



中国有色集团
CNMC



Continuing
the Mission with
Responsibility

2023

SUSTAINABILITY REPORT

About This Report

Reporting period

This report covers the period from January 1 to December 31, 2023. Part of the content can date back to previous years or be extended to 2024.

Report scope

This report covers the sustainability management practices and performance of China Nonferrous Metal Mining (Group) Co., Ltd. and its subsidiaries.

Preparation basis

This report is prepared in accordance with the *Guidelines to the Central State-owned Enterprises (SOEs) on Fulfilling Corporate Social Responsibilities with High Standards in the New Era* and *Guidelines to the State-owned Enterprises on Better Fulfilling Corporate Social Responsibilities* released by the State-owned Assets Supervision and Administration Commission of the State Council (SASAC); *GRI Sustainability Reporting Standards* by Global Sustainability Standards Board (GSSB); Ten Principles of the UN Global Compact; *Guidance on Social Responsibility (ISO 26000:2010)* issued by International Organization for Standardization; GB/T 36001 *Guidance on Social Responsibility Reporting*; The *Guidelines on Corporate Social Responsibility Reporting for Chinese Enterprises (CASS-ESG 5.0)* issued by Chinese Academy of Social Sciences; *Guidelines on Social Responsibility Management for China Industrial Enterprises (2015 Edition)* by China Federation of Industrial Economics, and other standards.

Release cycle

This annual report is the 13th sustainability report issued consecutively by China Nonferrous Metal Mining (Group) Co., Ltd.

Data sources

The data cited herein are all from official documents, statistical reports and official website of the China Nonferrous Metal Mining (Group) Co., Ltd. The currency for the data involved in the report is yuan by default, and other currencies are indicated under special circumstances.

References

For the sake of presentation, "CNMC", "the Company" or "we" in the report refer to China Nonferrous Metal Mining (Group) Co., Ltd.

Commitment

China Nonferrous Metal Mining (Group) Co., Ltd. promises that this report is free from any false records, misleading statements or significant omissions, and is responsible for the authenticity, accuracy and completeness of its content.

Access to report

You can download the electronic version of this report on the website of CNMC.

Website: <http://www.cnmc.com.cn/>

If you need the paper version of the report or have suggestions and comments on this report, please contact our Trade Union Office.

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Message from the Chairman

The year 2023 marked the 40th anniversary of CNMC. Throughout the year, we followed important instructions by President Xi Jinping, who provided guidance to CNMC on three distinct occasions, implemented major decisions and policies of the State Council as well as aligned our efforts with the stipulations of the State-owned Assets Supervision and Administration Commission of the State Council (SASAC). Focusing on the mission of being the main contributor to the security of national strategic resources and new non-ferrous metal materials, we embraced the principle of bold thinking, decisive action, and sustainable operation. By maintaining the certainty of our operations amidst an uncertain environment, we achieved remarkable results that surpassed market and industry standards and exceeded our own previous performance. This high-quality development marked a significant step forward and served as a proud testament to our 40 years of dedication and progress.

In 2023, we consistently advanced value creation, and became a more quality contributor to the security of national strategic resources and new non-ferrous metal materials.

Putting quality and efficiency first, we innovatively implemented the special action to enhance efficiency in output, technology, reform, management, policy, and investment. This resulted in a record business performance, and for the first time, the Company had been ranked among the A-level central state-owned enterprises in business performance assessment, meeting all assessment targets set by the SASAC. We comprehensively promoted the "6S" on-site management, advancing lean operations and management. At several companies of CNMC, key technical and economic indicators including those regarding the southeast ore mine of NFC Africa Mining PLC (NFC), copper smelting of the Yangxin Hongsheng project of CNMC Daye, and CNMC Orient, had reached international industry-leading levels. To optimize corporate governance, we advanced the building of a "strong headquarters." In this regard, we integrated financial and business systems, put the treasurer management system into fully online operation, and launched the building of a financial sharing center. Additionally, the online procurement amount via our e-commerce platform increased by 13% year-on-year, earning us the title of "Leading Enterprise in E-commerce Procurement and Operation Mode among Central State-owned Enterprises."

In 2023, we consistently advanced scientific and technological innovation, and became a more powerful contributor to the security of national strategic resources and new non-ferrous metal materials.

Adhering to the principle that science and technology is our primary productive force, we aligned our efforts with national strategic needs, advanced scientific and technological development and focused on original and cutting-edge scientific and technological research. This year, 6 projects of the open competition mechanism received contracts, and 13 of our products were included in various national catalogs of scientific and technological innovation achievements. With these accomplishments, we moved faster towards the building of a cradle for original science and technology and a leader in modern industrial chains. We advanced the building of national key laboratories and innovation research institutes, with four institutes having been established including those for superconducting materials. The cradles for original technology in the fields of "tantalum niobium" and "beryllium" were included in the "encouraged for attention" list. What's more, we established our presence in emerging industries of strategic significance as well as future industries, with an investment of RMB 558 million throughout the year. We are now one of the 22 central SOEs leaders in future industries.

In 2023, we consistently advanced reform, and became a more dynamic contributor to the security of national strategic resources and new non-ferrous metal materials.

Emphasizing the pursuit of benefits through reforms, we consolidated and advanced the achievements of our three-year action plan for SOE reform and launched the action of deepening SOE reform with a high-standard, with the annual completion rate of phased tasks standing at 100%. In addition, the effectiveness of our medium- and long-term incentive programs became increasingly evident as we formulated and implemented the "three no less than" salary mechanism. Subsidiaries that applied these incentives throughout the year generated a total profit of RMB 1.7 billion, marking a 157% increase year-on-year. What's more, we effectively leveraged the platform of flotation, adjusted and optimized our industrial structure and accelerated specialization integration. The Company was rated A in the assessment of the three-year action of central SOE reform by SASAC. In the sci-tech reform and "double hundred action", two of our enterprises were recognized as benchmark entities, while three were rated as excellent enterprises. Additionally, one more enterprise of CNMC joined the "sci-tech reform" initiative, and two more were added to the "double hundred action" initiative, bringing the total number of our enterprises in these programs to eight.

In 2023, we consistently built us into a global brand, and became a more reputable contributor to the security of national strategic resources and new non-ferrous metal materials.

Remaining committed to national resource security and diplomatic strategies, we actively participated in the Belt and Road Initiative and comprehensively carried out overseas resource expansion activities. We showcased our corporate brand by hosting China-Zambia investment promotion events, which received high praise from the President of Zambia and the high-level visiting delegation. We continuously enhanced our ESG governance capabilities by allocating a special fund of RMB 10 million to advance the initiative of "100 Enterprises and 1,000 Villages". Contributing to rural vitalization and assistance projects, we implemented a three-year paired assistance plan and established the Hulusi Cultural Tourism Industry Development Fund, with over 20% growth being achieved in five key indicators. Additionally, we launched the brand-leading initiative, developing a three-tier brand structure, with one of our overseas enterprises attaining the brand registration and recognition certificate for cathode copper at the London Metal Exchange (LME).

In 2023, we consistently advanced safety and environmental protection, and became a more confident contributor to the security of national strategic resources and new non-ferrous metal materials.

We upheld the principle that safety comes first and adopted a problem-oriented approach. We thoroughly implemented the "Safety Management Improvement Year" campaign and steadily advanced the three-year campaign for IT-empowered safety and environmental protection. We rigorously enforced accountability for production safety accidents by establishing an accountability investigation mechanism for major hazards and accidents. In addition, we achieved remarkable progress in our rectification efforts for issues identified in environmental protection inspections by the government agency. Specifically, we witnessed zero workplace safety accidents at major or above level and zero environmental emergencies and saw a steady decline in energy consumption and carbon emissions, with over RMB 660 million invested in safety and related projects. In alignment with the national strategy of carbon peaking and carbon neutrality, we developed and implemented the *Carbon Peak Action Plan* and the *Action Plan for Industrial Energy Efficiency Improvement*, leading to a customized safety and green development and transformation plan for each enterprise. Through these efforts, we got rid of 3,745 outdated, energy-intensive electromechanical devices, making our operations significantly greener.

With four decades of experience and a courageous pursuit of our dreams, we are ready to forge ahead and embark on new journeys. Under the guidance of the three important instructions made by President Xi to the Group, we will remain adamant and confident about our strategies. We will remain committed to implementing the "1+4" development strategy driven by scientific and technological innovation and strive for a more sustainable future through collaboration with our stakeholders. As the main contributor to the security of national strategic resources and new non-ferrous metal materials, we will expedite the building of a world-class enterprise and contribute more to high-quality development and the advancement of Chinese modernization.

Chairman of CNMC
Xi Zhengping

习近平



About CNMC

Company profile

Founded in 1983, China Nonferrous Metal Mining (Group) Co., Ltd. (CNMC) is a large central state-owned enterprise(SOE) managed by the SASAC. CNMC's main business includes the development of non-ferrous metal and mineral resources, new materials, construction projects, and related trade and services.

CNMC, the pioneer of China's non-ferrous metal companies to go global, are the company with the longest history in overseas copper development, the most complete industrial chain, and the largest number of projects. In particular, we have formed industrial clusters in central and southern Africa. In 2023, CNMC ranked 40th in the "Top 100 Chinese Multinational Companies", 89th in the "China's Top 500 Manufacturing Companies", and 185th in the "Top 500 Chinese Enterprises".

As of the end of 2023, CNMC develops business in more than 40 countries and regions, owning over 20 million tons of heavy non-ferrous metal resources in over 40 varieties. Under CNMC are 201 subsidiaries at all levels, including 103 overseas ones and five listed ones. Several symbolic mining development projects have been put into operation in Zambia, Mongolia, Myanmar, Thailand, the Democratic Republic of the Congo, and other countries and regions.

Corporate culture



Corporate spirit

Innovation, pioneering spirit, win-win cooperation, social contribution



Core values

Integrity first, pragmatic innovation, contributions to the country with resources, win-win cooperation



Mission

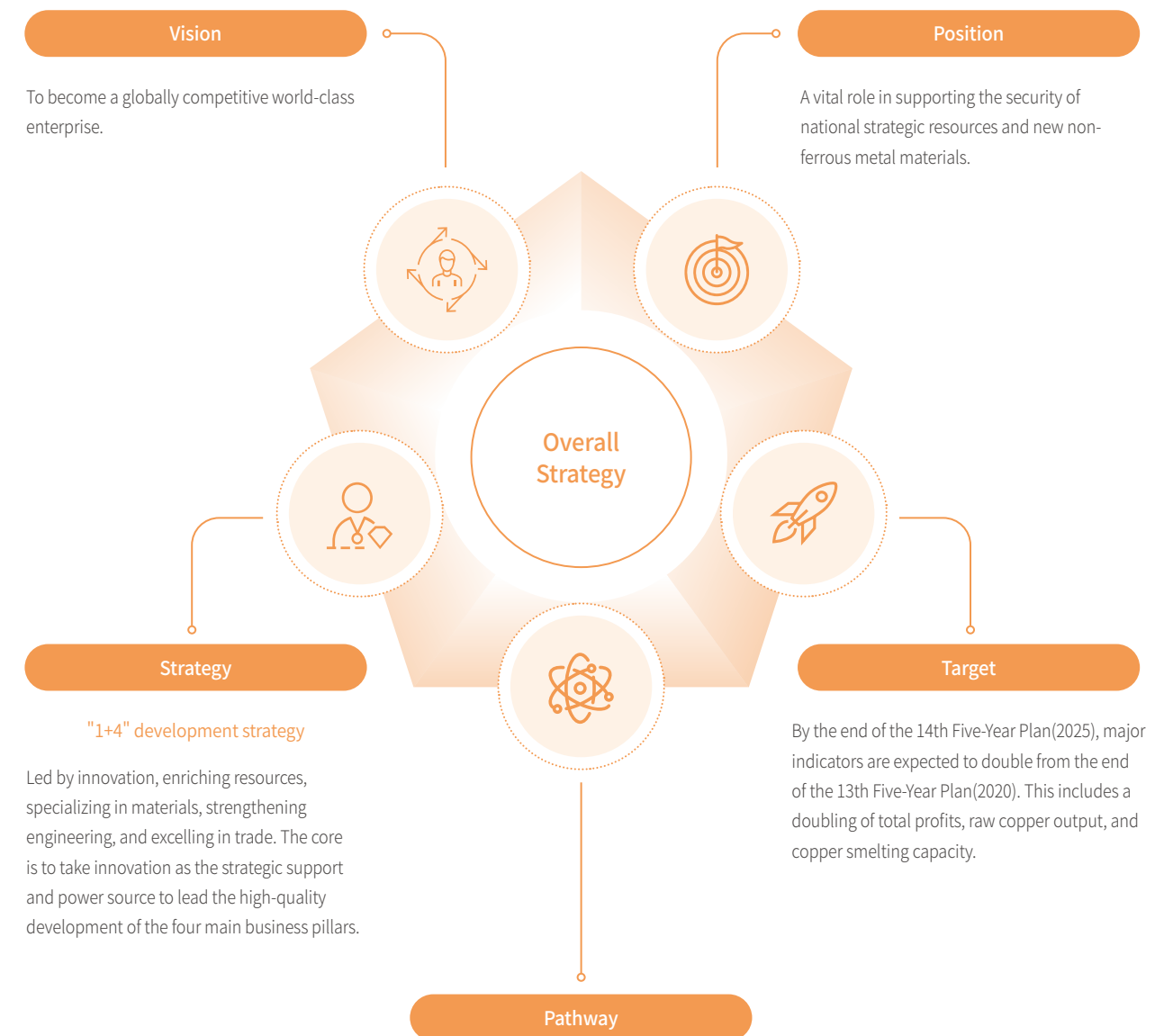
Contributing to the country with resources, pursuing innovation oriented development, giving back to society, and helping employees succeed



Business philosophy

Targeted regulations, efficient coordination

Group strategy

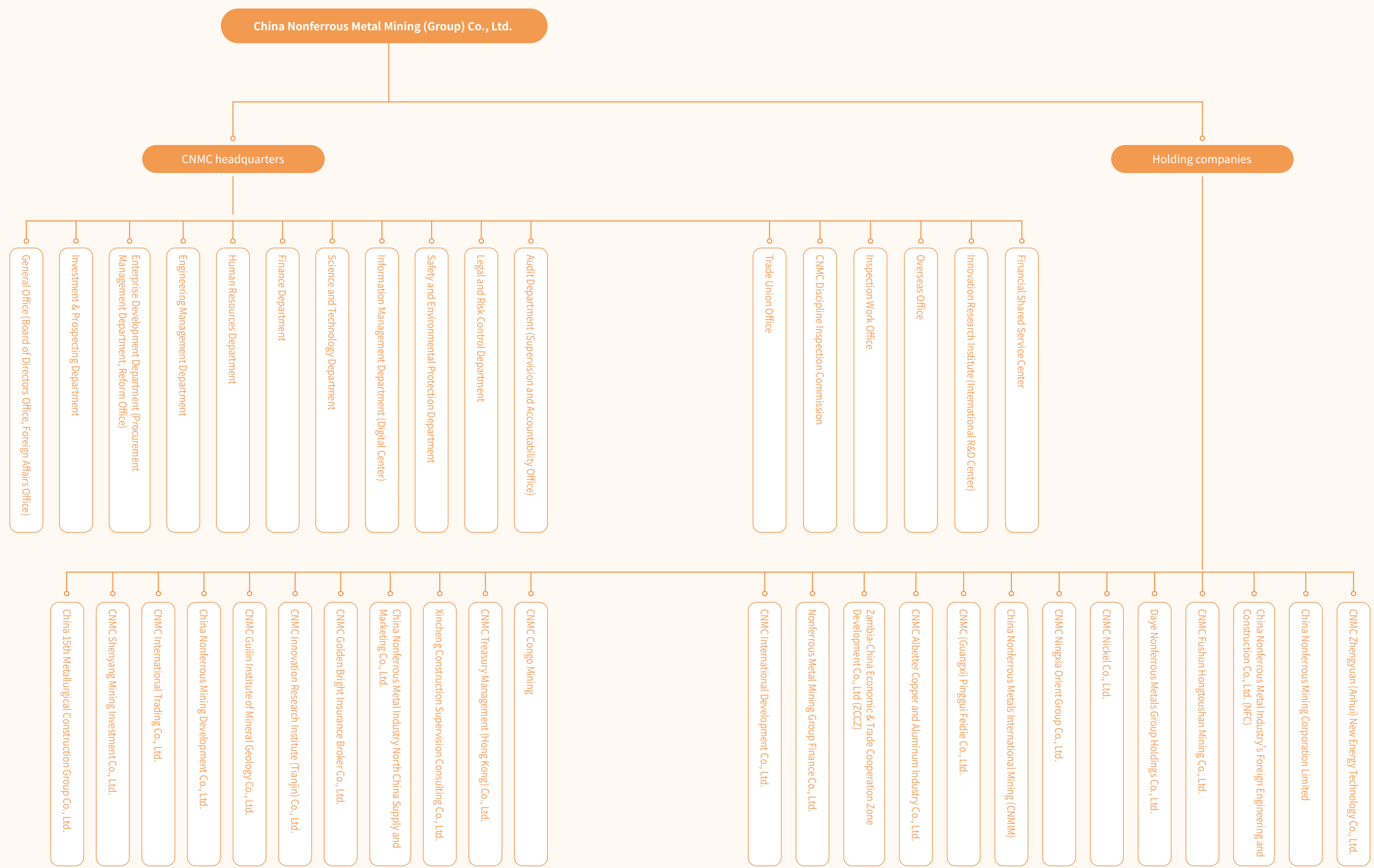


A "two-step" development strategy: management improvement (2021-2022) to consolidate the foundation and optimize existing business; leapfrog development (2023-2025) to enhance growth, expand business, and improve quality.

Four priorities: First is to implement key projects. Second is to carry out reform tasks. Third is to secure high-quality mineral resources. Fourth is to build a group of "little giant" high-tech enterprises.

Six enhancements: First, strengthen party building; second, strengthen basic management; third, strengthen resource guarantee; fourth, strengthen scientific and technological innovation; fifth, strengthen talent development; and sixth, strengthen capital operation.

Organizational structure



Figures in 2023



Honors
in 2023

40th
in the "Top 100 Chinese Multinational
Companies"

Top 10
in the Benchmarking Growth List of Central
State-owned Enterprises Capacity for
Brand-building

185th
in the "Top 500 Chinese Enterprises"

1st
in the multinational operation index
of central SOEs



Social performance

RMB 7.676 billion
Total tax payment

42,898
Total employees

27%
Proportion of female managers

RMB 7.6 million
The donations to Lianghe County
with paired assistance

RMB 1 million
Investment of the
assistance program

RMB 1.15 million
Donation fund channeled into
the assistance program

RMB 2 million
Investment fund channeled
into the assistance program

Approximately 663 million
Investment in safety production

1,100+
Emergency rescue drills for
enterprises at all levels

31,000+
Person-times participating
in the drill

600+
Sessions of various types of education and training on occupational
health conducted by enterprises at all levels

Approximately 38,000
Participants in the training



Environmental performance

RMB 2.153 billion
Total investment in
environmental protection

39
Units passed GB/T 24001/
ISO 14001 certification

91.6%
Completion rate of the rectification measures for issues
identified in the environmental protection inspections by the
government agency

19.84%
Proportion of clean energy
in the Company's energy
mix

**479,530 tons of
standard coal equivalent**
Total energy consumption

0.053 ton of standard coal equivalent / 10,000 yuan
Comprehensive energy consumption per 10,000 yuan of
output value (comparable price)

1.6992 million tons
Total amount of greenhouse gas emission

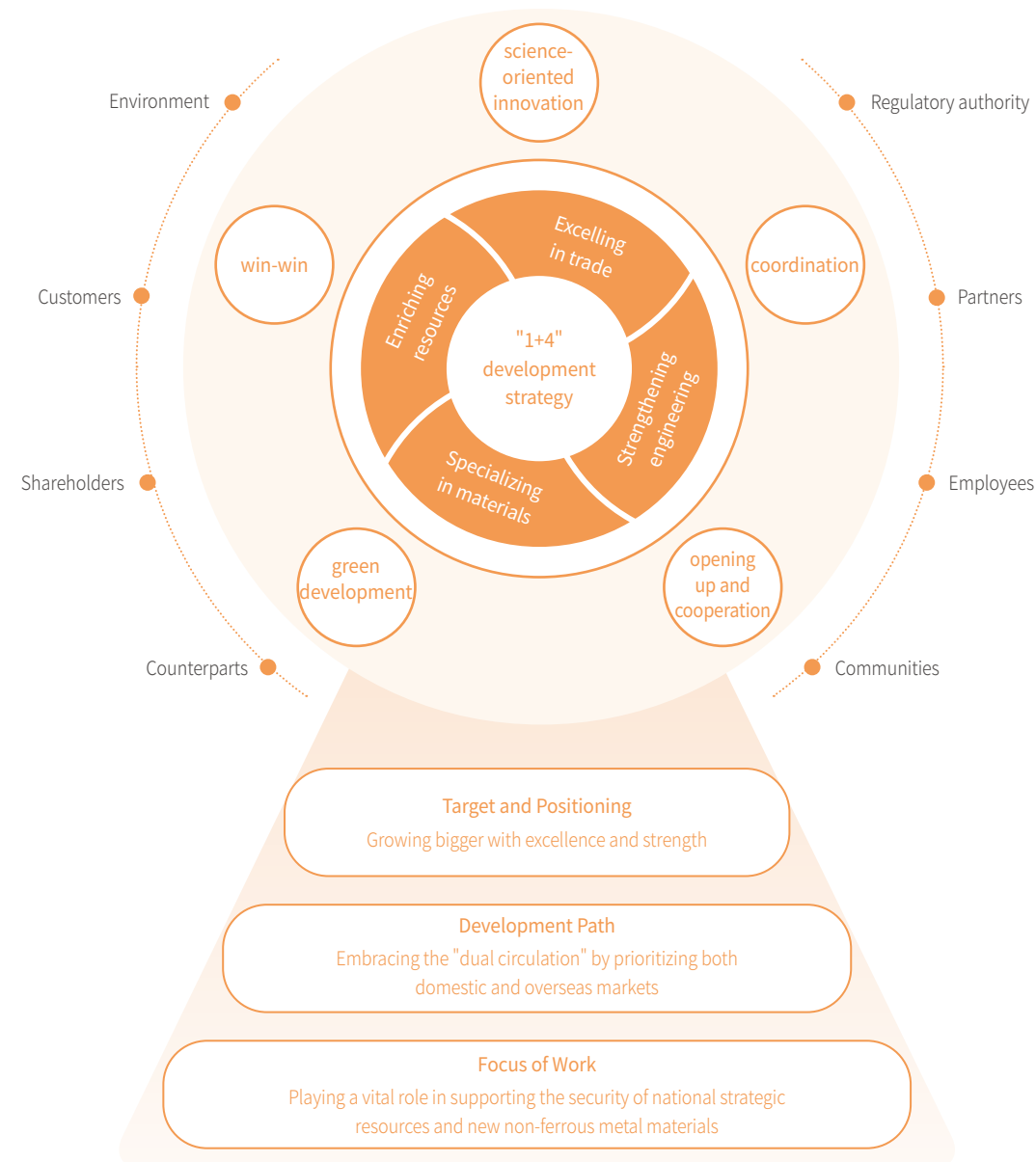
0.1955 tCO₂e per 10,000 yuan of output value (comparable price)
Greenhouse gas emission intensity

Approximately 134.24 hectares
Area of mine ecological restoration

Sustainability Management

CSR strategies and structure

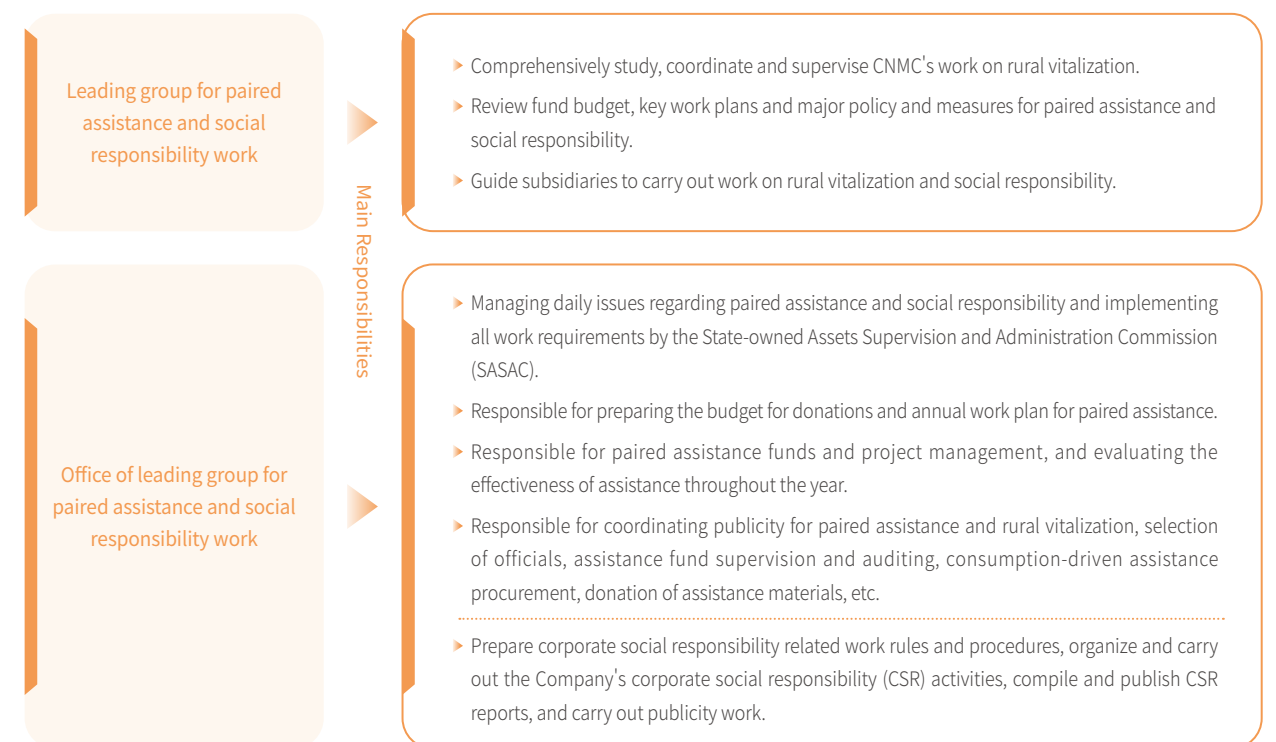
With the mission of "contributing to the country with resources, pursuing innovation-oriented development, giving back to society, and helping employees succeed", CNMC actively fulfills its social responsibilities, turns them into its business ethos, and integrates such principles into its strategic framework, production and operations, and corporate culture. The Company keeps enhancing its CSR management, explores ways to practice CSR principles, and fosters relevant communication, hoping to establish a robust management framework for sustainable development.



CSR management structure

CNMC attaches great importance to the work of social responsibilities. We have established a leading group for paired assistance and social responsibility work. Headed by the chairman, the leading group guides the work of the Company and subsidiaries on social responsibility.

The leading group sets up an office led by the Company's Trade Union Office, which is responsible for the daily management of issues concerning paired assistance and social responsibility. The office comprises staff from various departments at the headquarters. Guided by relevant work requirements, the staff is responsible for breaking down tasks, formulating corresponding action plans, and collectively driving the implementation of social responsibility initiatives.



CSR communication

CNMC is actively engaged in advancing CSR research and exchanges. We establish a mechanism for the regular disclosure of social responsibility information, present our CSR practice in the form of sustainability reports and guide subsidiaries to publish their own sustainability reports. With an enhanced quality of CSR information disclosure, we aim to facilitate effective communication with stakeholders and bolster our CSR brand image.



Scan for "Chinese Nonferrous Artisan" stories

We publish and promote the *CNMC Sustainability Report* through various forms including the electronic and printed versions and visual abstracts, with all reports written in Chinese, English, and French versions.

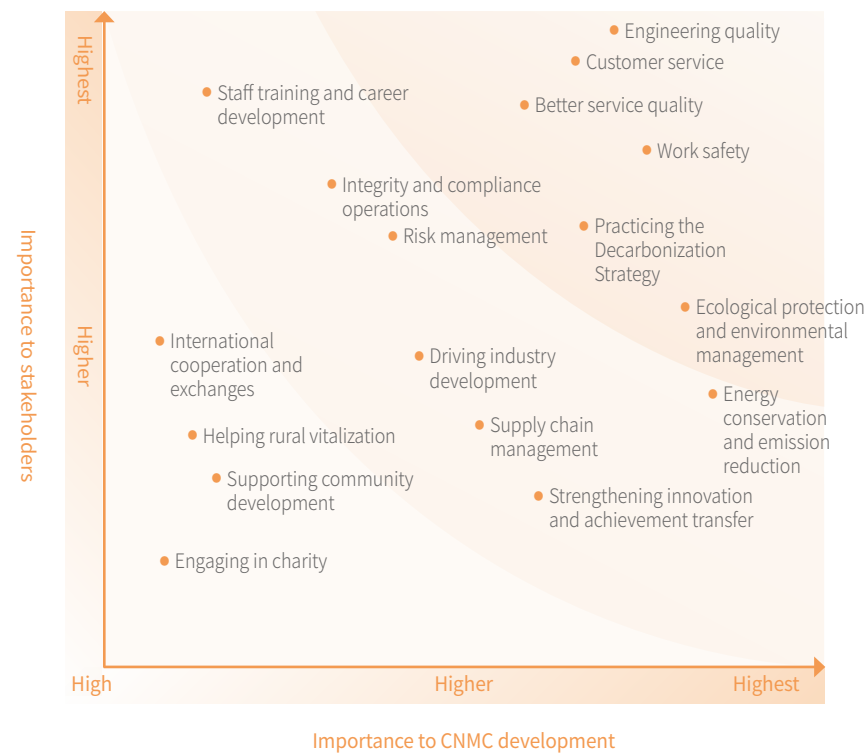
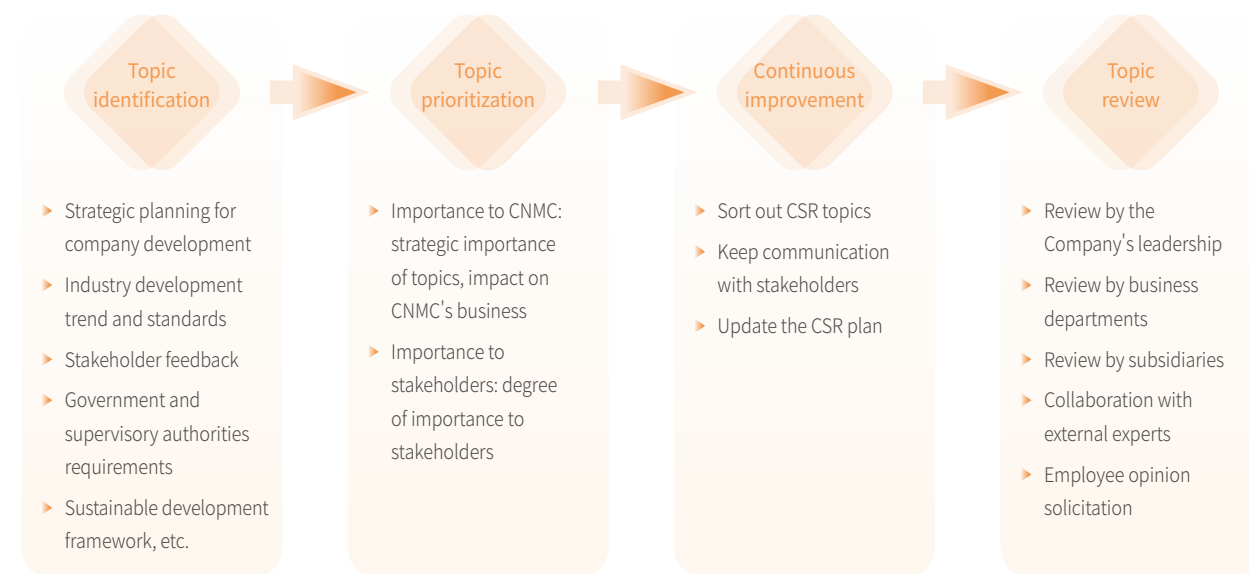
The Agence Congolaise de Presse (ACP) has been the publisher of the overseas version of *CNMC Sustainability Report* for two consecutive years, contributing to the promotion of the Company's sustainability report.

We launch the third session of "Chinese Nonferrous Artisan" award, selecting candidates and sharing their stories. We aim to inspire employees with the spirit of craftsmanship and mobilize them to take the initiative in making contributions in the new era. Across the Company, a culture that embraces practicing CSR initiatives has been fostered.



Materiality analysis

CNMC remains committed to identifying CSR topics and evaluating and selecting topics according to their significance. We analyze materiality topics by following the process of topic identification, topic prioritization, continuous improvement, and topic review. Through this process, we manage to confirm 17 key topics that are of great importance to CNMC development and are of utmost concern to stakeholders, leading to the formation of the Company's social responsibility development matrix. Based on the matrix, we carry out targeted management and actions to effectively meet stakeholder expectations.



Stakeholder communication

CNMC keeps broadening daily and special communication channels with various stakeholders. We ensure stakeholders' right to know, to participate and to supervise and foster a deep understanding of their needs and expectations. We keep improving our CSR management and practices, aiming to optimize the overall value of stakeholders.

Stakeholders	Communication mechanism	Stakeholder appeals	Corporate responsibility practice
SASAC	<ul style="list-style-type: none"> Work report Report submission 	<ul style="list-style-type: none"> Return on revenue Social responsibility 	<ul style="list-style-type: none"> Complete performance appraisal Strengthen risk management Deepen enterprise reform Accept stationed supervision
Shareholders and investors	<ul style="list-style-type: none"> Board of Directors Daily communication 	<ul style="list-style-type: none"> Continuous returns Protection of rights and interests Open and transparent information 	<ul style="list-style-type: none"> Improve business performance Improve corporate governance Protect shareholders' rights and interests Improve information disclosure
Government	<ul style="list-style-type: none"> Policy guidelines Special meeting report 	<ul style="list-style-type: none"> Response to national strategies Legal compliant operation Paying taxes according to law 	<ul style="list-style-type: none"> Serve the national strategy Adhere to steady operation Comply with laws and regulations
Owners and customers	<ul style="list-style-type: none"> Customer service hotline Satisfaction survey Visit Company website 	<ul style="list-style-type: none"> Strict contract fulfillment Good quality Providing satisfactory service 	<ul style="list-style-type: none"> Ensure the contract fulfillment rate and delivery pass rate Strengthen quality management and technological innovation Improve the service system
Employees	<ul style="list-style-type: none"> Workers' Congress Daily communication Corporate cultural activities 	<ul style="list-style-type: none"> Reasonable compensation and benefits Safe working environment Career development and training Employee care 	<ul style="list-style-type: none"> Protect legitimate rights and interests Ensure occupational health Improve the training and promotion system Provide assistance to needy staff
Communities and the public	<ul style="list-style-type: none"> Community exchanges and visits Community-based charity activities 	<ul style="list-style-type: none"> Engagement in community development Paying attention to special groups 	<ul style="list-style-type: none"> Participate in community charity cause Promote localized procurement and employment Carry out charitable activities
Environment	<ul style="list-style-type: none"> Insight into domestic and international trends Mastering advanced technology Raising environmental awareness 	<ul style="list-style-type: none"> Compliance with environmental regulations Reduction of pollution emissions Environment protection 	<ul style="list-style-type: none"> Energy conservation, emission reduction and carbon reduction Increase investment in environmental protection Increase energy efficiency Build green projects
Industry	<ul style="list-style-type: none"> Joining in industry associations Participation in the formulation of industry standards Business exchange and cooperation 	<ul style="list-style-type: none"> Fair competition Mutual benefit and win-win results Promoting industry progress 	<ul style="list-style-type: none"> Participate in the formulation of industry standards Give full play to the advantages of the whole industrial chain to provide high-quality services for the industry Maintain a fair and orderly competitive environment for the industry

Feature One

Shouldering Responsibility of Building World-Class Enterprise after Forty Years of Development

The year 2023 marked the 40th anniversary of the establishment of CNMC, and it was also crucial for the ongoing 14th Five-Year Plan. Over the past 40 years, the Company has shifted its focus from just one business pillar onto four main business pillars, become stronger and more competitive instead of merely pursuing company size, and played a vital role in safeguarding the security of national strategic resources and new nonferrous metal materials. We are enhancing our core competitiveness and functions to better play the role as a state-owned enterprise in the building of a stronger China and in the rejuvenation of the Chinese nation.



Start-up Stage (1983-1997)

We launched a number of general contracting projects to form a strong system integration capability and cultivate a professional talent team for the development and operation of overseas projects.

Transformation Stage (1998-2005)

We transformed from focusing on the single business of project construction to the two main businesses of both mineral resource development and project construction, which laid a solid foundation and broad prospect for development.

Rapid Development Stage (2006-2019)

We set mineral resource development, construction projects and related trade and services as our three main businesses, forming an initial strategic structure that gave equal stress on both domestic and international operations.

CNMC's 40-year development

High-quality Development Stage (2020-present)

We have established the "1+4" development pattern and achieved significant leaps in the profits and the preservation and appreciation of CNMC's state-owned capital, contributing to the solid foundation for high-quality development.

Business Highlights

Always believing that only profitable development is quality development over the past 40 years, we have taken special actions such as "doubling profits", "achieving profits of state-owned capital", "enhancing efficiency in output, technology, reform, management, policy, and investment" and "controlling accounts receivables and inventories while decreasing the high bank deposits and loans", so as to withstand significant declines in copper, cobalt, nickel, and zinc prices, as well as sharp increases in political risks, amongst which we have made steady progress and achieved breakthroughs while realizing the growth of total profits, net profits, and net profits attributable to the parent throughout 2023.

In 2023

- We were rated Grade A in the 2022 annual performance assessment of central SOEs by the SASAC of the State Council.
- We ranked **second** in the return on equity (ROE) among all central SOEs.
- We achieved coordinated growth in key indicators such as total profit and net profit, and completed the targets set by the 14th Five-Year Plan for major economic indicators **two years ahead of schedule**.
- In the mid-term adjustment of the 14th Five-Year Plan, we optimized the targets for the five profit-related indicators, such as the net profit growth rate, to be way higher than those set by the SASAC.

CNMC-featured value creation

Value creation is a key measure for CNMC to accelerate its building of a world-class enterprise. We have established a leading group for value creation, and set up a systematic and in-depth organizational structure led by the Group's top leaders. The *Implementation Plan for Benchmarking World-Class Enterprise in Value Creation* has been issued with 27 tasks in 6 fields specified and 118 measures formulated. Highly recognized by the SASAC of the State Council, the plan aims to facilitate value creation throughout the Group and guide enterprises at each level to benchmark against industry leaders and optimize core and key indicators to form CNMC-featured value creation actions.

Each subsidiary has set up its own leading group and formulated an action list based on the Company's value creation action plan. Following the overall guidelines of "focusing on six major areas, enhancing six capabilities, and achieving six major goals", they have made positive results in value creation through bold exploration and innovation.

In 2023

Ningxia Orient Tantalum Industry Co., Ltd. was selected as a "World-Class Professional and Leading Demonstration Enterprise", and its implementation plan for valuation creation was rated **A+** by the SASAC of the State Council.



▲ In November 2023, CNMC held the meeting for October business operation analysis and the promotion of value creation benchmarking world-class enterprises, to further deploy its value creation actions.

Contributions to the country with resources

It is CNMC's mission to contribute to the country with resources. Over the past 40 years, while focusing on improving our core competitiveness, we have been committed to transforming the Company from a supplier of nonferrous raw materials to a producer of key and strategic nonferrous new materials, exploring a way of contributing to the country with resources that involves finding resources through mining, exchanging resources through projects, competing for resources through trade, promoting resources through technology, and saving resources through deep processing. In 2023, the Company's four main businesses developed in a coordinated manner, as its overseas heavy nonferrous metal resources exceeded 20 million tons and its smelting technology reached a globally advanced level with an industry-leading smelting capacity.

- The annual resource reserve report was completed, with the Company's equity resources included for the first time.
- 10 subsidiaries were organized to implement 16 exploration projects with an investment of RMB 52 million. 700,000 tons of new heavy nonferrous metal resources were identified.
- Systematic research was carried out on 8 mines and 2 smelters before the "Mine Manager" pilot program was completed to comprehensively strengthen mines exploration.

- The copper processing technology of CNMC's Huangshi Shengxiang Copper Co., Ltd. has been significantly upgraded, leading to a substantial increase in A+ grade and A grade production rates and a huge rise in output as well.
- CNMC Orient's technology of controlling impurity elements (iron, nickel, and chromium) in tantalum powder has reached a world-leading level, and 16 tons of tantalum powder have been sold.
- The 60,000-ton lithium battery cathode material precursor project of CNMC Zhengyuan (Anhui) New Energy Technology Co., Ltd. is in smooth progress. It will help in extending CNMC's cobalt industry chain and transforming resources into economic benefits after its completion.



- The project construction sector has signed new contracts worth RMB 18.911 billion.
- Projects of NFC and 15MCC have won two National Quality Project Awards.
- To promote qualification management, CNMC Xincheng has obtained the comprehensive qualification of project supervision.

- To accelerate the transformation of trade business, we have carried out special actions to crack down upon false trade and cleared all risk exposures of financing trade.
- We have returned 282,000 tons of nonferrous metal equity products, and we ranked among the top three in China in terms of the international trade volume of crude copper.

CNMC's future layout

Strategic emerging industries and future-oriented industries are the main origins of new quality productive forces. As central SOEs serve as a key engine for the development of new quality productive forces, CNMC shoulders the responsibility to create new quality productive forces through technological innovation and coordinate works related to strategic emerging industries and future-oriented industries. We have seized opportunities for the development of strategic emerging industries and future-oriented industries in fields of mines exploration and development, superconducting materials, artificial crystals, and tantalum-niobium-beryllium rare metal materials, etc., in an effort to make full preparations for the new round of sci-tech revolutions and industrial transformations, and contribute to the building of a stronger China and to the rejuvenation of the Chinese nation with concrete actions.

- A special working group for strategic emerging industries led by the Chairman has been established, with its office set in the Science and Technology Department. Each subsidiary has also set up a special team to promote the work and clarify responsibilities for each level, so as to boost the development of strategic emerging industries and future-oriented industries in an effective and orderly manner.

Improving organizational structure

Setting goals

- Short-term goals for strategic emerging industries and future-oriented industries have been set, that is, by 2025, the proportion of the Group's revenue from these industries is going to increase by 9% compared with that in 2022.
- Detailed medium-and long-term goals have been formulated respectively for the 2 directions of strategic emerging industries and 4 directions of future-oriented industries undertaken by the Company, with the hope of achieving new breakthroughs in these industries by 2030.

In September 2023, the Company held a meeting to announce its entry into strategic emerging industries and future-oriented industries, and relevant subsidiaries signed the letter of responsibility for future-oriented industries.



Feature Two

Together for A Prosperous Future Since the Entry into Africa Twenty-Five Years Ago

Over the past 25 years since its entry into the African market, CNMC has practiced the Belt and Road Initiative, implemented major strategic plans such as China-Africa cooperation, and set an exemplary role of fulfilling responsibilities. We have worked with all parties to form a community with common interests and responsibilities as well as a shared future, injecting impetus and vitality for the economic and social development of the countries where our projects are located, while establishing a good image for Chinese enterprises there.



Value creation

Focusing on our core functions and main businesses, we have set a number of "earliest" and "first" records for Chinese enterprises and the nonferrous industry in south-central Africa, and a copper-dominated whole-industry-chain resource exploitation model has been built, making us the first Chinese enterprise to enter Africa with the largest number of subsidiaries and projects and the most successful operation in Africa. Promoting industrial upgrading and technical cooperation, we contribute to the development of the Belt and Road and the "China-Africa community with a shared future".

In July 2023, CNMC's external directors visited the Group's subsidiaries in Zambia and the Democratic Republic of the Congo. After field inspection of the production, management, support and IT application of relevant enterprises, they came to the conclusion that the Group's integrated development of "industry chain + technology chain + security chain" in Africa had made positive contributions to the Company's business performance and high-quality development, as well as to the economic and social development of these countries.



The Zambia-China Economic and Trade Cooperation Zone attracts investments exceeding USD 2.5 billion



By the end of 2023, the Zambia-China Economic and Trade Cooperation Zone (ZCCZ), China's first overseas economic and trade cooperation zone in Africa, has attracted nearly a hundred enterprises to settle in, with investments exceeding USD 2.5 billion. It has paid more than USD 800 million taxes to the host country, and created about 10,000 local job opportunities, continuously propelling the economic and trade cooperation between the two sides to new heights. In 2023, the zone has added investment in logistics and transportation, power supply, customs bonding and clearance, medical services, and plant leasing, etc., with the aim of expanding and enhancing its service functions and values to help in Africa's industrialization and economic diversification.



▲ 330KV substation in ZCCZ



▲ 24,000 m² bonded area in ZCCZ

Talent cultivation

Catering to the economic and social development of African countries as well as the needs of enterprises for business operation, we have enhanced the occupational quality and skills of local employees and trained a batch of high-quality technical talents locally through various ways such as building vocational schools in cooperation with African countries, providing internal skills training, and inviting African youth to China for further study.

Kambove Mining SAS's youth vocational training program



In July 2023, Kambove Mining SAS initiated the youth vocational training program, which was one out of the 12 programs stipulated in the social responsibility agreement signed with the local community, in order to help more local young people improve their professional skills for more job opportunities. Covering skills training in English, driving, human resources, tailoring, and IT, etc., the program lasted for 3 months and benefited around 200 young people, and it was handed over in September 2023. The training program has effectively helped local young people improve their skills and has also contributed to the cultivation of local talents in Africa, which is a land full of hope.



▲ Photo of Kambove Mining SAS handing over the youth vocational training program, with excellent graduates of the first session and social welfare volunteers.

"We are grateful to Chambishi Copper Smelter Limited for letting them to participate in vocational training and exchange activities. That is a dream come true for them, and it has greatly inspired them. They said they would work even harder and make greater contributions to the company."

shared by local employees in "Zambian Employees' Trip to China" Sharing Session

In November 2023, Chambishi Copper Smelter Limited held a "Zambian Employees' Trip to China" Sharing Session, where 5 outstanding Zambian employees represented by Mathews from the smelting plant and Brian from the sulfuric acid plant etc. shared their experiences and inspirations of participating in learning, training, and skills competitions in China.



Cultural exchange and mutual trust

Integrating ourselves into local cultures, we fully respect local laws, cultures, and customs while continuously deepening China-Africa cultural exchanges and fusions. We strive to be a practitioner and a promoter of win-win cooperation between China and Africa, and to become a bridge and a bond for spreading China-Africa friendship.

Growing popularity of the Chinese language in Somidez Mining

Since its opening in Somidez Mining, the Chinese Workshop has trained local Chinese language teachers and "language + vocational skills" teachers through courses such as Chinese language, Chinese and Congolese culture and vocational skills. Besides, it has also carried out customized training according to the needs of the enterprise and provided guidance for trainees in internship and employment, which was very popular among Congolese employees in Somidez Mining.

The Chinese Workshop in Somidez Mining is a special classroom featuring Chinese language + vocational skills, which is, with the support of CNMC, set up by the Ministry of Education's Center for Language Education and Cooperation and Zibo Vocational Institute. It serves as a platform for Chinese-Congolese language and culture exchange, vocational skills training and multicultural learning.



▲ Employees of Somidez Mining learning Chinese

Open day event held to celebrate Children's Day

In May 2023, China Nonferrous Mining Hong Kong Holdings Limited held an open day event at its subsidiary, Huaxin Hydrometallurgy Co., Ltd., to invite the children of its Congolese employees to visit their fathers' workplace. A series of wonderful activities brought everyone to learn the team spirit, corporate atmosphere and culture of China Nonferrous Mining Hong Kong Holdings Limited, and further enhanced communication between the company and the families of Congolese employees.



▲ Congolese employees and their kids celebrating Children's Day together at the company

Community engagement

Combining the fulfillment of social responsibility with China-Africa poverty reduction and development cooperation, we engage ourselves in the initiative of "100 Enterprises and 1,000 Villages" and carry out programs that are sustainable and helpful for improving people's livelihood at the grassroots level in Africa, so as to better benefit the African people and contribute to the building of a China-Africa community with a shared future in the new era.



▲ Lualaba Copper Smelter delivers a drinking water improvement project to three villages around the mining area, to provide community water sources and domestic water supply, and improve the quality of life for local residents as well.



▲ CNMC Luanshya Copper Mines PLC has donated agricultural production materials to local farmers in Luanshya for 14 consecutive years, to help impoverished residents improve their production conditions.



▲ CNMC donates a clinic to the BWEENGWA community in Southern Province. With an area of 285.58 m², the clinic will benefit around 1,000 households in surrounding villages after its completion.



▲ CNMC donated a central station to the city of Likasi in the Democratic Republic of the Congo, which revitalizes the city of Likasi and benefits approximately 600,000 local residents.



▲ Somidez Mining hands over the Masumbu School donated by it to the Lualaba Provincial Government, so that local school-age children can have access to school and books.



▲ Kambove Mining SAS donates 15 million Congolese francs and 50 bags of cement, worth about USD 8,000 in total, to JANGWA Elementary School in Kambove Township.



01

Seeking Development for a Solid Business Foundation

Under the guidance of Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era and the three important instructions made by President Xi to the Group, CNMC fully implements the State Council's decisions and the SASAC's work requirements. The Group continuously deepens reform, transformation and upgrading, while adhering to the safe development concept. We also strengthen the implementation and supervision of decision-making, so as to build a firm foundation for the long-term development of the enterprise.

663 million
Safety production investment



Enhancing Governance Efficiency

Taking self-construction as a fundamental and crucial task, CNMC continuously optimizes its governance system and enhances governance efficiency. We always stick to compliant operation in corporate governance and improve the ability of risk prevention and control, as a way to effectively prevent and resolve risks, and boost the high-quality development of the enterprise.

Optimizing governance system

We keep improving the operation of board of directors to make it more standardized and effective, enhance the duty performance capability of directors and improve group-level governance. We also promote the construction of the board of directors for subsidiaries and improve corporate governance mechanisms, in an effort to accelerate the building of a world-class enterprise.

Quality of board operations

8 board meetings were held, 38 proposals were deliberated and approved, 16 special committee meetings were organized, and 5 communication meetings with external directors were held; the annual work report of the board of directors was prepared; the rules of procedure for special committees and the list of authorities and scope of authorization of board of directors were revised; the special reporting mechanism and communication meeting reporting mechanism were implemented.

External directors support the scientific decision-making of the board through mechanisms such as special committees, communication meetings, and discussing meetings. The Chairman and the convener of external directors held 6 communication meetings to fully discuss on major decision-making matters. External directors visited 23 subsidiaries at various levels in Zambia, the Democratic Republic of the Congo, as well as in Hubei, Chifeng, and Ningxia etc. They were clear about the progress of major decisions and provided suggestions for the development of the Company.

The important role of external directors

Board of directors for subsidiaries

A plan was formulated to strengthen the building of subsidiaries' board of directors and fulfill their functions at each level; evaluations on the board of directors of subsidiaries were carried out and guidance and supervision were conducted for rectification; the compliance management of subsidiaries' shareholder meetings and board of directors was enhanced and assessment was conducted on dispatched full-time directors; the evaluation and rectification of subsidiaries' board of directors were further improved, with over 60% of subsidiaries fulfilling the functions of their board of directors.

We actively participated in the special research organized by the SASAC of the State Council and we carried out practices and explorations to strengthen corporate governance and improve the modern SOE system with Chinese characteristics; we also enhanced exchanges of governance experiences with other central SOEs, and we participated in special meetings and video conferences for central SOE secretaries.

Participation in research and exchanges



Promoting compliant operation

To further enhance efficiency in output, technology, reform, management, policy, and investment, we have established and improved the compliance management system, increased efforts in compliance management, and optimized the internal control management process, so as to promote compliant and law-based operation.

Establishing compliance management system

We have established a business compliance team (the first line of defense for compliance management) and a legal compliance team (the second line of defense), which cover the Group headquarters, 26 second-level enterprises, 45 third-level enterprises, and 11 fourth-level enterprises.

Improving compliance management system

While implementing the requirements of "classified management", we have established a centralized management mechanism of "double reviews", and optimized 12 business-related systems such as the governance system of the Group's headquarters. Efforts have also been made to facilitate the development of compliance management systems for subsidiaries.

Strengthening risk management

Committed to preventing and resolving major risks, we have comprehensively strengthened risk management by deepening risk prevention and control, establishing sound institutional mechanisms, optimizing risk management processes, enhancing internal control system, and deepening supervision on compliance management.

Risk management

- We enhanced financial risk control, reviewed the comprehensive budget plan, and responded rapidly to unexpected risk events.
- We strictly controlled trade business, reviewed management measures for commodity derivative business, and enhanced daily supervision and inspection.
- We identified hidden hazards in overseas institutions and inspected the work of security protection.

Risk prevention and resolution

- We prepared the *Work Report on the Internal Control System 2022* and clarified the outline for internal control in 2023; we updated the *Risk Control and Compliance Manual* to standardize the procedure of risk prevention and control.
- We strengthened the development of the internal control system, and organized subsidiaries to formulate systems and standards for key and high-risk businesses.
- We promoted rectification based on the feedback from the environmental protection inspectors, identified and resolved environmental risks, and further implemented the special campaign for safety production.

Risk supervision

- We supervised risks of key businesses and projects, and carried out rectifications according to audit results.
- We fully played to the role of the Audit and Risk Special Committee in supervision and risk prevention.
- We strengthened professional supervision from legal, finance, and audit departments.

Deepening Reform

CNMC fully deepens reform, improves its core competitiveness and functions, and enhances its value creation capabilities, striving to accelerate the building of a world-class enterprise.

By the end of 2023

Annual reform tasks completed

100%

Tasks completed over the last three years

39.71%



▲ CNMC's three-year action plan for SOE reform summary and further reform deployment conference



▲ Meeting hosted by Xi Zhengping, Chairman of CNMC, on the reform at all-level subsidiaries of CNMC Orient

Fulfillment of responsibility

We have established work systems such as systematic planning and record keeping; we regularly reviewed progress, discussed on major issues, and promoted the implementation of plans, with a comprehensive supervision mechanism.

All subsidiaries have completed their own board of directors dominated by external directors; to deepen the building of their board of directors, full-time directors have been appointed to subsidiaries to promote the exercise of the power of board of directors.

Modern corporate governance

Structural adjustment

We continued to remove a group of enterprises outside of our main businesses or without any strengths, closed overseas enterprises with no business and withdrew from ineffective shareholding enterprises. We have built the world-leading high-purity copper cathode project, started the construction of the lithium battery cathode material project, expanded the production of tantalum-niobium, superconducting, and copper foil industries, and accelerated the building of digital mines.

We implemented the "1+4" development strategy, established an innovation institute, launched the "6+1" initiatives for technological innovation, and led the implementation of 15 "Open Competition" projects; enterprises including Northwest Rare Metal Materials Research Institute Ningxia Co., Ltd., Guilin Tebon Superhard Material Co., Ltd., and Tieling Flotation Reagent Co., Ltd. were awarded the national-level specialized and innovative "little giant" enterprise.

Technological innovation

Market-oriented transformation

We explored the "three no less than" salary mechanism and promoted it in 90 basic-level units of 23 eligible subsidiaries, to fully motivate operation team members and key talents, and unleash the vitality for technological innovation.

Putting Safety First

To support six efficiency improvements and high-quality development, CNMC holds a firm belief that work safety and environmental protection are of overriding importance, and the Group has implemented key tasks such as the "Safety Management Improvement Year" campaign, special inspection and rectification of major risks in 2023, the transformation of smart mines, and the "IT-empowered Safety and Environmental Protection" campaign, striving to build a more standardized and efficient work safety management pattern.

Improving safety management system

We are working to improve the work safety management system and strengthen the work safety-based development philosophy. We have further optimized the work safety systems, clarified the main responsibilities for work safety, and launched the "Safety Management Improvement Year" campaign, in an effort to enhance our safety awareness, basic capabilities, intrinsic safety, responsibility fulfillment, the resolution of hidden risks and the building of mechanisms.

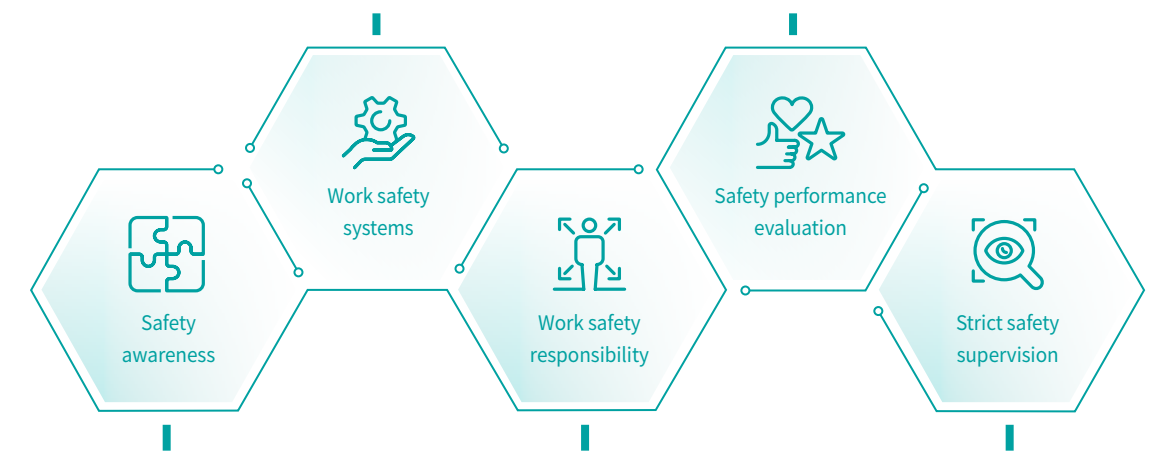
In 2023

0

Work safety accidents of major or above degrees

3 regulations and systems, namely the *Work safety Management Measures*, the *Management Measures for Work Safety Expenditure*, and the *Management Measures for Work Safety of Outsourcing Projects of Mines*, were revised and issued. Over 1,000 work safety regulations and systems as well as over 1,600 safe operation rules were formulated and revised by enterprises at each level.

The first ever performance evaluation of safety directors was conducted and they carried out annual report on their work to learn from lessons, reflect on problems and promote work safety accountability.



8 in-depth special deployment meetings were held to thoroughly study and implement the key instructions of President Xi on work safety. Nearly 40 inspections and visits to enterprises were carried out.

Safety and environmental protection responsibility letters were signed with 22 production enterprises. The work safety responsibility system for all staff was improved and over 6,000 copies of responsibility lists were established. A "three-level safety guarantee" system was formulated covering the main persons, technical persons, and operational persons responsible for major hazard sources.

The members of the safety inspection team were changed and regular domestic inspection tours were launched. The work safety of overseas enterprise was highlighted, by conducting inspections and strictly implementing the approval system for safety risks of overseas projects.



▲ CNMC's safety and environmental protection deployment for 2023 and three-year action plan for SOE reform summary conference

Enhancing safety risk prevention

Much effort has been devoted to optimizing the operation of the "dual prevention system", identifying and updating safety risk sources, and improving the "four-color distribution map of safety risks, safety risk notices, and lists of risk management responsibilities, risk control measures, and emergency response measures". We have standardized safety management processes, strictly carried out safety hazard inspections, and taken actions to prevent potential production risks, so as to ensure work safety.

Hazards reporting incentives

Throughout 2023, 418 general accident hazards and 60 violations of laws were reported and confirmed by subsidiaries, with incentives given to encourage all staff to value work safety.

Emphasis on high-risk areas

The *Manual for Inspection and Governance of Hazards in Underground Mines* was issued to specify the content, methods, and standards of the entire process of hazard inspection.

Standardized safety management

The *Ten Rules for Safety Operations*, the *Ten Measures to Further Strengthen the Safety Management of Hot Work* and the *Ten Measures to Further Strengthen the Safety Management of Confined Space Work* were formulated to further standardize whole-process safety management.

Regular safety reporting

Regular inspection and reporting mechanisms for special time periods, major risk sources, and emergency duty, etc. were implemented to ensure safety and stability.

Raising work safety awareness

We actively conduct work safety training and education, carry out emergency rescue drills, and enhance the ideas of "zero accidents, zero casualties" and that all accidents are preventable, creating an environment for all staff to pay attention to safety and take proactive actions to ensure safety.

Diverse "Work Safety Month" promotion and education activities with the theme of "Developing Safety Awareness and Emergency Skills Among All Staff" (Everyone Must be Aware of Security, Everyone Must Act)

Over 300 activities, including themed lectures by main responsible persons, "Work Safety Discussion", "Pre-Shift Meeting", and "Case-Based Law Study" were carried out to learn and implement President Xi's important instructions on work safety, with over 23,000 participants in total.

For special inspection and rectification actions, over 260 themed promotion and training activities were organized on topics such as "Safety Commitment by Main Responsible Persons", "Hot Work Risks" and "Comprehensive Inspection of Outsourcing and Leasing".

Domestic and overseas subsidiaries simultaneously held the launch ceremony of Work Safety Month, organized 288 safety promotion and consultation activities, and encouraged 48,000 participants to join the online knowledge competition.



▲ CNMC's work safety training course



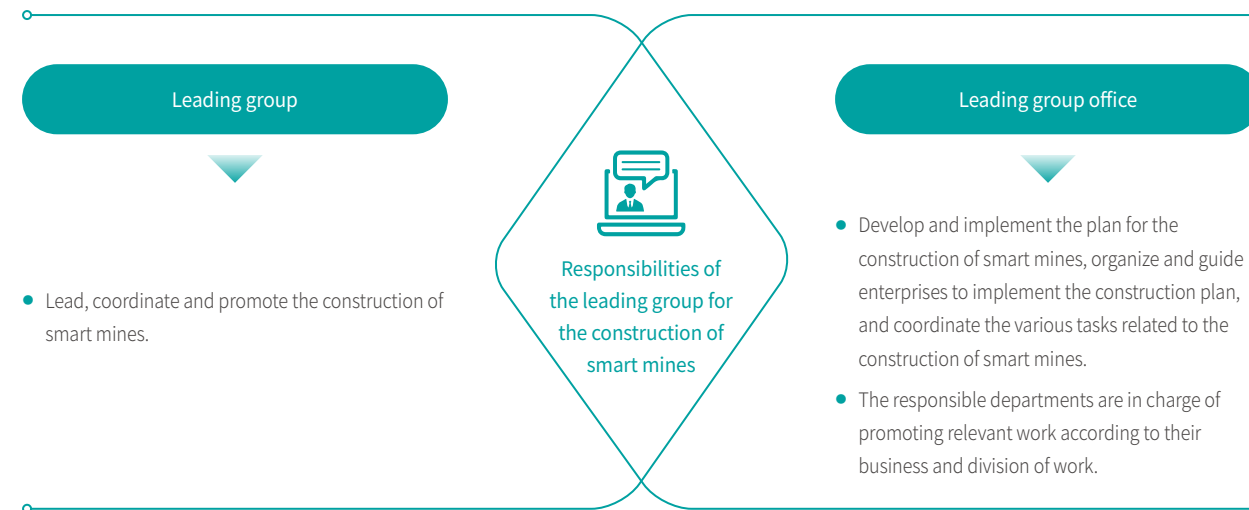
▲ The first emergency rescue drill for mine shaft fires jointly organized by CNMC Daye and CNMC Hongtoushan at the Tonglv Mountain Mine



▲ CNMC Congo's launch ceremony of Work Safety Month

Promoting the construction of smart mines

Having established a leading group, we are engaged in the construction of smart mines and the three-year campaign for IT-empowered safety and environmental protection, with the goal of achieving a safe, green, efficient, and low-energy-consumption transformation. Also, we conduct systematic research and formulate implementation plans to lay a solid foundation for accelerating corporate transformation and industrial upgrading.



Meeting held at CNMC Daye on the construction of smart mines and the three-year plan of boosting green and high-quality development through IT-empowered safety and environmental protection

Professional technical training courses organized for smart mines construction, mainly covering mine geology, surveying, mining, ore dressing, mining machinery, information technology, and automation, which lay a solid foundation for accelerating the digitization and intelligence of the Group's mining industry.



CSR Highlights

Developing New Quality Productive Forces with Key Reform Measures

Since the deepening of SOE reform, CNMC has taken the full implementation of medium- and long-term incentives as a winning strategy to play its vital roles. The reform measures such as employee shareholding, conversion of scientific and technological fruits into shares, restricted stock unit plans, and excess profit sharing, etc. are utilized to continuously improve its core competitiveness, enhance its core functions, and better serve the major national strategies.

Tech firm equity incentives, the start of employee shareholding reform

Guilin Bairay Photoelectric Technology Co., Ltd. has achieved two consecutive years of counter-trend growth in performance as its core technical backbones get equity incentives and the right to purchase incentives; Its core components have been selected into the *Recommended Catalogue of Scientific and Technological Innovation Achievements of Central SOEs*, and it has won a National Key Research and Development Program. Ningxia Oriental Superconductor Technology Co., Ltd. has its two products obtained the major scientific engineering certification, and has its annual sales volume increased by 240% compared with that of 2022, after implementing equity incentives for its technical backbones.

Mixed ownership enterprises' achievements through employee shareholding

We promoted backbone employee shareholding in Guilin Tebon Superhand Material Co., Ltd. a holding mixed ownership enterprise. After the mixed ownership and shareholding reform, Guilin Tebon achieved record-high operating performance and got approved as a "specialized and innovative" enterprise in the Guangxi Autonomous Region, a national-level specialized and innovative "little giant" enterprise and a national intellectual property advantage enterprise. In 2023, it was recognized as a Guangxi technological innovation demonstration enterprise.

Incentives by conversion of technological achievements into shares

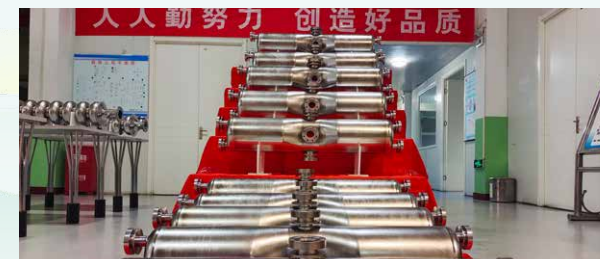
Ningxia Oriental Intelligent Manufacturing Technology Co., Ltd. has been established since the implementation of equity incentives for start-ups in CNMC Orient. In 2023, Oriental Intelligent Manufacturing undertook two key R&D projects under the national "14th Five-Year Plan" and two scientific research projects of Ningxia Hui Autonomous Region, and it obtained 2 invention patents, becoming the first company in China with the capability of processing large-format multi-laser scanning refractory metals.

Holding listed companies becoming reform models with the help of restricted stock unit plans

CNMC's Ningxia Orient Tantalum Industry Co., Ltd. implemented a listed company equity incentive plan in 2023, and 163 individuals spent RMB 23,665,500 to purchase 5,113,800 shares of Oriental Tantalum; 216 individuals from CNMC's NFC spent RMB 61,334,100 to purchase 23,870,650 shares of NFC. The implementation of equity incentives in listed companies helps them to become reform models.

Leap-frog growth of new projects driven by excess profit sharing

CNMC Daye has promoted the transformation and upgrading of its existing industries, established Yangxin Hongsheng Copper Co., Ltd., a green and low-carbon 400,000-ton copper smelting smart factory, and introduced the excess profit sharing mechanism to motivate backbone talents. Since 2023, Yangxin Hongsheng's operating performance has seen significant growth and the "flash melting + flash blow refining" project has been launched onto 98.6% of industrial Internet platforms. In 2023, it was included in the intelligent manufacturing demonstration factories of Hubei Province.



▲ The superconducting radio frequency cavities in large scientific facilities (the HIAF project) of Ningxia Orient Superconductor Technology Co., Ltd.



▲ Yangxin Hongsheng's green and intelligent factory



Pursuing Innovation for Sound Development

CNMC places technological innovation at a leading position of the "1+4" development strategy. It has issued a number of targeted support policies to back the industrial chain with the technology chain and build the value chain with the innovation chain, striving to seize technological innovation initiatives of the industry and continuously improve its core competitiveness.

RMB **2.824** billion
R&D investment

3,868
R&D personnel

97.98%
Product compliance rate in 2023

98.1%
Customer satisfaction



Empowering Development with Innovation

To enhance the leading role of innovation, CNMC reforms innovation mechanisms and places technology at the core of its development. The Group strengthens R&D platform construction and make constant efforts to drive its digitization, empowering its development with innovation.

Strengthening innovation systems

We continue to standardize technology management, strengthen innovation systems, and comprehensively consolidate the foundation of technology management from aspects such as system support, mechanism construction, fund management, talent cultivation, and assessment and incentive. We have revised the *Technology Project Management Measures*, and keep increasing R&D investment. Annual technology projects have been approved and implemented, and more weight has been given to technology assessment, so as to further enhance the leading role of innovation in the Company.

In 2023

RMB **2.824** billion
R&D investment

33
National-, provincial-, and municipal-level vertical
technology projects (researches) approved

5
Experts receiving the special allowance
granted by the State Council

Standardized R&D funding management

- Training on the statistics of R&D expenditure and the standard R&D cost accounting was carried out for subsidiaries at each level, and in-depth exchanges and Q&A sessions were conducted for technology and finance personnel of subsidiaries.
- Guidance was provided to subsidiaries in preparing auxiliary books, which has significantly standardized the statistics of R&D expenditure for subsidiaries.

Optimized technology assessment

- More weight was given to technological innovation in subsidiaries' performance assessment.
- Differentiated assessment was conducted for persons in charge of technological innovation in subsidiaries.
- Special work reports on technological innovation were organized, and the performance of technological innovation served as a key reference for the assessment of enterprise leaders and persons in charge of technological innovation.

Technology projects solicitation

- The special solicitation of technology projects in 2023 was conducted for all secondary subsidiaries.
- 107 applications for the Group's technology projects were received from 15 subsidiaries, with 55 approved, and 22 suggested to be approved by subsidiaries. The record-high supporting fund from the Group reached RMB 82.20 million.

Enhanced cultivation of technology talents

- The *Several Opinions on Strengthening the Cultivation and Use of Technological Talents*, the *Measures for the Introduction and Management of High-Caliber Talents*, and the *Guidelines on the Comprehensive Implementation of the "Three No Less Than" Salary Mechanism* were formulated and released, focusing on the introduction scope of technological talents, and salaries and incentives for talents. These documents improved the system for the introduction, use, cultivation, evaluation and incentives of technological talents and stimulated their vitality for innovation.

Strengthening R&D platform construction

We build innovation platforms to a high standard, high standard, promote the creation of cradles for original technology, and increase support for R&D platforms and restructured institutes. The *Opinions on Supporting the Development of Innovation Research Institute* and the *Opinions on Supporting the Development of CNMC Orient's National Key Laboratory* and some other documents have been released to provide sufficient guarantee for the development of the Company's high-level innovation platforms. In 2023, we established 4 research institutes and 1 branch institute including the superconducting material institute, which play role of coordinating the allocation of innovation resources and introducing and gathering high-caliber technological talents.

CNMC Innovation Research Institute and Tianjin R&D Platform unveiled

In 2023, CNMC established the Innovation Research Institute (International R&D Center) and CNMC Innovation Research Institute (Tianjin) Co., Ltd, which are committed to creating a cradle of original technologies, a technological talent hub, and a special zone of innovation with supporting policies for new nonferrous materials and resource development, aiming to improving the capabilities of basic and applied basic research.

According to the "6+1+1" layout, the Innovation Research Institute plans to build six research centers on superconducting materials, high-performance copper alloy materials, high-purity metal materials, and resource efficiency, etc., an overseas laboratory in south-central Africa, and an analysis and testing center which supports high-level R & D. The establishment of the institute is a key step of CNMC to serve the major national strategies, strengthen basic and frontier exploration and research as well as enhance the capacity of original innovation.



▲ CNMC unveils the Innovation Research Institute and the Tianjin R&D Platform

Innovation mechanism optimized and innovation platform provided for young technological talents

The Company has established a complete funding and rewarding mechanism for technological innovation, set up a training program for young technological talents, and given them opportunities of undertaking major tasks. There emerged a number of achievements transformation initiated by young talents in the innovation and efficiency promotion campaign. By the end of 2023, 23 youth innovation teams and 16 youth innovation studios have been set up across the Group. They participated in 51 projects and made 22 innovation achievements at or above the provincial and ministerial levels.

Zhu Yuanchang, director assistant of the tool R&D department of Guilin Tebon Superhand Material Co., Ltd. successfully developed the beading rope saw process through dual-body furnace, with x4 production efficiency compared with that of the traditional sintering process through vacuum resistance furnace and an over 50% drop in the unit cost of energy consumption by beading. The project achieved sales revenue of RMB 1,062,400.



Boosting digitization

To enhance IT application in a coordinated way, we promote the deep integration of digital technologies and operational management, facilitate the high-end, intelligent, and green transformation of traditional industries through digitization, and help enterprises replace manual operations through mechanized operations, reduce operational personnel through automated production, and achieve zero casualties through intelligent control.

In 2023

In 2023, our special action to enhance digitization of state-owned assets supervision was rated **"excellent"** by the SASAC.

In 2023, our "Promotion of digitization in State-owned Assets Supervision", which is part of the central SOEs' actions of deepening reform, **received a "full score"** in the key task assessment.

CNMC Yangxin Hongsheng and CNMC Zhengyuan were selected as the **"Intelligent Manufacturing Demonstration Factory 2023"** by the Ministry of Industry and Information Technology.

- The Group's mid-term revision of the digitization plan during the 14th Five-Year Plan was completed, and the guidance for the development of CNMC's big data governance system was formulated;
 - The plan for the development of CNMC's big data intelligent control platform was prepared to promote the digitization of the Company's systems.
 - The special action of cybersecurity was carried out within the Group, the "zero trust" technology was deployed, and the Internet ports were centralized to enhance the protection of cyber and information security.
- Digitization planning

Information systems

Cyber and information security
- Consistent efforts were made to drive the development of online supervision systems for state-owned assets and enterprises. Systems concerning treasurer, audit, investment, and shared financial center have been built to strengthen digital control in these areas.

Remarkable results achieved in the building of digital mines

CNMC has launched the building of smart mines and the three-year action of boosting green and high-quality development through IT-empowered safety and environmental protection. The Group has also formulated and carried out the benchmarking and implementation plan for the building of smart mines, with remarkable results achieved by relevant subsidiaries.

NFC Africa Mining PLC (NFC)

- NFCA has established the first set of digital production management platform and system in Zambia, and applied the MES system in various key production and operation processes to significantly improve production efficiency.
- The Chambishi Southeast Copper-Cobalt Mine had a single motor scraper achieved the highest monthly production of 36,640 tons by utilizing the MES system.

CNMC Hongtoushan

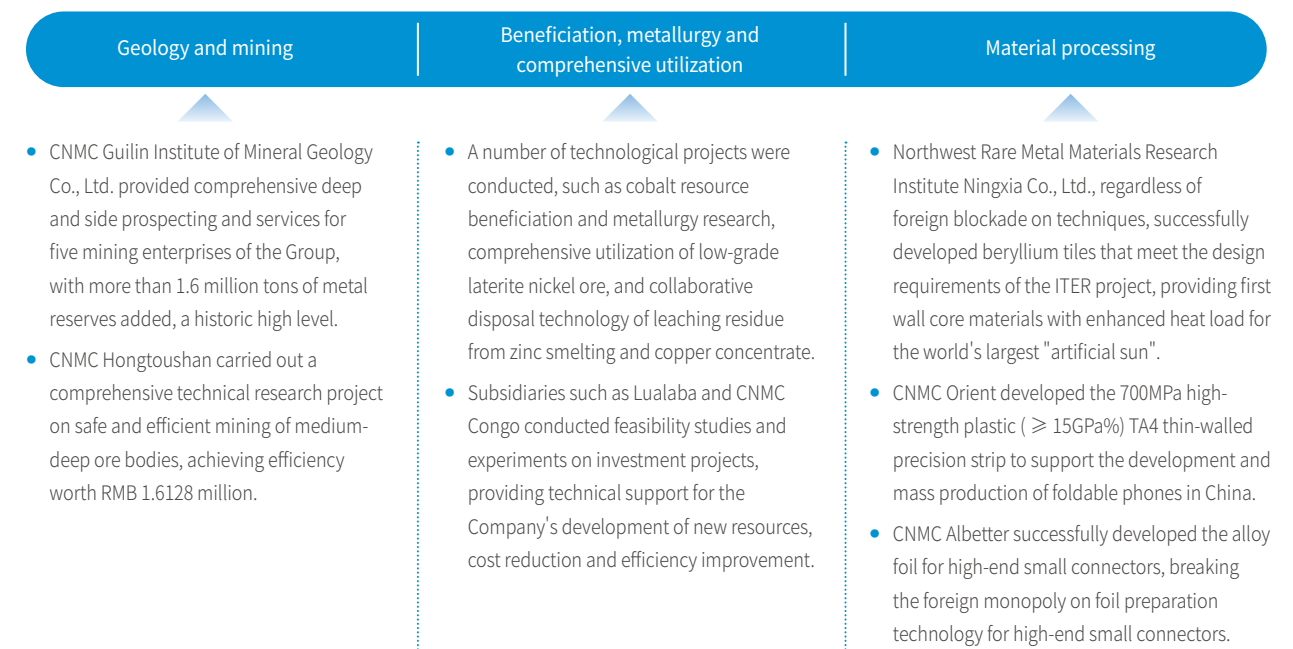
- It has formulated the *Three-Year Action Plan for Smart Mines Development and IT-empowered Safety and Environmental Protection of Hongtoushan Mining Company*, with RMB 77.15 million invested for the first phase of smart mines development.
- It has completed projects including the digital production command center, the 5G+ integrated network, and the GIS intelligent step-down substation.

Making Key Technological Breakthroughs

CNMC Keeps tackling key technological bottlenecks and supporting the core national-defense technology R&D. We have our subsidiaries applied for and implemented a number of national projects, so as to prepare the key technologies for the Company's development in strategic emerging industries and future-oriented industries.

Enhancing efficiency with innovation

We have organized enterprises at each level to improve efficiency through technology, facilitate the transformation of technological achievements, and upgrade industrial technologies and equipment. We achieved an efficiency increase totaling over RMB 600 million in 2023, by continuously optimizing the technological and economic indicators through innovation, developing high value-added products, and improving product yield and quality.



Technological upgrades help put the anode furnace project into production

In August 2023, the No. 3 anode furnace of the Chambishi Copper Smelter Limited anode furnace technological upgrading project was put into production. Chambishi Copper Smelter Limited carried out a variety of measures including technological transformations and system upgrades, etc. to complete the project construction in 14 months, ensuring the smooth operation of the whole project. The commissioning of the project has further expanded the designed capacity of Chambishi Copper Smelter Limited and improved the metal recovery rate and overall economic efficiency. It is capable of producing anode plate products in 3-4 sizes, which better satisfy the needs of different customers.



Making innovation achievements

Countless technological achievements have been made as we guide subsidiaries to carry out technological achievements evaluation and apply for technological awards and tech firms. In 2023, we released an international standard and organized some international conferences such as the International EPMA Standard Conference and the China-Russia New Materials Conference, which increased our global influence in technological innovation.

Cradles for original technology

- The cradle for original technology of superconducting materials was selected into the "key support" list.
- The cradles for original technology in the fields of "tantalum niobium" and "beryllium" were included in the "encouraged for attention" list.

Technological achievements application

- 2 products of CNMC Orient was selected into the *Recommended Catalogue of Scientific and Technological Innovation Achievements of Central SOEs* by the SASAC.
- 6 products including beryllium aluminum alloy, beryllium copper alloy and tantalum tungsten alloy powder were selected into the *Guidance Catalog for the First Batch Application Demonstration of Key New Materials* (2024 Edition) by the Ministry of Industry and Information Technology

Tech firm certification

- NFC Pump Industry Co., Ltd. was certified as a "specialized and innovative SME of Liaoning Province
- Orient Tantalum passed the review of manufacturing single-category champion enterprise.
- CNMC Hongtoushan and Tieling Flotation Reagent Co., Ltd. were approved as National Intellectual Property Advantage Enterprises.

Enhancing international exchanges and technological influence

In November 2023, CNMC Guilin Institute of Mineral Geology Co., Ltd., as the chair unit, hosted the 30th plenary meeting of the Technical Committee of Microbeam Analysis of ISO (TC202) and the 29th meeting of the Electron Probe Microanalysis (SC2) in Germany. More than 50 representatives and experts from countries such as the United Kingdom, Germany, Japan, and Uganda attended the meeting and conducted in-depth exchanges. The meeting was expected to enable China to establish new international standards in the field of electronic probes and further enhance our global technological influence.

In 2023

We won

3 First prizes

1 Second prize

1 Third prize

of the China Nonferrous Metals Industry Science and Technology Awards.



▲ We participated in the formulation and publication of ISO 3483:2023 *Copper and Zinc Sulfide Concentrates — Determination of Thallium*.

Creating Quality Brand

CNMC regards strengthening product quality control as an important part of promoting high-quality development. Focusing on building a company with a strong quality foundation, CNMC starts by improving quality and brand building, carrying out whole-process quality management and quality awareness training for employees, and launching the special campaign of creating a leading quality brand, in an effort to enhance the ability of value creation and core competitiveness while providing customers with higher-quality products and services.

Improving quality management

We constantly improve the quality management system and promote the "6S" on-site management, striving to enhance product and service quality.

Two QC team achievements of CNMC Orient and CNMC Daye won the national second prize.

Projects of NFC and 15MCC won two National Quality Project Awards.

Huayue Nickel Cobalt project in Indonesia won the National Metallurgical Industry Engineering Quality Excellent Achievement Award 2023

15MCC was among the Top 30 Building Construction Enterprises in Quality Management Evaluation of Hubei Province in 2022

Pumpi Copper-Cobalt Mine in the Democratic Republic of Congo (DRC) and the Hydrometallurgical Copper Leaching Project of the Main Ore of Kambove Mining SAS were selected into the first batch of quality projects of nonferrous metal industry 2022-2023

CNMC Zhengrui's quality improvements

Placing product quality in a more prominent position, CNMC Zhengrui's copper foil plant improves the quality and efficiency of the supply system and takes various measures to improve quality management, in order to raise product quality.

Improving quality systems

It established the IATF16949 automotive industry quality management system, and completed the internal audit of IATF16949 and the internal and external audits of ISO 19001, while promoting the standardization of quality management, design and development, and process control.

Enhancing product quality

It implemented detail-oriented management and conducted failure mode analysis on factors affecting product yield. In 2023, the return rate caused by single concave-convex defects decreased by 7.1% and the annual return rate decreased by 0.82% compared with those in 2022.

Standardizing production for all employees

It promoted the TPM (Total Productive Maintenance) management mode and set up productive maintenance activities involving all employees. On-site quality control was strengthened for frequent quality issues.

Enhancing quality awareness

Attaching great importance to the fostering of quality culture, we encourage enterprises at each level to organize various quality training activities, strengthen the quality awareness of all employees, and improve the comprehensive quality of quality management personnel, thus laying a foundation for high-quality development.



▲ On-site inspection and acceptance of CNMC Xincheng's "Quality Month" activity

15MCC

Online and offline training sessions were carried out for a total of 570 trainees on quality, environmental, and occupational safety management systems.

CNMC (Guangxi) Pigma

The quality education and training were organized to strengthen quality awareness at all levels, including training for team operators and on ISO quality management system documents, with a total of 935 participants in quality skills and management training throughout 2023.

CNMC Xincheng

All staff were encouraged to participate in the online quality management knowledge competition on the official website of China Association for Quality (CAQ), which greatly improved the quality knowledge reserve of the staff and helped in creating a good atmosphere for everyone to value quality management.

Strengthening brand building

We have launched the campaign of creating a leading quality brand and formulated the *Implementation Plan for Benchmarking World-Class Enterprise in Leading Brand Creation*, through which a three-level brand structure and brand management system was determined with a highly recognizable path of CNMC brand building established. Setting brand building as a "top priority" program, we have made a list of key tasks and measures for brand building and developed 18 key measures to strengthen the leading brand, build a solid foundation for brand development, enhance brand management, and cultivate featured brands, which has already taken some effects.

CNMC was among the **TOP 10** central SOEs in the growth of benchmark brand building

"CLM" Brand Grade A Cathode Copper successfully registered on the LME

In December 2023, the "CLM" Brand Grade A Cathode Copper produced by CNMC Luanshya was successfully registered in the London Metal Exchange (LME), which marked the transfer from a product to a brand. Since the launch in 2021, CNMC Luanshya has set up a leading group for LME registration, followed the latest requirements of LME registration guidelines and benchmarked against excellent local foreign enterprises in Zambia, and it has completed the certification of international standards such as ISO45001 and ISO14001 and established a supply chain due diligence management system, before the successful registration of the cathode copper brand. The successful registration has directly improved the value by USD 25-55 per ton of copper, which indicates that the quality of the company's products has been recognized by international authorities and a solid foundation has been built for the company's further expansion in the international market.



CSR Highlights

"Open Competition" Projects Propel Technological Innovation

CNMC has always taken scientific and technological projects as an important means to fuel technological innovation and remove technical barriers for high-quality development. Since the exploration of "Open Competition" projects in 2021 and its fair, just and open procedures, we have already formed a management mechanism for scientific and technological projects, which caters to major demands, supports high-quality technology supply, meets the problem-solving standard, and sustains by the market-oriented cooperation mode. As a result, new vitality, high efficiency and good mechanisms have been achieved through technological innovation.

By the end of 2023

15 major scientific and technological projects have been implemented in the form of "Open Competition", and more efforts have been made to accelerate the tackling of key and core technological breakthroughs, with the aim of solving major technological bottlenecks in production, operation, and industrial development and thus supporting and leading the high-quality development of CNMC.



Technology empowers industrial transformation and upgrading

The Daye Copper Smelter is one of the 156 projects built with the assistance of the Soviet Union in the 1950s. Its outdated equipment and relatively extensive production management had limited itself from development. The smelter has made core technological breakthroughs to lead the process optimization and upgrading. Empowering quality productive forces with digitization, it has successfully developed the new green and efficient Ausmelt -PS converter blowing smelting technology, which has significantly optimized production process, improved production environment, and enhanced product quality. The smelter has also built a digital centralized control platform and put into operation the first "one-key rocking furnace" intelligent converter production system in China, which realized remote centralized control of copper smelting converters and centralized and efficient control of the whole system, and promoted the digitization of the traditional copper smelting system.



Superconducting materials lead the future of manufacturing

CNMC Orient actively creates the cradle for original technology in superconducting materials, and has undertaken the production of niobium superconducting cavities for a number of domestic and foreign scientific research institutions. Its scientific research capability and production capacity get steadily improved as it has completed the parts for 50 superconducting cavities of various types, delivered 40 superconducting cavities, undertaken 4 scientific research projects and submitted 4 patent discourse letters. In the field of low-temperature and high-RRR superconducting niobium and RF niobium superconducting materials manufacturing, the company has independently developed the key materials of high-purity niobium for RF superconducting cavities above 3N5, and it has set up a production line of superconducting niobium, which is ranked the second in the world in terms of production capacity, with the world's advanced technology level. In 2023, CNMC Orient produced 40 RF superconducting cavities, hitting a record high.



03

Living Green for a Better Planet Earth

CNMC adheres to the Xi Jinping Thought on Eco-Civilization and promotes environmental management with a focus on green and safe development. We are committed to environmental protection and the establishment of a sound green and low-carbon development system. We have integrated environmental protection into the planning, deployment, advancement, and realization of business development.

RMB **2.153** billion
Total investment in environmental
protection

39
Units passed GB/T 24001/ISO14001
certification

1,699,200 tons
Total GHG emissions



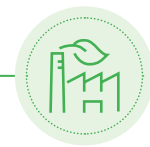
Strengthening Environmental Management

Developing environmental management systems

Shouldering the main responsibility of environmental protection, we have improved the safety environmental protection function planning for the 14th Five-Year Plan and the *Development Plan for Safety and Environmental Protection 2023-2025*. We constantly strengthen the environmental management system, responsibility system, daily supervision system, and assessment and accountability system to form closed-loop management.

Responsibility system

The main leaders of the Company and its subsidiaries are the first persons responsible for environmental protection; members of the management team in charge of environmental protection bear important leadership responsibilities; other responsible persons fulfill their environmental protection duties within their scope of responsibility in accordance with the principles of "two types of responsibilities for one position", "person in charge is held responsible" and "business manager must also be responsible for environmental protection".



Institutional System

In 2023, we improved the environmental management system according to the assessment requirements of the SASAC in energy conservation, which served as an institutional support for environment protection.

Supervision mechanism

The supervision mechanism of environmental and energy-saving management has been improved. We have conducted tabular-based management of key tasks such as rectification based on the feedback from the environmental protection inspectors, special actions of environmental protection and carbon peak actions, and turned them into lists for resource allocation and dynamic tracking, so as to promote high-quality and efficient environmental and energy-saving management.

Carrying out environmental protection inspection and rectification

By dispatching leaders to subordinate units for supervision and inspection, and assigning the the inspection team to give regular guidance, we further strengthen the fulfillment of responsibilities, accelerate the implementation of rectification, and enhance on-site inspection and follow-up management, in an effort to deepen inspection and rectification.

In 2023

91.6%

Problems rectified as required by the environmental protection inspectors

90%+

The annual rectification target of no less than completed

CNMC Daye rectifies environmental problems to achieve green transition



These used to exist in CNMC Daye some issues such as the environmental governance of the tailings pond of Fengshan Copper Mine and the old smelter, which were key rectification projects. Paying great attention to the issues, CNMC rapidly conducted research and deployment from aspects of organization, management, concepts, and systems. By 2023, the emissions of major pollutants from the off-gas of the old smelter have been kept far below the national special emission limit, and the energy consumption per unit product is also lower than the national advanced level, making it a new model of "green" copper smelting.

The tailings pond of Fengshan Copper Mine has been completely renovated and it looks very beautiful! The villagers are very satisfied! They even suggested that we turn the tailings pond into a 4A scenic spot and build a tourism and leisure center.

--said by Song Dengliang, director of Zhangwan village near the mine



Scan the QR code to learn the green transition of CNMC Daye.

Working for Ecological Governance

CNMC values ecological protection, and it is committed to reducing pollution emissions and restoring the whole ecological environment. The Group pursues green operation and constantly improves the level of ecological governance, striving to achieve green and high-quality development.

Conserving energy and reducing emissions

We thoroughly implement the requirements of the new development philosophy and the work of "carbon peak and neutrality". We accelerate the industrial restructuring and layout optimization while promoting energy conservation and efficiency. The green and low-carbon transformation has been carried out and the proportion of clean energy consumption has been increased, as a way to advance the key tasks of the carbon peak action plan.

CNMC Daye's 400,000-ton high-purity cathode copper clean production project completed and put into operation



In February 2023, an opening ceremony was held at the 400,000-ton high-purity cathode copper clean production project of CNMC Daye's Hongsheng Copper. With a total investment of RMB 8.7 billion, the project utilizes the most mature new environmental protection technology and the most advanced new environmental protection equipment. To be a globally leading intelligent copper smelting plant empowered by digitization, the project minimizes environmental pollution and maximizes resource utilization, with the comprehensive energy consumption per unit product far lower than the advanced level of the industry yet the emissions of pollutants also much lower than the special emission limit. It has been selected into the "Excellent Practices of Green and Low-carbon Corporate Development 2023" released by the China Enterprise Confederation and the China Enterprise Directors Association.



|| Focusing on pollution prevention and control

We focus on pollution prevention and control, and strictly control the discharge of "three wastes". We have carried out comprehensive hidden risk inspections to effectively address environmental pollution and risk issues, so as to promote green development.

Comprehensive utilization of industrial solid waste - CNMC Zinc's zinc smelting process optimization and comprehensive utilization of leaching residue treatment project



In April 2023, CNMC Zinc's zinc smelting process optimization and comprehensive utilization of leaching residue treatment project started construction. Adopting the side-blown smelting furnace and the fuming furnace, the project achieves comprehensive utilization of the smelting waste residue generated by the zinc hydrometallurgy system of CNMC Zinc, with a designed processing capacity of 225,000 tons per year. After its completion, CNMC Zinc can ensure regional environmental safety and get environmental benefits since valuable metals such as zinc and indium in the smelting waste residue can be further recovered, resource efficiency can be increased, hazardous waste can be reduced, and resources can be recycled or harmlessly treated.

Comprehensive reuse of wastewater - CNMC Luanshya's tailings pond with highest safety level and strictest environmental standards in Zambia



Built on a relatively flat surface, the Muliashi tailings pond of CNMC Luanshya Copper Mines Plc is an important environmental protection and safety facility supporting the company's copper hydrometallurgy. The storage in the pond is acidic medium, and the entire pond is lined with high-density polyethylene (HDPE film) to prevent leakage and groundwater pollution. At the same time, a comprehensive wastewater reuse system has been established to achieve full recycling of metallurgical industrial wastewater, which saves water resources while achieving the goal of zero emissions. The Muliashi tailings pond is equipped with displacement monitoring points on the pond body and hydrological observation wells downstream for regular water quality testing, making it the tailings pond with the highest safety level and strictest environmental standards in Zambia.

Waste gas prevention and control - CNMC Daye upgrades its old smelter for environmental protection



The converter system of CNMC Daye's old smelter was renovated and put into trial operation at the end of November 2023. It connected the whole production process and got significantly improved in key environmental protection indicators. State media such as CCTV have reported on the environmental rectification of CNMC Daye's old smelter, which fully recognized the strong determination of the Group and CNMC Daye to implement the Xi Jinping Thought on Eco-Civilization and vigorously promote rectification and green development based on the feedback from the environmental protection inspectors.

|| Restoring mines

We are constantly promoting green and low-carbon innovation, accelerating digitization and promoting the building of green mines. We carry out environmental governance, reclamation of abandoned mines and mine restoration, in order to improve the ecological environment of mining areas.

“ In 2023

Around **134.24** hectares
Restored area.

”



CNMC has 7 mines in China that have been classified as green mines

Subsidiaries	Mines	Green mine category
CNMC Daye	Fengshan Copper Mine	Municipal-level
CNMC Daye	Tonglv Mountain Mine	State-level
NFC	Baiyinnuoer lead-zinc mine of Chifeng CNMC Baiyinnuoer Mining Co., Ltd.	Provincial-level
CNMC (Guangxi) Pgma	Shanhu mine of Guangxi Guihuacheng Co., Ltd.	State-level
CNMC Daye	Tongshankou Copper Mine	State-level
CNMC Hongtoushan	Hongtoushan Copper Mine	State-level
CNMC Daye	Sareke copper mine of Xinjiang Huixiang Yongjin Mining Industry Co., Ltd., Ulugqat County, Xinjiang Uyghur Autonomous Region	State-level

Building green mines to promote green and low-carbon transition



Since its was listed into the green mine construction list of the Inner Mongolia Autonomous Region in 2020, NFC's CNMC Baiyinnuoer Mining has established a leading group for green mine construction to adopt proper mining methods, achieve efficient resource utilization, and conduct digital management. It regularly prepares the annual green mine construction plan and completes annual goals as scheduled to pass the verification and acceptance of the competent department. By 2023, it has completed the ecological restoration of 14 waste rock yards and the No.1 open-pit mine in the north area while the ecological restoration of the No.2, No.3, and No.4 open-pit mines in the south area is under progress, so that it promotes mine construction while consolidating governance.

Advancing Low-Carbon Operation

In pursuit of a green, low-carbon, and sustainable development path, CNMC actively carries out environmental protection promotions such as organizing the National Ecology Day, the Low Carbon Day, and the World Environment Day events as well as launching the green and low-carbon initiatives and holding energy-saving essay competitions and quizzes, in order to strengthen the philosophy of green and low-carbon development and practice a green and low-carbon work-life style.



▲ Energy Conservation Publicity Week videos on doors



▲ Energy Conservation Publicity Week posters along corridors



▲ World Environment Day promotion by CNMC Shenyang Mining Investment Co., Ltd.



▲ World Environment Day promotion by 15MCC



CSR Highlights

Boosting Low-Carbon Transformation and Pursuing Green Development

We have formulated and issued the *Carbon Peak Action Plan* based on the requirements of carbon peak for central SOEs and our own industrial status. Targeting at the goals of low-carbon transformation and control, we keep advancing key project construction, conduct energy efficiency inspections of key energy-consuming equipment, and promote the development, application, and popularization of advanced technologies, so as to ensure the implementation of various energy-saving and carbon reduction measures and promote the establishment of a green, low-carbon, and high-quality development pattern.

- The *Action Plan for Industrial Energy Efficiency Improvement* was formulated to clarify the medium- and long-term energy efficiency improvement goals and the key tasks for 5 stages.
- The *Equipment Management Measures* was issued to set the principles of lifecycle equipment management for each subsidiary and improve their equipment management capability.
- The *Energy Conservation Management Measures* was released to enhance the energy conservation and carbon reduction management capability at each level.

- The training courses in the form of "offline full-time participation + online video learning" were conducted for energy conservation and carbon reduction management personnel to effectively enhance their management capabilities.
- Special training was carried out for over 180 energy management personnel on carbon emission accounting, energy efficiency diagnosis, and reporting on the energy conservation and emission reduction system.

- 10 domestic subsidiaries were organized to conduct a comprehensive investigation of the energy efficiency of energy-consuming equipment in 5 key categories, including boilers, transformers, motors, refrigeration, and lighting, with 59,131 sets of equipment picked out.
- The annual carbon emission statistics of overseas subsidiaries was completed and a monitoring and statistical system for carbon emissions of overseas enterprises was established.
- 13 key energy-consuming enterprises were organized to carry out energy efficiency diagnosis and evaluation on major equipment and devices (production lines), which was a push for them to launch targeted energy conservation and carbon reduction technological transformation.



Top-level design



Responsibility fulfillment



Capacity building



Digitization



Energy utilization efficiency

- The equipment energy department was established to get to know and collaborate with the equipment energy management systems of subsidiaries and encourage relevant enterprises to strengthen management.
- Safety and environmental protection responsibility letters were signed with 22 production enterprises to ensure the fulfillment of leadership responsibility.
- The energy conservation and carbon reduction task was decomposed. Energy consumption and carbon emission indicators were incorporated into the performance assessment of enterprises to allocate responsibilities to each level.

- We took the initiative to build smart mines and launch the three-year campaign for IT-empowered safety and environmental protection. We have formulated relevant work plans, held on-site work meetings and learned from external benchmark companies. We have also organized expert teams to conduct systematic research and diagnosis on 8 domestic mines and 2 smelters, so as to facilitate the formulation and implementation of customized enhancement plans for different enterprises.
- CNMC Daye's Fengshan Copper Mine accelerated the building of digital mines and propelled the green transition of the Group's industrial structure by providing the transformation of CNMC Daye's smelter and the construction of Hongsheng Copper's green and smart factory as models.



04

Joining Hands for Openness and Win-win Cooperation

Believing in the value of cooperation and shared growth, CNMC continually enhances its global operational standards. Beyond advancing our own growth, we are dedicated to fostering a global landscape featuring win-win cooperation. In this regard, we engage in enduring collaborations with partners around the world, fostering strong bonds of trust with local communities and governments. As we go global, we consistently embrace openness and cooperation, aiming to contribute to the high-quality and sustainable development of global economy and society.

15,773
Total suppliers*



* 15,773 suppliers registered and stored online in 2023.

Stabilizing Global Supply Chain

CNMC is responsive to China's crucial strategic imperative of guaranteeing the security of supply and industrial chains. We prioritize the enhancement of our core capabilities and reinforce our sense of mission as a central SOE. Our aim is to ensure the reliability and security of both the industrial and supply chains and contribute to fostering a high-quality dual circulation featuring domestic and overseas markets.

Expanding Overseas Resources

As one of the pioneers in China's non-ferrous metal industry to go global, we have managed to conduct business cooperation around the world. Remaining committed to expanding overseas resources, we have pioneered innovative "going global" approaches such as the whole industrial chain collaboration model, engineering project for resources model, cluster-based model, and integrated and contracted mine development model. These endeavors are dedicated to facilitating the high-quality development of the Belt and Road Initiative.

CNMC (Guangxi) Pgma has released the *Special Team Work Plan for Resource Reserve Enhancement*, outlining a strategy focused on "expanding resources, deepening reserves, and innovating deep processing methods." In addition, the work plan stipulates clearly that the enterprise should keep strengthening its core mining business and explore ways to enhance the reserve of tungsten, tin, and titanium resources abroad, which serves as an objective of strategic significance.

CNMC Innovation Research Institute (Tianjin) Co., Ltd. operates on the basis of the CNMC's whole industrial chain spanning copper exploration, mineral extraction, metallurgical engineering, material preparation, and processing. In this regard, the firm prioritizes the efficient utilization of resources like copper, nickel, and cobalt, the production of high-purity and ultra-high-purity metal materials, as well as metal processing. It is dedicated to establishing a scientific and technological innovation platform of domestic leadership and international excellence. This platform integrates the latest scientific exploration, applied basic research, key generic technologies development, medium-scale testing and validation, and industrial applications promotion.

China Nonferrous Mining Hong Kong Holdings Limited focuses on improving its control over non-ferrous metal resources. The firm expands its network of high-quality ore suppliers, secures mineral rights through exclusive project collaborations, and alleviates resource-related pressures through innovative cooperation models. With these measures, the enterprise had managed to add medium-grade ores to the supply of Huachin Leach, and at a later time the amount of such supply had become vast enough to reduce the reliance on the supply of costly hand-mined ores. Through these efforts, the company manages to address the shortage of premium-grade raw materials.

Enhancing Procurement Management

We consistently enhance our procurement management system and bolster online procurement operations. In addition, we refine local procurement mechanisms and steadily increase the localization of procurement, effectively boosting the growth of local suppliers and service providers and contributing to local industrial development and economic prosperity.

In 2023, CNMC won the Leading Enterprise in E-commerce Procurement Operation Model for Central State-owned Enterprise and ranked the first among central SOEs in the nonferrous industry in the procurement benchmarking work of the State-owned Assets Supervision and Administration Commission



▲ In November 2023, CNMC attended the sixth China International Import Expo (CIIE), where its subsidiaries, CNMC Daye, NFC, and CNMC International Trading, inked 12 import procurement contracts with overseas merchants. The transaction amounts of these agreements surpassed those of previous sessions made by CNMC subsidiaries.

Win-win cooperation through enhanced local procurement

NFCA places a high emphasis on supplier management. It bolsters its core production chain and fortifies its foundational capabilities through practices such as scheduled procurement, information sharing with local markets, establishment of enduring supply and demand collaborations, and local suppliers development. Currently, there are 623 accredited suppliers for NFCA, of which 614 are local suppliers, representing 98.56% of the total. The enterprise enhances its support for local manufacturing firms and steadily increases the share of local procurement. As of the end of 2023, local procurement accounted for a substantial 88.83% of the total procurement amount, a great boost to local economy.



▲ NFCA inspects local suppliers

Building a Responsible Supply Chain

As an active player in the global supply chain layout, we continuously refine our supply chain management system, conduct supplier qualification reviews and promote supplier CSR compliance, achieving mutual benefit and win-win cooperation with our supply chain partners.

In March 2023, CNMC Luanshya Copper Mines PLC formally joined the *Responsible Critical Mineral Initiative* (RCI) and set itself apart from 32 member companies by earning a place on the RCI decision-making committee. In collaboration with RCI leading entities, it actively contributes to making relevant rules.

In September 2023, CNMC Luanshya Copper Mines PLC, as the pioneer among overseas enterprises to implement the *Chinese Due Diligence Guidelines for Mineral Supply Chain*, underwent an assessment. Under the supervision of auditors designated by the LME copper committee, the firm passed the assessment for due diligence management in the industrial and supply chains of copper cathode, earning an AA grade certificate. This achievement marks the highest level attained by a Chinese enterprise in this domain.

By 2023, Ningxia Orient Tantalum Industry Co., Ltd. had undergone audits of Responsible Minerals Assurance Process (RMAP) under the Responsible Minerals Initiative (RMI) for 13 consecutive years. It also released the 2023 *Responsible Supply Chain Due Diligence Report*, which garnered widespread attention and oversight from the public.

Ningxia Orient Tantalum Industry Co., Ltd. rigorously screens and reviews its suppliers to ensure they meet environmental and social evaluation standards. It follows the requirements set forth by the Organization for Economic Co-operation and Development (OECD) in its *Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas* and formulates a *Responsible Minerals Supply Chain Policy*. The firm pledges to refrain from sourcing any tantalum raw materials from conflict-affected areas or using intermediate products derived from such sources and resolutely resists the use of illegal mining profits that cause environmental deterioration and human rights violations.



▲ Ningxia Orient Tantalum Industry Co., Ltd. obtains the RMAP certificate



Deepening International Cooperation

CNMC actively collaborates with industry partners inside and outside the industry. Through resource sharing, technological exchanges, and industrial chain integration, we and our partners utilize complementary strengths, achieve coordinated development, and realize mutual benefits and win-win cooperation. Our aim is to shape a sound environment for development and push for a high-quality growth of the industry.



In February 2023, Chairman Xi Zhengping of CNMC held discussions with Raed Al-Rayes, CEO of Saudi Industrial Investment Company, along with his team. They made in-depth exchanges and discussions on the implementation of the cooperation agreements established during President Xi Jinping's state visit to Riyadh, Saudi Arabia, with a broad consensus being reached between the two parties.

In February 2023, CNMC inked a strategic collaboration agreement with China State Construction Engineering Corporation and China Energy Conservation and Environmental Protection Group. Through cooperation, they are committed to advancing initiatives aligned with major national regional development strategies, ESG management, ecological conservation, energy efficiency, and green construction. This partnership underscores their joint dedication to advancing ecological progress and promoting green and high-quality development.



In June 2023, CNMC Albetter convened the "University of Jinan- CNMC Albetter Industry-University-Research Cooperation and Exchange Meeting." During this event, they inked agreements with University of Jinan to jointly establish the postgraduate training base, employment and internship base, and youth employment, entrepreneurship and apprentice base. Both parties pledged to enhance collaboration in postgraduate training, market application of scientific and technological advances, and scientific research. The aim is to foster mutual benefit and coordinated development between universities and enterprises.

In July 2023, China Nonferrous Mining Hong Kong Holdings Limited and COMMUS of Zijin Mining inked a strategic cooperation agreement, deepening their collaboration in copper and cobalt resource development. Their cooperation spans various facets, including the supply and marketing of copper oxide concentrates, commissioned processing services for copper oxide concentrates, and the exchange of cutting-edge technologies and equipment for copper and cobalt hydrometallurgy.



Performing Social Responsibility Overseas

Cooperation between enterprise and local community

We prioritize fostering a localized operational approach within the Company. We actively stimulate local employment and nurture local talents, effectively promoting local economic growth and industrial upgrading. Our efforts contribute to optimizing and upgrading the local economic structure.

Fully honoring the contract on schedule and jointly advancing growth through local employment



In August 2023, the steel structure of the main smelting building of the Amman project department in Indonesia reached its topping-out stage two days ahead of schedule. Since the project commenced, the project department had consistently prioritized scientific planning, optimized construction plans, and ensured the reasonable allocation of resources including personnel, materials, and equipment. By implementing the construction management approach adopted in the "flash melting + flash blow refining" project, the department increased its project productivity, earning commendations from both the main contractor and project owner. The project used many Indonesian localized employees, with a focus on enhancing their skills training and management and offering new technological knowledge for improved technical skills. This not only reduced labor costs but also bolstered the Company's capacity for localized management.



▲ The topping-out ceremony of the steel structure of the main smelting building of the Amman project department in Indonesia

Promoting economic development and advancing employment through talent training



In 2023, CNMC Nickel's procurement and transportation of coal, diesel fuel, and fluidized lime powder within Myanmar involved collaboration with 22 local companies. This initiative boosted tax revenue for the country and fostered the growth of related local industries.

- CNMC Nickel has purchased 167,000 tons of coal, 800,000 gallons of diesel fuel, and about 2,600 tons of fluidized lime powder from Myanmar, promoting the development of the local industry and economy.
- CNMC Nickel has cooperated with a number of Myanmar transportation enterprises through diversified transportation modes such as bulk vehicle transport, full container vehicle transport, inland waterway transport, and land and waterway transport, boosting the employment rate in areas related to the project.
- CNMC Nickel has recruited 59 employees from the Myanmar side to fill up various positions in the Company, effectively solving the problem of local employment.



▲ CNMC Nickel recruits employees from Myanmar

Overseas love, warmth and companionship

We are committed to fulfilling our corporate social responsibility. While expanding our global business, we focus on respecting and preserving the cultural traditions and heritage of local communities. Acting in the spirit of humanity, we engage in relevant overseas initiatives such as cultural exchanges, charitable activities, and volunteer services. These efforts help enhance the image of CNMC and other Chinese enterprises.

Advancing cultural exchanges and building lasting friendships in the new era



- ▲ China Nonferrous Mining Hong Kong Holdings Limited collaborates with University of Lubumbashi to foster cross-cultural exchanges and recruit excellent graduates.



- ▲ Dairi Prima Mineral holds Indonesian language enhancement course, with active participation of the Chinese staff.

Fostering unity through compassionate public welfare assistance in foreign countries



- ▲ CNMC donates school uniforms, food and daily necessities to local orphanage in Indonesia on Eid al-Adha.



- ▲ Sino-Metals Leach Zambia Limited donated a total value of approximately 85,000 kwacha worth of learning and office supplies to the Munsenga Community Primary School in the vicinity of the project, benefiting 340 students and 13 teachers.



- ▲ LLC Pakrut of China Nonferrous Metals International Mining raises over RMB 700,000 and engages a local professional construction team in Tajikistan to repair and repave approximately 5 kilometers of pitch road severely damaged by disaster.



- ▲ In 2023, CNMC Nickel held a CSR donation ceremony, contributing a total of 318 million kyats to 16 projects concerning government agencies in local villages and townships, public welfare organizations, hospitals and schools. These donations benefited 12 villages and towns, covering various fields such as healthcare, education, power supply, public services, infrastructure and charity.



CSR Highlights

Achieving Win-Win Cooperation through the Pursuit of the Belt and Road Initiative

The Belt and Road Initiative has entered a new phase of high-quality development. CNMC is one of the pioneering companies in China's nonferrous metals industry to "go global" and engage in international cooperation. We have pioneered innovative "going global" approaches such as the whole industrial chain collaboration model, engineering project for resources model, cluster-based model, and integrated and contracted mine development model. Throughout our operations, we actively implement principles of local employment and procurement, reinforcing and advancing our relationships with countries involved in the Belt and Road Initiative. Our efforts not only contribute to the socio-economic development of these nations but also drive our own growth and earn us respect. As the Belt and Road Initiative marks its tenth anniversary in 2023, we find ourselves at a new historical juncture. Moving forward, we will continue to collaborate with all stakeholders, drawing from past experiences to pave the way for future progress and ensuring the ongoing high-quality development of the Belt and Road Initiative.

Win-win bonds fostered through international cooperation on production capacity



- ▲ Saplings donation by Chairman Xi Zhengping to the speaker of Dairi Regency

We actively pursue the "going global" strategy by establishing comprehensive industrial, technological, and security networks overseas for non-ferrous metal development and production. This effort contributes significantly to the Belt and Road Initiative.

- Investing and running Zambia-China Economic & Trade Cooperation Zone, the first Chinese overseas economic and trade cooperation zone established in Africa.
- Investing and running the first and by far the largest non-ferrous metal mine invested and developed by China abroad, the Chambishi copper mine.
- Launching the first nickel mine project of China-Myanmar joint venture, the Tagaung Taung Nickel Mine, which is a typical example of production capacity cooperation with ASEAN countries.

Spiritual bonds fostered by cultural exchanges and integration



- ▲ The large-scale cultural integration activity "My story with CCS" organized by the Chambishi Copper Smelter Limited for the Chinese and Zambian employees

We reflect on and promote China's own cultural strengths while consistently respecting and safeguarding the culture of local communities. Through diverse initiatives, we advance cross-cultural exchanges, mutual learning, cultural integration, and harmonious coexistence.

- Promoting the "going global" initiative in vocational education and training a large number of local industrial workers and high-end management personnel who are familiar with traditional Chinese culture and mining and metallurgical practices.
- Conducting theme-based open days activities with local communities to strengthen communication with the community and employees.
- Making local employees feel the Company's inclusiveness and harmony and gaining the recognition of the local community by respecting the culture, customs and religious beliefs of the local community.

Livelihood bonds fostered by giving back to communities with compassion



- ▲ The handover ceremony of the teaching building and other infrastructures of KAPUPULU Primary School built with the aid of CNMC Luanshya Copper Mines PLC

Embracing a philosophy of cooperation and sharing, we take concrete actions like repairing roads, supplying power, providing healthcare, offering jobs, and supporting education. Our aim is to ensure that the fruits of growth genuinely trickle down to people of the local communities.

- Providing free sight-restoring surgeries for poor local cataract patients in Zambia under the China-Zambia "Bright Journey" program.
- Completing the construction of 3 million cubic meters of water storage and withdrawal project, 220kV external power supply project, 13km road project and 4G network project in DRC.
- Contributing to local schools including the China-Myanmar Friendship Buddhist School in Myanmar.
- Building local infrastructure such as squares, roads, gardens and theaters in Mongolia.



热烈庆祝中国有色矿业集团有限公司成立40周年
“赓续·跨越”文化体育活动启动仪式

2023

05

Building Happiness
and Sharing a
Good Life

CNMC adheres to the principle of "putting people first" and continuously practices the idea of "delivering services to the people" by taking care of our employees, improving the well-being of community residents, and actively donating to charity causes. We thus contribute our share to a community with a shared future for mankind.

685

Fresh graduates recruited

RMB 55.7554 million

Donated to public welfare, paired assistance, and rural vitalization initiatives



Caring for Employee Development

Committed to the philosophy of development for employees and by employees, we improve employee well-being, strengthen talent team building, and enhance mechanisms for talent training, recruitment, utilization, and reasonable mobility. This ensures the provision of new talent for the new quality productive forces, driving high-quality development with high-caliber personnel.

Strengthening protection of employee rights and interests

We adhere to the principles of equal employment and equal pay for equal work. In order to create a happy and harmonious workplace for employees, we lawfully sign labor contracts with employees, improve the salary and performance systems, establish welfare protection systems, implement democratic management systems, and optimize occupational health systems.



Promoting career development

We are committed to advancing our strategy of strengthening the enterprise through talent. Our efforts focus on selecting and utilizing personnel, talent education, and talent incentives. We have expanded mechanisms for talent recruitment, innovated incentive systems, and improved talent development frameworks. By implementing strategic cooperation with academic institutions, we consolidate the talent foundation for industry progress and enterprise development.

In 2023

685

Fresh graduates recruited

162

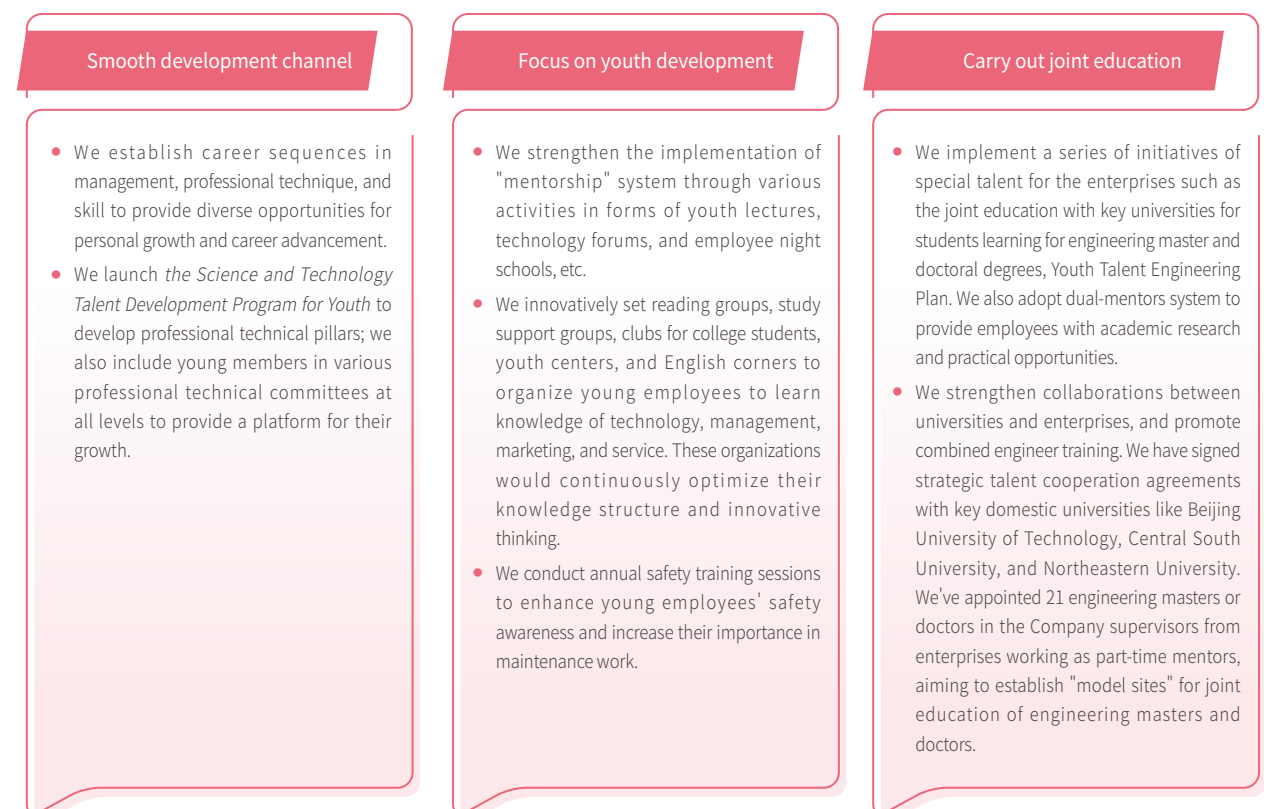
Masters and doctors recruited

53

Engaged in strategic emerging industries and future industry

100%

Market-based recruitment rate of all-level subsidiaries of CNMC



CNMC inaugurates its first Craftsman Workshop



In February 2023, the CNMC unveiled its first Craftsman Workshop named after Master Shao Zhicun at the CNMC Daye Hongsheng Copper Company. Shao Zhicun, known for his strong political integrity, excellent operational skills, diligent work ethic, and outstanding contributions, was honored as a National Model Worker in 2020 and recognized as a National Technical Expert in 2022. He was also proudly included in the second batch of the "Craftsman of the Nation" training support program of the central enterprises.

The founding of the Shao Zhicun Craftsman Workshop marks a milestone for CNMC. This initiative aims to cultivate skilled talent and tackle technical challenges through mentorship programs and other methods, thereby fostering the aggregation of skilled professionals within the industry and the enterprise, which empowers the Company's innovative development.

Offering humanistic service

Adhering to the "Putting People First", we take care of our employees by implementing compassionate measures and strengthening democratic management. This enhances employees' sense of happiness and fulfillment, ensuring their workplace safety and health, and motivating them in their careers.

In 2023, we focused on three main areas: employees' expectations for high-quality corporate development, employees' needs for an high-quality life, and the company's social responsibilities. With these "Three Focuses," we conducted practical activities aimed at addressing the challenges faced by grassroots employees and resolving their concerns.

Different subsidiaries conduct various practical services for the people



Adhering to the principle of focusing on the front line and closely integrating actual practices of "learning, research, and inspection," subsidiaries have collected and compiled issues into a list through measures such as conducting in-depth grassroots investigations, site visits, group discussions, public opinion surveys, online feedback, and petition channels. With the list, subsidiaries could effectively advance the services for the people in a comprehensive and meaningful way.

CNMC Orient

Focusing on prominent issues in the public well-being, CNMC Orient has established a list with 21 items related to employees' livelihood, which includes expanding medical examination items and improving the sanitary conditions of the surrounding environment, thereby enhancing the sense of fulfillment and happiness among the employees and the community.

CNMC Shenyang Mining Investment Co., Ltd. Chifeng Dajingzi Mining

Dajingzi Mining conducted a charity donation event to help the families of its employees who are ill, raising a total of RMB 17,708. Fubang Copper Industry's entire workforce actively participated, contributing nearly RMB 30,000 to assist an employee's family member suffering from a serious illness to overcome their difficulties.

NFC Africa Mining PLC

NFC Africa Mining PLC conducted a "Leadership Reception Day" event. Members of the leadership team met with employees individually in the two activity rooms at the Chinese staff residences. They engaged in one-on-one dialogues to listen to employees' urgent issues, difficulties, concerns, expectations, and work-related suggestions.

NFC Somidez Mining

NFC Somidez Mining organized a series of "Heart-warming Projects," promoting the brand development of the "DBA Basketball" activity. Simultaneously, it advanced a series of cultural and sports activities such as badminton and table tennis to enrich employees' cultural lives and strengthen their physical and mental well-being.

Chambishi Copper Smelter

Chambishi Copper Smelter has improved the living conditions and canteen meals for employees, renovating the entire No. 6 Courtyard and other rooms, and standardizing the purchase of new furniture and appliances, thereby enhancing employees' sense of well-being and satisfaction.

CNMC Nickel

In response to the continuous depreciation of the Myanmar currency, CNMC Nickel has actively adjusted the salaries and benefits for local employees, increasing their wages to ensure that the living standards of their families do not decline, which has been well received by the local community.



▲ The launch ceremony of the 40th anniversary of CNMC and the cultural and sports activities "Continuation and Leap"



▲ China 15th Metallurgical Construction Group Co., Ltd. organized female employees in Wuhan to participate in the "Beauty Walking in the Flower" activity hosted by the Administrative Committee of Donghu New Technology Development Zone.



▲ CNMC Hong Toushan has consistently carried out the "Cool Delivery in Summer" activity for many years, providing care to employees who stay at their posts during the hot summer.



▲ CNMC Albetter visited and offered condolences to employees at frontline on May 1st, the International Worker's Day.



▲ CNMC (Guangxi) Pigma hosted a mental health lecture titled "Learning the Wisdom of Traditional Chinese Culture • Being a Happy Mother."



▲ CNMC Guilin Geology and Mining Co., Ltd., in collaboration with Nanxishan Hospital, carried out the "Serving Employees by Delivering Medical Services to the Frontline" initiative.



Engaging in Social Welfare

CNMC advocates for a shared development philosophy and cooperative construction model. We actively engage with local communities, support educational and cultural initiatives, and participates in charitable donations, community welfare activities, and emergency disaster relief, contributing to the establishment of harmonious and thriving communities.

Building the community together

We actively participate in community development, communicating deeply with the communities where we operate. Starting with the details, we improve local infrastructure, drive regional economic growth, and enhance the well-being and happiness of the surrounding population.

Promoting enterprise-community integration to increase local employment and income



CNMC Baiyinnuoer Mining adheres to the principle of "developing Baiyinnuoer is to benefit the local community." Based on the practical needs of Baiyinnuoer Town in Chifeng City, (Inner Mongolia Autonomous Region), the company actively integrates into local cultural life, enhances supporting efforts to promote rural vitalization. We continuously monitor and address the living conditions of local herdsmen, responding to their difficulties and needs. In 2023, the company donated RMB 685,500 to local schools, health centers, and designated villages (administrative units) for cultural, sports, and healthcare initiatives. Additionally, CNMC signed a cooperation agreement with Baiyinnuoer Town, promoting local herdsmen employment in line with enterprise development. Since 2022, the company has facilitated the employment of over 80 local herders, assisting them in transitioning to worker roles and contributing to stable income growth.



Bringing warmth to residents through voluntary services

We actively organize and encourage employees to participate in volunteer activities. By offering a diverse range of volunteer service projects, regularly organizing volunteer events, and providing professional skills training for volunteers, we contribute to building a more harmonious and beautiful society.



▲ China 15th Metallurgical Construction Group Co., Ltd. organized employees in Wuhan to participate in a voluntary blood donation in China Optics Valley Central Area .



▲ Oriental Tantalum Industry cooperated with surrounding communities to regularly carry out the themed volunteer activity "Appliance Repair with Love: Company-Community Cooperation for Livelihood Improvement".



▲ CNMC (Guangxi) Pgma carried out a "Volunteer Service" activity by visiting Dachaocun Village, Danning Town, to conduct electrical safety inspections.



▲ Chinese International Trading conducted first aid skills training with Red Cross to improve youth's sense of dedication and social responsibility.

Volunteer services in rural areas: fulfilling our mission



In July 2023, CNMC (Guangxi) Pgma Tungsten Industry Co., and the ammonium paratungstate workshop jointly organized a themed activity, "Volunteer Services in Rural Areas: Fulfilling Our Mission." They visited Liyuzhou Village enjoying five guarantees in Wanggao Town near the Company, to conduct volunteer services. The activity included visiting and comforting nine elderly residents enjoying five guarantees, followed by environmental cleaning, electrical inspections, and replacing energy-saving lamps. The activity effectively addressed the daily challenges faced by the elderly.



Demonstrating responsibility in dangerous moments

We proactively assume the responsibility of maintaining social stability by leveraging our technical and equipment advantages. Facing with disasters, we courageously stepping up to the frontlines of emergency rescue and disaster relief, thereby contributing to social stability with our efforts.

Demonstrating responsibility with CNMC strength: CNMC Hong Toughan Mine Rescue Team assists in flood rescue operation

In August 2023, affected by Typhoon Doksuri, Yushu City of Changchun, Jilin Province, experienced continuous heavy rainfall for several days. The Lalin River witnessed a once-in-50-years mega-flood, causing breaches in some embankments and posing a severe threat to the lives and property of the local people.

The National Mine Emergency Rescue Team (CNMC) from CNMC Hong Toughan quickly responded to the drainage and rescue orders from the National Emergency Rescue Center for Work Safety Production. With 20 personnel and 4 vehicles, along with 6 drainage pumps, they immediately rushed to the scene. Despite the difficulties and harsh working conditions, the mine rescue team from CNMC Hong Toughan manually cleared the flooded area of weeds and sludge, ensuring that the pumps were installed at the optimal drainage positions. They achieved uninterrupted drainage operations for 24 hours, pumping approximately 188,200 cubic meters of water. After 14 days of continuous day and night battles, they safely, orderly, and efficiently completed the drainage and disaster relief tasks in Dalin Town and Hongxing Town, demonstrating their precious spirit of "coming when called, fighting when arrived, and winning when fighting", and their sense of responsibility in "rescuing people from disasters, and assisting people in times of danger".

国家安全生产应急救援中心

感谢信

中国有色集团抚顺红透山矿业有限公司：
风调雨顺，五谷丰登。受今年台风“杜苏芮”影响，吉林省长春市宽城区红透山镇红透山村50年一遇特大洪水，部分堤防出现决口，村民房屋及大量农作物被淹，人民群众生命财产安全面临严重威胁。为做好防汛抢险救援工作，在应急管理厅统一部署下，国家安全生产应急救援中心调派4支国家专业应急救援队伍赴现场救援。国家矿山应急救援（中国有色）红透山队迅速响应，力量集结，临危不惧，经过14天连续奋战，安全、有序、高效完成红透山镇红透山村排涝抢险任务，展现了“召之即来，来之能战，战之能胜”的优良作风和“救民于水火，解民于危难”的责任担当。
面对重任，救援队伍，接到排涝救援命令后，矿山救援红透山队出动20人、4台车，携带6台排涝水泵第一时间赶赴现场，为充分发挥水泵作用，矿山救援红透山队组织救援队员克服连续作业和恶劣的作业环境，授予排涝抢险任务设备和物资，保证水泵能够正常运转排水位置，实现24小时不间断排水，累计排水约188,200立方米。在此，国家安全生产应急救援中心对矿山救援红透山队在此次排涝抢险中所表现出的英勇精神和突出贡献致以崇高的敬意和衷心的感谢！

▲ Letter of Appreciation from the National Emergency Rescue Center for Work Safety Production to C NMC Fushun Hongtoushan Mining Co., Ltd.

Supporting flood relief and rescue in Huangshi region

In July 2023, due to continuous heavy rainfall, Huangshi in Hubei Province experienced a rapid rise in the water levels of rivers and reservoirs, posing a severe flood relief situation. China 15th Metallurgical Construction Group Co., Ltd. coordinated various units in Huangshi to form a flood prevention emergency team. They immediately rushed to the scene of the pipeline danger at Wangshan Brick Factory and the emergency rescue site at Daye Lake in Huangshi. After an overnight fighting, they successfully controlled the situation, ensuring the safety of people's lives and property, and providing solid support for the later flood prevention work at Daye Lake.



CSR Highlights

Promoting Rural Vitalization and Contributing to Common Prosperity

CNMC thoroughly implements President Xi Jinping's argument on issues of agriculture, farmer and rural area and rigorously follows the mandates of the State-owned Assets Supervision and Administration Commission (SASAC). Committed to the social responsibility as a central state-owned enterprise, CNMC adopts a high-level strategy for rural vitalization. The Company has formulated and released the "CNMC Three-Year Plan for Targeted Assistance (2023-2025)", which systematically organizes the Company's targeted assistance efforts. This plan aims to consolidate and expand the successes of poverty alleviation, effectively contributing to rural vitalization and common prosperity.

CNMC Three-Year Plan for Targeted Assistance (2023-2025)

Clarifying the "1234 Sustainable Assistance Model"

1 Core

Sustainable development of the cucurbit flute (Hulusi) cultural tourism and wellness industry.

2 Key Area

Guagou Village, Pingyi Village, and Mengyang Town, the origin of the cucurbit flute.

3 Directions

Continued investment in the cucurbit flute cultural industry, cultural tourism and elder caring, and the education course.

4 Regular Actions

Emphasizing talent cultivation, employment, consumption, and organization development.

In 2023

20%+
Investment increase

40%+
Increase of introduction of funds

50%+
Attraction of investment growth

41%+
Increase of consumption-driven support funds

Boosting industrial vitalization

- We have invested RMB 3.5 million in aid funds to build a Cucurbit Flute Art Exhibition Center, integrating the functions of manufacturing and displaying cultural and creative products, talent training, dining, and accommodation. This aims to promote the integrated development of agriculture, culture, and tourism.
- We have invested RMB 200,000 in aid funds to establish a cucurbit planting demonstration base, helping to create employment for villagers and develop the region into the "Hometown of Cucurbit Flute."
- We have invested RMB 3 million to establish a standardized textile industry employment support workshop, strengthening the village's collective economy and facilitating the transition to employment for 20 individuals from impoverished backgrounds.
- We assisted in attracting two agricultural and sideline product sales companies to invest in Lianghe County, achieving an investment total of RMB 2 million.

Promoting cultural revitalization

- We assisted Lianghe County in establishing the "Cucurbit Flute Cultural Tourism Industry Development Fund" with an initial investment of RMB 1 million, promoting the development of the local cultural tourism industry.

Assisting talent development

- We have trained village-based work team members, village cadres, and talents for rural vitalization with a total pollution of 913 people, enhancing the ability of frontline cadres to lead communities towards prosperity and manage rural area effectively.
- We have trained medical personnels and health emergency teams with a total of 452 people at the county, township, and village levels, continuously improving the county's medical service capabilities.
- We have trained a total of 461 cultural tourism practitioners, promoting the development of the cultural tourism industry in Lianghe County.
- We have trained 150 individuals in vocational skills such as excavator operation, crane and loading machinery operation, and electrical work, achieving high-quality employment.

Contributing to ecological development

- We created a model benchmark for rural vitalization, promoting livable and business-friendly rural areas, where villagers can live and work happily; Pingyi Village was rated as one of 2023 Provincial Green and Beautiful Villages and selected as a typical case of rural governance in Yunnan Province.



ESG Special Actions

As the one of the earliest vanguard of China's nonferrous metal industry to go global, CNMC complies with international rules and standards, implements major decisions of the State Council and regulatory requirements of the SASAC, and emphasizes environmental protection, CSR performance, and governance improvement. In 2023, CNMC was rated A in the 2022 business performance assessment of the persons in charge of central SOEs and in the key task performance of the three-year action plan for SOE reform.

Better governance capabilities: Apart from timely adjusting the composition of the specialized committee members and secretariats under the Board of Directors, we have revised the rules of deliberation of the committees. In addition, we have improved the composition of our subsidiaries' Boards of Directors, selected full-time board directors to serve positions in companies funded by CNMC, and fully promoted the rights fulfillment of the Board of Director.

Protection of investors' rights and interests: Holding listed companies have actively organized diverse activities of investor communication such as business performance briefings and the Collective Reception Day for Investors; they have timely answered investors' questions through the stock exchange, e-mails, investor hotline, and other means, intensifying benign interactions with investors and protecting investors' interests.

Enhanced information disclosure: All listed subsidiaries of CNMC observe the principles of fair, impartial and open information disclosure. We publish sustainability reports (or ESG reports) every year in an effort to actively and timely disclose all information that may exert a material impact on the decision-making of shareholders and other stakeholders, effectively fulfilling the obligations of a listed company to disclose information.



▲ NFC Social Responsibility Report & ESG Report 2023



▲ Ningxia Orient Tantalum Industry Co., Ltd. ESG Report 2023



▲ China Nonferrous Mining Corporation Limited ESG Report 2023

Tighter implementation of environmental responsibility: We have firmly promoted supervision, inspection and rectification of environmental protection. The fulfillment rate of measures adopted in this regard was 91.6% in 2023, which reached the annual goal of no lower than 90%. Moreover, we have substantially improved industrial energy efficiency and carbon emission management. In 2023, the energy consumption indicator fell by 4.35% year on year while the carbon emission indicator fell by 3.85% year on year, respectively decreasing 32.45% and 24.21% from the end of the 13th Five-Year Plan Period (2016-2020). Besides, we have optimized our plans and targets, launched the three-year action plan of promoting smart mine construction and ensuring safety and environmental protection with science and technology, and released related work plans, laying a solid foundation for eco-friendly and high-quality development of traditional industries while ensuring work safety.

More emphasis on social contributions: With the original aspiration of "Contributing to the country with resources", we pursue a path where minerals, engineering projects, trade, science and technology are used to seek and improve resources while deep processing is leveraged to save resources. Efforts are also made to support relevant work on strategic & emerging industries and future industries, as well as the high-quality development of the Belt and Road Initiative. We have accomplished the strategic goals for the 14th Five-Year Plan period (2021-2025) two years ahead of schedule. Adhering to the development philosophy of mutual benefits and win-win results, we have established a resource security system, enhanced partnerships and localized operation, and shared growth and development with employees, cooperation partners and society.

NFC ESG Action Report

E: Low-carbon development and environmental protection

Putting safety and environmental protection in the first place, NFC safeguards safety and environmental protection at every critical and special period. In 2023, the company invested a total of RMB 437 million in energy conservation, environmental protection and related projects. Following the philosophy that "Lucid waters and lush mountains are invaluable assets", NFC has established a leading group on supervision, inspection and rectification of environmental protection work to support the efforts of the central government in this regard. To earnestly fulfill the requirements of carbon peaking and carbon neutrality, the company has also set up environmental protection organizations and leading groups on carbon peaking & carbon neutrality to coordinate efforts on energy conservation, environmental protection as well as carbon peaking and carbon neutrality. While strictly controlling emissions, the company has eliminated high-energy-consuming and outdated mechatronical equipment so as to promote energy conservation and emission reduction. Consequently, the ecology of the mining areas has been improved and new progress has been made in terms of overall safety and environmental protection.

S: Social contribution

Protection of employees' rights and interests: NFC has revised the *Recruitment Management Measures* and *Labor Contracts Management Measures* to better protect employees' rights and interests. The company has implemented localized recruitment and development of talents and explored a new mechanism of localized talents employment cooperation. The company has also set up staff opinion e-mail boxes (mailboxes) and employee suggestion boxes, ensuring that staff communication channels are unimpeded and creating a harmonious corporate atmosphere. Besides, the company has revised 11 provisions on compensation and benefits. In 2023, to fully mobilize employees' initiative and creativity, NFC granted 23,870,650 restricted shares to 216 incentive recipients for the first time.

Career development support: To stimulate the enthusiasm and creativity of employees, NFC has formulated the *Rank Management Measures* and improved the mechanisms of personnel appraisal, selection, training and employment. Furthermore, the company has coordinated efforts on regular training for management personnel, technicians and skilled personnel, as well as safety and environmental protection education, etc. In 2023, a total of 343 training sessions were carried out, with an average of 8.82 hours of training per person.

Responsible procurement: NFC has formulated the *Suppliers Management Measures (2022)*. As of the end of 2023, the company had a total of 3,221 qualified suppliers, 293 of whom were newly added in 2023. The company has promoted information-based procurement and realized quality & efficiency improvement and ensured the openness and fairness of procurement.

High-quality projects: NFC has improved the product and service quality management system. In 2023, the company maintained the contract performance rate of 100 percent and project acceptance rate of 100 percent. Paying attention to customer information protection, the company has improved the customer management system and provided full life cycle services for customers. In 2023, the company reached 100 percent product qualification rate and 98 percent customer satisfaction rate, with no major complaints and quality defects reporting.

Support for community improvement: In the past three years, NFC and its subsidiaries have invested over RMB 2.8 million as rural vitalization subsidies, contributing to the consolidation of poverty alleviation achievements and the promotion of rural vitalization in assistance areas. Moreover, the company has organized employees to carry out volunteer services such as traffic guidance and voluntary blood donation to convey love and good will. To promote harmonious relations between the company and communities, NFC has also carried out social welfare activities such as aid to students and teaching, disaster relief, and infrastructure construction, and promoted the development of education, medical care, culture and other public services to build harmonious relationship between enterprise and society.

G: Corporate governance

NFC has revised the *Management Measures on the Authorization of the Board of Directors*, the *List of "3+1" Decision-making Matters*, the *Working System for Independent Directors* and other systems to improve the decision-making efficiency of the Board of Directors. The company has also set up the legal committee, chief compliance officers, business compliance officers and risk control compliance officers, developed the risk control compliance manuals, and carried out company-wide legal awareness raising and compliance training to further improve compliance management. In addition, risk control has been incorporated into top-level design, major decision-makings and daily operations, contributing to the integration of law-based governance, compliance and risk control.



Ningxia Orient Tantalum Industry Co., Ltd. 2023 ESG Action Report

E: Low carbon and environmental protection

Ningxia Orient Tantalum Industry Co., Ltd. (Orient Tantalum) has formulated strategies to promote development while dealing with climate change, proactively identified physical and transition risks posed by climate change to the company, and developed risk countermeasures and seize development opportunities. Moreover, Orient Tantalum has formulated internal management procedures and systems such as the *Resources and Energy Management Procedures* and *Power Energy Management Measures*, and established a leading group on energy management to improve the utilization efficiency of energy, water resources, packaging materials and other resources. In terms of emission and discharge management, the company has monitored pollutants in its wastewater discharge and exhaust gas emissions, performing environmental monitoring and information disclosure in strict accordance with the monitoring scheme. In 2023, the company met the pollutant standard in terms of wastewater discharge and exhaust gas emissions. Besides, the company has formulated the *Solid Waste Management System*, established a solid waste management ledger, and actively facilitated the recycling of all kinds of solid wastes. In 2023, the company recycled 110.82 tons of solid wastes, which substantially reduced the generation of solid wastes.

S: Social contribution

Product quality and service: Orient Tantalum has revised the *Outsourcing Process Management System*, *Product Verification and Control Procedures* and other systems, and organized branches and subsidiaries to sign the *Quality Improvement Responsibility Letter*. Moreover, the company has established and improved the *Product Return and Exchange Management System*, and handled product quality defects in strict accordance with the aforementioned system.

Protection of customers' rights and interests: Orient Tantalum has established the *Quality Information Control Procedures* to prevent and resolve information leakage and abuse risks. A total of 383 rapid feedback mechanisms are implemented to realize rapid response and timely response for higher customer satisfaction.

Responsible supply chain: Orient Tantalum has established strict supplier screening and evaluation systems, standardized management duties and processes related to supplier classification, access, assessment and exit, and implemented hierarchical suppliers management. The company has regularly conducted supplier communication activities to help suppliers improve their own capacity building. In addition, the company has developed the *RBA Management Manual* and improved the level and efficiency of supply chain management through cross-departmental communication and collaboration.

Employees' rights and benefits: Orient Tantalum has formulated the *Remuneration Management System* and *Performance Management System* to ensure the realization of equal pay for equal work. The company pays attention to employee communication and strives to improve employee satisfaction. To promote democratic management, the company has improved the internal management system of trade unions. In 2023, the company provided financial support for 211 employees; RMB 197,000 was spent in supporting employees with critical illness.

Employee safety and health: Orient Tantalum has constantly improved the occupational health management system, occupational disease prevention and control accountability system, operating procedures, electronic files and bulletin boards to better safeguard employees' safety and health. In 2023, the company conducted seven occupational health and safety trainings and engaged 1,006 employees to join emergency drills, fire drills and other drills.

Employee development and growth: Orient Tantalum has designed diverse development channels for employees according to their own situation. The company has organized a company-wide evaluation to assess the capabilities of on-duty employees and made targeted training or adjustments accordingly. Moreover, the company has established and improved the staff training system and conducted safety training and assessments for employees on an irregular basis. In 2023, the company invested RMB 353,000 in training, reaching 100 percent in terms of the training coverage rate.

Social welfare: Attaching great importance to rural vitalization, Orient Tantalum has selected three employees to carry out paired assistance in Wangqing Village, Pingfeng Town, Xiji Prefecture, Guyuan City, Ningxia Province. The company actively improves social welfare to fulfill its social responsibilities. In 2023, the company spent 36 hours on social welfare activities and organized 5 employee volunteer services, with 62 employee participants in the volunteer services.

G: Corporate governance

Orient Tantalum has formulated the *Management Measures on the Authorization of the Board of Directors*, and the *List of Matters Related to Rights and Responsibilities*, standardized the performance of the company's board of directors and managers in accordance with the law, and clarified the decision-making procedures for corporate governance matters. Moreover, Orient Tantalum has established the *Compliance Management System*, set up the Compliance Management Committee, and specified the responsibilities, work contents and requirements of personnel at all levels, improving the company's compliance management. During the reporting period, the company issued 4 regular announcements, 119 temporary announcements and a number of public disclosure documents online, covering independent directors' opinions, legal opinions, board of supervisors' verification opinions, commitment letters, and other types of announcements, effectively fulfilling its information disclosure obligations as a listed company.



China Nonferrous Mining Corporation Limited 2023 ESG Action Report

E: Low carbon and environmental protection

Utilization of energy and natural resources: China Nonferrous Mining Corporation Limited has comprehensively used waste ore, improved the ore recovery rate, extended the mine life, and updated production processes, equipment and facilities. The company has promoted energy management at multiple levels, formulated monthly production plans and overall targets of energy consumption control, and implemented performance appraisals in a strict manner. Efforts are also made to use local clean energy for project operation, promote green office, and conduct energy conservation awareness raising activities. Besides, the company has treated the discharged underground waster and reused it as production and domestic water, developed targets of water resources utilization and kept track of target realization progress.

Climate change combat: China Nonferrous Mining Corporation Limited has identified climate risks that exert a significant impact on business operations and developed measures to mitigate negative impacts. The company has formulated the *Notice on Developing the Carbon Peaking Action Plan of CNMC*, and standardized the statistics and management of carbon emissions-related data and reports. Based on the characteristics of the industry and the actual situation of the company, China Nonferrous Mining Corporation Limited has analyzed the status quo of climate change risk control and developed corresponding countermeasures to tackle the climate risks identified based on SSP1-2.6 Scenario 4 and SSP3-7.0 Scenario 5, TCFD recommendations and industry characteristics.

Environmental protection actions: China Nonferrous Mining Corporation Limited has set up the safety and environmental protection department to take charge of daily environmental management and supervision. The company has categorized environmental emergencies into three levels and formulated corresponding emergency response plans. With more efforts on environmental inspections, the company has timely and effectively taken rectification actions. Besides, the company has formulated the *Environmental Protection Management Measures*, which clarifies management responsibilities and assessment rules for environmental protection.

S: Social contribution

Employment and development: Adhering to the principles of fairness, equality, diversity and anti-discrimination, China Nonferrous Mining Corporation Limited respects the culture and customs of foreign employees. Apart from an improved system for talent management, the company provides competitive compensation and benefits. In addition, the company has established an effective incentive mechanism and provided employees with diversified training programs and a healthy and harmonious growth environment.

Health and Safety: China Nonferrous Mining Corporation Limited has formulated the occupational health and safety system, project targets and indicators, as well as assessment methods. The company has established a work safety management system for tailings ponds and corresponding management systems and emergency response plans. Meanwhile, the company endeavors to foster a safety culture, raise safety awareness, and improve work safety skills and emergency response management. Efforts are also made to constantly improve the occupational safety and health protection system.

Supply chain management: China Nonferrous Mining Corporation Limited has established a sound supplier management system. When selecting suppliers, the company comprehensively takes into account supplier performance in terms of compliance, supply quality, delivery cycle, product price, after-sales service and other aspects. Paying attention to suppliers' environmental and social risks, the company requires suppliers to present corresponding qualification certificates. In terms of suppliers selection, preference is given to local suppliers.

Product liability management: China Nonferrous Mining Corporation Limited has established product liability targets, observed international and national inspection and quality standards, and provided customers with high-quality products. The company pays attention to improving the product quality management system and customers' service experience, and makes every effort to better customer service. Attaching great importance to information security and privacy protection, the company strictly keeps confidential major, non-public information of cooperation partners and customers during the operation process, and signs confidentiality agreements to prevent the disclosure of sensitive information.

Community investment initiative: China Nonferrous Mining Corporation Limited has formulated the *External Donations Management Measures* and standardized the company's processes of public welfare donations. Moreover, the company has developed external donation plans reviewed and summarized the fulfillment of the plan. To continue contribution to local welfare, the company has stepped up efforts to improve infrastructure construction and medical & health conditions of local communities, and support local medical and educational undertakings.

Anti-corruption: China Nonferrous Mining Corporation Limited has formulated the *Management System for Related Transactions*, the *Management System for Reporting and Complaints*, the *Implementation Measures for the Prevention and Control of Integrity Risks*, and other management systems, incorporating integrity construction into internal governance. To prevent supplier corruption, the company has adopted strict management measures for key anti-corruption links such as bidding and procurement. In terms of protection of informants' legitimate rights and interests, the company has standardized the work of letters and visits and protected informants' privacy. Besides, integrity is incorporated into daily training to raise the awareness of integrity.

G: Corporate governance

China Nonferrous Mining Corporation Limited has formulated a series of management systems such as the *Rules of Procedure for the General Meeting of Shareholders*, the *Board of Directors and the Office of the President* and the *Rules for the Management of Shareholders' Meetings and the Board of Directors of the Invested Enterprises* to clarify the detailed rules for corporate governance. The company has worked on internal control and formed the *Risk Management and Internal Control Review Report*. The Nomination Committee, Remuneration Committee, Compliance Committee and Audit Committee have been established with respective management responsibilities under the Board of Directors of the company. The Board of Directors shall convene at least four meetings annually; the Audit Committee shall convene at least two meetings every year to review and discuss interim and annual financial statements; the Compliance Committee shall convene at least two meetings every year to review the company's internal control policies and management situation.

Outlook in 2024

The year 2024 marks a critical phase in advancing the reform of central SOEs and is pivotal for the implementation of the latter half of the "14th Five-Year Plan". Under the guidance of Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, CNMC will enhance its political stance and strengthen its sense of responsibility and mission. In addition, by fully implementing the guiding principles of the 20th CPC National Congress and focusing on the security of national strategic resources and new nonferrous metal materials, CNMC will remain committed to pursuing high-quality development and drive the Group towards a world-class enterprise.

We will advance corporate reform to improve management efficiency.

Focusing on CNMC's "1+4" development strategy, we will consistently advance innovative practices that are in line with top-tier management standards. We will comprehensively promote the "6S" on-site management and the centralized domestic and international procurement across all levels. What's more, we will accelerate the removal of operations outside of our main businesses or without any strengths, directing resources towards competitive and promising businesses. Additionally, we will continue to enhance the market-driven mechanism and achieve 70% of the main tasks in the deepening of SOE reform.

We will promote scientific and technological innovation to unleash the potential for corporate growth.

Adopting a talent-oriented approach, we will promote industrial innovation with scientific and technological inventions. We will expedite the development of emerging industries with strategic significance as well as future industries while advancing the transformation and upgrading of traditional sectors. We will encourage increased investment in R&D, optimize top-level design and related rules, and promote the technological achievements evaluation mechanism and the benefit distribution mechanism for the technology commercialization. Our aim is to further unleash our potential for innovation.

We will promote green and safe development and further practice ESG principles.

Adhering to the Xi Jinping Thought on Eco-Civilization, we will implement the strategy of carbon peak and carbon neutrality and ESG principles. We will continue to advance the rectification efforts for issues identified in environmental protection inspections by the government agency and expedite the research, development, and application of low-carbon technologies. In addition, we will push for smart mine initiatives, the "IT-empowered Safety and Environmental Protection" campaign, workplace safety initiatives, pollution prevention and control events, carbon peak initiatives and industrial efficiency enhancement programs. Our aim is to achieve the green, low-carbon, and high-quality development of CNMC.

We will shoulder social responsibility and demonstrate our responsibility as a central SOE.

We will continue to compile and publish sustainability reports and implement the three-year plan for paired assistance. We will increase investment in assistance funds, aiming to achieve a 5% year-on-year growth in different indicators. We will continue to foster friendly exchanges and cooperation with local governments, partners, industry organizations, and communities. Through the initiative of "100 Companies in 1,000 Villages", we participate in high-quality, small-scale public welfare projects aimed at improving people's livelihoods, further enhancing our ESG management and relevant practice.



CSR Performance

Indicators	2021	2022	2023
Total investment in environmental protection (million yuan)	541	794	2,153
Number of organizations that have passed GB/T 24001/ISO 14001 environmental management system certification	28	31	39
Total energy consumption (10,000 tons of standard coal equivalent)	59.73	45.99	47.95
Comprehensive energy consumption (10,000 tons of standard coal equivalent)	55.50	44.57	46.08
Comprehensive energy consumption per 10,000 yuan of output value (comparable price) (ton of standard coal equivalent / 10,000 yuan)	0.07	0.06	0.05
Greenhouse gas emissions (10,000 tons)	202.48	171.25	169.92
Greenhouse gas emission intensity (tCO ₂ e per 10,000 yuan of output value (comparable price))	0.26	0.23	0.20
Amount of hazardous waste generated (10,000 tons)	44.69	45.00	53.89
Disposal rate of hazardous waste (%)	97.48	97.13	99.09
Amount of general solid waste generated (10,000 tons)	675.78	644.93	634.11
Comprehensive utilization rate of general solid waste (%)	56.06	59.90	45.59
Sulfur dioxide emissions (tons)	741.63	557.46	528.27
Nitrogen oxide emissions (tons)	563.45	466.57	434.44
COD emissions (tons)	265.27	238.12	199.08
Ammonia nitrogen emissions (tons)	38.75	38.40	24.03
Proportion of clean energy use (%)	7.90	4.92	19.84
Clean energy consumption (10,000 tons of standard coal equivalent)	4.72	2.26	9.52
Ratio of qualified products (%)	96.63	97.1	97.98
Yield of finished products (%)	84.39	96.3	93.38
Investment in work safety (million yuan)	487	665	663
Emergency drills	527	710	1100
Participants in work safety training (10,000 person-time)	11.28	13.2	23.4
R&D expenditure (billion yuan)	2.276	2.304	2.824
New authorized patents	197	162	189

Note: Starting from this year, the statistical coverage of the environmental performance indicators disclosed in the report has been adjusted to the domestic level, and some of the environmental performance data for the years 2021 and 2022 differ from the values disclosed in previous years' reports due to changes in the criteria.



Indicators	2021	2022	2023
Total number of suppliers	26,000	14,942	15,773*
Customer satisfaction rate (%)	99	96.7	98.1
Complaint resolution rate (%)	100	100	100
Total number of employees	46,774	45,738	42,898
Staff turnover rate (%)	14.58	4.63	2.3
Ratio of labor contracts signed (%)	100	100	100
Social insurance coverage rate (%)	100	100	100
Paid annual leave per employee (days)	10.5	10.5	10.5
Proportion of foreign employees in the total employees of overseas subsidiaries (%)	89	78.22	80
Proportion of female managers (%)	25.37	26.01	27
Number and proportion of ethnic minority or other ethnic employees (%)	2,743 person 10.45%	2,612 person 9.91%	2,674 person 10%
Staff training sessions	1,070	1,126	1,304
Total staff training hours	409,616	433,538	456,572
Employee training coverage rate (%)	100	100	100
Donations and for paired assistance and rural vitalization (10,000 yuan)	4,784.38	4,303.32	5,575.54

* 15,773 suppliers registered and stored online in 2023.



Expert Opinion

Yu Zhihong, President and Editor-in-Chief of China Sustainability Tribune

It is a pleasure to once again be invited to comment on the CNMC Sustainability Report. This marks the 13th consecutive year the Company has released such a report. As CNMC celebrates its 40th anniversary, this report not only reflects on the Company's four decades of progress, achievements, and valuable experiences but also underscores its steadfast commitment to sustainable and high-quality development.

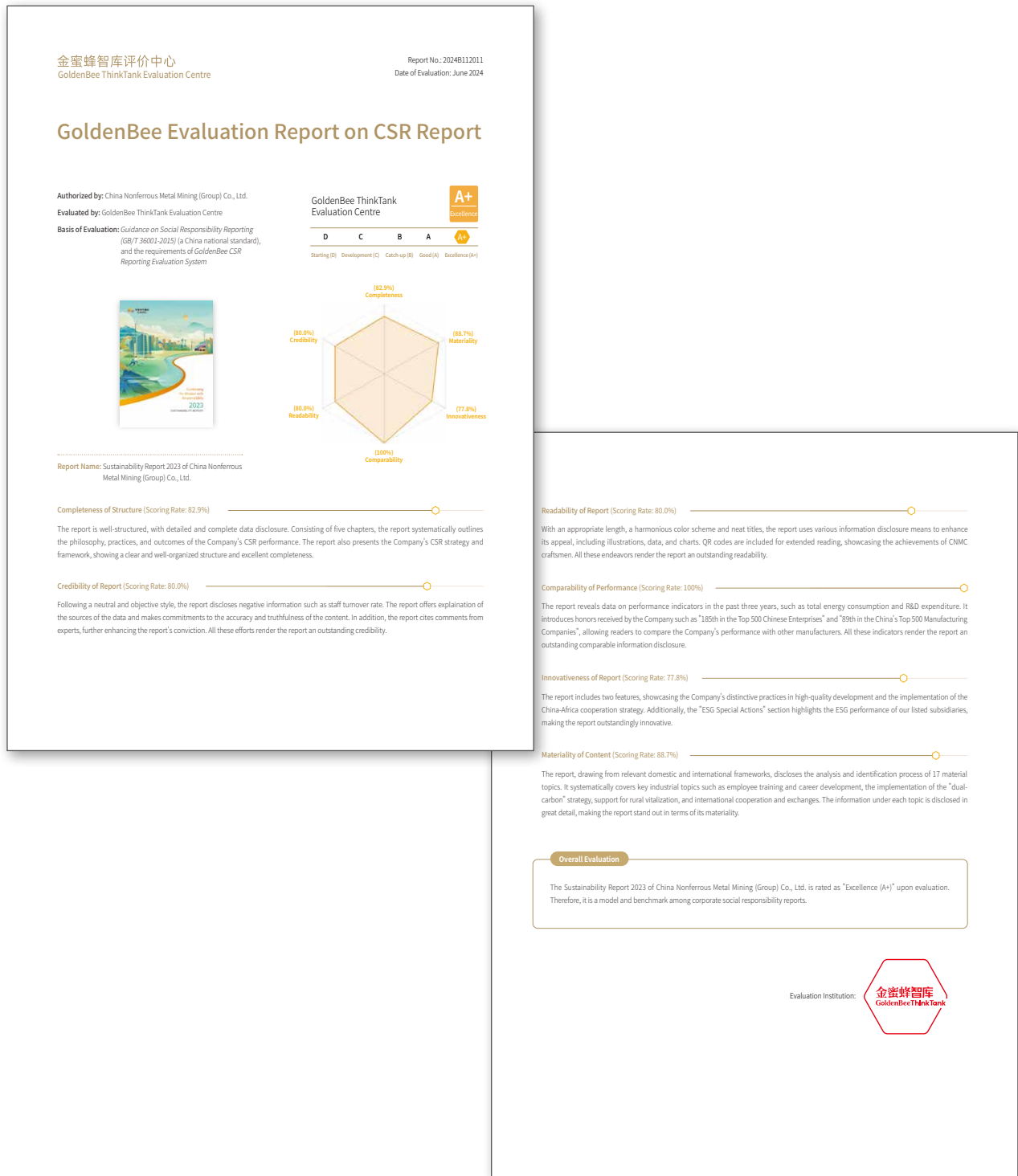
The theme of sustainability endeavors has become more pronounced in our work. Under the theme of "Continuing the Mission with Responsibility," this report highlights that over the past 40 years, CNMC has consistently embraced a global development perspective, adhered to the "going global" strategy, and benchmarked itself against world-class enterprises. In addition, the Company has engaged in exchanges and cooperation with stakeholders including investors, clients, environmentalists, partners, employees, and communities, fostering a culture of mutual benefits. As a responsive player to national development strategies, CMNC remains committed to the mission of "contributing to the country with resources" and strives to be the main contributor to the security of national strategic resources and new non-ferrous metal materials, giving full play to the role of state-owned economy in national development and rejuvenation. What's more, the Company emphasizes collaboration and shared benefits, fully upholding its social responsibilities. Through strong, barrier-free communication with local employees, communities, and governments, CNMC supports local employment and industrialization, constructs roads and power lines, provides medical care and medicines, and donates to educational initiatives. Through these efforts, the Company has earned high recognition locally, showcasing the responsibilities and commitments of a global enterprise.

The structure of the Sustainability Report has become clearer. The Report discloses information by integrating features with main chapters. The "two features" highlight CNMC's proactive commitment and responsibility in supporting major national strategies. The "five chapters" are centered around CNMC's mission of "contributing to the country with resources, pursuing innovation-oriented development, giving back to society, and helping employees succeed." In these chapters, the Company implements the "1+4" development strategy, strengthens governance system and capacity building, prioritizes scientific and technological innovation, and develops a green, low-carbon, circular industrial system. The Company continues to advance the high-quality, sustainable development of the global economy, society, and environment, embarking on a path of sustainable development with CNMC's characteristics. The "five chapters" also feature a "CSR Highlights" section that focuses on hot topics such as deepening reform, scientific and technological innovation, green development, openness and win-win cooperation, and rural vitalization, which enhances the Report's authenticity, originality, and readability.

At this new historical juncture, I sincerely hope that, as CNMC moves faster towards a world-class enterprise, the Company will persist in strengthening cooperation with all stakeholders and creating shared value that can be enjoyed by all. I am also confidant that the Company will become more adamant about its commitment to sustainable and high-quality development.



Report Rating





Report Contents	Benchmarked against GRI Standards
Seeking Development for a Solid Business Foundation	
Enhancing Governance Efficiency	2-13/2-17
Deepening Reform	2-6/2-17/2-27/203-2
Putting Safety First	2-27/203-2/403-7/416-1
CSR Highlights: Developing New Quality Productive Forces with Key Reform Measures	2-6/2-17/2-27/201-1/203-2
Pursuing Innovation for Sound Development	
Empowering Development with Innovation	203-2/416-1/417-1
Making Key Technological Breakthroughs	203-2/416-1/417-1
Creating Quality Brand	203-2/416-1/417-1
CSR Highlights: "Open Competition" Projects Propel Technological Innovation	203-2/416-1/417-1
Living Green for a Better Planet Earth	
Strengthening Environmental Management	2-23/2-27/203-2
Working for Ecological Governance	303-2/303-3/306-2/306-3/306-5
Advancing Low-Carbon Operation	203-2/301-2/302-4/303-2
CSR Highlights: Boosting Low-Carbon Transformation and Pursuing Green Development	203-2/302-4/302-5
Joining Hands for Openness and Win-win Cooperation	
Stabilizing Global Supply Chain	203-1/308-1/408-1/414-1
Deepening International Cooperation	203-1/203-2
Performing Social Responsibility Overseas	2-6/203-2
CSR Highlights: Achieving Win-Win Cooperation through the Pursuit of the Belt and Road Initiative	2-6/203-1/203-2
Building Happiness and Sharing a Good Life	
Caring for Employee Development	403-1/403-3/403-4/403-5/403-6/405-1
Engaging in Social Welfare	413-1/415-1
CSR Highlights: Promoting Rural Vitalization and Contributing to Common Prosperity	2-24/203-2/413-1
ESG Special Actions	2-24/2-27/203-2/301-2/302-4/308-1/403-1/405-1/414-1
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Feedback Form

Dear readers,

Thank you very much for reading the *China Nonferrous Metal Mining (Group) Co., Ltd. 2023 Sustainability Report*. In order to continuously improve the report preparation, we are eager to listen to your opinions and suggestions. Please help answer the questions in the feedback form and send it back to us.

Please tick "√" in the corresponding position.

Your identity:

- ☐ Government and regulatory authority
- ☐ Shareholder/investor
- ☐ Customer
- ☐ Employee
- ☐ Partner
- ☐ Scientific research institution or university
- ☐ Community resident
- ☐ Media
- ☐ Peer company
- ☐ Social organization
- ☐ Financial institution

Multiple-choice questions:

1. Are you satisfied with this report on the whole?

☐ Yes

☐ No

☐ Fair
2. Is the information you are interested in shown in the report?

☐ Yes

☐ No

☐ Fair
3. Do you think the report truthfully reflects CNMC's work on social responsibility and its impact on stakeholders?

☐ Yes

☐ No

☐ Fair
4. Can you easily find the information of interest to you in the report?

☐ Yes

☐ No

☐ Fair
5. Are you satisfied with the layout design of the report?

☐ Yes

☐ No

☐ Fair

Open questions:

6. What do you think are the weaknesses of this report?
7. What information do you want to be published in this report on a regular basis?
8. Do you have any comments and suggestions for our work on social responsibility and its report?


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