from flotation sulfide ore.
- Solid waste management**
- Harmful solid waste: Set up standardized temporary hazardous waste storage facilities; establish cooperation with local qualified hazardous waste treatment organizations; implement the hazardous waste transfer checklist system and regularly train hazardous waste management personnel.
  - Harmless waste: Establish an industrial solid waste classification and collection system; optimize the resource utilization of solid waste; standardize the management of general industrial solid waste storage sites; regularly make statistics on solid waste generation and disposal.



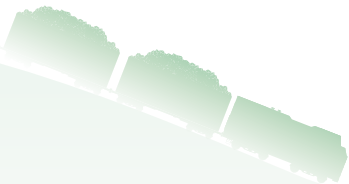
- Waste water management**
- Regularly conduct water sample testing, and strictly control pollutant emissions.



- Waste water management**
- Most of dilute acid generated during the acid-making process is sold externally to reduce the waste water generated after neutralization; the remaining dilute acid after neutralization is recycled as the water for slow cooling of slag, achieving zero emission.
  - The ground in the acid-making process is hardened and coated with anti-corrosion materials to prevent harmful substances from seeping in.
  - In 2024, approximately 1,800 m<sup>2</sup> of the concentrate warehouse ground was newly hardened, and the ground of the blister copper stacking area was repaired, which effectively prevented water and dust from seeping into the soil.
- Solid waste management**
- Collect and classify reusable waste such as waste oil, waste chemical barrels, and ton bag packaging materials, and recycle valuable waste such as used electronic products, old equipment, and scrap steel for closed-loop resource utilization.
  - Regularly conduct environmental protection training for raising employees' awareness and responsibility for emission reduction, waste management, and environmental protection.



- Waste water management**
- Through the renovation of the water circulation system in the hydrometallurgical plant, 100% of the production waste water is ensured not to be emitted externally.
  - Regularly sample and analyze groundwater and production water from the tailings pond monthly, and conduct soil sampling and analysis of the hydrometallurgical plant and ore transport roads quarterly to ensure that production does not pollute the local environment.
  - The tailings pond is equipped with an anti-seepage membrane layer, and any damaged areas of the membrane are promptly repaired and reinforced to prevent waste liquid and slag from contaminating groundwater.
- Waste gas management**
- Production organizations such as the hydrometallurgical plant use bag dust collectors to filter exhaust gases before emission.
- Solid waste management**
- Waste iron slag, waste oil, and scrap iron generated during production are processed by qualified waste treatment companies for resource recovery.





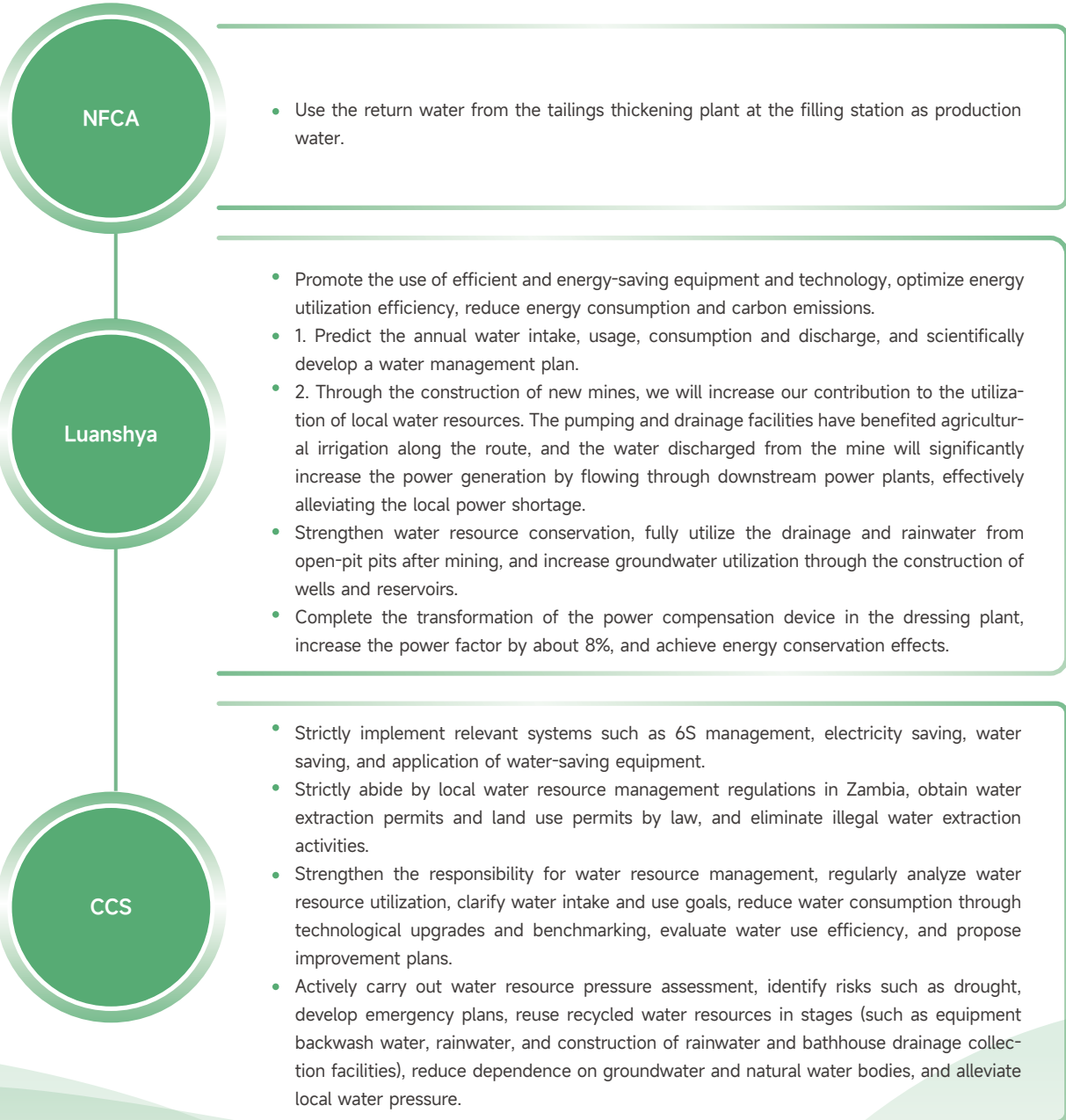


Key performance:

	Indicator ▼	Unit ▼	2024 ▼
Exhaust pollutant emission	Sulfur oxide emission	t	4,043.04
	Nitrogen oxide emission	t	11.29
	Dust and fume emission	t	113.26
Waste water emission	Waste water emission	Ten thousand t	1,219.13
	Industrial waste water emission	Ten thousand t	1,180.05
	Domestic waste water emission	Ten thousand t	39.08
	Waste water emission intensity per unit revenue	t/USD thousand	3.19
Solid waste emission	Total harmful wastes	Ten thousand t	0.10
	Compliance rate of harmful waste disposal	%	100
	Harmful waste emission intensity per unit revenue	t/USD million	0.25
	Total harmless wastes	Ten thousand t	5,664.55
	Compliance rate of harmless waste disposal	%	100
	Harmless waste emission intensity per unit revenue	Ten thousand t/USD million	1.48

# Resource conservation and utilization

“The Corporation actively practices the green development philosophy, continuously improves resource management systems, enhances energy and water resource utilization efficiency, and builds a green, low-carbon, and sustainable resource utilization model, to contribute to the coordinated development of economy, society, and environment. The affiliated companies of the Company operate in Zambia and the Democratic Republic of the Congo (DRC) in Africa, mainly utilizing the local clean energy for production. According to the research of the International Energy Agency, Zambia and the DRC are rich in hydropower resources, and the local area mainly relies on hydropower generation, which is a type of clean energy. The underground water inflow of the ore bodies of the Company is abundant, resulting in a low risk in obtaining suitable water sources, and no problems have been encountered in this regard.”





SML

CNMC Huachin Mabende

Lualaba Copper Smelter

Kambove Mining

- Establish a comprehensive energy management system to monitor energy consumption in real-time and conduct data analysis, promptly identify energy waste issues, and formulate improvement measures.
- Optimize production processes, introduce high-efficiency energy-saving hydrometallurgical technologies and equipment for improvement of energy use efficiency and reduction of greenhouse gas emissions, optimizing process parameters such as leaching and extraction during wet smelting, adopt layered emission technology, combustion control technology and pure oxygen combustion technology, implement test project for energy-saving motor upgrade and renovation, optimize equipment operating parameters, and achieve a comprehensive power saving rate of 21.26%.
- Establish a green production and circular economy model by strengthening the management of raw material suppliers, enhancing inventory control and other measures, and achieve material conservation and resource utilization of waste. For the steel strip packaging material used for cathode copper bundling packaging, measures such as standardizing steel strip specifications, optimizing procurement batches, implementing standardized storage, developing standard operating procedures, optimizing packaging processes, and regularly maintaining packaging equipment are taken to improve material efficiency and reduce steel strip losses.
- Regularly conduct energy conservation and carbon reduction training activities to enhance employees' energy conservation and carbon reduction awareness and operational skills.

- Advance the upgrade and transformation of environmentally friendly full-process sampling systems, construct environmentally friendly sampling workshops, ensure automatic sampling, improve sampling accuracy, reduce labor intensity, minimize human errors, reduce dust pollution, improve labor and environment.

- Formulate Energy Management Measures and implement centralized management by a department.
- Improve system operation and load rates, increase oxygen enrichment in the smelting process, and reduce fuel consumption.
- Carry out leaking stoppage on the steam pipelines of the waste heat system, reduce the leakage of low-pressure steam, increase power generation and water recovery.
- Use waste water after dilute acid neutralization and back washing water from the water station as slag cooling water.
- Strengthen the fine management of material usage by improving technology and enhancing the skills of operators, reduce material loss in production, and continuously optimize material utilization.
- Promote water saving through training and advocacy, raise employees' awareness of water saving, and ensure effective management of water usage at every stage.

- Actively strive to use municipal electricity to reduce the proportion of diesel power generation.
- Incorporate water resource management into business planning, establish mechanisms of communication with relevant parties, and achieve planned use of water resources in the river basin.
- Construct drainage pump stations and sumps for the main ore body to recycle water inflows; install water pumps for the western ore body, using mine inflows as production water supplement and for irrigation to reduce water resource consumption and groundwater consumption.
- Optimize the internal water circulation system in the hydrometallurgical plant to enhance water recycling efficiency and reduce freshwater intake.
- Implement total water usage control for each production organization.

Key performance:

Indicator	Unit	2024
Total energy consumption	tce	243,556.48
Gasoline consumption	L	234,741.00
Diesel oil consumption	L	40,352,148.30
Coal consumption	tce	42,128.30
Coke consumption	tce	370.00
Liquefied petroleum gas consumption	kg	18,120.00
Acetylene consumption	kg	17,700.70
Purchased energy (indirect)	Hundred million kWh	12.86
Energy consumption intensity per unit revenue	Tce/USD million	63.82
Fresh water consumption	Ten thousand t	1,457.64
Fresh water consumption intensity per unit revenue	t/USD thousand	3.82



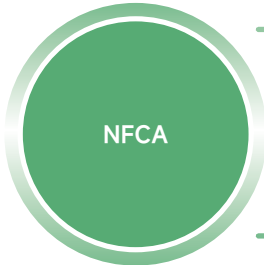
# Development of green mine

“The Corporation solemnly commits to “fulfilling social responsibilities in the process of promoting business development, achieving comprehensive and sustainable development of the environment, enterprise, industry, and society”. To further advance the development of green mines, the Corporation implements strict resource management measures in all production and office operations. In key business processes such as mining, processing, and smelting, the Corporation minimizes negative impacts and promotes the coordinated development of the economy, environment, and society while ensuring the rational development and utilization of resources.”

The Corporation actively promotes the development of green mines, with subsidiaries formulating relevant institutional documents based on their business realities, aiming to reduce the adverse environmental impacts of business operations. Focusing on achieving pollutant emission standards, controlling environmental risks of tailings ponds, and restoring mine ecosystems, the Corporation actively carries out ecological environment management and governance to continuously improve the ecological environment of mines.

Subsidiaries regularly monitor and analyze pollutant emissions, provide early warnings for potential excessive emission risks, and formulate corresponding control measures to minimize the environmental impact of mine development and continuously promote the positive development of the mine ecological environment.

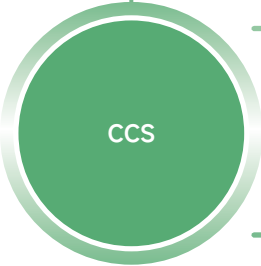
Regarding tailings ponds, subsidiaries routinely conduct environmental risk inspections, closely monitor surrounding soil conditions, and ensure no pollution issues arise. In terms of ecological restoration, tree planting is carried out annually according to plan to effectively reduce the area of exposed land.



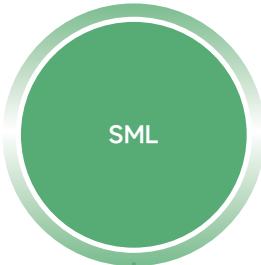
- Include total carbon emission targets and the promotion of solar energy use in the Safety and Environmental Protection Responsibility Letters, implement a system primarily with carbon intensity control as a main method and total carbon emission control as a supplement, establish a total carbon emission control system, and reduce energy consumption.



- The Management Measures for Ecological Environmental Protection explicitly require protecting the geological environment of mines and reducing the damage caused by mineral resource exploration and mining activities to the mine geological environment.
- Ensure that existing mines meet the standards for green mine development, use green mine standards as the basis for new mine development, actively conduct self-evaluations of green mine development, and voluntarily accept spot checks and audits.
- Establish and improve green mine planning, comprehensively promote green exploration of mineral resources, actively advance the construction of in-production mines to meet standards, accelerate the transformation of resource utilization methods, and incorporate technological innovation into the green mine system.
- Protect the trees within the mining area. Stop the tree-cutting activities by surrounding community members around the area, actively promote tree protection efforts, ensure the forest coverage within the mining area remains at a high level, and reduce atmospheric carbon dioxide content through tree planting.
- Address the environmental impact of dust through various measures, including spraying water to reduce dust on ore transport roads and other key construction areas in open-pit mines, and solving dust issues at the Musen tailings pond through backfilling topsoil and vegetation coverage.
- Complete the demolition of old plant buildings in the dressing plant and the reclamation of the demolition area between May and December 2024.



- Strictly carry out production activities in accordance with Zambian laws and regulations and the environmental emission permits, and pay EPF (Environmental Protection Fund) fees.



- Promote green building renovations and green office operations: conduct energy conservation renovations on buildings, including the use of energy-saving building materials and improving building insulation performance.
- Construct solar photovoltaic power plants in the new residential area and the Mwambashi open-pit mine, which makes it take the lead in achieving zero-carbon emissions for overseas operations of Chinese enterprises.
- Participate in community environmental protection activities and conduct environmental protection publicity and education.





Huachin Leach

- Use solar street lamps, post water-saving signs, organize environmental day activities, and conduct energy conservation publicity campaigns.
- In September, it organized relevant organizations to conduct a safety status evaluation of the tailings pond and rectify the non-conformities and safety hazards identified in the report.

CNMC Huachin Mabende

- All departments and workshops sign the Safety and Environmental Protection Responsibility Letters.
- Promote the implementation of photovoltaic power generation projects and explore the transition to green energy.

Lualaba Copper Smelter

- Sign the 2024 Safety and Environmental Protection Target Responsibility Letters, and strictly work according to the target indicators.
- Prioritize the use of sustainable raw materials, encourage the use of renewable resources and environmentally friendly materials, and reduce excessive reliance on natural resources. The impact of business activities on the surrounding environment has been fully considered during the design stage of main business activities, and environmental monitoring of both the surrounding area and the plant site has been conducted after operation.
- Actively promote the construction of a green procurement supply chain, strictly implement green procurement, strengthen energy efficiency constraints in procurement, (in principle) procure equipment with energy efficiency reaching or exceeding the energy saving level, and encourage the procurement of equipment with advanced energy efficiency levels.

Kambove Mining

- Each year, fees for deforestation are paid to the FFN National Forestry Fund of the DRC for the occupation of forest and vegetation areas due to production needs.
- During the rainy season, African daisies are planted in abandoned dumps to restore the ecological environment of the mining area. In 2024, a total of 12,000 m² of vegetation area was restored. Water is continuously sprayed on the 14-km transport roads of the hydromet-allurgical plant, tailings pond, and open-pit mine every day to reduce dust.

CNMHK's Mabende Photovoltaic Project Achieves Grid-connected Power Generation



In November 2024, the On-site Meeting for Green Mine Microgrid in the DRC and Grid Connection Celebration Ceremony for Mabende Photovoltaic Project of CNMHK were successfully held. CNMHK, in collaboration with Huawei Digital Power, released the world's first green microgrid mine model point, which set a new benchmark for energy transition in the DRC's mining industry.

The 8MW photovoltaic + 4MWh energy storage mode can flexibly adjust power supply in case of insufficient external power supply, ensure normal production power supply, and achieve the organic unity and optimal benefits of enterprise investment efficiency, technological efficiency, and production efficiency. Within the year, carbon emissions can be decreased by 119.32 tons. After the project is put into operation, it can ensure stable production of 4,800 tons of copper cathodes for CNMC Huachin Mabende based on the cost calculation of 2,500 KWh per ton of copper.





# I Combat with climate change

“The Corporation actively responds to the global call for carbon reduction, and strives to reduce carbon emissions in production and operations. It establishes a climate risk monitoring and management system, standardizes the statistics and management of carbon emission-related data and reports of its subsidiaries, regularly assesses the impact of climate risks on business, and formulates emergency plans to ensure the robust development of subsidiaries in the face of complex and changing climate environments.”



The Corporation vigorously promotes energy conservation and emission reduction projects, optimizes production processes, and introduces advanced energy-saving equipment for improvement energy utilization efficiency and reduction of greenhouse gas emissions from the source. At the same time, it increases investment in the utilization of clean energy and the R&D of low-carbon technologies, explores the application of renewable energy such as solar energy in mining production, and continuously innovates green mining technologies to enhance resilience to climate change. In 2024, the Corporation, in collaboration with CNMC, conducted a special training on “carbon peaking and carbon neutrality”, with participants from energy conservation and environmental protection, production, trade, equipment, and technology departments of subsidiaries, to improve the ability of business personnel to identify and respond to climate risks.

In 2024, the Corporation comprehensively analyzed relevant content from international guidance organizations such as the Intergovernmental Panel on Climate Change (IPCC) and the current status of climate risk disclosure in the industry, and compiled a list of potential climate risks. Based on the content of the IPCC’s Sixth Assessment Report regarding the impact of different actions on climate change, the Corporation, considering the characteristics of the industry and the actual situation of the Corporation, analyzed the current status of governance of climate-related change risks, and ultimately selected the SSP1-2.6<sup>1</sup> scenario and the SSP3-7.0<sup>2</sup> scenario as potential climate change risks the Corporation may face under different climate scenarios.



Based on the SSP1-2.6 scenario, the SSP3-7.0 scenario, TCFD recommendations, and the industry characteristics of the Corporation, the Corporation identified the following climate risks and implemented corresponding response measures.

<sup>1</sup> The SSP1-2.6 scenario is a more optimistic sustainable development path within the Shared Socioeconomic Pathways (SSP) framework, aiming to control global warming and limit the global average temperature rise to within 2 degrees Celsius.  
<sup>2</sup> The SSP3-7.0 scenario is a more pessimistic scenario path within the Shared Socioeconomic Pathways (SSP) framework, representing a future of high emissions and unsustainable development.

Climate risk			Scope of application	Effect	Measures
Physical risks	Acute physical risks	Thunderstorms and flood disasters	Luanshya, Lualaba Copper Smelter, and Kambove Mining	Flood disasters may cause water levels in mining areas to rise, affecting mining and production activities. Floods may damage mining equipment and infrastructure, leading to production interruptions, equipment losses, and mineral resource losses. In addition, floods may damage mountain vegetation, trigger debris flows and mudslides, and increase work safety risks in mining areas.	<ul style="list-style-type: none"><li>• <b>Luanshya:</b> Timely excavation of interception ditches, use of fully automatic groundwater level and flow monitoring equipment systems to track groundwater dynamics, use of large submersible pumps to drain water, and compacting slopes.</li><li>• <b>Lualaba Copper Smelter:</b> Cover open-air materials to reduce rainwater erosion; strengthen inspection and cleaning of drainage ditches in advance, equip low-lying areas with submersible pumps, etc., to avoid poor drainage and flooding of facilities and equipment during the rainy season. According to the plant conditions, lightning rods are installed in different areas, and the grounding resistance of lightning protection is checked according to standards before the rainy season to ensure they are intact and effective.</li><li>• <b>Kambove Mining:</b> Construction of fixed drainage facilities within the mining area.</li></ul>
Physical risks	Acute physical risks	Landslide	SML, Kambove Mining	Landslides may pose a direct threat to mining facilities and personnel safety. Landslides can severely damage mining buildings, equipment, and infrastructure, hindering the extraction and transportation of mineral resources.	<ul style="list-style-type: none"><li>• <b>SML:</b> Open-pit mining and waste dumps are strictly constructed according to design, ensuring construction techniques and mining parameters meet design requirements, drainage systems are smooth and effective, and slopes and waste dumps are stable to avoid landslide accidents.</li><li>• <b>Kambove Mining:</b> Strengthen early warning of slope hazards through radar monitoring systems.</li></ul>
Physical risks	Acute physical risks	Extreme Drought Weather and Wildfires	NFCA, Lualaba Copper Smelter, Kambove Mining	Extreme drought weather may trigger wildfires, posing a direct threat to mining facilities and personnel safety. Intense wildfires may spread rapidly and cause internal fires in mining areas, leading to production interruptions and resource losses.	<ul style="list-style-type: none"><li>• <b>NFCA:</b> Regularly conduct controlled burning in mining areas to eliminate fire hazards; before the dry season, clean the exterior of each plant to leave a sufficient safety buffer zone.</li><li>• <b>Lualaba Copper Smelter:</b> Clear weeds in the plant area in advance, conduct regular safety inspections, and eliminate hazards in a timely manner. Strengthen reservoir management, continuously monitor water level changes, and reduce the management of overflow water from pump house pools.</li><li>• <b>Kambove Mining:</b> Purchase fire trucks and establish a part-time firefighting team to promptly respond to and eliminate risks in case of mountain fire hazards.</li></ul>



Climate risk			Scope of application	Effect	Measures
Transformation risk	Policies and law risks	Litigation risk	Luanshya, Lualaba Copper Smelter, and Kambove Mining	If the Corporation fails to comply with environmental and social regulations or does not take appropriate environmental and community protection measures, it is highly likely to face litigation risks, resulting in orders to pay hefty fines, suspend operations for rectification, or even bear the responsibility for environmental or community restoration.	<ul style="list-style-type: none"><li>• <b>Luanshya:</b> Strictly adheres to the Mines and Minerals Development Act, Environmental Management Act, Mining Regulations, and Mines and Minerals (Environment) Regulations to ensure legal and compliant governance and operations, effectively avoiding potential environmental pollution incidents and related litigation risks.</li><li>• <b>Lualaba Copper Smelter, Kambove Mining:</b> Strictly comply with local legal requirements to protect the environment and community.</li></ul>
Transformation risk	Market and technical risks	Insufficient fossil fuel and electricity supply	NFCA, CNMC Huachin Mabende, Lualaba Copper Smelter, Kambove Mining	The increasing pressure of global climate change and the heightened focus on emission reduction and sustainable energy utilization goals require mining companies to further accelerate energy transition and actively seek alternative energy sources. This may lead to increased transformation costs and technical challenges, posing difficulties for the Corporation's operations and competitiveness. Insufficient electricity supply significantly impacts normal production and operations, leading to a substantial decrease in output.	<ul style="list-style-type: none"><li>• <b>NFCA:</b> All street lights in the camp and the southeastern mining area have been replaced with solar-powered lights, and electric water heaters in the southeastern and main western ore body bathhouses have been replaced with solar water heaters, reducing energy consumption. Scrapped a batch of high-displacement vehicles, implemented total vehicle control across departments, and promoted the use of electric vehicles to replace fuel-powered vehicles. Strengthened the management of underground trackless equipment and decommissioned some high-energy-consuming and underutilized equipment.</li><li>• <b>CNMC Huachin Mabende:</b> Communicate with the power company to ensure electricity supply, imported electricity from neighboring countries, purchase diesel generator sets, initiate photovoltaic power generation projects, and optimize processes to reduce electricity consumption. Benchmarked against advanced domestic smelters, optimized and improved emergency power outage plans and production organization plans, organized full-capacity production when electricity supply is sufficient; optimized load usage and organized low-material production during power restrictions; conducted pre-inspection and pre-repair of equipment during power outages, continuously improving equipment operation rates and production load rates; actively explore the phase II photovoltaic project.</li><li>• <b>Lualaba Copper Smelter:</b> Develop the Energy Management Measures and the 2024 Safety and Environmental Responsibility Agreement to clarify the responsibilities of each unit, define energy-saving performance</li></ul>

Climate risk			Scope of application	Effect	Measures
Transformation risk	Market and technical risks	Electricity price fluctuations	NFCA, Luanshya, CCS, Huachin Leach, CNMC Huachin Mabende, Kambove Mining	Mining companies typically have huge electricity demands during mining and production processes. If electricity prices fluctuate drastically or unpredictably, it will be difficult for companies to accurately estimate and control production costs.	<p>indicators, utilize waste heat for power generation, reduce fossil energy consumption; improve response plans for various electricity loads; explore photovoltaic power generation projects.</p> <ul style="list-style-type: none"><li>• <b>Kambove Mining:</b> Independently implement and complete the technical transformation project for the parallel operation of diesel generators and the grid, alleviating the issue of insufficient external power supply; actively seek hydropower resources and explore photovoltaic power generation projects to compensate for insufficient energy supply.</li></ul> <ul style="list-style-type: none"><li>• <b>NFCA, Luanshya, CCS:</b>Collaborate with peers and mining associations to negotiate electricity prices with local governments and power companies.Adopting peak shaving and valley filling strategies to reduce the impact of electricity price fluctuations on enterprises</li><li>• <b>CCS:</b> Use low-power consumption equipment, introduce other energy sources (such as solar energy) to meet the Corporation's electricity needs; maintain long-term stable operation of waste heat generators; study the feasibility of converting waste heat resources into electricity; actively seek external power plants as partners.</li><li>• <b>Huachin Leach:</b> Actively maintain good communication with local power supply departments, dispatch construction teams to assist in the repair of power facility accidents, and strive for more power supply quotas.</li><li>• <b>CNMC Huachin Mabende:</b> Actively maintain good communication with local power supply departments, dispatch construction teams to assist in the repair of power facility accidents, and strive for more power supply quotas; implement photovoltaic power generation projects and use clean energy.</li><li>• <b>Kambove Mining:</b> Actively seek hydropower resources, reduce reliance on fossil fuels, develop photovoltaic power generation projects, and use clean energy.</li></ul>
Transformation risk	Market and technical risks	Rising material costs	Within the scope of the Corporation	The price fluctuations of materials such as chemicals, sulfur, and maintenance materials for facilities and equipment required for the Corporation's production and operations in the market have led to increased costs.	<ul style="list-style-type: none"><li>• Monitor the fluctuations in the prices of energy, materials, etc., required for production and operations in real-time, and prepare for the possibility of cost increases in advance.</li></ul>



Climate risk			Scope of application	Effect	Measures
Transformation risk	Market and technical risks	Investment costs for low-carbon transition technologies	Within the scope of the Corporation	The traditional mining and smelting processes applied in the Corporation's operations have little possibility of iteration, and the application of low-carbon transition technologies is limited by energy sources, which will lead to increased investment costs for equipment and facility replacement.	<ul style="list-style-type: none"><li>Continue to focus on the development of low-carbon transition technologies, selecting mature, stable, and effective technologies and products.</li></ul>
Transformation risk	Reputation risks	Reputation risks	Luanshya, SML, Huachin Leach, CNMC Huachin Mabende, Kambove Mining	Overseas operations often involve areas such as land exploitation, water resource utilization, and waste disposal, which are prone to environmental issues. If performance in environmental compliance and ecological protection is poor, local governments, communities, and tribes may pay close attention to the environmental impact caused by the enterprise, question its sustainability and social responsibility, and affect its reputation.	<ul style="list-style-type: none"><li><b>Luanshya:</b> Diligently fulfill the annual social responsibility project plans, actively maintaining regular communication with local governments, communities, tribes, and other stakeholders.</li><li><b>SML:</b> Obtain various permits as required by the local government to meet management requirements.</li><li><b>Huachin Leach and CNMC Huachin Mabende:</b> Continuously invest manpower, material, and financial resources to build roads, schools, wells, power lines, and other infrastructure, solving practical problems for local governments, communities, and residents.</li><li><b>Kambove Mining:</b> Carry out waste resource disposal and repair and reuse waste to reduce environmental hazards and protect reputation. Participate in 12 projects in local education, health, infrastructure, agriculture, sports, and communication, further improving local community conditions and sharing the fruits of enterprise development with the community.</li></ul>

Climate opportunities		Effect	Measures
Energy sources	Clean energy project construction	Develop green photovoltaic power generation, adopt low-emission, clean, and renewable energy solutions to save energy costs, reduce carbon emissions, decrease reliance on external power, compensate for external power supply shortages, and create conditions for full production.	<ul style="list-style-type: none"><li>Actively explore the construction of clean energy solutions such as photovoltaics, gradually promoting the low-carbon transition of energy.</li></ul>

Key performance:

Indicator	Unit	2024
Greenhouse gas emissions (Category 1 and Category 2)	Tons of carbon dioxide equivalent	227,286.66
Greenhouse gas emissions (Category 1)	Tons of carbon dioxide equivalent	223,817.92
Greenhouse gas emissions (Category 2)	Tons of carbon dioxide equivalent	3,468.74
Greenhouse gas emission intensity per unit revenue	Tons of carbon dioxide equivalent/USD 1 million	59.55



# 02 Society

Adhere to a people-oriented approach,  
building a better society



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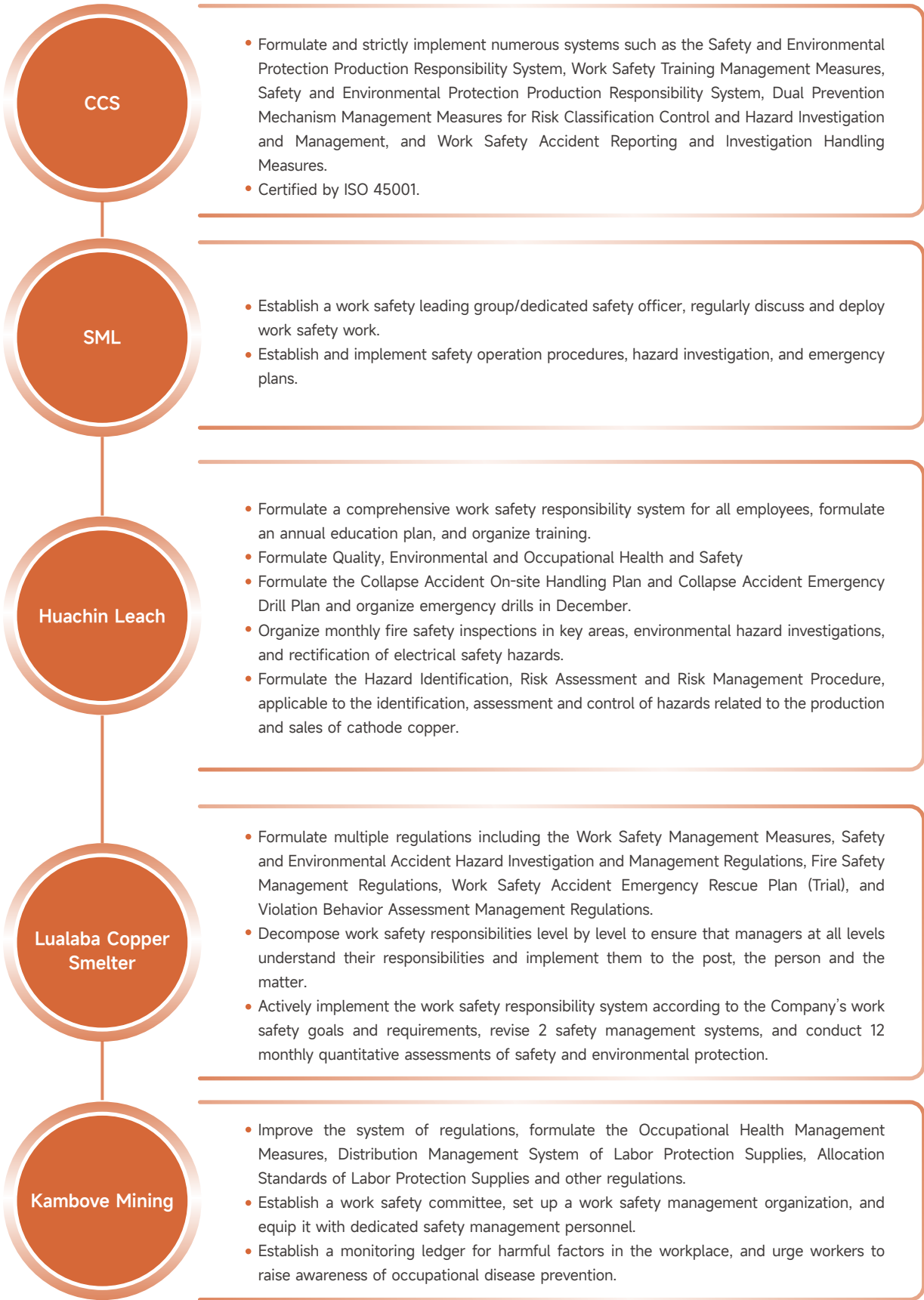
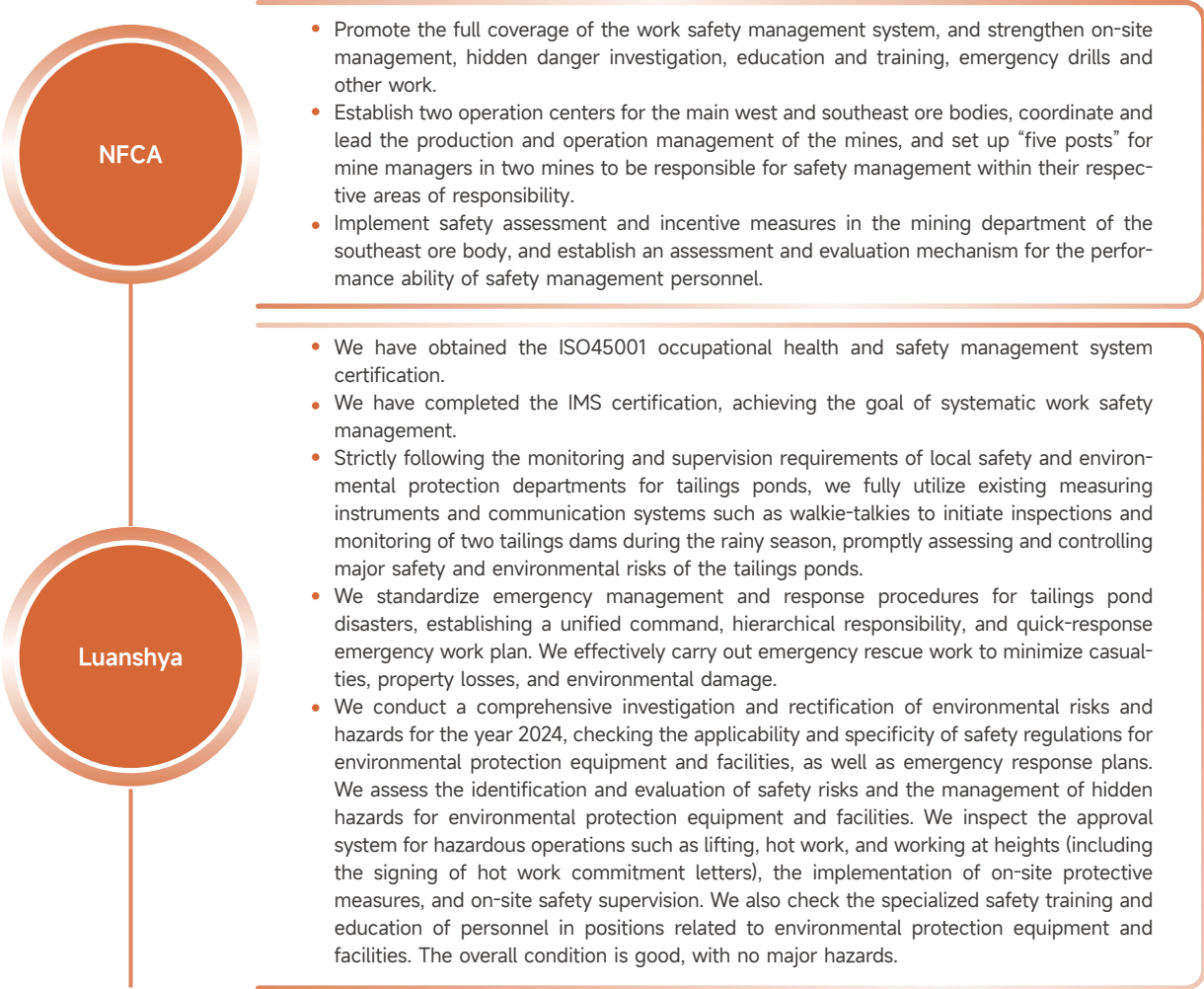
# Safety management

“The Corporation always upholds the concept of “work safety first” and “intrinsic safety, proactive safety”, aiming for “zero harm” as the core goal, continuously driving the steady improvement of overall safety levels. In 2024, the Corporation did not experience any work safety accidents, achieving significant results in work safety work.”

## ■ Safety management system

The Corporation steadfastly adheres to the principle of “Safety First, Prevention Foremost, Comprehensive Management”, closely focusing on issues, goals, and results. Through regular safety hazard inspections, we promptly identify and eliminate various safety hazards, ensuring the safe and stable operation of the Corporation’s production activities.

The Corporation strictly implements CNMC’ s Work Safety Management Measures, Work Safety Performance Assessment Measures for Invested Enterprises, Work Safety Cost Extraction and Usage Measures, Work Safety Training Management Measures, Work Safety Accident Accountability Measures, Work Safety Assessment and Evaluation Measures, and Mine Outsourcing Project Safety Management Measures. We actively guide subsidiaries to formulate work safety and occupational health systems, and work safety occupational health goal responsibility assessment methods based on local conditions. For subsidiaries involved in tailings pond management, we have established a comprehensive tailings pond work safety management system and developed relevant management regulations and emergency plans, comprehensively strengthening the work safety defense line.





Lualaba Copper Smelter held a training meeting on the criteria for determining major accident hazards.



▲ Lualaba Copper Smelter Training Meeting Site

In April 2024, Lualaba Copper Smelter organized a training meeting on the criteria for determining major accident hazards to enhance employees' work safety awareness, further consolidate the foundation of work safety management, and promote the solid implementation of the three-year action for fundamental improvement in work safety

Key performance:

Indicator	Unit	2024
Number of work fatalities	Person	0
Number of working days lost due to work-related injuries	Day	0
Number of safety accidents	Nos.	0
Coverage rate of physical examinations and health records	%	100

CCS obtained ISO 45001:2018 occupational health and safety management system certification

In May 2024, CCS obtained the ISO 45001:2018 occupational health and safety management system certificate by the Zambia Bureau of Standards.



Occupational Health and Safety Management System Certificate of CCS

■ Safety culture cultivation

The Corporation always adheres to the core philosophy of "Safety First, Life First" and implements the principle of "Prevention First, Combining Prevention with Control". Through safety education and training, enhancement of safety environments, and promotion of safety production awareness, we have established an integrated "three-dimensional" safety culture ecosystem, which comprises: an individual responsibility-empowered self-management mechanism, a team-collaborative safety behavior intervention system, and organizational-level risk control cycle. This comprehensive approach drives continuous improvement in safety per-

formance and fosters the development of long-term mechanisms for sustainable safety excellence.

In addition, by formulating and implementing a series of management systems, the Corporation actively prevents and controls occupational disease risk, and continuously tracks and evaluates the implementation effect of relevant systems; it provides "Comprehensive Health Management Services", psychological counseling services, etc., and is committed to ensuring the effective protection of workers' physical and mental health.





NFCA

- Carry out ten special “Work Safety Month” activities such as “On-site Safety Hazard Inspections, Emergency Rescue Drill Classes, and Safety Management Theme Speeches”.
- Gradually established six major training programs: trackless equipment operation training, basic safety training, safety competency qualification training, first aid certification and blasting certification training, electrical, mechanical, and welding safety skills training, and hoisting and winch operation training. Introduced a VR virtual training system to recreate typical accident scenarios through virtual reality technology, enhancing employees’ risk prevention awareness and emergency response capabilities.
- Management personnel sign safety commitment banners.



Luanshya

- Strengthen publicity and education to enhance occupational safety awareness. Organize training on relevant laws, regulations, standards, and prevention knowledge. Organize all staff to watch and study materials related to the Occupational Disease Prevention and Control Law, and supervise outsourcing units to carry out related publicity and learning activities, covering nearly 400 people.
- Strictly carry out various training and learning activities in accordance with relevant Zambian laws and regulations, conducting a total of 12 training sessions, covering over 800 people.

CCS

- Formulate and strictly implement the Work Safety Training Management Measures.

Huachin Leach

- Fully implement work safety requirements, with the executive team “discussing safety at every meeting”, organizing employees to learn from warning education cases, and enhancing overall work safety awareness, skills and emergency management capabilities.

Lualaba Copper Smelter

- Regularly conduct safety education and training, organize special promotions such as Work Safety Month and “Fire Safety Month”, and create a safety atmosphere through various activities such as “Find Hidden Hazards in Pictures” and “Emergency Drills for Accidents”.
- Set up safety culture promotion walls in production sites, offices, rest areas, etc., and post safety slogans and warning signs to strengthen daily publicity.
- Conduct weekly hazard identification activities, encouraging employees to actively discover and report hazards in their work.

Kambove Mining

- Carry out company-level thematic safety training and departmental monthly safety education and training, and conduct vocational training with the Congo National Vocational Training Center.
- Actively carry out occupational disease awareness week safety education and conduct regular safety education every week.

Huachin Leach conducts training on work safety laws and regulations knowledge.

In August 2024, Huachin Leach held a training session on work safety laws and regulations for all employees, further enhancing their safety awareness and strengthening their understanding and practical abilities of work safety laws and regulations.



▲ Training Meeting on Work Safety Laws and Regulations Knowledge





Lualaba Copper Smelter launches Safety Month activities.

In June 2024, Lualaba Copper Smelter conducted a series of activities to improve work safety capabilities.



▲ Emergency Drill

Kambove Mining launches Fire Safety Awareness Month activities.

In November 2024, Kambove Mining, centered around the theme "Fire Safety for All, Life First", conducted a series of promotional activities including fire drills on diesel storage safety, fostering a good atmosphere where everyone cares about and participates in fire safety, effectively improving the emergency response capabilities of all employees and maintaining a stable safety situation.



▲ Fire Emergency Response Drill

▲ Fire Safety Knowledge Test

■ Prevention and control of safety risks

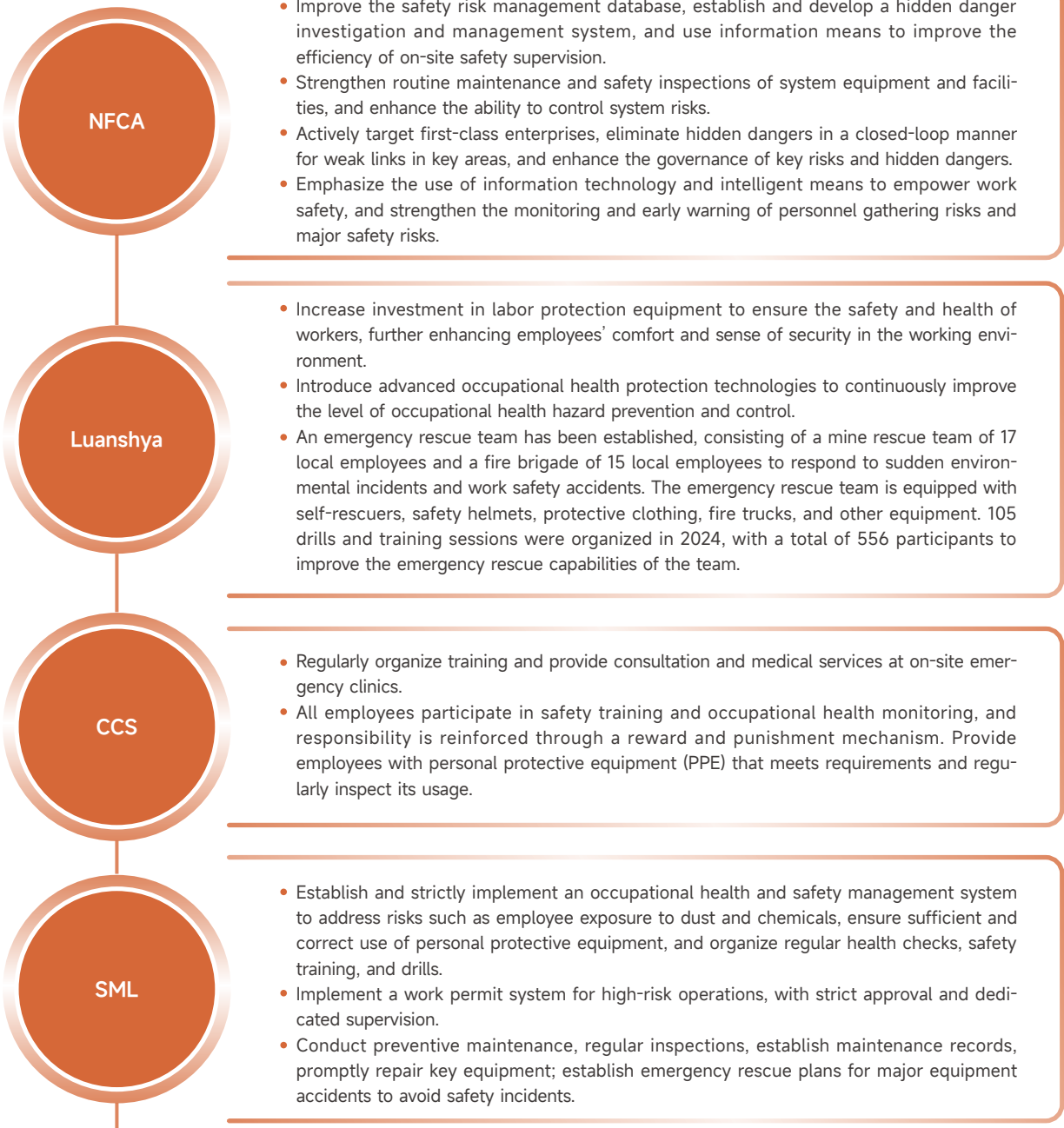
The Corporation, tailored to the characteristics of its mining and smelting industries, encourages subsidiaries to adopt international standards such as ISO 45001 Occupational Health and Safety Management Systems. Through institutional and procedural controls, it strengthens the systematic anticipation and management of unexpected incidents, including personnel injuries, safety accidents, and equipment failures, ensuring proactive risk mitigation and operational resilience.

The Corporation guides its subsidiaries to clarify the responsibilities and divisions of each department, actively respond to potential person-

al injury accidents, and continuously improve the occupational safety and health protection system. All subsidiaries purchase social insurance, medical insurance, and other commercial insurances for eligible employees, and organize annual health check-ups, committed to providing a safe and healthy working environment for employees. Each subsidiary company increases its investment in safety, and the relevant subsidiary company carries out a special action of "science and technology to rejuvenate the safety environment" according to the work arrangement of CNMC to improve the essential safety level.

In the event of an accident, relevant personnel will carry out emergency rescue and first aid immediately and report the accident to the mine area manager without delay. Upon receiving the report, the manager will count the casualties and report them to the Corporation and the local consulate. Additionally, the Corporation will establish an accident investigation team to thoroughly investigate the accident, analyze the causes, release a report, and propose corrective measures. The Corporation uses past accidents as warnings, continuously optimizes safety management, and minimizes the possibility of potential accidents in the mining area to the greatest extent.

All subsidiaries regularly inspect safety protection equipment, organize employee training, educate employees on the correct use of personal protective equipment, and request employees entering production and construction areas to wear it.





Huachin Leach

- Regularly conduct special fire inspections and safety environment checks.
- Regularly organize emergency drills, such as electrolyte leakage accident drills and electric shock injury accident drills in maintenance workshops.

Lualaba Copper Smelter

- Develop key points for occupational health, safety, and environmental protection work, requiring personnel in production areas to strengthen the management of wearing labor protection equipment.
- Develop personal protective equipment (PPE) standards for different positions, provide employees with the necessary PPE as required, and equip devices and production tools with essential safety protection devices such as guardrails, emergency stop switches, and safety covers to prevent injuries caused by equipment malfunctions or operational errors.
- Establish a system for identifying safety hazards and a hazard ledger, and promptly track and implement rectifications for issues identified during inspections.
- Develop an emergency rescue plan for accidents, regularly organize full participation in emergency drills, and improve employees' emergency response capabilities and practical operational skills.
- Set up clear safety warning signs and indicators at production sites, such as high temperature, high pressure, electrical hazard, and flammable and explosive warning signs, to remind employees to pay attention to safety and avoid accidents.

Kambove Mining

- Formulate Methods for Accountability in Safety Accidents, HSE Inspection Systems, and Comprehensive Emergency Plans for Production Safety Accidents, and conduct regular drills.
- Strengthen work safety standardization and build a dual prevention mechanism for safety risk classification control and hazard investigation and management.
- Sign work safety goal responsibility agreements at all levels, implement safety responsibilities to teams and positions, and strictly assess work safety goal responsibilities and hold accountable for accidents.

Huachin Leach holds training on equipment use and maintenance knowledge.

In July 2024, Huachin Leach, based on actual production cases, conducted training on equipment usage and maintenance knowledge.



Training Meeting on Equipment Use and Maintenance Knowledge

Lualaba Copper Smelter conducts emergency rescue and evacuation drills for fire accidents.

In June 2024, Lualaba Copper Smelter held a safety committee meeting for employees and organized emergency rescue and evacuation drills for fire accidents, comprehensively improving the emergency response capabilities and on-site handling skills of fire personnel, and further enhancing fire safety awareness and self-rescue and mutual rescue abilities.



▲ Security Commission Meeting



▲ Cardiopulmonary Resuscitation Rescue Drill

Kambove Mining conducts annual occupational health check-ups for employees.

In June 2024, Kambove Mining completed a 4-day occupational health check-up for employees, conducting multiple check-up items such as blood pressure, lung function, blood sampling, and occupational diseases for noise, dust, and other occupational hazards, focusing on identifying occupational health risks and providing employees with a "health protection umbrella".



▲ The Doctor was Performing Heart Rate Test on Employee



▲ The Doctor was Conducting Occupational Disease Inquiry with Employee





# Employee development

“The Corporation, with the “people-oriented” core concept, adheres to equal and standardized employment policies, Respect employees of different nationalities, ethnic groups, ages, genders, physical conditions, and their diverse cultural back- grounds, and considers protecting employee rights as an important mission, enabling every employee to fully utilize their talents, realize their own value, and jointly create a bright future for both the enterprise and employees.”

## ■ Employment management

The Corporation continuously improves its talent management system, always adhering to the principles of fairness and equality, and widely attracts talents. The Corporation has guided its subsidiaries to establish systems such as the Employee Labor Contract Manage- ment Measures, Employee Recruitment Management Measures, Employee Resignation Management Measures, and Employee Perfor- mance Management Measures to comprehensively ensure the legal and compliant conduct of employment work.

### ➤ Protection of human rights

The Corporation respects human rights, complies with the Inter- national Labor Convention, and integrates human rights philoso- phies into the Corporation’ s risk management system and onboarding training. The Corporation and all subsidiaries strictly comply with local laws and regulations, actively protect human rights, do not use child labor, and have not engaged in forced labor, harassment, bullying, or intimidation of employees, effec- tively protecting the rights of all employees.

The Corporation expects every employee to deeply understand the importance of respecting human rights, continuously promote the development of social cultural diversity and equal opportuni- ties, strive to provide equal development opportunities for employees of all genders and nationalities, and implement the concept of respecting human rights in all aspects of daily work, creating a good atmosphere for enterprise development.

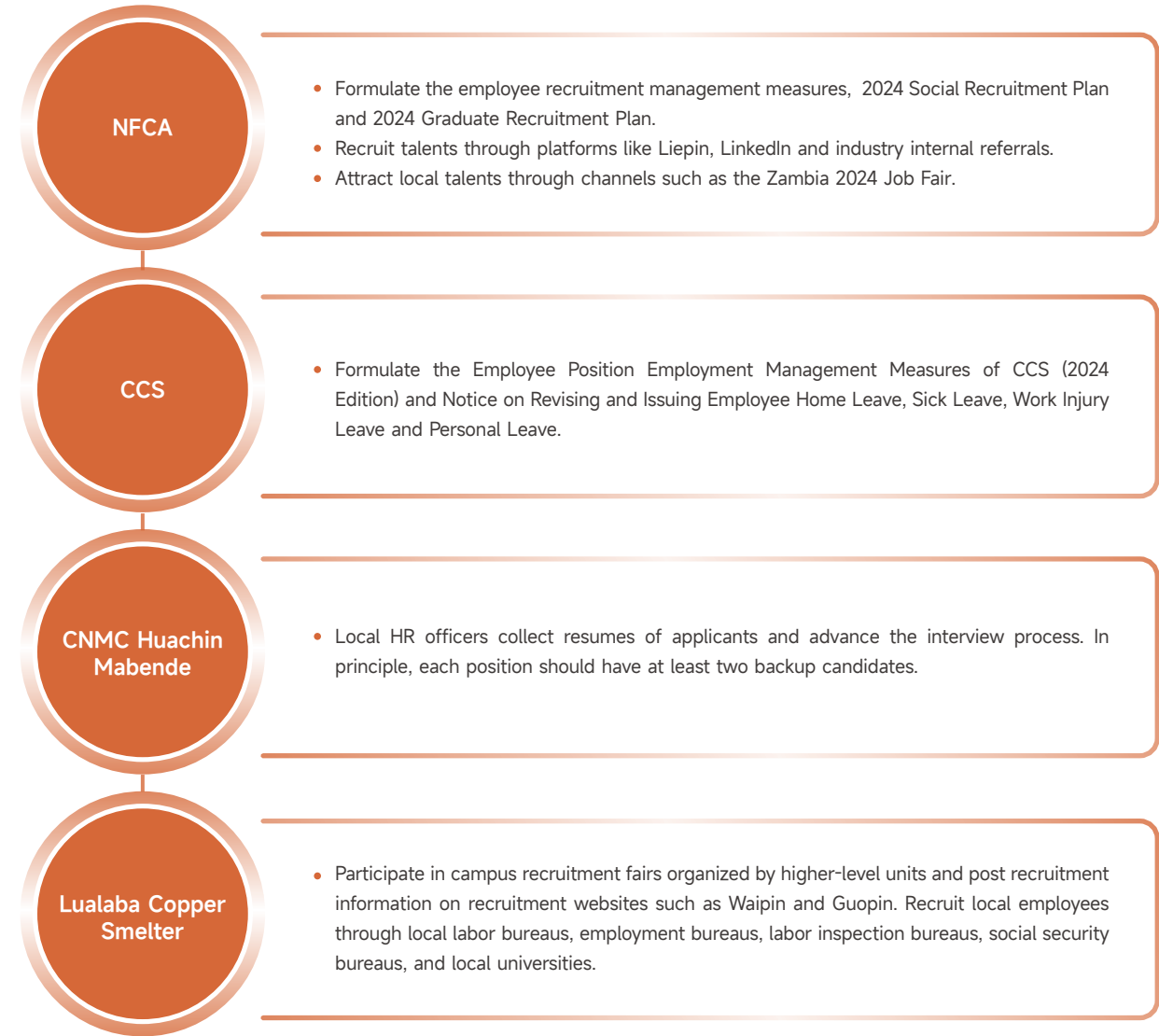
Han Chinese clothing show of Lualaba Copper Smelter



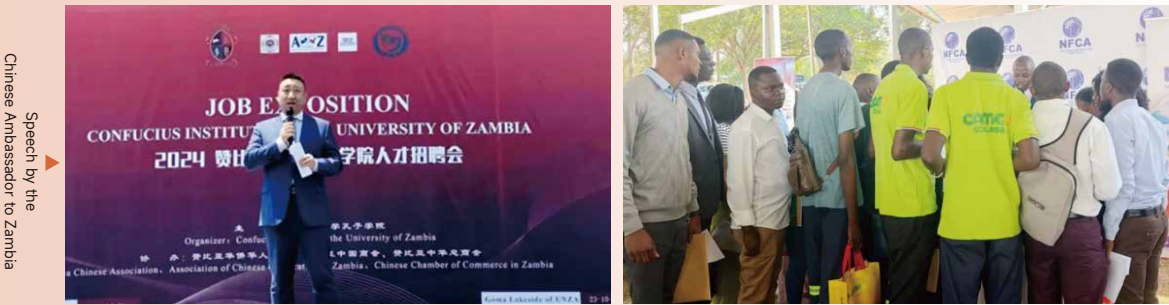
On the occasion of International Women’s Day, nearly 40 Chinese and Congolese female colleagues at Lualaba Copper Smelter wore the traditional Chinese attire “Ma Mian Qun” (horse-face skirt) to take photos and group portraits amidst flowers and plants, bringing this iconic garment to life on African soil. The event, bridged by the cultural symbolism of Hanfu and Ma Mian Qun and rooted in traditional heritage, not only provided overseas female employees with an opportunity to express themselves and enjoy a heartwarming, festive atmosphere amidst their busy work schedules but also deepened their sense of belonging through the Company’s thoughtful care and support.

### ➤ Recruitment of employees

The Corporation adheres to the recruitment principles of “openness, equality, competition and merit-based selection”, forming a talent selec- tion and employment mechanism that emphasizes merit-based hiring, appropriate placement, full utilization of talents, and appointment based on ability, ensuring that every employee has room for promotion and achieving the common development of individuals and the Corporation.



NFCA participated in Zambia's 2024 Talent Recruitment Fair



In October 2024, NFCA participated in Zambia’s 2024 Talent Recruitment Fair, fully demonstrating its desire and empha- sis on local talents.





CNMHK and Lubumbashi Higher Normal University held a cross-cultural exchange and school-enterprise cooperation signing ceremony



▲ Awarding Prizes to Scholarship Recipients

▲ Group Photo

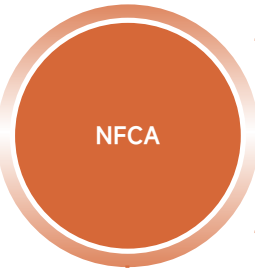
In June 2024, CNMHK and Lubumbashi Higher Normal University held a grand signing ceremony for cross-cultural exchange and school-enterprise cooperation. CNMHK has always adhered to the principle of “internationalization of talents and localization of labor”, attached great importance to the training of employees, protected the rights and interests of employees, trained a large number of skilled construction, smelting, maintenance, equipment operation and industrial managers for the local, and strive to achieve a win-win situation between enterprise management and local talent development.

If an employee voluntarily applies for resignation, they need to submit a written resignation report signed by themselves to the head of their unit, after which the HR department will handle the subsequent resignation procedures. In 2024, the Corporation’s employee turnover rate was 10.31%.

➤ Remuneration and performance

The Corporation strictly adheres to the Guidelines for the Management of Wages and welfare of Employees in Overseas Enterprises of CNMC, fully safeguarding the legitimate rights and interests of employees, providing competitive remuneration and welfare within the industry, and ensuring that employees’ efforts are duly rewarded. Based on the Wage Management Measures, Employee Performance Management Measures, Cadre Selection and Appointment Management Measures, and Employee Career Path Management Measures, the Corporation provides employees with a market-competitive remuneration system and builds an open and transparent assessment and promotion mechanism.

The Corporation attaches great importance to the safety and health of employees, incorporating safety and health-related indicators into the performance evaluation system, guiding employees to prioritize safety and health through institutional measures. Employees who meet safety indicators and performance will be awarded bonuses to motivate them to better implement safety and environmental protection work, ensuring safe and orderly production and operation of the enterprise.



- Ensure that labor employment complies with laws and regulations, clarify employee treatment and welfare.



- Conduct regular assessments of occupational health, safety and environmental goals based on actual work conditions.



- Adhere to the principles of “distribution according to work, distribution according to production factors” and “synchronizing labor remuneration with the increase in labor productivity”, fully stimulating and mobilizing the enthusiasm and creativity of all cadres and employees.

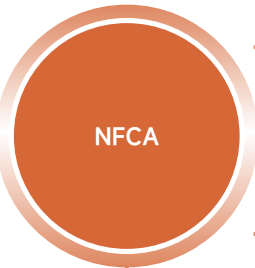


- Adopt a position + performance approach, linking remuneration levels to position grades, with a focus on hardworking frontline positions.

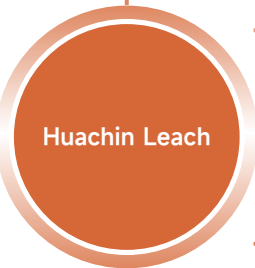
➤ Holiday welfare

Given the different countries and regions where the Corporation’s subsidiaries are located and the differences in work content, each subsidiary strictly complies with the laws and regulations of the host country (region), ensuring that employees’ working hours do not exceed legal standards.

In addition to statutory holidays, the Corporation provides employees with paid annual leave, sick leave, maternity leave, marriage leave, and bereavement leave, offering overtime, night shift, and high-temperature subsidies, comprehensively enhancing employee welfare levels, safeguarding employees’ legal rights, and helping employees achieve work-life balance.



- Clearly define working hour systems and remuneration standards.



- Ensure employees enjoy the average rest time stipulated by labor laws. Calculate overtime pay at 200% for overtime workers.
- New employees are entitled to 18 days of annual leave, with an additional 2 days for every 5 years of service.



- Implement overtime according to the labor system of the Democratic Republic of Congo, and enjoy paid leave days as stipulated in the collective agreement each year.

➤ Legal employment

The Corporation maintains an absolute “zero tolerance” attitude towards child labor and forced labor. During recruitment, all subsidiaries of the Corporation strictly review the identity information of applicants to ensure they meet the legal employment age and qualifications. The corporation adheres to legal and compliant employment practices. Upon discovery of any illegal employment, the corporation will immediately terminate the involved personnel and hold the responsible recruiters accountable. All employees sign labor contracts, which clearly specify employee remuneration, positions, reasons for dismissal or termination, etc., effectively safeguarding the legitimate rights and interests of employees.



- Recognition agreements have been signed with multiple industry labor unions in the operating locations, ensuring that every employee is treated fairly and effectively protecting the legitimate rights and interests of all employees.
- Strictly enforce local labor laws, regardless of race, gender, sexual orientation, nationality, language, or any other status, implementing equal pay for equal work and providing equal development opportunities.

- The Employment Screening System explicitly prohibits the hiring of child labor or any minors aged below 18. Establish the Employee Onboarding Investigation System to standardize the onboarding process for new employees.

- The system explicitly requires mutual respect between Chinese and Congolese employees, adapting to local conditions, managing the Congolese with Congolese methods, and conducting open day activities.

During the reporting period, the Corporation did not experience any incidents violating relevant laws and regulations on employment and labor practices, and no cases of child labor or forced labor were found.

Key performance:

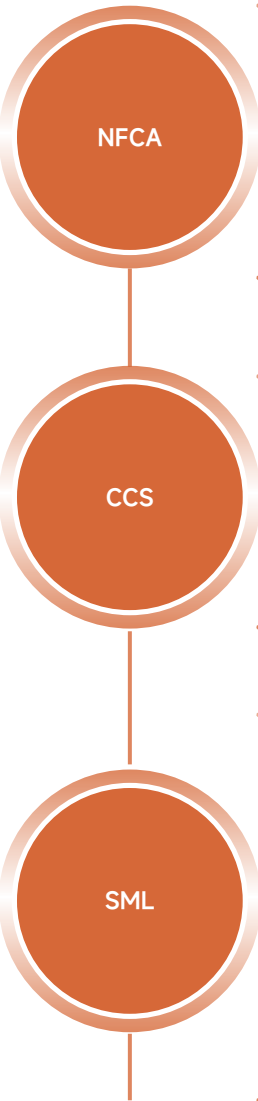
Indicator	Unit	2024
Total number of employees	persons	8,494
Number of full-time employees	persons	8,494
Number of employees in Chinese mainland	persons	903
Local employee	persons	7,591
Proportion of male employees to total employees	%	93.35
Proportion of female employees to total employees	%	6.65

Employee caring

The Corporation is committed to creating a healthy and harmonious working environment, building an equal, open, and inclusive work atmosphere. In terms of employee welfare, the Corporation provides employees with multiple welfare and allowances such as pension, medical care, housing, and transportation, and offers medical services to employees' families, actively improving medical security capabilities. For high-prevalence infectious diseases in the local areas where the subsidiaries operate, such as malaria, dengue fever and AIDS, extensive efforts are made in publicity, prevention, monitoring, and treatment. The Headquarters and all subsidiaries of the Corporation regularly organize employee health check-ups, comprehensively ensuring the physical health of employees and meeting their living needs.

Subsidiaries build sports venues such as basketball courts and football fields, and equip them with sports equipment to enrich employees' leisure life. At the same time, various holiday activities such as basketball matches, badminton matches, and tug-of-war competitions are actively organized to enhance communication and exchange between Chinese and foreign employees, further improving team cohesion.

Subsidiaries regularly hold employee family open day events, inviting employees' families to visit the Corporation and learn about its development. Conditional subsidiaries will provide educational subsidies for employees' children and offer opportunities for local African employees to exchange and study in China, enhancing their sense of belonging to the Corporation.



- Provide social insurance and welfare, conduct annual pneumoconiosis physical examinations and preemployment physical examinations for new hires.

- Formulate the Notice on Revising and Issuing Employees' Family Visit Leave, Sick Leave, Work Injury Leave and Personal Leave and the Detailed Implementation Rules for Enterprise Annuity Scheme (2024 Edition) to strengthen employee care.

- A dedicated counseling room and a 24-hour hotline have been established to facilitate employees' feedback on psychological issues through online and offline channels.
- Regularly organize mental health training led by professional psychologists and provide one-on-one psychological counseling services for employees in need.
- Establish employee mental health records and regularly conduct employee care activities, such as team building and employee forums, to enhance employees' sense of belonging and team cohesion.



CNMHK

- Organize a “Children’ s Day” corporate open day activity.

Lualaba Copper Smelter

- Provide employees with legally mandated welfare such as social insurance, medical insurance, accumulation fund, and paid leave.
- Collaborate with professional psychological counseling institutions to regularly provide free psychological counseling services for employees. Pay attention to employees’ mental health management in daily work, provide timely inquiries and care, and offer psychological guidance.
- In 2024, 15 Congolese employees were recognized and rewarded, and 3 outstanding Congolese employee representatives were selected to visit and study in China.

Kambove Mining

- Provide commuting buses for resident employees.
- Establish a medical room to provide medical services for employees and their families.
- Provide housing and educational subsidies for employees.
- Equip with AED automatic external defibrillators and organize training.

Key performance:

Indicator	Unit	2024
Social insurance coverage rate	%	100

Luanshya "Gratitude - Striving" "Win-Win - Sharing" theme open day

In December 2024, Luanshya held a “Gratitude - Striving” theme open day activity, inviting 30 retired employees to return to their former workplace, witness the new development pattern of the mine, and learn about the progress and future plans of the “New Luanshya Mine” project.



▲ Visiting the Drainage System of the New Mine Project

Luanshya invited supply chain organizations, industry associations, government agencies, and community representatives to participate in the second company open day themed “Win-Win and Sharing”, reaffirming Luanshya’ s commitment to ESG principles and highlighting the “New Luanshya Mine” project. Visiting guests highly praised Luanshya’s proactive measures in the ESG field.

▲ Exchange scene at the event



SML held the 17th “May Day” International Labor Day commendation and celebration activity.

▲ Recognizing Outstanding Employees



▲ Live Tug-of-War



In May 2024, SML held the 17th “May Day” International Labor Day commendation and celebration activity, recognizing outstanding employees and organizing fun games, setting examples of labor excellence, and promoting cultural exchange between China and Zambia.

Kambove Mining and CNMC Congo conducted sports exchanges.

▲ Friendly Football Match



▲ Badminton Match



In April 2024, Kambove Mining and CNMC Congo conducted sports exchanges to enhance communication and understanding, jointly promoting the development of company culture.

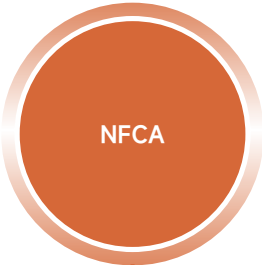




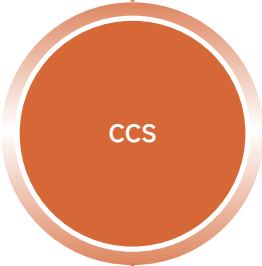
Talent training

The Corporation values talent development, offering customized training programs for employees, creating a favorable growth environment, and supporting employees in advancing their personal capabilities and career development.

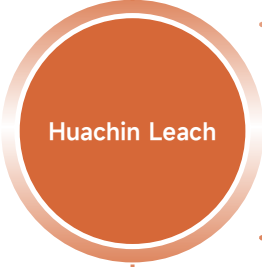
Given the differences in the nature and specifics of production operations among subsidiaries, the Corporation guides each to develop systems and methods tailored to their unique circumstances.



- Establish the Employee Training and Education Management Measures and the Employee Overseas Training Cost Management Measures (Interim), building a training system that includes onboarding, basic job rotation, specialized training, academic education, and targeted training. Encourage employees to participate in short-term professional training during their vacations, with training cost subsidies provided.
- Conduct technical exchanges with advanced domestic enterprises, actively introduce resources such as the Open University of China, and offer training in first aid, blasting certification, mechanics, welding, high-voltage electrical work, computer skills, and team leader management skills.
- Establish interconnected career channels, with clear regulations on position changes and promotion / demotion conditions.



- CCS conducts competency-based training and problem-oriented training in accordance with the Employee Training Management Measures to enhance employee capabilities.
- The Employee Position Appointment Management Measures of CCS (2024 Edition) was formulated, organizing work safety training for all new employees and periodically conducting skill training and competitions.



- Implement the Measures for Headquarters New Employees of CNMHK to Train and Learn at the Grassroots Level (Trial). New employees receive three-level education and training, routine safety education, and certification/re-certification training. Employees undergo occupational safety and professional ethics training upon joining.



- Employees have 10 levels, with clear career progression paths in management, technical, and skill tracks, scientifically planning these three career development channels.
- Annual vocational skills training is conducted, inviting local INPP to train employees in specialized roles.

Kambove Mining

- The Employee Career Path Management Measures was established, dividing career paths into administrative, professional technical, and skilled worker tracks.

Key performance:

Indicator	Unit	2024
Employee training coverage rate	%	97.44
Total duration of annual training	Hour	280,420

Luanshya Sino-Zam Vocational College of Science and Technology serves “Belt and Road” enterprises going global

Entrance to the Graduation Ceremony of Sino-Zam Vocational College of Science and Technology



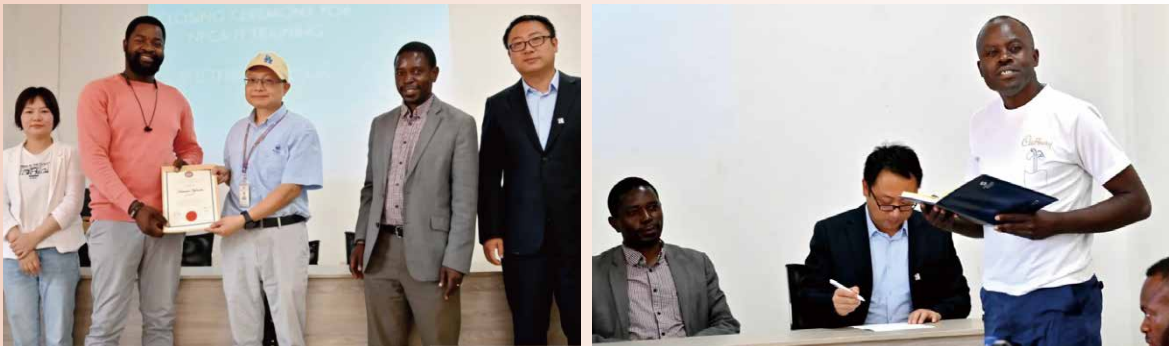
Since its establishment, Luanshya Sino-Zam Vocational College of Science and Technology has focused on market demand, providing students with teaching and practical environments that meet actual enterprise needs through school-enterprise cooperation. In 2024, all 205 graduates secured employment, achieving a 100% employment rate. This outstanding achievement not only demonstrates the college’s educational strength but also fully reflects its original intention of “serving ‘Belt and Road’ enterprises going global.”

Graduation Certificates Were Awarded at the Graduation Ceremony





NFCA holds pre-job IT training for  
Zambian employees



▲ Awarding Graduation Certificate

▲ Student representative speech

In September 2024, NFCA held the graduation ceremony for the pre-job IT training of Zambian employees. The training lasts for 7 days, combining theory and practical exercises to fully enhance employees' production skills.

■ Democratic management

The corporation always adheres to the people-oriented core philosophy, deeply carries out democratic management work, and builds a comprehensive, multi-level, and wide-ranging democratic management system. The corporation has established diversified communication channels, encourages employees to participate in daily management, and stimulates employees' innovative thinking and sense of ownership through various democratic management activities, creating a harmonious, equal, and positive corporate culture atmosphere.

NFCA

- A labor union was established and maintains good communication with local unions to jointly resolve labor disputes.
- Annual labor negotiations are conducted with the Zambian union, gradually increasing the wages and benefits of employees.

Huachin Leach

- Through free elections by employees, a labor union was established, with two union meeting times per week and no more than 35 hours of "union affairs" time per month.
- Regular union meetings are held periodically, and special temporary meetings can be convened as needed.

CNMC Huachin  
Mabende

- A Committee of Safety, Health, and Environment (CSHE) was established, organizing monthly meetings with team leaders to form reports.

Lualaba Copper  
Smelter

- A labor union was established, holding regular quarterly meetings to communicate with employees in a timely manner.
- Organizing Chinese and Congolese employees to participate in various holiday activities such as Labor Day, Chinese National Day, and Spring Festival.

I Cutting-edge products

“The corporation adheres to the principles of “sustainable resource utilization” and “achieving high-quality development”, focusing on improving quality efficiency and core competitiveness, emphasizing responsible production, and clearly setting development goals such as improving resource utilization, safe and clean production, reducing production costs, improving product quality, and economic benefits, striving to achieve resource sustainability and standardized product quality management, fully consolidating responsibilities.”

■ Product and service quality

➤ Product quality

The Corporation strictly complies with international or national relevant inspection and quality standards, committed to providing customers with high-quality products. Among them, the blister copper and anode copper products follow BS EN 1978:1998, GB/T 467-2010, ASTM B115-10 standards, cathode copper products follow the Chinese national standard GB/T 467-2010, and copper concentrate products follow the Chinese national standards GB/T 3884.1 to 3884.10-2000.

Each subsidiary of the Corporation establishes a quality management system based on actual conditions, clarifies quality management measures, and ensures stable and reliable product quality. In 2024, each subsidiary vigorously promoted “6S” on-site management, exchanged practical experiences with internal and external enterprises of the Corporation, and achieved significant results.

Luanshya

- Build a quality management system and obtain ISO 9001-2015 quality management system certification.

SML

- Establish product quality inspection processes and risk control charts, clarify division of responsibilities and approval authority.
- Establish corrective actions, preventive actions, and improvement measures, and continuously improve the effectiveness of the management system.





During the reporting period, the corporation did not receive any product-related complaints or legal proceedings, and there were no recalls of sold or shipped products due to safety and health issues.

6S Management Promotion and Training



Improvement of Production and Operation Environment in the Factory Area

Through a series of efforts in “6S” management, Huachin Leach has further improved its “factory appearance” and management level, completing the transformation of “renewing the old factory”.

Lualaba Copper Smelter implements 6S on-site management



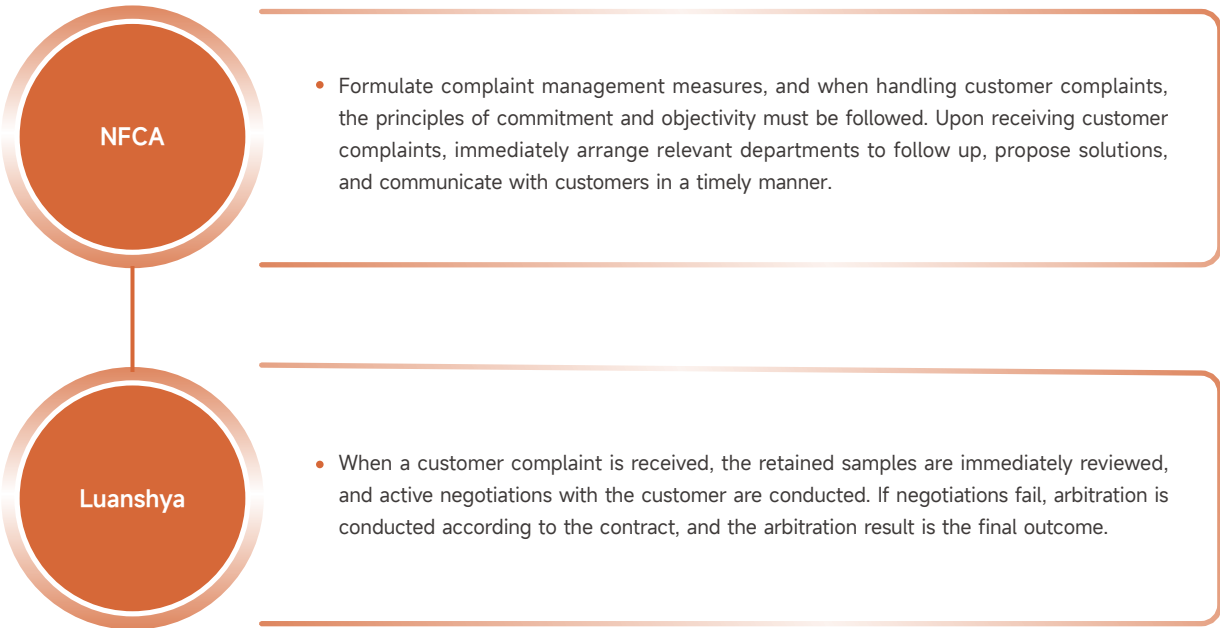
6S On-site Management Achievements

Leaders Led the Inspection and Guidance of 6S On-site Management

In September 2024, Lualaba Copper Smelter organized a meeting to deepen the promotion of “6S” management, strengthen the improvement of “6S” lean management, and consolidate work achievements.

Service quality

The corporation values customer service experience and continuously improves customer service. Each affiliated company formulates complaint management measures.



During the reporting period, the corporation did not receive any service-related complaints or legal proceedings.

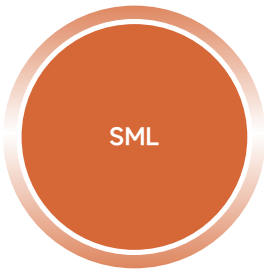




➤ Customer privacy protection

The corporation attaches great importance to information security and privacy protection, strictly safeguarding the non-public information of partners and customers. When signing contracts or agreements involving trade secrets, "confidentiality clauses" are explicitly set in the contracts, and separate confidentiality agreements are established as needed. For key project name information, code names are used to minimize the risk of sensitive information leakage.

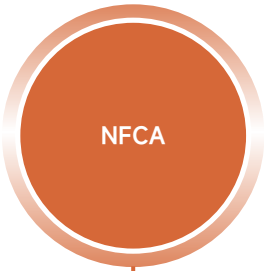
During the reporting period, there were no incidents of privacy leakage involving the corporation or its customers.



- Regular inspections of network equipment and servers are conducted, with a comprehensive check performed at least once a week to ensure system stability and security.
- Additional security measures, such as not connecting to external networks, are applied to servers storing important data to reduce the risk of external attacks.
- In addition to the daily automatic backup mechanism, regular offline backups are performed to ensure data recoverability.
- Regular security patch updates are conducted to ensure all systems and software are promptly updated with the latest patches, preventing the exploitation of known vulnerabilities.
- Backup recovery tests are performed on relevant systems to ensure rapid business recovery in emergency situations.

■ Supply chain management

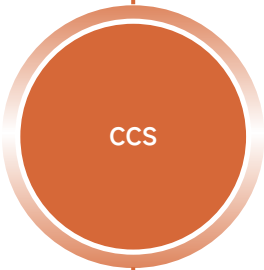
The corporation has formulated the Detailed Rules for Procurement Management to standardize supplier conduct, enhance the corporation's competitiveness and risk resilience in market procurement, and maintain long-term stable relationships with suppliers. Affiliated companies of the corporation have established corresponding management systems based on their specific circumstances.



- Based on the review of suppliers' basic qualifications, further evaluate ESG factors such as product energy consumption levels, and require suppliers to provide relevant proofs or qualification documents.
- Achieve full-process information management of the supply chain.
- Set safety inventory for bulk materials and critical spare parts directly related to production, ensure inventory turnover time, prioritize execution, and closely track execution of contract and logistics status.



- Supplier management includes classification and hierarchical management of suppliers, supplier sourcing and qualification, supplier selection and evaluation, handling of supplier misconduct, and supplier exit.
- Suppliers are required to provide corresponding qualifications and system certificates for document review, and on-site inspections may be organized as needed to ensure compliance with ESG requirements and local laws and regulations.
- Develop supply chain security management measures and contingency plans. Identify primary suppliers while determining alternative suppliers to ensure production needs are met and the risk of supply disruption is prevented. Material distribution follows the first-in-first-out principle to ensure the quality of goods supply and reduce inventory time.



- Develop a unified list of enterprise procurement and supply chain management systems, including the Procurement Management Measures (Revised Edition), Bidding and Procurement Management Measures (Revised Edition), Non-Bidding and Procurement Management Measures (Revised Edition), Supplier Management Measures (Revised Edition), and Management Measures for Bid Evaluation Expert and Bid Evaluation Expert Database (Revised Edition).
- In the supplier eligibility application form, suppliers are required to provide materials related to their quality, safety, and environmental management systems.
- Supplier evaluation is conducted through annual comprehensive assessments, and in principle, only suppliers with current business dealings are evaluated.
- Energy-using products provided by suppliers must comply with the relevant provisions of the Energy Saving Management Measures (Trial).



- Implement a green procurement policy, prioritizing low-carbon, environmentally friendly, and recyclable raw materials.
- Optimize inventory by improving inventory management, reasonably adjusting inventory levels, reducing inventory backlog and over-purchasing, and ensuring maximum resource utilization efficiency.
- Give priority to electronic equipment that meets green standards, and regularly inspect and maintain them to increase their service life and ensure high efficiency and low energy consumption of the equipment.



Key performance:

Indicator	Unit	2024
Key suppliers	Nos.	595
Number of key local suppliers	Nos.	519
Number of non-local key suppliers	Nos.	76

Luanshya was invited to attend the 17th OECD Mineral Supply Chain Side Event Forum



▲ Conference on the Theme of "Global Promotion of Responsible Procurement Policy"



▲ On-site Sharing by Luanshya

In May 2024, Luanshya, as a member of the Decision-making Committee of the Responsible Critical Mineral Initiative (RCI), was invited to participate in the 17th Organization for Economic Cooperation and Development (OECD) Mineral Supply Chain Forum due to its outstanding performance in supply chain due diligence management, and shared good practices in supply chain due diligence management.

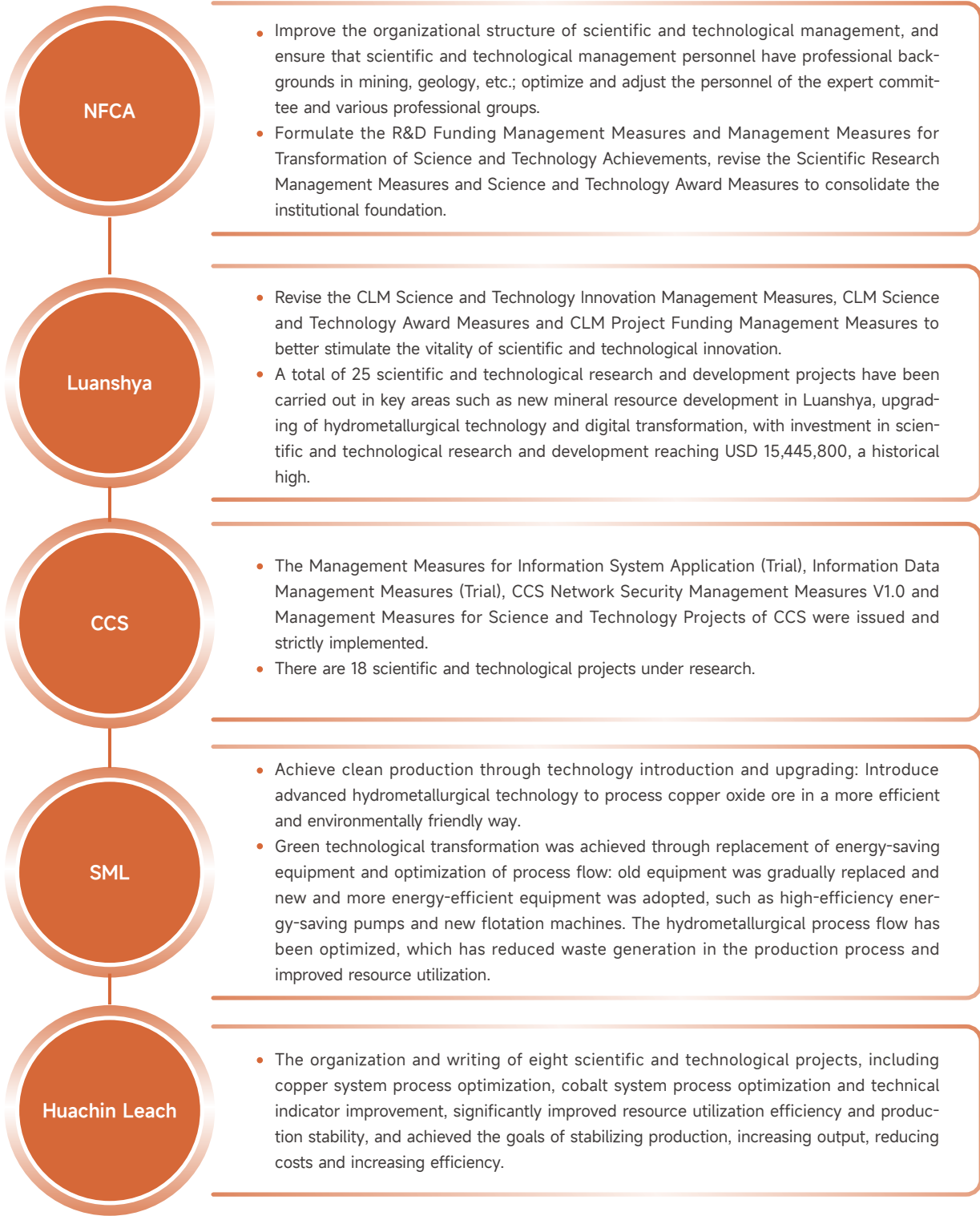
Kambove Mining was awarded the "AA" rating certificate for supply chain due diligence assessment



In July 2024, Chamber of Commerce of Chemical Importers and Exporters of China Minmetals officially released the Summary Report on the Due Diligence Management Assessment of the Copper and Cobalt Supply Chain of Kambove Mining Co., Ltd. and Kambove Mining was awarded the "AA" rating certificate.

Technology R&D innovation

The corporation regards technological innovation as the core driving force for corporate development, attaches great importance to its key role in promoting sustainable development, and actively guides its affiliated companies to build a scientific and technological research and development management system and strengthen the guarantee of scientific research resources.







CNMC Huachin Mabende

- Five scientific and technological projects were implemented, including the Upgrade and Transformation Project of Environmentally Friendly Full-Process Sampling Systems and the Raw Liquid Workshop Sulfuric Acid Tank Level Monitoring Renovation Project, to achieve the goals of optimizing processes, improving efficiency, remote monitoring, and improving economic benefits.

Kambove Mining

- Formulate systems such as science and technology project management methods, R&D funding management methods, science and technology award methods, rationalization suggestion management methods, and scientific and technological achievement management methods, and sign an industry-university-research cooperation agreement with Central South University.

CNMHK

- Organize the formulation of the Management Measures for Science and Technology Projects (Revised in 2024), Management Measures for R&D Funds of Science and Technology Projects, Management Measures for Transformation of Science and Technology Achievements, and Management Measures for Science and Technology Awards (Revised).

The corporation actively plans scientific and technological research and development, continuously increases R&D investment, carries out scientific research projects, and has won many technical patents. Some of its technologies have reached international advanced levels. Through technological innovation, the corporation has effectively improved production efficiency, reduced resource consumption and environmental impact, provided strong support for high-quality development, and promoted the corporation's steady progress on the path of green, intelligent and sustainable development.

The corporation attaches great importance to intellectual property protection. Its affiliated companies have formulated relevant systems for intellectual property management, clearly defined acts that infringe the corporation's intellectual property rights, explained the legal protection measures for patent rights, and stipulated the patent application process and reward standards. At the same time, the ownership of intellectual property is specified in detail in scientific research contracts, continuously standardizing intellectual property work, and comprehensively enhancing the competitiveness of the enterprise.

NFCA

- Annual investment in scientific research funds, with the ownership of intellectual property clearly stipulated in scientific research contracts.
- Awarded one first prize in science and technology by the China Gold Association, one first prize in science and technology by the China Nonferrous Metals Industry Association, and one third prize in science and technology progress by the China Nonferrous Metal Mining (Group) Co., Ltd.

SML

- Relying on the experimental analysis and research center, improve analysis and experimental processes, update testing equipment, and enhance mineral processing research capabilities. In 2024, SML collaborated with universities and research institutes to promote the incubation of scientific and technological innovation achievements, with 6 scientific projects initiated throughout the year, and R&D investment accounting for more than 2.35%.

Kambove Mining

- Formulated the Intellectual Property Management Measures, clearly stipulating through contracts that intellectual property is jointly owned by both parties in technical cooperation.
- Actively implemented the "1+4" development strategy, increased R&D funding, accelerated the construction of original technology sources, and formed multiple technologies with independent intellectual property rights.
- In 2024, undertook 2 group-level scientific projects, initiated 21 local scientific projects, and obtained 4 authorized patents.

NFCA held an exchange seminar on digital transformation



In September 2024, NFCA held an exchange seminar on digital transformation, during which participants visited and reviewed digitalization initiatives at the Company's Employee Mining Skills Training School, Southeast Orebody Production Control Center, and Mineral Processing Plant. Attendees also experienced VR safety training and simulated jumbo training systems.

NFCA introduces the first Tunnel Boring Machine (TBM) for African metal mines, which will soon serve in the development drift.



In December 2024, the "China Nonferrous Metals No.2" Tunnel Boring Machine (TBM) was successfully launched in Changsha, which will serve the development drift of the southeast ore body of the Chambishi Copper Mine of NFCA.

Compared with traditional tunnel drilling and blasting methods, TBM construction has a tunneling speed 3-5 times faster, and construction personnel are all working under shields. In terms of work safety, it has a more solid guarantee and plays a decisive role in promoting the intrinsic safety level of underground mines.





Zambian President Hichilema attended the 2024 Technology Empowering Mining Development Forum

(President Hichilema visits corporate tour)



(President Hichilema and signing representatives take a photo as a souvenir)

In May 2024, Zambian President Hichilema attended the 2024 Technology Empowering Mining Development Forum and delivered a keynote speech. After the meeting, President Hichilema visited the enterprise exhibitions of “CNMC Chapter”, “Cooperative Units Chapter”, and “Sino-Zam Vocational College of Science and Technology Chapter”, comprehensively showcasing the contributions of the corporation’s invested enterprises and Chinese enterprises in Zambia to jointly achieve mining development through technology empowerment.

During the conference, Luanshya initiated the Action Initiative of Technology Empowering Development of Mining Industry (TEDMI). 26 Chinese and Zambian companies and educational institutions joined the Action Initiative at the forum and signed on the spot, marking a successful conclusion to the 2024 Technology Empowering Mining Development Forum.

CNMHK held its first technology innovation conference



In March 2024, CNMHK held its first Technology Innovation Conference, where participants exchanged in-depth insights on technological innovation, work ideas, and future plans. This initiative aims to better encourage employees to focus on the central tasks of production and operation, and to meticulously implement “micro-innovations”, “micro-reforms”, and “micro-improvements” in their daily work.

# Harmonious society

## National initiative response

The corporation actively responds to the national “the Belt and Road” initiative and the host country’s socio-economic development strategy. Leveraging its strong business foundation in Zambia, the Democratic Republic of Congo, and other regions, the corporation utilizes its professional expertise in the non-ferrous metals sector to contribute to regional economic development and resource exploitation. In Zambia, the corporation has established a vertically integrated industrial chain from copper and cobalt mining, mineral processing, to hydrometallurgy, pyrometallurgy, and sales. This not only brings advanced technology and management experience to the local area but also creates numerous job opportunities, promoting the diversified development of the local economy. In the Democratic Republic of Congo, the corporation is deeply involved in the development of

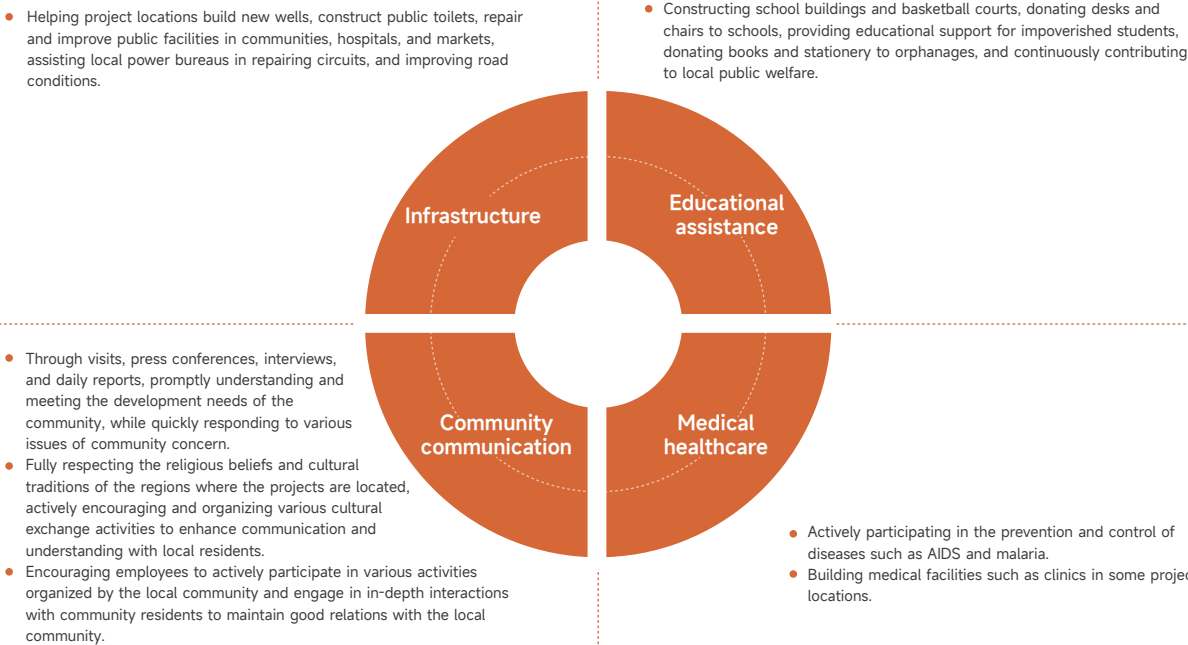
local mineral resources, helping to transform the region’s resource advantages into economic benefits.

The corporation consistently adheres to the principles of green and sustainable development. In the process of project development, it strictly follows international environmental standards, introduces advanced environmental technologies and equipment, and is committed to minimizing the impact on the local environment. At the same time, the corporation actively fulfills its social responsibilities by engaging in various forms of cooperation with local communities, participating in infrastructure construction, education, healthcare, and other public welfare initiatives. This promotes the sustainable development of the communities and enhances friendly relations with local residents.

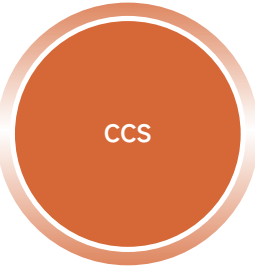
## Community co-construction

The corporation always considers fulfilling corporate social responsibility as its mission and gives back to society through various forms of community public welfare activities. Based on the needs of the communities where they are located and their own practical circumstances, each affiliated company has formulated the External Donation Management Measures, comprehensively standardizing the principles, types, channels, approval processes, and supervision of public welfare donations. In 2024, the total amount of public welfare donations from the corporation was USD 2,690,000.

The corporation and each affiliated company deeply understand community needs and take proactive actions in infrastructure construction, healthcare, educational support, and community communication. Through regular organization of community exchange activities, they listen to residents’ voices, continuously optimize service content, inject strong momentum into the social development of the region with practical actions, and work hand in hand with community residents to create a better future.







- Following the development philosophy of “rooting in Africa, benefiting the local community, and being a responsible enterprise”, the corporation has focused on local healthcare, cultural education, and traditional cultural activities in Zambia for many years.
- According to the annual social welfare budget and in conjunction with the local government’ s corporate social responsibility implementation plan, the corporation continues to carry out social welfare donation activities, with social welfare donation expenditures of USD 280,800 in 2024.
- In terms of rural revitalization, a total of 5 social welfare donation projects have been included in the corporation company’ s “Hundred Companies and Thousand Villages” project list, with “Hundred Companies and Thousand Villages” project donation expenditures of USD 196,600.

NFCA has provided continuous support to FITANDA.



▲ On-site Agricultural Skills Training

In October 2024, NFCA hired a professional training team to provide representatives from 81 households in the FITANDA community with training in planting techniques, beekeeping, and on-site planting. Since 2024, NFCA has repaired roads, built markets, constructed football fields and women’ s basketball courts, and established waste disposal sites, actively serving the surrounding community residents.



▲ Donation of Water Pumps, Sand and Gravel and Other Related Materials to the Local Community

The FITANDA community is the location of NFCA’ s southeast ore body relocation project. NFCA has built single-family houses, a church, a school, a clinic, and other infrastructure for the 81 relocated households. They have also established a water supply system, donated generators, provided weekly diesel donations and deliveries, repaired roads, and conducted regular maintenance. Through ongoing social responsibility projects, they have improved the living standards of local villagers.

NFCA donated clinic to the local community



▲ New Clinic in NACHIBULI Village

▲ Local villagers sing and dance to celebrate the completion of the clinic.

In March 2024, NFCA officially handed over the donated clinic to the local government of NACHIBULI Village in the BWEENGWA District of Southern Province. The clinic benefits approximately 1,000 households in surrounding villages, effectively reducing the difficulty of accessing medical care for residents. It has attracted significant attention from local media such as the Zambia National Broadcasting Corporation, the Times of Zambia, the Zambia Daily Mail, and PRIME Television.

Luanshya donated agricultural production materials to Luanshya community farmers



◀ Donation Ceremony Scene

In November 2024, Luanshya held a donation ceremony for agricultural production materials, marking the 15th consecutive year of such donations to Luanshya community farmers. Since its establishment in 2009, Luanshya has consistently focused on the livelihood development of the Luanshya region. Due to the drought in Zambia and the prominent issue of food shortages, as the only large

mining company in the Luanshya region, Luanshya donated agricultural production materials such as seeds and fertilizers worth over ZMK 540,000 to 200 impoverished farmers. This year alone, donations in the agricultural sector have exceeded ZMK 1 million.





CCS handed over 4 “Thousand Companies and Hundred Villages” social responsibility projects to Kalulushi City

On-site Ribbon Cutting Activity



New Classrooms



In June 2024, CCS officially handed over four social responsibility donation projects to Kalulushi City: the Mother Shelter at Kalulushi General Hospital, a 1×3 classroom at Chambishi Primary School, a 1×3 classroom at Chibote Primary School, and a girls’ bathroom at Chati South Boarding School. CCS has always adhered to the principle of “joint consultation, joint construction, and shared benefits”, upholding the concept of “mutual benefit and win-win, common development”. It focuses on local health-care, cultural education, infrastructure construction, and traditional cultural activities, emphasizing the fulfillment of social responsibilities.

The primary school built with the assistance of CNMC Huachin Mabende has been successfully handed over



▲ A Group Photo of Residents at the School Entrance



▲ Celebration Activities Held by Villagers

In June 2024, the CNMC Huachin Mabende Primary School was successfully handed over. KALAMBANGILI Primary School covers an area of approximately 3,000 square meters, featuring a building with 6 classrooms, an administrative building (including 2 offices, 1 teacher’ s room, 1 meeting room, and 1 storage room), as well as standardized toilets, a playground, and a water supply point equipped with a submersible solar pump.

Lualaba Copper Smelter practices the concept of “joint consultation, joint construction, and shared benefits”, embarking on a path of development, cooperation, and prosperity



▲ A 22-Kilometer-Long External Power Transmission Line



▲ A 12 km Highway Connects to the City’s Main Road

The Lualaba Copper Smelter has created a large number of local jobs, solving the livelihood issues for thousands of families and enabling employees to live and work in peace and contentment. The Company has built water conservancy projects and dams to secure a continuous water supply, stabilizing production water while solving basic living water and agricultural irrigation issues for local villagers. The construction of a 12 km road through thorny jungles connected to the city’ s main road, providing transportation convenience for local residents and creating a path to prosperity. The Company also financed a USD 30 million 220 KV substation, bringing electricity to southern Kolwezi and attracting numerous private investments to build factories in the surrounding area. Steel plants, hydrometallurgical plants, and transportation companies have established roots here, indirectly driving around 3,000 related employment opportunities in transportation, retail, maintenance, and service operations, benefiting approximately 3,000 families. The living standards of tens of thousands of people have significantly improved, effectively boosting local economic development.

SML donated medical and office supplies to Minsenga Health Center



▲ A Group Photo of the Donation Site



▲ On-site Donation of Materials

In December 2024, SML donated medical and office supplies to the Minsenga Health Center near the Mwambashi Mine, contributing positively to improving local medical conditions, enhancing the level of medical care, and safeguarding the health of local residents.





The Lualaba Copper Smelter officially delivered the Mpango vegetable garden drip irrigation project



▲ Official Delivery of Mpango Vegetable Garden Drip Irrigation Project

In December 2024, the Lualaba Copper Smelter officially delivered the drip irrigation project for the vegetable garden donated to Mwanzn Pango Village. The Lualaba Copper Smelter organized professional construction units to design a drip irrigation system tailored to the geographical conditions of the area. The system includes a reservoir, water storage tanks, and solar-powered submersible pumps for daily irrigation. Each pipeline is equipped with an independent valve to control the drip irrigation time based on crop growth, significantly improving water resource efficiency.

The health station in Kashengenneke Village, funded by Kambove Mining, was officially handed over



▲ The health station in Kashengenneke Village, funded by Kambove Mining, was officially handed over



▲ Villagers Celebrated the Handover of the Health Station with Singing and Dancing.

While focusing on mining development, Kambove Mining also pays attention to community needs and actively fulfills social responsibilities. Following the donation of a school and a well to Kashengenneke Village, Kambove Mining, recognizing the lack of medical resources, invested in building a health station for the village. In October 2024, the health station funded by Kambove Mining was officially handed over to Kashengenneke Village. From then on, the village has a sanctuary for health.

Kambove Mining donated well construction to the local community



In June 2024, the MIKUBA public well funded by Kambove Mining was completed and handed over to local residents, solving their drinking water problems and effectively demonstrating the central enterprise' s commitment to benefiting the community and achieving mutual development.



# 03

## Governance

Adhering to standardized governance,  
strengthening operational foundations



■ Compliance and internal control .....	079
■ Construction of Board of Directors .....	080
■ Integrity operation .....	080





■ Compliance and internal control

The corporation strictly adheres to local laws and regulations in all locations, including Mainland China, Hong Kong, Zambia, and the Democratic Republic of Congo. To enhance international competitiveness, the corporation continuously improves its management system and upholds business ethics.

In accordance with Hong Kong’s Companies Ordinance, Listing Rules, and other relevant regulations, the corporation has established internal management systems such as the Rules for Shareholders’ Meetings, Board of Directors, and President’s Office Meetings, Management Rules for Shareholders’ Meetings and Boards of Directors of Invested Enterprises, Internal Control Management Manual, and Legal and Compliance Management Guidelines. The corporation has also revised the Internal Control Evaluation System to strengthen the internal risk prevention and control system and standardize corporate governance.

In 2024, the corporation organized employees to participate in various professional development lectures, including the Hong Kong Chartered Governance Institute’s Governance Professionals Enhanced Continuous Professional Development Lecture, the Hong Kong Listed Companies Information Disclosure Lecture, the Corporate Governance and Capital Operation Practical Basics Course, the Advanced Training Course for Chinese Overseas Listed Companies, and the “Going Global” Training Course organized by the superior organizations. The corporation also organized directors and senior executives to attend Hong Kong regulatory rules training to enhance their ability to perform duties in a standardized and compliant manner.

The corporation attaches great importance to legal affairs management, establishing the position of Chief Compliance Officer/General Counsel and the Legal and Compliance Affairs Department to better adapt to the legal systems of overseas project locations such as Zambia and the Democratic Republic of Congo, ensuring that overseas production and business activities fully comply with local laws and regulations. The implementation rate of the General Counsel system, the establishment rate of legal affairs institutions, and the formulation rate of legal compliance systems in the corporation headquarters and its affiliated and subsidiary companies have all reached 100%.



- The corporation compiled the 2024 Major Business Risk Prediction and Assessment Report, the Company Compliance Management Measures, the Annual Internal Control System Work Report, the Annual Report on the Investigation of Responsibility for Illegal Business Investment, and the Annual Self-Assessment Report on the Quality of Internal Audit Work, promoting the continuous improvement of the internal control, compliance, and risk management system, leveraging the role of internal audit, and effectively identifying, analyzing, and preventing major business risks.
- The corporation assessed 2 major business risks faced in 2024, intensified the monitoring and resolution of major business risks, and achieved a 20% increase in the amount of copper concentrate entering the plant compared to the previous year, providing strong support for the overfulfillment of the annual high-load production and output targets. The risk prevention and control work was advanced, and the risks were well controlled by the end of 2024.
- In 2024, the corporation revised and issued the List of Board of Directors’ Authority and Authorization Matters (2024 Edition) and the rules of procedure for two specialized committees, the Strategic Investment Committee and the Audit Risk Committee. The corporation also formulated and issued the Rules of Procedure for the Chairman’s Special Meeting, further optimizing and improving the decision-making authority and procedural rules of various governance bodies.



- The corporation established a comprehensive risk management system, identifying and assessing potential risks in various business segments through the implementation of the comprehensive risk management system. Formulated the Compliance Management Measures and the Compliance Risk Identification List, and have developed specific response measures for the major risks identified, including avoiding, reducing, transferring or accepting risks. Improved and revised the Internal Control Manual to prevent operational risks by strengthening internal control, optimizing processes, authority management and audit mechanisms.
- Set up a full-time audit department to organize and carry out internal special audit work in key areas such as R&D expense management, safety and environmental protection control, and mineral raw material procurement.
- Established the Internal Audit Procedure to provide objective evidence that the quality, environment, occupational health and safety management systems operate effectively and meet the requirements of the certification standards and are in compliance with planned arrangements.



- Formulated the Compliance Management Measures and the Comprehensive Risk and Internal Control Management Measures (Revised).

■ Construction of Board of Directors

The corporation's Board of Directors is responsible for the management and operation of the corporation's business. The Board of Directors consists of 6 directors, including 1 Executive Director, 2 Non-Executive Directors and 3 Independent Non-Executive Directors, with Independent Directors accounting for 50%. The corporation’s Board of Directors consists of a Nomination Committee, a Remuneration Committee, a Compliance Committee and an Audit Committee. The Nomination Committee is responsible for managing and maintaining the board structure; the Remuneration Committee focuses on the employee rights and interests of directors and senior management; the Compliance Committee focuses on ensuring the compliance of the corporation's operations, monitoring the corporation's financial reporting procedures, and has an ESG working group; the Audit Committee is responsible for internal monitoring and risk management.

In 2024, all directors of the corporation participated in compliance training, covering the statutory disclosure system for insider information, transactions that must be disclosed, related-party transactions, recent updates, etc.

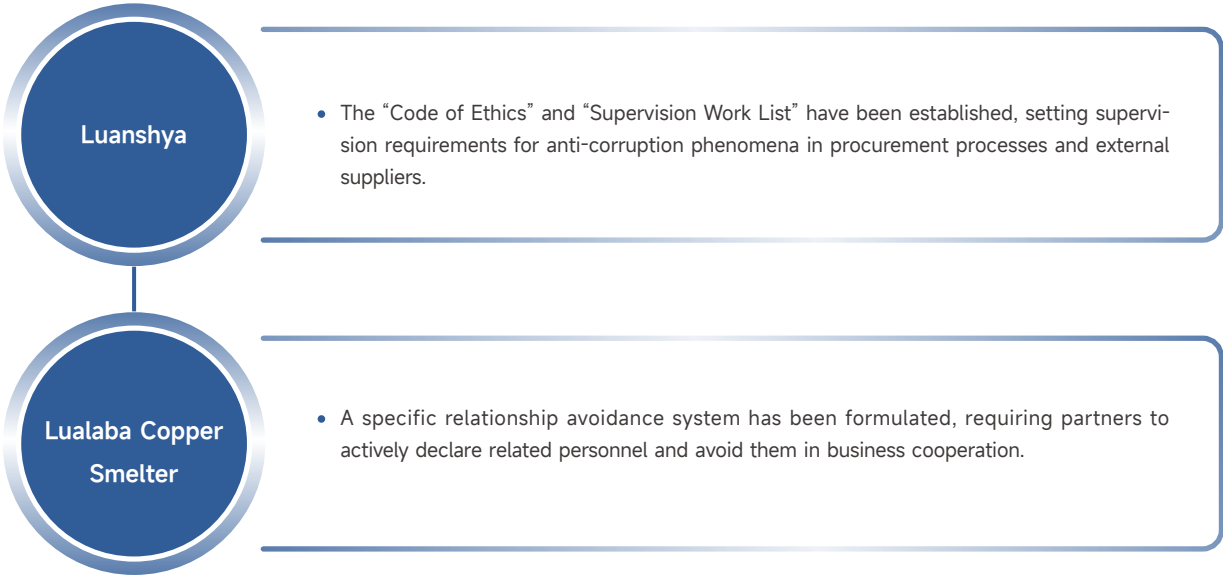
■ Integrity operation

The corporation firmly maintains a “zero tolerance” stance towards corruption and all unethical business practices, and has formulated systems such as the Management System for Related Party Transactions, Management System for Reporting and Complaint, and Integrity Risk Prevention and Control Implementation Measures, focusing on preventing corruption, effectively reducing legal risks, and standardizing business activities to lay a solid foundation for the sustainable and healthy development of the corporation.

➤ Supply chain anti-corruption

In key anti-corruption areas such as bidding and procurement, the corporation has clearly set anti-corruption clauses in procurement contracts to ensure the transparency of the bidding process and strictly prevent various fraudulent behaviors. The corporation requires all suppliers and contractors to comply with the business ethics policy, creating a clean and upright business cooperation environment.





➤ Whistleblower Protection

The corporation always regards the protection of employee rights and public interests as important work goals, resolving various conflicts and disputes through proactive and effective preventive measures, creating a harmonious and stable internal and external corporate environment. The corporation firmly opposes any retaliatory actions against whistleblowers, actively adopts various measures to ensure the anonymity of whistleblowers, and strictly limits the dissemination of whistleblowing information.

The corporation pays special attention to communication and coordination with all parties, maintaining good order through standardized work processes, protecting the legitimate rights and interests of whistleblowers, and striving to balance and handle the interests of all parties.

- A management violation reporting platform has been established to accept reports related to management activities, with relevant business and supervision departments strictly keeping the identity of the whistleblower and the reported matters confidential.

- A full lifecycle management mechanism has been established, covering report acceptance, report clue ledger creation, regular tracking supervision, and guidance handling.

- Relevant functional and supervision departments should strictly control the scope of knowledge of report clues, strictly keep the identity of the whistleblower and the reported matters confidential, and no unit or individual may retaliate against the whistleblower in any form.

➤ Anti-corruption training

The corporation attaches great importance to the construction of a clean culture, integrating clean information into daily training. By regularly organizing middle and senior employees to learn anti-corruption policies, conduct integrity education, and hold admonishment talks, the corporation continuously enhances employees' awareness of self-discipline and integrity. During the reporting period, the corporation actively carried out anti-corruption related training work. For example, special online training courses on strengthening compliance with laws and regulations and improving work style for leading cadres, 2024 online training courses on discipline inspection and supervision work in state-owned enterprises, training on the Disciplinary Regulations for State-owned Enterprise Management Personnel.

During the reporting period, the corporation did not encounter any litigation cases arising from bribery, extortion, fraud, or money laundering, and there were no concluded corruption litigation cases.



# Annex

## ➤ Laws and regulations that have a significant impact on the corporation

Laws and regulations that have a significant impact on the corporation	Compliance of the corporation
Environment	
Level A1: Emissions	
<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>Zambia’s “Environmental Protection and Pollution Control Act”</li><li>Zambia’s “Mines and Minerals Development Act, 2015”</li><li>Zambia’s “Mines and Minerals Act”</li><li>Zambia’ s “Air Pollution Control (Licensing and Emission Stan- dards) Regulations, 1996”</li><li>Zambia’ s “Water Pollution Control (Effluent and Waste) Regula- tions, 1993”</li><li>Zambia’s “Water Resources Management Act, 2011”</li><li>Zambia’s “Forest Act, 2015”</li><li>Zambia’s “Hazardous Waste Management Regulations, 2001”</li><li>Zambia’s “Solid Waste Regulation and Management Act, 2018”</li><li>Democratic Republic of Congo’ s “Mining Code (Laws No. 001/2018)”</li><li>Democratic Republic of Congo’ s “Mining Regulation (Decree No. 18/24)”</li></ul>	<p>During the reporting period, the corporation did not violate any laws and regulations listed in this appendix related to exhaust emissions, emission to water and land, and the generation of harmful and harmless waste.</p>
Society	
Level B1: Employment	
<ul style="list-style-type: none"><li>“Labor Law of the People’s Republic of China”</li><li>“Labor Contract Law of the People’s Republic of China”</li></ul>	

<ul style="list-style-type: none"><li>Zambia’s “Industrial and Labour Relations Act”</li><li>Zambia’s “Minimum Wages and Conditions of Employment Act”</li><li>Zambia’s “Employment Act”</li><li>Democratic Republic of Congo’s “Labour Code, 2002”</li><li>Democratic Republic of Congo’ s “Occupational Health and Safety Act, 2010”</li></ul>	<p>During the reporting period, the corporation did not violate any laws and regulations listed in this appendix related to remuneration and dismissal, recruitment and promotion, working hours, leave, equal opportunity, diversity, anti-discrimination, and other benefits.</p>
Level B2: Occupational health and safety	
<ul style="list-style-type: none"><li>Zambia’s “Mines and Minerals Development Act, 2018”</li><li>Zambia’s “Factories Act (Chapter 441 of the Laws of Zambia)”</li><li>Democratic Republic of Congo’s “Mining Code (Laws No. 001/2018)”</li><li>Democratic Republic of Congo’ s “Mining Regulation (Decree No. 18/24)”</li></ul>	<p>During the reporting period, the corporation did not violate any laws and regulations listed in this appendix related to providing a safe working environment and protecting employees from occu- pational hazards.</p>
Level B4: Labour standards	
<ul style="list-style-type: none"><li>“Law of the People’s Republic of China on the Protection of the Minors”</li><li>“Provisions on Prohibiting the Use of Child Labour”</li><li>Zambia’s “Employment Act”</li><li>Democratic Republic of Congo’s “Labour Code (2002)”</li></ul>	<p>During the reporting period, the corporation did not violate any laws and regulations listed in this appendix regarding the preven- tion of child labor and forced labor.</p>
Level B6: Product quality and responsibility	
<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 corporation did not violate any laws and regulations listed in this appendix regarding the health and safety of products and services, advertising, labeling, and privacy.</p>



Level B7: Anti-corruption		
<div><ul style="list-style-type: none"><li>“Anti-unfair Competition Law of the People’s Republic of China”</li><li>Zambia’s “Anti-Corruption Act, 2012”</li><li>Democratic Republic of Congo’s “Corruption, Legal 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></div>		During the reporting period, the corporation did not violate any laws and regulations listed in this appendix regarding the prevention of bribery, extortion, fraud, and money laundering.

➤ Data overview

Indicator	Unit	2024	2023
Environment			
Emissions of exhaust pollutants			
Sulfur oxide emissions	tons	4,043.04	4,258.06
Nitrogen oxide emissions <sup>Note</sup>	tons	11.29	0.08
Smoke and dust emissions	tons	113.26	110.10
Wastewater discharge volume			
Wastewater discharge volume	10,000 tons	1,219.13	1,790.59
Wastewater discharge intensity per unit revenue	Ton/USD 1,000	3.19	4.97
Industrial wastewater discharge volume	10,000 tons	1,180.05	1,757.91
Domestic wastewater discharge volume	10,000 tons	39.08	32.68
Solid waste discharge volume			
Total amount of hazardous waste	10,000 tons	0.10	0.04

Note: The statistical caliber has increased over the previous year.

Compliance rate of hazardous waste disposal	%	100	100
Hazardous waste emission intensity per unit revenue	Ton/USD 1 million	0.25	0.11
Total amount of harmless waste	10,000 tons	5,664.55	5,482.32
Compliance rate of harmless waste disposal	%	100	100
Harmless waste discharge intensity	10,000 tons/USD 1 million	1.48	1.52
Resource utilization			
Total energy consumption	tce	243,556.48	233,289.57
Gasoline consumption	Liters	234,741.00	194,074.00
Diesel consumption	Liters	40,352,148.30	30,117,567.30
Coal consumption	tce	42,128.30	45,734.30
Coke consumption	tce	370.00	1,777.60
Consumption of liquefied petroleum gas	Kilogram	18,120.00	23,115.00
Acetylene consumption	Kilogram	17,700.70	21,368.40
Outsourced energy (indirect)	Hundred-million-kWH	12.86	9.92
Energy consumption intensity per unit revenue	Tons of standard coal/USD 1 million	63.82	64.68
Fresh water usage	10,000 tons	1,457.64	1,428.53
Fresh water consumption intensity per unit revenue	Ton/USD 1 thousand	3.82	3.96
Greenhouse gas emissions (Category 1 and Category 2)	Tons of carbon dioxide equivalent	227,286.66	281,061.84
Greenhouse gas emissions (Category 1)	Tons of carbon dioxide equivalent	223,817.92	278,368.31
Greenhouse gas emissions (Category 2)	Tons of carbon dioxide equivalent	3,468.74	2,693.53
Greenhouse gas emission intensity per unit revenue	Tons of carbon dioxide equivalent/USD 1 million	59.55	77.93





Social			
Employment			
Total number of employees	persons	8,494	8,683
Number of full-time employees	persons	8,494	8,683
Number of part-time employees	persons	0	0
Divided by gender			
Number of male employees	persons	7,929	8,265
Number of female employees	persons	565	418
Proportion of male employees	%	93.39	95.19
Proportion of female employees	%	6.65	4.81
Divided by management level			
Number of ordinary employees	persons	8,224	/
Number of intermediate management personnel	persons	211	/
Number of senior management personnel	persons	59	/
Proportion of ordinary employees	%	96.82	/
Proportion of intermediate management personnel	%	2.48	/
Proportion of senior management personnel	%	0.70	/
Proportion of employees divided by age			
Proportion of employees under 30 years old (inclusive)	%	16.56	26.75

Proportion of employees aged 30-50 (inclusive)	%	72.78	64.90
Proportion of employees aged 50 and above	%	10.66	8.35
Employee turnover rate	%	10.31	9.20
Male employee turnover rate	%	10.72	9.38
Female employee turnover rate	%	4.45	5.74
Employee turnover rate under 30 years old	%	7.87	9.60
Employee turnover rate between the ages of 30 and 50	%	11.02	8.61
Employee turnover rate for employees aged 50 and above	%	9.23	12.55
Proportion of local employees	%	89.37	/
Employee satisfaction	%	>98	/

Indicator	Unit	2024	2023	2022
Health and safety				
Number of work fatalities <sup>Note</sup>	persons	0	0	0
Rate of employee deaths due to work-related reasons	%	0	0	0
Lost working days due to work-related injuries	Days	19	48	127
Number of safety accidents	Nos.	0	/	/

Indicator	Unit	2024	2023
Development and training			
Employee training coverage rate	%	97.44	/
Proportion of male employees trained	%	97.28	/
Proportion of female employees trained	%	98.02	/

Note: Excluding the number of contractors.



Proportion of senior management employees trained	%	100	/
Proportion of middle management employees trained	%	97.16	/
Proportion basic employees trained	%	98.43	/
Total duration of annual training	Hours	280,420	289,730
Total training hours for male employees	Hours	265,287	279,518
Total training hours for female employees	Hours	15,133	10,212
Total training hours for senior management employees	Hours	1,991	1,920
Total training hours per capita for middle-level management employees	Hours	6,954	7,428
Total training hours per capita for basic employees	Hours	271,476	280,382
Average training duration for employees	Hours	33.01	/
Average training duration per male employee	Hours	33.44	35.02
Training duration per female employee	Hours	26.78	25.38
Training duration per senior management employee	Hours	33.53	32.52
Average training duration per mid-level management employee	Hours	32.91	22.96
Training duration per basic employee	Hours	33.53	35.09
Supplier management			
Total number of key suppliers	Nos.	595	675
Number of key local suppliers	Nos.	519	608
Number of non-local key suppliers	Nos.	76	67

Technological innovation			
R&D investment	USD 1 million	79	/
Proportion of R&D investment	%	2.07	/
Community contribution			
Amount of community donation investment	USD 1 million	2.69	/
Proportion of investment in community donations	%	0.07	/

➤ HKEX ESG indicator index table

Part B: Mandatory Disclosure Requirements

Mandatory disclosure requirements	Description	Relevant sections or other descriptions in this report
Governance architecture	<p>A statement issued by the Board of Directors contains the following contents:</p> <p>(i) Disclosure of the Board of Directors’ oversight of environmental, social and governance matters;</p> <p>(ii) The Board of Directors’ environmental, social and governance management policies and strategies, including the process for assessing, prioritizing, and managing significant environmental, social and governance-related matters (including risks to the issuer’s business); and</p> <p>(iii) How the Board of Directors reviews progress against environmental, social and governance-related goals and explains their relevance to the issuer’ s business.</p>	ESG management architecture
Reporting principles	<p>Describe or explain how the following reporting principles are applied in preparing the environmental, social and governance report:</p> <p>Materiality: The environmental, social and governance report should disclose: (i) The process for identifying material environmental, social and governance factors and the criteria for selecting these factors; (ii) If the issuer has engaged stakeholders, a description of the identified key stakeholders and the process and outcomes of the issuer’ s stakeholder engagement.</p>	Basis of preparation



	<p>Quantification: Information on the standards, methods, assumptions and/or calculation tools used for reporting emissions/energy consumption (if applicable) and the source of the conversion factors used should be disclosed.</p> <p>Consistency: The issuer should disclose in the environmental, social and governance report any changes in statistical methods or key performance indicators (if any) or any other relevant factors affecting meaningful comparisons.</p>	
Reporting scope	Explain the reporting scope of the environmental, social and governance report and describe the process for selecting which entities or operations to include in the report. If the reporting scope has changed, the issuer should explain the differences and the reasons for the changes.	Report scope

Part C: “Comply or Explain” Provisions

A. Environment

General disclosure and key performance indicators	Description	Relevant sections or other descriptions in this report
Environment		
Level A1: Emissions		
General disclosure	<p>For the emission of waste gas and greenhouse gases, the emission of pollutants into water and land, the generation of harmful and harmless wastes, etc.:</p> <p>(a) Policies; and</p> <p>(b) The information about the compliance with relevant laws and regulations that have a significant impact on the issuer.</p>	<p>Environment management system</p> <p>Development of green mine</p> <p>Pollutant emission control</p> <p>Laws and regulations that have a significant impact on the group</p>
KPI A1.1	KPI A1.1    Types of emissions and related emission data.	Data overview

KPI A1.2	Direct (scope 1) and indirect (scope 2) greenhouse gas emissions (calculated in tons) and (if applicable) density (e.g. calculated per production unit and per facility).	Data overview
KPI A1.3	Total amount of harmful wastes generated (calculated in tons) and (if applicable) density (e.g. calculated per production unit and per facility).	Data overview
KPI A1.4	Total amount of harmless wastes generated (calculated in tons) and (if applicable) density (e.g. calculated per production unit and per facility).	Data overview
KPI A1.5	Describe the emission goals set and the steps taken to achieve such goals.	Combat with climate change
KPI A1.6	Description of the method to dispose of hazardous and harmless wastes, waste reduction goals set and the steps taken to achieve such goals.	Environment management system Pollutant emission control
Level A2: Use of resources		
General disclosure	General disclosure: Policies for the effective use of resources (including energy, water and other raw materials)	Resource conservation and utilization
KPI A2.1	Direct and/or indirect energy consumption by type (e.g. electricity, gas or oil) in total (0,000 kWh) and intensity (e.g. calculated per production unit and per facility).	Data overview
KPI A2.2	Total water consumption and density (e.g. calculated per production unit and per facility).	Data overview





KPI A2.3	Describe the energy use efficiency goal and the steps taken to achieve such goal.	Environment management system Economical utilization of resources
KPI A2.4	Description of any problems in obtaining the applicable water sources, the water use efficiency goals set and the steps taken to achieve such goals.	Environment management system Economical utilization of resources
KPI A2.5	Total packaging material used for finished products (in ton), and, if applicable, proportion of per production unit.	Due to the nature of the corporation's products and business, we do not involve the use of packaging materials.
Level A3: Environment and natural resources		
General disclosure	Policies on minimizing the issuer's significant impact on the environment and natural resources.	Development of green mine
KPI A3.1	Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them.	Significant impacts on the environment and natural resources and response methods
Level A4: Climate change		
General disclosure	Policies to identify and respond to major climate-related issues that have and may have an impact on the issuer.	Combat with climate change
KPI A4.1	Description of major climate-related issues that have and may have an impact on the issuer and actions.	Combat with climate change

B. Society

General disclosure and key performance indicators	Description	Relevant sections or other descriptions in this report
Employment and labor practices		
Level B1: Employment		
General disclosure	For remuneration and dismissal, recruitment and promotion, working hours, holidays, equal opportunities, diversity, anti-discrimination and other salaries and welfare:  (a) Policies; and  (b) The information about the compliance with relevant laws and regulations that have a significant impact on the issuer.	Employment management  Laws and regulations that have as significant impact on the group
Employee caring		
Talent construction		
KPI B1.1	Total employees by gender, employment type (full time or part-time), age group and region.	Employment management Data overview
KPI B1.2	Turnover rate of employees by gender, age group and region.	Employment management Data overview
Level B2: Occupational health and safety		
General disclosure	For providing a safe working environment and protecting employees from occupational hazards: (a) Policies; and  (b) The information about the compliance with relevant laws and regulations that have a significant impact on the issuer.	Safety management system  Laws and regulations that have as significant impact on the group



Work safety and operation		
KPI B2.1	Number and proportion of occupational deaths in each of the past three years (including the reporting year).	Safety management system Data overview
KPI B2.2	Number of working days lost due to work-related injuries.	Safety management system
KPI B2.3	Describe occupational health and safety measures adopted, how they are implemented and monitored	Safety management system Safety culture cultivation Prevention and control of safety risks
Level B3: Development and training		
General disclosure	Policies on improving employees' knowledge and skills in performing their responsibilities. Description of training activities. Note: The training refers to vocational training, including internal and external courses paid by the employer.	Talent training
KPI B3.1	Percentage of trained employees by gender and category (such as senior management and middle management)	Talent training Data overview
KPI B3.2	Average training hours of employees by gender and category.	Talent training Data overview
Level B4: Labour standards		
General disclosure	For the prevention of child or forced labor:  (a) Policies; and  (b) The information about the compliance with relevant laws and regulations that have a significant impact on the issuer.	Employment management  Laws and regulations that have a significant impact on the group

KPI B4.1	Description of measures to review employment practices to avoid child and forced labour	Employment management
KPI B4.2	Description of the steps taken to eliminate violations when they are found.	Employment management
Operation management		
Level B5: Supply chain management		
General disclosure	Manage environmental and social risk policies of supply chain.	Supply chain management
KPI B5.1	Number of suppliers by region.	Supply chain management Data overview
KPI B5.2	Description of practices relating to engaged suppliers, number of suppliers where the practices are being implemented and how they are implemented and monitored.	Supply chain management
KPI B5.3	Describe the practices of identifying environmental and social risks in each link of the supply chain and the implementation and monitoring methods.	Supply chain management
KPI B5.4	Describe practices of promoting the use of environment-friendly products and services during the selection of suppliers, and relevant implementation and monitoring methods.	Supply chain management
Level B6: Product responsibility		



General disclosure	For the health and safety, advertising, labeling and privacy matters of the products and services provided and the remedies:  (a) Policies; and  (b) The information about the compliance with relevant laws and regulations that have a significant impact on the issuer.	Product and service quality  Laws and regulations that have a significant impact on the group
KPI B6.1	Percentage of total products sold or shipped subject to recalls for safety and health reasons.	Product and service quality
KPI B6.2	Number of complaints about products and services received and countermeasures.	Product and service quality
KPI B6.3	Description of practices relating to observing and protecting intellectual property rights.	Technology R&D innovation
KPI B6.4	Description of quality assurance process and recall procedures.	Product and service quality
KPI B6.5	Describe consumer data protection and privacy policies, how they are implemented and monitored.	Product and service quality
Level B7: Anti-corruption		
General disclosure	For the prevention of bribery, extortion, fraud and money laundering:  (a) Policies; and  (b) The information about the compliance with relevant laws and regulations that have a significant impact on the issuer.	Integrity operation  Laws and regulations that have a significant impact on the group
KPI B7.1	Number of corruption litigation cases filed against the issuer or its employees and concluded during the reporting period and litigation results.	Integrity operation

KPI B7.2	Describe preventive measures and whistle-blowing procedures, how they are implemented and monitored.	Integrity operation
KPI B7.3	Description of the anti-corruption training provided to the board of directors and employees.	Integrity operation
Level B8: Community investment		
General disclosure	Policies on community participation to understand the needs of the community in which it operates and ensure that business activities consider the interests of the community.	Community co-construction
KPI B8.1	Focus on contribution categories (such as education, environmental matters, labor needs, health, culture and sports).	Community co-construction
KPI B8.2	Resources (such as money or time) contributed to focusing categories.	Community co-construction Data overview

➤ Reference indicator system for ESG special reports of listed companies controlled by central enterprises

Environment category

Indicator		Relevant sections or other descriptions in this report	
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	Data overview
		E.1.1.3 Proportion of recycled water usage	Data overview
		E.1.1.4 Water resource consumptionintensity	Data overview
	E.1.2 Materials	E.1.2.1 Non-renewable material consumption	Data overview
		E.1.2.2 Consumption of toxic and hazardous materials	Data overview





		E.1.2.3 Material consumption intensity	Data overview
	E.1.3 Energy	E.1.3.1 Fossil energy consumption	Data overview
		E.1.3.2 Non-fossil energy consumption	Our operational sites in Zambia and the Democratic Republic of Congo primarily use clean energy
		E.1.3.3 Proportion of non-fossil energy use	
		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 Consumption of packaging materials	N/A
		E.1.4.2 Lightweight and reduced packaging materials	N/A
E.2 Pollution prevention	E.2.1 Waste water	E.2.1.1 Compliance of waste water emission	Pollutant emission control
		E.2.1.2 Waste water management and reduction measures	Pollutant emission control
		E.2.1.3 Waste water emission	Data overview
		E.2.1.4 Emissions of waste water pollutant	Data overview
		E.2.1.5 Concentration of waste water pollutant emissions	Data overview
	E.2.2 Exhaust gas	E.2.2.1 Compliance of waste gas emission	Pollutant emission control
		E.2.2.2 Exhaust pollutant emission	Data overview
		E.2.2.3 Concentration of air pollutant emissions	Data overview
	E.2.3 Solid waste	E.2.3.1 Compliance of solid waste disposal	Pollutant emission control
		E.2.3.2 General industrial solid waste management	Pollutant emission control
		E.2.3.3 General industrial solid waste disposal	Data overview
		E.2.3.4 Harmful waste management	Pollutant emission control
		E.2.3.5 Amount of harmful waste disposal	Data overview

E.3 Climate change	E.3.1 Greenhouse gas emission	E.3.1.1 Sources and types of greenhouse gases	Data overview Combat with climate change
		E.3.1.2 Greenhouse gas emission management	Combat with climate change
		E.3.1.3 Scope 1 emissions	Data overview
		E.3.1.4 Scope 2 emissions	Data overview - combat with climate change
		E.3.1.5 Scope 3 emissions	Data overview
		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	Environment management system Combat with climate change
		E.3.2.2 Greenhouse gas emission reduction	Environment management system
	E.3.3 Environmental rights trading	E.3.3.1 Participation in carbon emission trading markets	None
		E.3.3.2 Participation in energy, water, and emission rights trading markets	None
		E.3.3.3 Participation in green power trading	None
	E.3.4 Climate risk management	E.3.4.1 Climate risk management	Combat with 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	Development of green mine
	E.5.1 Low-carbon development goals and strategic measures	E.5.1.1 Low-carbon development goals and strategic measures	Environment management system Combat with climate change
	E.5.2 Resource management measures	E.5.2.1 Water resource usage management	Pollutant emission control Resource conservation and utilization
		E.5.2.2 Material usage management	Resource conservation and utilization
		E.5.2.3 Energy usage and energy saving management	Environment management system Combat with climate change



E.5 Measures for resource and environmental management system	E.5.3 Energy saving and carbon reduction statistical monitoring and assessment system	E.5.3.1 Energy saving and carbon reduction monitoring, statistical reporting and evaluation system	None
	E.5.4 Green environmental actions and measures	E.5.4.1 Clean production	Development of green mine Resource conservation and utilization
		E.5.4.2 Green technology upgrades and recycling	Environment management system
		E.5.4.3 Green building renovation	Resource conservation and utilization
		E.5.4.4 Green office and operations	Resource conservation and utilization Development of green mine
		E.5.4.5 Green procurement and green supply chain management	Supply chain management
		E.5.4.6 Environmental public welfare activities	Community co-construction
	E.5.5 Green and low-carbon certification	E.5.5.1 Environmental management system certification	Environment management system
		E.5.5.2 Green and low-carbon enterprise certification	None
		E.5.5.3 Green and low-carbon product and service certification	None
	E.5.6 Legal compliance in environmental areas	E.5.6.1 Emergency plan for sudden environmental incidents	Environment management system
		E.5.6.2 Environmental violations and illegal incidents	Laws and regulations that have a significant impact on the corporation

Society

Indicator		Relevant sections or other descriptions in this report	
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 Avoidance of child labor or forced labor	Employment management	

S1 Rights and interests of employees	S1.2 Employee remuneration and benefits	S1.2.1 Remuneration philosophy and policies	Employment management
		S1.2.2 Working hours and holidays	Employment management Employee caring Talent training
		S1.2.3 Remuneration and benefits protection	Employment management
		S1.2.4 Employee democratic management	Democratic management
	S1.3 Employee health and safety	S1.3.1 Employee occupational health and safety management	Safety management system
		S1.3.2 Employee safety risk prevention and control	Prevention and control of safety risks
		S1.3.3 Safety accidents and work injury response	Prevention and control of safety risks
		S1.3.4 Employee care and assistance	Employee caring
	S1.4 Employee development and training	S1.4.1 Employee motivation and promotion policy	Employment management
		S1.4.2 Employee education and training	Talent training
		S1.4.3 Employee career planning and position change support	Talent training
	S1.5 Employee satisfaction	S1.5.1 Employee satisfaction survey	Employee caring
		S1.5.2 Labor disputes	Data overview
		S1.5.3 Employee turnover	Data overview
	S2.1 Product safety and quality	S2.1.1 Production standard management policy and measures	Product and service quality
		S2.1.2 Quality management	Product and service quality
		S2.1.3 Product recall and withdrawal	Product and service quality
		S2.1.4 Product or service negative events	Product and service quality
S2 Product and service management	S2.2 Customer service and rights	S2.2.1 Customer satisfaction	Product and service quality
		S2.2.2 Customer complaints and handling	Product and service quality
		S2.2.3 Customer information and privacy protection	Product and service quality





	S2.3 Innovative development	S2.3.1 Research and development and innovation management system	Technology R&D innovation
		S2.3.2 Research and development investment	Technology R&D innovation
		S2.3.3 Innovation achievements	Technology R&D innovation
		S2.3.4 Intellectual property protection	Technology R&D innovation
S3 Supply chain security and management	S3.1 Supplier management	S3.1.1 Supplier selection and management	Supply chain management
		S3.1.2 Supplier quantity and distribution	Supply chain management
	S3.2 Supply chain management	S3.2.1 Supply chain management policy and measures	Supply chain management
		S3.2.2 Supply chain security assurance and emergency plan	Supply chain management
		S3.2.3 Major risks and impacts (supply chain)	Supply chain management
S4 Social contribution	S4.1 Tax payment status	S4.1.1 Tax payment status	Data overview
	S4.2 Community co-construction	S4.2.1 Policies and measures for participating in local community construction	Community co-construction
		S4.2.2 Contributions and impacts on local communities	Community co-construction
	S4.3 Social public welfare activities	S4.3.1 Policies and measures for participating in social public welfare activities	Community co-construction
		S4.3.2 Investment and effectiveness in social public welfare activities	Community co-construction
		S4.3.3 Barrier-free environment construction	Community co-construction
	S4.4 National strategy response	S4.4.1 Industrial transformation	Development of green mine
		S4.4.2 Rural revitalization and regional coordinated development	Community co-construction
		S4.4.3 Belt and Road initiative and overseas responsibility	Community co-construction




		S4.4.4 Industry characteristics and other social responsibility fulfillment	Community co-construction
G1 Governance strategy and organizational structur	G1.1 Governance strategy and processes	G1.1.1 Governance strategy formulation	ESG management architecture
		G1.1.2 Governance strategy and supervision processes	ESG management architecture
		G1.1.3 Governance strategy approval and review processes	ESG management architecture
	G1.2 Organizational composition and functions	G1.2.1 Ownership responsibilities	Annual report - management discussion and analysis
		G1.2.2 Board of Directors, Board of Supervisors, and Management organizational structure and functions	Annual report - corporate governance report Construction of Board of Directors
		G1.2.3 Appointment procedures and composition of the Board of Directors, Board of Supervisors, and Management	Annual report - corporate governance report Construction of Board of Directors
	G1.3 Remuneration management	G1.3.1 Remuneration plans for directors and supervisors	Annual report - corporate governance report, board report Construction of Board of Directors
		G1.3.2 Board remuneration transparency	Annual report - board report Construction of Board of Directors
		G1.3.3 Management remuneration rationality	Annual report - board report, notes to the consolidated financial statements
G2 Standardized governance	G2.1 Internal control	G2.1.1 Internal audit	Compliance and internal control
		G2.1.2 Internal control structure, mechanisms, and processes	Compliance and internal control
	G2.2 Integrity construction	G2.2.1 Integrity construction system and standards	Integrity operation
		G2.2.2 Integrity construction measures and effectiveness	Integrity operation
	G2.3 Fair competition	G2.3.1 Fair competition system and standards	Integrity operation
		G2.3.2 Fair competition measures and effectiveness	Integrity operation



G3 Investor relations management and shareholder rights	G3.1 Investor relations management	G3.1.1 Investor relations management strategy	The company effectively carries out investor relations management by establishing the Information Disclosure Management System, clarifying the annual work plan and the management department.	
		G3.1.2 Communication with investors	We actively maintain communication with investors each year through hosting and participating in investor meetings, shareholder meetings, earnings releases, and roadshows	
		G3.1.3 Construction of investor relations management department	The Board of Directors Office of the corporation is responsible for investor relations management. Additionally, our emphasis on investor culture and initiatives is disclosed in various sections of the annual report (e.g., corporate governance report)	
	G3.2 Shareholder rights	G3.2.1 Shareholders' meeting situation	Annual report - corporate governance report	
		G3.2.2 Shareholder communication situation	Annual report - corporate governance report	
		G3.2.3 Shareholders' right to know and participate in decision-making	Annual report - corporate governance report	
	G3.3 Creditor rights	G3.3.1 Credit situation	The corporation has disclosed its credit situation in the annual report, such as identifying and addressing credit risks. For details, please refer to the notes to the consolidated financial statements in the annual report.	
		G3.3.2 Bond market compliance situation	None	
	G4 Information disclosure transparency	G4.1 Information disclosure system	G4.1.1 Financial information disclosure	The corporation timely discloses financial information through regular announcements and other means
			G4.1.2 Non-financial information disclosure	This report is entirely non-financial information disclosure.
G4.2 Information disclosure quality		G4.2.1 All disclosed information is regularly monitored, audited, and evaluated	The corporation timely discloses financial information through regular announcements and other means	
	G5.1 Compliance governance and operations	G5.1.1 Compliance governance and operation system	Compliance and internal control	
		G5.1.2 Compliance system construction status	Compliance and internal control	

G5 Compliance governance and operations and risk management	G5.2 Risk management	G5.1.3 Compliance review specific process	Compliance and internal control
		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

➤ Sustainable development goals (SDG) comparison table

UN sustainable development goals (SDG)	Goal interpretation	Actions taken by the corporation	Relevant chapters of this report
	Ensure healthy lifestyle and promote well-being for all at all ages.	<ul style="list-style-type: none"><li>Provide medical benefits and allowances for employees and their families, strengthen the promotion, prevention, monitoring, and treatment of high-prevalence infectious diseases in some parts of Africa</li><li>Formulate and implement road safety-related policies, and establish environmental protection management measures for exhaust gas, sewage, and solid waste during the mining process to control pollution emissions from the source</li></ul>	Employee caring Safety and health protection Community co-construction
	Ensure inclusive and equitable quality education, and promote lifelong learning opportunities for all.	<ul style="list-style-type: none"><li>Formulate and implement internal policies related to employee training, conduct training content suitable for different fields, and establish self-learning awards for positions</li><li>Provide opportunities for outstanding local employees' children to study in China</li><li>Support local community education and provide educational funding for impoverished students</li></ul>	Talent training
	Ensure availability and sustainable management of water and sanitation for all.	<ul style="list-style-type: none"><li>Follow the principle of recycling, use wet copper smelting and pyrometallurgical copper smelting processes to recycle production waste water and evaporate after filtering slag</li><li>Office and domestic sewage are treated before emission to reduce pollution</li></ul>	Environment management system Development of green mine Pollutant emission control Resource conservation and utilization





	Promote sustained, inclusive, and sustainable economic growth, full and productive employment, and decent work for all.	<ul style="list-style-type: none"><li>• Eliminate the use of child labor and forced labor, sign labor contracts with employees to protect their legal rights</li><li>• Sign recognition agreements with multiple unions to ensure equal opportunities for employees</li><li>• Prioritize providing local communities with employment opportunities</li><li>• Develop and implement internal policies and emergency plans related to occupational health and safety</li><li>• Equip employees with personal protective equipment, enhance occupational safety training, conduct hazard monitoring and assessment, and purchase insurance for employees</li></ul>	Employment management Employee caring
	Build disaster-resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation.	<ul style="list-style-type: none"><li>• Develop and implement internal policies related to patent applications and intellectual property protection</li><li>• Increase research and innovation in mining processes and develop corresponding mining plans</li><li>• Encourage production and management personnel to provide constructive suggestions on quality control, high energy consumption, and other production aspects</li><li>• Assist local communities in improving infrastructure, including well drilling, community maintenance and renovation, emergency electrical repairs, and road restoration</li></ul>	Safety management system Safety and health protection Work safety and operation Technology R&D innovation
	Reduce income inequalities within and among countries.	<ul style="list-style-type: none"><li>• Continuously improve company management systems, comply with relevant regulatory requirements, and clarify corporate management details</li><li>• Adhere to the principles of equality, diversity, and anti-discrimination, treating employees of different nationalities, races, and genders equally</li><li>• Prioritize providing local communities with employment opportunities</li><li>• Develop and implement internal policies related to community donations</li></ul>	Compliance and internal control Construction of Board of Directors Integrity operation Community co-construction

	Ensure sustainable consumption and production patterns.	<ul style="list-style-type: none"><li>• Consider business sustainability in operations and disclose relevant information publicly</li><li>• Develop and implement internal policies related to environmental management</li><li>• Establish management measures for exhaust gases, sewage, solid waste, and the ecological environment to reduce the environmental impact of business operations</li><li>• Manage resources in business operations, offices, and daily life to improve comprehensive resource utilization in all aspects of the business</li><li>• Emphasize technological research and innovation, continuously improving mining processes</li></ul>	Product and service quality
	Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forest, combat desertification, and halt and reverse land degradation, and curb the loss of biodiversity.	<ul style="list-style-type: none"><li>• Monitor the water quality of surrounding rivers</li><li>• Conduct tree-planting activities</li></ul>	Environment management system Development of green mine Pollutant emission control Resource conservation and utilization
	Create peaceful and inclusive societies for sustainable development, provide access to justice for all, and build effective, accountable, and inclusive institutions at all levels.	<ul style="list-style-type: none"><li>• Develop and implement internal policies related to anti-corruption</li><li>• Provide employees with anti-corruption training</li><li>• Establish reporting and grievance mechanisms to report misconduct within the company</li></ul>	Compliance and internal control Community co-construction Integrity operation