



中國大冶有色金屬礦業有限公司

China Daye Non-Ferrous Metals Mining Limited

(Incorporated in Bermuda with limited liability)

Stock Code : 00661

2022
**ENVIRONMENTAL,
SOCIAL AND
GOVERNANCE
REPORT**



Contents

Introduction	2
The Scope of and The Period Covered by this Report	2
Stakeholder Engagement	2
Environmental, Social and Governance Issue ("ESG") is a Board Responsibility	2
Environment	6
1. Environmental Protection	6
2. Use of Resources	10
3. Climate Change	12
Social	17
1. Safety Development	17
2. Employment Relationship and Labor Standards	32
3. Supply Chain Management	34
4. Product Responsibility	36
5. Anti-corruption	38
6. Community Investment	39
Environmental, Social and Governance Reporting Guide Index	41

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT 2022

INTRODUCTION

In 2022, China Daye Non-ferrous Metals Mining Limited (the “Company”) and its subsidiaries (collectively the “Group”) upheld its belief that economic development should go hand in hand with environmental protection and focused on its objectives and strengthened its problem-oriented approach in accordance with its environmental policy of “compliance with laws and regulations, green development, energy conservation and emission reduction and clean production”, with the aim of making continuous improvement and opening a new stage for the Company’s efforts in the ecological environment protection.

This environmental, social and governance report (“this report”) is prepared by the Group in accordance with the Environmental, Social and Governance Reporting Guide set out in Appendix 27 to the Rules Governing the Listing of Securities on the Main Board of The Stock Exchange of Hong Kong Limited.

THE SCOPE OF AND THE PERIOD COVERED BY THIS REPORT

Unless otherwise stated, this report consists mainly of the relevant operational information of two subsidiaries of the Company, namely Daye Non-ferrous Metals Co., Ltd. (大冶有色金屬有限責任公司) (“Daye Metal”) along with its subsidiary Yangxin Yangxin Hongsheng Company Limited* (陽新弘盛銅業有限公司) (“Yangxin Hongsheng”), and Xinjiang Hui Xiang Yong Jin Mining Co., Ltd. (新疆匯祥永金礦業有限公司) (“Xinjiang Hui Xiang Yong Jin”), during the Reporting Period. This report covers the period from 1 January 2022 to 31 December 2022 (the “Reporting Period”).

STAKEHOLDER ENGAGEMENT

Stakeholders refer to the parties that have interests in the Group or would be affected by the decisions and activities of the Group, including our shareholders, employees, suppliers, customers, regulators and the public. Stakeholders have participated in the assessment of materiality by way of face-to-face interviews, annual general meetings, telephone interviews, questionnaires, etc.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE ISSUE (“ESG”) IS A BOARD RESPONSIBILITY

The Board is responsible among other things for the development of the Group’s long-term corporate strategies and broad policies. In setting its standards, it considers the needs and requirements of the business, its stakeholders, the Corporate Governance Code and ESG Reporting Guide encompassed in the Stock Exchange’s Rules governing the listing of securities.

As such, the Board has overall responsibility for, and is engaged in, the Group’s ESG strategy and reporting, including identifying, evaluating and managing ESG-related risks, and ensuring appropriate and effective ESG risk management are in place. Management provides confirmation to the Board of the effectiveness of these systems. The Board also reviews progress made against ESG-related goals and targets.

Main Responsibilities of the Board

1. Oversee and execute the Group’s ESG strategy.
2. Review and ensure proper disclosure and compliance with the ESG Guide of The Stock Exchange of Hong Kong Limited.
3. Review the annual materiality assessment of ESG risks.
4. Review the internal procedures and system for the maintenance and generation of appropriate and accurate KPI data.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT 2022

The Group has established an ESG taskforce (the “Taskforce”). The Taskforce comprises of core members from the Groups’ different departments and is responsible for collecting relevant policies and information on its ESG aspects for preparing this report. The enterprise development department is responsible for the overall planning, with the guidance from the company secretary, and the members come from the safety and environmental supervision and management department, the enterprise management department, the science and mineral resources department, the quality accounting center, the safety and environmental protection supervision and management department, the human resources department, the commercial affairs department, the disciplinary committee and labor union.

The Taskforce will report to the Board at least once a year and is responsible for reviewing, assessing and enhancing the Group’s ESG policies, strategies and performance, and ensuring the Group is in full compliance with ESG requirements. The Taskforce also examines and evaluates the Group’s performances in different areas such as environment, safety production, labor standards, and product responsibilities in the ESG aspects. The Board has also set up a general direction for the Group’s ESG strategies, ensuring the effectiveness in the control of ESG risks and internal control mechanism. This approach affirms and enables the Group’s commitment to ESG, and ensures that members with different backgrounds and expertise are represented to deliver meaningful outcomes.

Main Responsibilities of the Taskforce

1. Collect relevant policies and information for preparing this report.
2. Present and regularly report to the Board on ESG performance.
3. Make recommendations to enhance ESG strategies and practices.

Principles for ESG Disclosures

The Company believes that quality reporting in terms of accuracy, balance, clarity, comparability, reliability and timeliness is the key to managing corporate sustainability. As a result, the Group defines the ESG content to be disclosed in this report based on the following principles:

Materiality	The Company conducts annual materiality assessments to ensure that the identified and prioritized ESG issues reliably reflect the most material concerns to the Company and its stakeholders.
Quantitative	The Company strives to quantify data with the most accurate and precise standards, methodologies and assumptions possible for ease of comparing ESG performances.
Consistency	The Company consistently compiles its latest sustainability report in a familiar format as our past reports and publishes it in a timely manner for readers to make meaningful comparisons of the ESG performance of the Company before making any ESG-dependent decisions within the expected timeframe.
Stakeholder Inclusiveness	The Company engages a broad range of stakeholders to pinpoint the most material issues. Stakeholder groups include investors, shareholders, governments, customers, employees, villagers, local communities, business partners, suppliers and non-governmental organizations.
Sustainability Context	The Company aims to expand our coverage on sustainable development goals, climate risks and opportunities, and other ESG topics in our sustainability reports to provide clarity on the ESG efforts of the Company in a greater context.
Completeness	The Company discloses both the positive and negative impacts of our business in a transparent manner to give a more balanced and complete overview of the ESG performance of the Company.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT 2022

Data Source and Reliability Statement

Data and cases in this report are primarily extracted from the official documents, statistical reports, relevant public information and internal reporting documents of the Group. The Company undertakes that this report contains no false representations or misleading statements, and assumes responsibility for the truthfulness, accuracy and completeness of its contents.

Goal Setting and Progress Review

The working group has set ESG-related goals and corresponding implementation initiatives, which are reviewed by the working group and submitted to the Board for approval, covering key ESG performance indicators such as discharge of pollutants, greenhouse gas emissions, resource consumption, production safety, quality management, etc. The Board regularly reviews the progress of achieving the ESG goals and makes recommendations for action on items that require improvement.

Communication with Stakeholders

Based on feedbacks from the stakeholders, the Company establishes a regular stakeholder communication practice. With targeted and diverse communication channels, the Company hopes to achieve positive interactions with stakeholders and respond to their expectations, thus facilitating the implementation of the Company's sustainable development efforts.

Stakeholders	Communication feedbacks	Communication channels
Government departments	<ul style="list-style-type: none"> Comply with relevant laws and regulations Safety Cooperate with the regulatory work of the government in support of healthy industrial development Ensure tax compliance and promote local economic development 	<ul style="list-style-type: none"> Meetings between government and company Supervision and inspection Work reports and studies
Shareholders and investors	<ul style="list-style-type: none"> Protect the legitimate rights and interests of shareholders Understand the operating results, governance standards and stringent risk control measures of the Company Ensure steady operation to maximize investment return Facilitate open, fair and equal information disclosure 	<ul style="list-style-type: none"> General meetings Company website Investor communication conferences and on-site visits Timely disclosure of material operating information and extraordinary announcements, and regular updates on financial information Face-to-face interviews, telephone enquiries and emails
Employees	<ul style="list-style-type: none"> Safeguard the basic rights and interests of employees Care for employees' physical and mental wellbeing and safety Understand employees' needs and their suggestions Provide training and career development platform for employees 	<ul style="list-style-type: none"> Employee representative meeting and labor union Employee satisfaction survey Occupational health and safety training Opinion and feedback platform Daily communication

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT 2022

Stakeholders	Communication feedbacks	Communication channels
Customers	<ul style="list-style-type: none"> • Protect customers' rights and interests • Uphold business ethics • Ensure product quality and safety, timely recall of defective products • Provide high-quality after-sales service guarantee 	<ul style="list-style-type: none"> • Product labelling and information disclosure • Customer visits • Customer satisfaction survey • Address complaints and opinions from customers
Partners and suppliers	<ul style="list-style-type: none"> • Maintain good and stable cooperation relationship • Operate with integrity and ensure the products are compliant with the standards • Timely communication and coordination with upstream and downstream players to achieve mutual benefits 	<ul style="list-style-type: none"> • Regular exchange and communication • Working meetings, phone calls and correspondences
Peers in the industry	<ul style="list-style-type: none"> • Fair competition among peers to promote healthy industrial development • Sharing of technology and experience among enterprises 	<ul style="list-style-type: none"> • Meetings of industry organizations • Experience sharing sessions • On-site visits and exchanges
Local community	<ul style="list-style-type: none"> • Take into account the impact of manufacturing and operation on local community • Drive local economic development, provide assistance to the disadvantaged groups • Promote health education and help patients • Enhance recycling of product packaging and waste, etc. to reduce environmental pollution 	<ul style="list-style-type: none"> • Participate in social welfare events • Provide regular assistance to the local community • Organize volunteer service • Disclose environmental information

Materiality Assessment

The Company has reviewed and assessed the ESG issues for the year and summarized the key ESG issues of the Company from the stakeholders' perspective as the basis for the preparation of this report.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT 2022

Materiality assessment process

- Review the pool of ESG issues: comprehensively consider and select the pool of ESG issues for 2022 by taking into account of the overall business development of the Group in 2022 and with reference to the ESG management practices of peer companies;
- Formulate and implement the stakeholder engagement program: communicate and research with important stakeholders to obtain relevant original data by taking into account of the Company's own situation for the Reporting Period and with reference to industry development and overall economic and social development;
- Quantify and evaluate from two dimensions: evaluate each issue from two dimensions of "materiality to corporate development" and "materiality to stakeholders" to obtain a matrix of material issues. The Company conducted a questionnaires survey in December 2022, inviting various categories of stakeholders to rate the materiality of ESG issues in 2022 on a scale of 1 to 5, in ascending order of materiality. After the survey, the Company analyzed and assessed the materiality of each issue from the two dimensions of "materiality to corporate development" and "materiality to stakeholders" based on the feedbacks from all participants, to arrive at the materiality analysis matrix of ESG issues in 2022 and the rating of each issue. The survey covered a wide range of stakeholders, including directors, senior management, middle management, employees, investors, suppliers, distributors of the Company and government regulators;
- The working group submit the report to and obtain approval from the management: submit the assessment report on stakeholder engagement and material issues to, and obtain approval from, the management. The Company is fully aware of the high level of stakeholder interest in key issues in areas, and that proper management of these issues will be a top priority for the Group. This report will provide responses and disclosures on various material issues, with a focus on high-materiality issues. The findings of the materiality assessment will be used to guide future ESG strategies and practices to drive the sustainable development.

The materiality assessment result

The materiality assessment result indicated that the five most material topics to the Group are:-

Labour Standards
Supply Chain Management
Anti-corruption
Product Responsibility
Community Investment

ENVIRONMENT

1. Environmental Protection

The Group painstakingly placed the development of ecological civilization in a prominent strategic position. With rigid adherence to its environmental policy of "compliance with laws and regulations, green development, energy conservation, emission reduction and clean production", the Group stringently implemented national environmental protection laws and regulations, technical specifications and emission standards while continuously promoting clean production and the operation of the environmental management system as part of its efforts to fulfil its social and environmental responsibilities, with the aim of achieving green development. The Group did not incur any major environmental incidents during the Reporting Period.

1.1 Environmental Management

The Group constantly improves its environmental management mechanism by establishing a safe environmental supervision and management department, a specialized function for environmental management responsible for the organization, supervision, inspection and coordination of the Company's daily environmental management efforts, as well as the environmental protection offices, which are responsible for environmental management during the production process. The Group standardized its

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT 2022

daily management of environmental protection through the establishment of a series of environmental protection management regulations such as the Environmental Protection Management (《環境保護管理》), Environmental Responsibility System (《環保責任制》), Management of Hazardous Waste (《危險廢物管理》) and Environmental Management of Construction Projects (《建設項目環境管理》). In 2022, the Group's Safety and Environmental Protection Department revised the "Environmental Protection Responsibility System" and "Environmental Protection Accountability System" (《環保責任追究制度》), clarified the management responsibilities at each level, and built a full-chain responsibility system of "clear responsibility, performance, assessment, and accountability" to allow accountability for dereliction of duty. Responsibility, due diligence and exemption from responsibility have become the norm, and leading cadres at all levels are urged to perform their duties. Sign the "Safety and Environmental Protection Responsibility Letter" (《安全環保責任書》) at various levels, refine and decompose key environmental protection tasks, and further tighten tasks and compact responsibilities; in order to strengthen the management of the company's online monitoring system for pollutant discharge, the "Standardized Management and Assessment Rules for Sewage Outlets (Trial)" (《排污口規範化管理與考核細則(試行)》) was issued for regular assessment of the standardized management of sewage outlets. At present, the Company has passed ISO14001 environmental management system certification.

The Group implements the Annual Environmental Monitoring Program (《年度環境監測計劃》) by combining online and manual monitoring, i.e. regularly monitoring the pollutants to obtain knowledge of wastewater and exhaust emissions at the key points, so as to ensure that the emission of pollutants meets the standards.

Usable materials in solid waste produced during the smelting process are further recycled and used by the Company; unusable materials are handed to professional companies for proper disposal; tailings slag from ore processing is disposed by filling, curing cementation or professional tailings pond storage in compliant manner.

For the noise generated during the production process, facilities such as sound-proof walls, mufflers and shock absorbers, etc. are employed to minimize noise pollution, and noisy equipment is placed away from the residential areas and staff quarters.

The Company implemented the environmental impact assessment system. The Company comprehensively promoted the environmental impact assessment of construction projects and the environmental acceptance upon completion of project to improve the intrinsic environmental protection level of the Company. It completed the environmental impact assessment of ten projects, including the rain and sewage diversion from the smelter, and the environmental acceptance upon completion of four projects, including the tailings pond closure of the Chimashan Mine, and successfully obtained the discharge permit for Yangxin Hongsheng, which further strengthened the bottom line of corporate governance in accordance with the law and added to the Company's green and high quality development.

For the rectification progress of issues raised by the Central Environmental Protection Inspectorate, please refer to the annual report 2022 of the Company.



Illustration: Remarkable Reduction in Pollutants Emission Achieved through Advanced Technical Innovation

1.1.1 The Company launched the project of environmental protection upgrading and the production system improvement of the smelter, with a planned investment of RMB696.3 million. The project was implemented in two phases, with the first phase consisting of the reinforcement and heightening of the main workshop of the converter and the environmental FGD (flue gas desulfurization) system modification, and the second phase consisting of the thermal system modification and the production system improvement of the smelter, which reduced carbon emissions of the smelter by 59707.39tCO₂.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT 2022

1.2 Environmental Protection Activities



Illustration: Moving on the Road of Green Mining through Proactive Protection of Mine Environment

- 1.2.1 The Group invested RMB9.03 million to implement an ecological restoration and treatment project for the open pit of Tongshankou Mine. In August 2022, the reclamation and re-greening of 175,000m² of the open pit slope was completed. On this basis, the greening of 66,000m² of the mine area was carried out in accordance with the requirement of “managing while mining”. The project passed the on-site acceptance by experts organized by the Natural Resources and Planning Bureau of Daye on 16 August 2022.
- 1.2.2 Following the closure of the Chima Shan tailings pond, the Group invested RMB17.32 million in the ecological restoration of the Chimashan mining area to improve the regional ecological environment through comprehensive treatment of the ground collapse area. The project was started in November 2022 and was expected to be completed by the end of March 2023. The project was divided into 9 sub-areas with a restoration area of approximately 150,000 square meters.



Imaginary drawing showing the ecological restoration and treatment effects at the copper mine open pit slope of Tongshankou Mine

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT 2022



Illustration: Targeted Trainings on Environmental Protection with the View of Enhancing the Awareness among Employees

1.2.3 In order to implement the new national environmental protection policies, the Group insisted on organizing quarterly training on environmental protection, focusing on the targeted training on in four aspects of construction projects (namely environmental management, solid waste management, environmental risk prevention and control, and environmental management system), to enhance the professional level of environmental management personnel. At the same time, the Group conducted examinations and assessments for internal auditors of the environmental management system and trained not less than 10 auditors for the environmental management system at the community level.

1.2.4 Overall environmental performance during the Reporting Period

The environmental protection work in 2022 has been achieved “one guarantee, three decreases”: In order to ensure that the stage node tasks of the central ecological environmental protection inspection and rectification could be completed on time, 26 inspection and rectification measures have been implemented as of 31 December 2022, with a rectification completion rate of 76.47%. In 2022, the Company was imposed one administrative penalty in respect of environmental protection, representing a decrease of seven cases or 87.5% from 2021.

1.3 Emission Statistics during the Reporting Period

	2022	2021	2020	2019
CO ₂ :	412,573 tonnes	484,264 tonnes	522,399 tonnes	551,531 tonnes
SO ₂ :	191 tonnes*	294 tonnes*	1,709 tonnes	1,813 tonnes
NO _x :	106 tonnes*	190 tonnes	139 tonnes	262 tonnes
Dust:	12.6 tonnes	18 tonnes	37 tonnes	82 tonnes
Production of hazardous waste:	71,880 tonnes	73,740 tonnes	82,056 tonnes	82,082 tonnes
Disposal rate of hazardous waste:	100%	99.80%	100%	100%
Production of non-hazardous waste:	3,795,657 tonnes	4,440,534 tonnes	7,143,418 tonnes	4,592,736 tonnes
Disposal rate of non-hazardous waste:	100%	100%	100%	100%

Note: CO₂ emissions are calculated according to the national “Guidelines for Accounting and Reporting Greenhouse Gas Emissions from the Smelting and Rolling of Other Non-ferrous Metals Industrial Enterprises” (《其他有色金属冶炼及压延加工业企业温室气体排放核算方法与报告指南》). (Including the smelting plant, Tonglvshan Mine, Tongshankou Mine, Fengshan Copper Mine, Xinjiang Hui Xiang Yong Jin)

Data temporarily does not include Yangxin Hongsheng. Yangxin Hongsheng is now in trial production, and the current data is not representative. Their production capacity has not met the requirements, and there is no control for the time being.

* The sharp drop in sulphur dioxide emissions in 2021 is due to the suspension of production and renovation after environmental inspections in 2020.

* The significant year-on-year decrease in sulfur dioxide and nitrogen oxides on 2022 was mainly due to the smelter's implementation of central environmental protection supervision and rectification, and the strengthening of waste gas emission indicators. The concentration of waste gas emissions decreased year-on-year, and the amount of pollutant emissions decreased accordingly.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT 2022

2. Use of Resources

2.1 Energy Saving Control

The Group earnestly implements national and industrial energy conservation laws, regulations, standards and requirements, and strictly follows relevant provisions including the Energy Conservation Law of the People's Republic of China (《中華人民共和國節約能源法》), Electric Power Law of the People's Republic of China (《中華人民共和國電力法》), and Norm of Energy Consumption Per Unit Products of Copper Metallurgical Enterprise (《銅冶煉企業單位產品能源消耗限額》), etc., and takes the low-carbon green development as the goal of energy-saving management, through the implementation of effective control management, the energy utilization efficiency in mining, ore processing, and smelting is improved to achieve comprehensive sustainable development.

Measures for Operation Management

- In 2021, the Group obtained the certification of the new ISO50001:2018 standard for energy management systems. In production activities, in accordance with the requirements of the energy management system, process control of energy consumption is strengthened to maintain the ongoing effective operation of the system and the reduction of energy consumption in products.
- Energy conservation-related technological improvement plans are formulated to step up efforts on energy saving technological transformation and energy mix adjustment, thus gradually reducing the proportion of fossil energy consumption, improving operation stability of key equipment and increasing energy efficiency.
- Annual energy consumption limits for all production units as well as total energy consumption control targets for the Group are formulated, and performance appraisals are carried out, to control energy consumption comprehensively in multiple levels.
- The usage and control of water resources are strengthened to increase recycling and reuse rate of circulation water and underground water. The management measures of water savings are introduced to reduce the new water consumption. The Group did not encounter any issues on seeking for sources of water.

Measures for Office and Domestic Management

- The use of energy saving LED lighting is promoted and smart sensing power switches with voice, light and time control, etc. are installed.
- Energy and water resource management in offices are strengthened by use of natural light for office lighting as much as possible and complete prevention of unused lights, air conditioners and running faucets, etc.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT 2022

Illustration

- 2.1.1 In 2021, research on the technology of end-point control of oxidation for converters was launched, as a result of which the oxidation-reduction time has been shortened and natural gas consumption has been reduced by 5%. Natural gas consumption is saved by approximately 237,300 cubic meters per year.
- 2.1.2 In 2021, technical research on optimizing electric furnace production and reducing electrode power consumption was carried out, analyzing and studying the impact of voltage level, electrode insertion depth and slag properties on power consumption, adjusting the voltage level and conducting experimental analysis of the impact of slag properties on power consumption. By adjusting the copper and slag temperature difference, and the balance of negative pressure inside the furnace through equipment and process transformation, and adjusting the voltage level and electrode insertion depth, power consumption of the electric furnace is reduced and 600,000 kWh of electricity is saved annually.

2.2 Improving Resource Utilization Rate

The Group conducts exploration of mineral resources in strict accordance with the Mineral Resources Law of the People's Republic of China 《中華人民共和國礦產資源法》 and strictly implements the Law of the People's Republic of China on Safety in Mines 《中華人民共和國礦山安全法》. Paying attention to the full utilization and protection of resources in the process of resource development, the Group enhances the comprehensive resource utilization rate for energy conservation and consumption reduction through measures including technological innovation and optimization of mining, processing and smelting processes to maximize the value of resource utilization.

Through production mining prospecting, mining prospecting data analysis, mining prospecting target area selection, ore body secondary delineation, etc., the amount of recoverable resources has been greatly increased and the loss rate of ore dilution has been reduced. Through the construction of digital mines and the application of new equipment, the operation efficiency has been effectively improved. Through technical breakthroughs and key technical index supervision and other projects, the recovery rate of ore processing can be improved, and various available resources can be effectively recovered.

2.3 Indicators of Energy Consumption during the Reporting Period

	2022	2021	2020	2019
Electricity consumption:	609,066,061 KWh	668,967,300 KWh	715,660,648 KWh	717,813,609 KWh
Natural gas consumption:	14,703,104 m ³	15,816,200 m ³	16,240,942 m ³	16,053,022 m ³
Total quantity of new water:	6,174,232 tonnes	5,967,800 tonnes	5,479,414 tonnes	6,007,558 tonnes
Total raw coal :	31,400 tonnes	48,800 tonnes	56,200 tonnes	73,400 tonnes
New water consumption per tonne of copper:	9.09 tonnes of water/tonne	8.93 tonnes of water/tonne	8.28 tonnes of water/tonne	8.02 tonnes of water/tonne

Notes:

- ① Electricity consumption includes all the electricity consumed for production at the smelting plant, Tonglvshan Mine, Tongshankou Mine, Fengshan Copper Mine and Xinjiang Hui Xiang Yong Jin.
- ② Natural gas consumption (cubic meter) represents the quantity of natural gas consumed by the smelting plant.
- ③ Total quantity of new water represents the quantity of new water used for production in the smelting plant, Tonglvshan Mine, Tongshankou Mine, Fengshan Copper Mine and Xinjiang Hui Xiang Yong Jin.
- ④ New water consumption per tonne of copper (tonne of water/tonne of copper cathodes) is the indicator of water consumption for producing copper cathodes, the main products of the smelting plant.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT 2022

3. Climate Change

The Group recognises that the long-term risks of climate change have far-reaching impacts on our operations and environment. As such, we are committed to mitigating the impacts of climate change and other environmental related risks. Changes in weather patterns and the increased severity of extreme weather events are physical risks which will likely disrupt the continuity of daily operations in terms of the ability of our employees for the company's business and operation. For this reason, we have developed emergency protocols to handle such events, as outlined in the Employee Handbook. As the awareness of environmental protection become more and more important in society, there is potential change in climate-related regulation and policy, including imposition of energy-efficiency requirements. Such transition risk may impact our operation cost and increase exposure of legal risk. Therefore, we monitor the changes of the regulation and policy regularly and make sure our operations are in line with the requirements of latest laws and regulations.

3.1 Climate Change Risks

Governance

The Company has incorporated sustainable governance into its corporate governance framework to ensure that the Group's exposure to the risks of climate change is incorporated into the corporate agenda and that the Group is actively involved from top to bottom in the development and implementation of strategies to address climate risks.

Board level

The Board is the highest governance body of the Group and is the highest leading unit for managing climate change risks, formulating sustainable development strategic goals and supervising the effective implementation of relevant goals. The Board is responsible for formulating the strategic direction of the Group. When formulating strategic goals and development directions, the Board takes climate change-related issues and corporate social responsibility into consideration, sets goals for the management and supervises the achievement thereof.

Supported by the leadership committee and construction working group of internal control system, the Board retains ultimate responsibility for the oversight of the Group's risk management activities. The working group under the Board takes accountability on risk management, and reviews corporate risk management and internal controls at least once a year.

Under the Management Decision Committee, the Group has established a Safety and Environmental Supervision and Management Department. The Safety and Environmental Supervision and Management Department provides practical guidelines and support to the Group's sustainable development, and is tasked to ensure thorough implementation of the Group's sustainable management policies.

Management level

The risks brought on by climate change are placed high on the Group's agenda, and therefore, the Group is committed to building resilience against these risks. In particular, the Group has established a working group, the leader of which is mainly responsible for its leadership role, and annually develops, monitors and reviews safety and environmental indicators and targets. The leader shall firmly discharge his/her responsibilities and guide the various executive departments in taking measures to address climate risks.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT 2022

Strategy

The Group understands that climate change will bring various risks to its business, such as physical risks such as water resource stress, floods and extreme weather, which will cause damage and negative impact on assets and supply chains; and transition risks such as policy changes and reputation, will also cause potential financial impact. Therefore, it is actively taking actions to address the impact of climate change. The Group is committed to reducing and offsetting greenhouse gas emissions, enhancing the resilience of the Group in response to climate change, and seizing relevant opportunities to build a cleaner environment. Facing the continuous impact of climate change, the Group has established and implemented a series of strategies to deal with climate risks, re-positioning the Group in the ever-changing world, in order to enhance the city's climate change resilience and promote sustainable development. The Group has adopted the following strategies to address climate change, and will strengthen its efforts and take more relevant actions to achieve the goal of carbon neutrality:

Analysis of the Impact of Climate-related Risks on Finance

During the Reporting Period, the working group has identified and assessed a number of climate-related issues that have affected or may affect the Group (e.g. disruption to production operations, supply chains, energy resources and logistics due to the increasing intensity and frequency of extreme weather events (e.g. typhoons, rainstorms, snowstorms, floods, etc.); replacement of existing products, services or technologies during the transition period; the increased capital expenditure and operating costs due to damage to assets and facilities; threats to employee safety; increased insurance premiums due to the potential recurrence of extreme weather events; possible implementation of climate-related regulations and policy changes; global transition to a low carbon economy through energy efficiency innovations, etc.).

Climate-related risks	Climate risk outcomes	Potential financial impact
Policy and legal risks (low risk)	The Group may face the risks of being held legally liable or subject to regulatory measures, facing disciplinary actions, encountering property damage or loss of business reputation due to its failure to meet climate-related policies or laws.	Reduction of operating income, increase of credit risks
Technology risks (low risk)	In the process of low-carbon technology transformation, the development and application of energy-saving and environmental protection technologies such as renewable energy and new energy may have certain impacts on the operation and business of the Group.	Reduction of fixed asset value, increase of R&D investment cost

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT 2022

Climate-related risks	Climate risk outcomes	Potential financial impact
Acute physical risks (high risk)	Severe climate changes such as extreme weather or natural disasters such as typhoons and floods, among which rainstorm will cause flooding can aggravate the Company's flood relief efforts. Extreme weather may lead to disruptions in the transportation of raw materials and products, as well as reduction of efficiency of mine and smelter production operations.	Reduction of operating income, increase of operating cost, and reduction of fixed asset value
Environmental risks (high risk)	The Company's major environmental risks include contaminant leakage and the occurrence of events such as the construction and operation of projects that do not meet expectations due to their impact on the environment.	The Company's headquarters and subsidiaries take impermeable measures in accordance with the regulations and have set up collection ponds and weirs to prevent harmful substances from leaking into the environment, and also conducts regular emergency drills for hazardous waste.
Chronic physical risks (low risk)	The long-term shift in natural phenomenon such as rising of sea level and continuous high temperature may influence the normal operation of the Group.	Increase of operating cost, and reduction of fixed asset value
Reputation risks (low risk)	The public pays more and more attention to green operation. If the Group fails to meet the expectations of stakeholders, it may face reputation risk in the operation.	Reduction of operating income, increase of operating cost
Market risks (low risk)	Considering the business characteristics of the industry, the risk of transformation caused by the increased demand of consumers for green products and services.	Reduction of operating income, increase of operating cost

It is concluded that these climate-related issues are not material to the Group. The materiality assessment, as detailed in the "Stakeholder Engagement and Peer Benchmarking" and "Materiality Assessment" sections above, indicated that the materiality of A4 Level: Climate Change and Key Performance Indicator A4.1 has been currently ranked as "low" overall, consistent with the conclusions of the Enterprise Risk Management team above.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT 2022

Analysis of the Impact of Climate-related Opportunities on Finance

During the Reporting Period, the working group has identified and assessed a number of climate-related issues that have affected or may affect the Group (e.g. promotion of resource and energy use efficiency, etc., use of clean energy and low-carbon energy instead of traditional high-carbon energy, selection of environment-friendly suppliers resulting in lower operating cost and higher operating income).

Climate-related opportunities	Climate opportunities outcomes	Potential financial impact
Resource efficiency	The Group promotes energy conservation and emission reduction through promoting resource and energy use efficiency, etc., which is conducive to reducing operating costs.	Reduction of operating costs
Energy sources	The use of clean energy and low-carbon energy instead of traditional high-carbon energy will help significantly reduce the uncertainty of Group's energy expenditure in the future.	Reduction of operating cost risks
Resilience	The Group's climate resilience is enhanced by adopting energy efficiency measures in operations and choosing environment-friendly suppliers and partners.	Increase of operating income, and reduction of operating costs

It is concluded that these climate-related issues are not material to the Group.

3.2 Carbon Emission

We focused on the goal of "carbon peak and carbon neutrality," and our green and low-carbon development pattern was continuously consolidated and improved. We support the Paris Agreement and the Chinese government's National Strategy for Climate Change Adaptation. Achieving the "Carbon Peak" and "Carbon Neutrality" goal and stepping into the "renewable energy and advanced materials" business have become important components of the Company's development strategy for the next decade.

The Company has been firmly establishing its "energy transformation and green low-carbon development" concept in quickening the promotion of green transformation and development. The Company has successively completed the full-process transformation of mining and smelting systems, greatly improving the level of greening, intelligence, mechanization, automation and informatization. At the same time, the Company steps up efforts on the management of energy conservation and carbon reduction, and promotes the continuous development of energy conservation and carbon reduction work through measures such as advancing the construction of energy management systems, promoting the application of energy-saving technologies, strengthening the management and control of production process, and optimizing the energy mix.

The Company has always actively supported and participated in the building of the carbon emission market. In 2013, the Company became a shareholder of China Emissions Exchange in Hubei Province. In 2014, it was among the first group of enterprises to participate in the pilot carbon emission trading market in Hubei Province, achieving certain results in terms of carbon emissions planning, verification and trading as well as carbon reduction technology, etc. With the implementation of projects including increasing the oxygen enrichment of the Ausmelt furnace with the smelting system to reduce electricity and raw coal consumption, applying the lean-oxygen combustion technology at the refining furnace to reduce natural gas consumption, dismantling renewable resources and recovering scrap copper to reduce energy consumption in the blister copper smelting process, the Company plays a significant role in controlling and reducing carbon dioxide emissions in the course of production.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT 2022

The Company has a long-term plan for carbon emissions, aiming at carbon peaking by 2030 and carbon neutrality by 2060. "Carbon peaking" means that carbon dioxide emissions no longer increase, and gradually decrease after reaching the peak. "Carbon neutrality" means that total amount of carbon dioxide generated from enterprise offset through tree planting, energy conservation and emission reduction, and other means to achieve "zero emission" of carbon dioxide.

Carbon peaking and carbon neutrality have presented a huge issue for the green, low-carbon and high-quality development of enterprises. However, in the specific implementation process, the gradual emergence of issues including the few number of latest low-carbon and zero-carbon technologies being developed and promoted for application, the relatively high cost of implementing low-carbon technology, the slow speed of developing clean energy, the need for further research and promotion of carbon capture technology, etc., has formed certain obstacles for enterprises to achieve the goals of carbon peaking and carbon neutrality.

The Company is vigorously promoting the development of double carbon work in accordance with the national requirement to promote "carbon peak and carbon neutrality". The Company has set up a leading team for the "carbon peak and carbon neutrality" action, formulated work responsibilities and action requirements, organized continuous learning and training on the policy requirements of "carbon peak and carbon neutrality", studied carefully the ideas and technical methods for the implementation of the double carbon action, and formed the implementation direction and working ideas for the implementing of the action.

In order to implement the new development concept, focus on reducing carbon emissions, accelerate the formation of green production methods, strengthen green technology innovation, and help the Company achieve high-quality development, the Company is engaging a professional institution to prepare an implementation plan for the "carbon peak and carbon neutrality" action and develop and build the Company's carbon assets management information platform. Through a comprehensive and systematic verification on the Company's existing carbon emissions, and LCA full life-cycle assessment and analysis of the carbon footprint of the main products, the project carries out research on low-carbon technology measures and carbon reduction potential technologies, proposes targeted low-carbon control solutions for each production control step and business segment, builds the Company's carbon assets and carbon footprint information management platform system, formulates the technical roadmap and implementation steps for carbon peak and carbon neutrality, and conducts overall research and planning of the Company's carbon management system (carbon emission rights, carbon assets, carbon finance, etc.). Finally, a scientific, systematic, quantifiable and practical implementation plan for the Company's "carbon peak and carbon neutrality" action has been formed and implemented. The first draft of the action plan has been formed and the Company's carbon assets information management platform has been built and is ready for operation. Upon completion of the project, it will provide substantial planning and guidance for the commencement of the Company's double carbon work.

Next, the Company will vigorously promote the development of energy utilization in the direction of high efficiency and cleanliness in combination with double carbon planning, vigorously promote the application of key national energy-saving and low-carbon technologies, clean energy technologies, new energy storage technologies and low-temperature waste heat recovery technologies within the Company, gradually explore ways to adjust the energy structure, improve energy use efficiency and build a clean, low-carbon, safe and efficient energy management system. The Company will improve the dual control of total energy consumption and intensity, seek various effective paths of carbon peak and carbon neutrality, and strive to promote the achievement of the goal of carbon peak and carbon neutrality.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT 2022

SOCIAL

1. Safety Development

Adhering to the principle of putting people and their lives first, the Group gives top priority to the protection of employees' lives and safety, firmly establishes the safety development concept upholding the policy of safety first, prevention the key and comprehensive management, strictly complies with the laws and regulations of the PRC on production safety, and establishes and continuously improves its occupational health and safety management system, thus providing a safe and healthy workplace for employees for the protection of their safety and health.

1.1 Safety Management System

The Group has established an occupational health and safety management system in accordance with the ISO45001 standard and has continued to improve its occupational health and safety performance. At the end of 2022, we passed the on-site audit of the Hubei Branch of China Quality Certification Centre.

- Safety management organization: The chairman of a corporation of the Group is the top manager of the corporation's occupational health and safety management system, responsible for system operation planning and command. The corporation's general manager is the representative of management. Under the leadership of the top management, he is responsible for the establishment, implementation, maintenance and improvement of the process required by the corporation's occupational health and safety management system. The Group has set up a Safety Supervision and Management Department as a specialized institution for safety management, and is manned by safety directors and full-time safety production managers who meet the requirements of laws and regulations.
- Safety performance inspection: The Group has established a safety performance evaluation procedure to regularly review and examine its compliance with laws and regulations, the progress of its goal achievement, the operation of its occupational health and safety management system, its safety education and training and other aspects so as to identify opportunities for improvement, formulate improvement measures and continuously improve its safety management performance.
- Safety inspection and rectification: The Group has established a safety inspection and hazard management system under which regular safety inspections are conducted by the corporation and its factories, workshops and production teams. In response to various safety risks, the corporation and various factories and mines organize special inspections and rectifications of hazardous chemicals and explosives, metallurgical high-temperature melts, mines and tailings ponds, and natural gas. Any accident hazard found in the inspection is rectified in a timely manner to prevent and reduce the occurrence of accidents.
- Safety emergency management: The Group has established an emergency rescue centre and a mine emergency rescue team, equipped with corresponding rescue equipment. Based on the safety risks of the Group, corresponding emergency plans are formulated. The Group establishes an emergency drill scheme annually and organizes emergency drills for fire, hazardous chemicals and flood prevention on a regular basis.
- Safety education management: The Group has established a "three-level" safety training system covering the corporation, workshops and production teams, and has formulated The Company's Implementation Plan for the Safety Skill Improvement Action Plan (《公司安全技能提升行動計劃實施方案》) to organize and conduct skill improvement training for safety management personnel, production team leaders and employees. The Group regularly organizes a series of safety promotion, education and training activities, such as "Safety Alert Month" (事故警示月), "Production Safety Month" (安全生產月), "Ankang Cup" (安康杯) and "100 Days with Zero Accident" (百日安全生產無事故) to enhance the safety awareness and skills of its employees.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT 2022

- Occupational health protection: The Group strictly implements laws and regulations such as the Law on the Prevention and Control of Occupational Diseases, and conducts occupational hazard inspections every year in workplaces where harmful factors such as dust and noise exceed the standard. In strict accordance with the standards for the provision of protective supplies, the Group provides its employees with protective products, such as safety helmets, dust masks, gas masks, protective glasses and earplugs. Through the adoption of dust washers and ventilators and other measures, the Group reduces dust concentration at the work site to improve the operating conditions, thus protecting the physical and mental health of its workers. Every year, the Group conducts regular occupational hazard tests on the work site, organizes medical checkups and rehabilitation trips for its employees, and purchases medical insurance, work injury insurance and safety liability insurance for those who meet the requirements.

1.2 Safety Operation

Attaching great importance to occupational health and safety, the Group has established a production safety responsibility system for all employees, clarifying the safety responsibilities of employees in each position. With focus on mobilizing the enthusiasm and initiative of all employees to actively participate in production safety work, the Group organizes employees to learn safety knowledge through weekly production team safety meetings. At the same time, each production team has a team safety officer to give timely feedback to employees on occupational health and safety opinions and suggestions. Activities such as "Check for Hazards, Make Suggestions" (查隱患、提建議) are extensively carried out for all employees, and employees are rewarded for checking for hazards and making reasonable safety suggestions. The Group formulates safety precautions for various safety risks, actively conducts research on critical safety technology issues, promotes the application of advanced equipment and processes, and focuses on vigorously promoting the application of mechanized equipment in mines to reduce the risks faced by operators. For areas and equipment that are prone to accidents and pose a threat to our employees' safety and health, measures such as full isolation, full protection, video surveillance, and installation of protective interlocking devices are taken to protect the safety of employees. For example, gas leakage alarms are installed in flammable and explosive places, protective covers are installed in the transmission parts of equipment for isolation, etc., and obvious safety warning signs are set up.

The Group also exhibits its concern about road safety and traffic control by deploying dedicated traffic management personnel for daily traffic control. We provide education and training on road safety to drivers on a regular basis, who must pass the examination held by the safety management department before they are allowed to commence work. The Group's safety management department organizes regular safety examinations and installs GPS-powered real-time monitoring systems and video surveillance systems on vehicles transporting hazardous chemicals for real-time monitoring.

The Group also takes into serious consideration the safety management of its contractors. An outsourcing safety management system has been established, under which all contractors of construction projects must pass a safety qualification examination before they are admitted and a Production Safety Management Agreement (《安全生產管理協議》) would be entered into in order to clarify their respective rights and obligations for production safety. Strictly control the access of subcontracting teams to prevent subcontracting and illegal subcontracting. The Group will keep the contractors under its unified management and conduct regular safety inspections and assessments on contractors.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT 2022

1.3 KPIs

During the reporting period, the Group had 1 outsourced production safety accident, resulting in the death of 1 worker and a direct economic loss of RMB1.43 million, and a loss of 420 working days due to work-related injuries (based on the minimum of 60 working days under the Classification Standard for Work-related Injuries and Deaths GB6441-86).

 **Illustration 1.3.1: Smelter conducted safety education and training for outsourced personnel**



On 9 December, the smelter conducted safety education and technical disclosure for new staff in order to strengthen safety risk control in the process of environmental upgrading and transformation. Focusing on the environment characteristics of the production site of the main converter workshop, the safety risks and protective measures for high-risk operations involving fire, high altitude, lifting, etc. were explained.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT 2022

➤ *Illustration 1.3.2: Yangxin Hongsheng launched a comprehensive inspection of safety, fire safety and equipment and facilities*



Yangxin Hongsheng launched a comprehensive inspection of safety, fire safety and equipment and facilities on 28 September, in order to further prevent and restraint the occurrence of safety incidents and to promote a stable and positive safety situation.


ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT 2022

➤ *Illustration 1.3.3: Smelter conducted occupational hazard test*



On 26 July, a team of occupational health hazard test from Huangshi Renfu Hospital (黄石人福醫院) was commissioned by the smelter to carry out the 2022 annual occupational disease hazard test and evaluation work to prevent and detect occupational disease hazards and protect the physical and mental health of employees. The scope of the test included production sites such as smelter, main converter workshop and the electrolysis workshop. The test items involved dust, lead and arsenic, noise, sulfur dioxide and other occupational hazards, with a total of more than 100 test locations, covering all production sites and operating positions of the smelter.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT 2022

 *Illustration 1.3.4: The Company held a training course on safe production knowledge for senior and middle management*



From 17 to 18 June, the Company held a training course on safe production knowledge for senior and middle management in 2022. Professor Jiang Wei, Director of Emergency Management Research Center of Zhongnan University of Economics and Law and an expert from the Provincial Department of Emergency Management, was invited to give a lecture.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT 2022

➤ *Illustration 1.3.5: The labor union of the Company launched an activity of “sending health to the team”*



The labor union of the Company presented the team medical kit to the team leader representatives of the smelter and the design and research company, and organized training on first aid knowledge for the team. Orthopedic experts, nursing and first aid specialists of Emergency Department from Huangshi Nonferrous Metals Hospital (黄石有色醫院) taught knowledge on orthopedic first aid, first aid for heat stroke, first aid for burns, CPR, trauma rescue and others respectively.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT 2022

 *Illustration 1.3.6: Xinjiang Hui Xiang Yong Jin held a launch ceremony of “Safe Production Month” and “Environmental Protection Month” activities in 2022.*



On 1 June, Xinjiang Hui Xiang Yong Jin held a launch ceremony of “Safe Production Month” and “Environmental Protection Month” activities in 2022. Subsequently, the signing of safety pledge was carried out.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT 2022

➤ *Illustration 1.3.7: Emergency rescue drill for work-related injury prevention and mechanical injury accidents in Huangshi was held in the smelter*



ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT 2022



On 26 May, Emergency rescue drill for work-related injury prevention and mechanical injury accidents in Huangshi was held in the smelter. Fang Xin, deputy director of Huangshi Human Resources and Social Security Bureau, and Liu Kun, chief engineer of the Emergency Management Bureau, attended the drill.

The accident simulated the scene in which two workers in the sulfuric acid workshop dealt with a malfunctioning acid pump, they accidentally triggered the switch, causing the sudden start of the motor, resulting that a worker's finger was rolled into the pump and squeezed. The staff quickly reported the accident and the smelter immediately activated a Level 4 emergency response to the workplace accident. The emergency rescue, general co-ordination, medical rescue and accident investigation teams under the drill headquarters received instructions and immediately went to the spot to carry out emergency rescue and disposal. Subsequently, professional ambulance personnel from the provincial emergency rescue training center conducted training on first aid knowledge such as hemostasis and bandaging and CPR.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT 2022

 Illustration 1.3.8: Safe Production Information Desk was set up in Tongshankou Mine



During the National Safe Production Month in June, a safe production information desk was set up in Tongshankou Mine, where the safety management professionals from the Mine were invited to answer questions about production safety policies and regulations, the use of labor protection supplies and other related issues, and to popularize safety knowledge. In addition, promotional materials were distributed, a question-and-answer draw was held, and explanations on the use of gas detectors and self-rescue breathing apparatus were given.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT 2022

 *Illustration 1.3.9: Yangxin Hongsheng Emergency Drill created safety atmosphere*



In the afternoon of 22 June, Yangxin Hongsheng conducted a hydrogen sulfide leakage emergency disposal drill at the site of the sulfide workshop in the chemical area.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT 2022

➤ *Illustration 1.3.10: The Company (militia) emergency rescue team conducted a flood control and rescue drill*



On 11 May, the 2022 annual flood control and rescue drill of (militia) emergency rescue team was conducted. Seven units, including the smelter, had 145 militia and emergency team members participating in the drill. The drill was conducted in three main activity sections of “emergency response mechanism activation, emergency instruction issuance, militia emergency rescue team assembly and test”.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT 2022

 *Illustration 1.3.11: The Company organized safety and environmental knowledge competition*



On 1 April, the Company organized a safety and environmental knowledge competition to further enhance the safety and environmental protection awareness of the Company's staff and guide them to establish the concept of green development, so as to better promote the production and operation and reform and development of the Company.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT 2022

1.3.12: Fengshan Copper Mine held health knowledge lecture on “Care for Health, Escort for Safety”



On 24 March, a health knowledge lecture on “Care for Health, Escort for Safety” was held at the Fengshan Copper Mine to enhance the health awareness of all staff, establish a correct health concept, promote a healthy lifestyle and improve the ability to deal with emergencies. The training was attended by management staff of the Mine, including team leaders and above, members of the Mine’s emergency rescue team and staff with chronic diseases.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT 2022

2. Employment Relationship and Labor Standards

The Group complies strictly with the laws, regulations and policies on human resources and social security, and has formulated a comprehensive human resources management system to ensure the legality and compliance of its labor employment. The Group has also established a diversified income distribution system to open up the development and promotion channels, while providing multi-level training and various welfare benefits to its employees.

2.1 Employment

The Group insists on hiring its staff in compliance with the laws and regulations, entering into labor contracts with them to protect their legitimate rights and interests and promoting harmonious and durable labor relations. During the Reporting Period, the Group did not incur any serious violations of laws and regulations in terms of recruitment and promotion, remuneration and dismissal, working hours, holidays, equal opportunities, diversity, anti-discrimination, other treatment and benefits, and forced labor.

- The Group implements a standard working hours system to ensure reasonable working hours for its employees and made reasonable arrangements for its employees to take paid leaves.
- The Group strives to provide a healthy and safe working environment for its employees, distributes necessary protective equipment to them, and arranges regular medical checkups, rehabilitation and recuperation for those working in toxic and hazardous environment.
- The Group complies strictly with the Labor Law of the People's Republic of China (《中華人民共和國勞動法》) and the Labor Contract Law of the People's Republic of China (《中華人民共和國勞動合同法》) and the labor contract signing ratio of the employees of the Group has reached 100%.
- The Group absolutely forbids the use of child labor and forced labor.
- The Group protects the rights and benefits of its female employees in pregnancy, childbirth and breastfeeding.
- The Group opposes discrimination and treats our employees from different countries, ethnicities, genders and religions in a fair and equitable manner.

2.2 Care for Our Employees

The Group cares for its employees, organizing diverse and interesting cultural and sports activities, as well as physical examination and protection for occupational disease for our employees to enhance their sense of happiness and loyalty.

- The Group takes good care of its employees in need and makes efforts to satisfy their daily needs. We sponsor targeted missions such as support, mutual help and major disease relief to help those suffering from various kinds of difficulties; we also pay condolence visits to the junior level staff and worker exemplar during holidays to extend our greetings and make them feel the warmth like a family.
- The Group provides soccer fields, basketball courts, tennis courts, and badminton courts, and regularly organises various cultural and sports activities, such as basketball, badminton, chess and card competitions, as well as Labor Day and National Day evening parties, for our employees.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT 2022

2.3 Remuneration and Incentives

The remuneration of our employees is determined based on the value of their positions as well as the Group's operating results and the individual employee's performance, which is assessed through a complete performance appraisal system, under the principle of fairness, equity and transparency.

- The Group has established a remuneration management system which is pegged to the achievement of the Group's targets and the completion of respective unit's tasks, whereby the total remuneration varies with the profits of the Group and the units.
- The Group implements a diversified distribution system based on the performance of its employees with various forms of payments, such as annual salary, agreed salary, output-based salary and commission for marketing staff.
- We aim at sharing the Group's profits with its employees and continuously improve their income.

2.4 Employee Development

The Group offers education and training programs to our employees with the aim of "growing into an enterprise with learning atmosphere and cultivating employees with learning altitude", reserving talent for our production and operation and development strategies. While ensuring the sustainable and stable development of the Group, respecting the personality and desires of our employees, we adhere to the training theory of "training for everyone and forever", aiming to provide it with various outstanding management, technical and operational talents. Our education and training programs are organized under the principle of "effectiveness-oriented and learn for application", with a hierarchical and categorized training system and a variety of training activities to provide quality resources for the long-term development of our employees.

2.5 KPIs

As at the end of 2022, the Group had a total of 5,434 employees, which are distributed as follows:

1. Age: 0 under 18; 780 between 18 and 29; 773 between 30 and 39; 3,152 between 40 and 49; and 729 at 50 or above;
2. Gender: 4,646 males and 788 females;
3. Type of employment: 100% on a permanent basis;
4. Employees trained: 4,471 males in 2022, with a training rate of 96.23%, 724 females, with a training rate of 91.89%; the average number of training hours per employee is 42.49;
5. Voluntary turnover rate: 19 in 2022, accounting for 0.34% of the total employees; among them, 0.34% are between 18 and 29; 0.22% between 30 and 39; 0.43% between 40 and 49, and 0.01% at 50 or above; 0.92% are male and 0.08% are female.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT 2022

3. Supply Chain Management

3.1 Environmental and Social Risk Policies for Managing the Supply Chain

The Group is a state-owned large-scale copper industrial conglomerate engaged in geological exploration, mining, mineral processing, smelting and processing, etc. The Group mainly engaged in non-ferrous metal resources development and trading, and the raw materials required for non-ferrous metal resources development are mostly imported copper concentrates, blister copper and anode plates.

The Group manages its supplier with performance evaluation in accordance with a full set of rules such as Credit Risk Management (《信用風險管理》), Implementation Measures for Investing Responsibility for Non-compliant Operation (Trial) (《違規經營投資責任追究實施辦法(試行)》), and Copper Procurement Management Measures (《銅原料採購管理辦法》), aiming to strengthen the access approval, evaluation and withdrawal of suppliers, improve the supplier evaluation system, standardize the Company management on the full life cycle of suppliers, and improve the quality of supplier resources.

The Group attaches remarkable importance to supply chain risk control and maintains comprehensive assessment and control of the environmental, social and governance risks of its suppliers through on-site inspection, telephone communication, Internet information, and review by third-party agencies, etc.

The increasing number of the new and upcoming smelt enterprises and constantly growing production capacity has resulted in serious imbalance on the supply side of raw materials. The intensified competition among peers, year-on-year increase in procurement costs, and the increasingly demanding environmental policies and import policies has created enormous difficulty in the normal production of the upstream suppliers, resulting in more and more obvious imbalance between supply and demand.

3.2 KPIs

3.2.1 KPIs (Number of suppliers by region)

Year	Raw Material Sources	Region	Number of Suppliers
2022	Imported	United States	2
		Switzerland	6
		Hong Kong	3
		Singapore	3
		United Kingdom	1
		Chile	1
	Domestic mines	In Province	9
		Jiangxi	2
		Zhejiang	1
		Sichuan	3
	Blister copper, anode plate	Guangdong	1
		In Province	4
		Jiangxi	11
		Anhui	2
		Yunnan	1

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT 2022

3.2.2 *KPIs (Illustrate the management of the supplier, the number of suppliers to whom the practice is enforced, and the related implementation and monitoring methods)*

The Group attaches great importance to the exploration of non-ferrous metal resources and purchases raw copper from qualified suppliers in accordance with the Group's criteria. When selecting the suppliers, we take into account the price, the stability and reputation of the goods and the environmental protection policies of the suppliers. Our commerce department evaluates the quality of the supplied goods and the operation of key links in the execution process every six months based on the supplier's supplying strength and ability to fulfill the contract, and submits the evaluation results to the relevant senior managements for approval, so as to ensure that the quality and price of the purchased raw materials meet the requirements. Meanwhile, process implementation was examined from time to time and offer suggestions for improvement.

During the Reporting Period, the Group included the key indicators of the quality of raw materials, i.e. the grade of copper and sulfur, in its annual performance appraisal system, and improved and optimized the system based on the appraisal results.

3.2.3 *KPIs (Illustrate the practices for identifying environmental and social risks in each link of the supply chain, and the related implementation and monitoring methods)*

The Group assesses the impacts of its suppliers on the environment and society in their production or supply chain by maintaining contact with them, and continuously monitored them in collaboration with the relevant departments of the Group and made appropriate procurement recommendations to the senior management in a timely manner.

During the Reporting Period, the Group sorted out and examined the latest operations development and the credit risks of its suppliers in the supply chain such as abnormal changes in their industrial and commercial registration, major tax violations and defaults, dishonest person subject to enforcement etc., aiming to eliminate those with abnormal operating conditions and high credit risks in a timely manner.

3.2.4 *KPIs (Illustrate the practices for encouraging the suppliers to use more eco-friendly products and services during the screening process, and the related implementation and monitoring methods)*

During the Reporting Period, the Group's commerce department made its utmost efforts to encourage our suppliers to adopt more eco-friendly ways in providing mining services and helped them optimize their production processes.

3.2.5 *Green supply chain: During the reporting period, the Group adhered to the procurement policy of direct supply of copper concentrate to mines and direct supply of blister copper/anode plates to manufacturers, giving priority to green mines as partners, strictly controlling the impurity content of incoming raw materials, and preventing suppliers from supplying plastic films being placed in the compartments of freight transport vehicles to reduce environmental pollution and impact on production. In terms of imported raw materials, for the newly imported copper concentrate from Kazakhstan, foreign businessmen have been urged to reinforce and replace the packaging ton bags to ensure that the spillage of concentrates caused by the rupture of ton bags is reduced, so as to reduce the impact on the environment pollution and impact on production.*

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT 2022

4. Product Responsibility

The Group complies strictly with relevant laws and regulations including the Product Quality Law of the People's Republic of China (《中華人民共和國產品質量法》) and the Metrology Law of the People's Republic of China (《中華人民共和國計量法》), etc. in its production process. All our products and labels have met the applicable national and industrial quality standards. Our products had a 100% success rate in various product quality sampling tests conducted by national, provincial and municipal government authorities. During the Reporting Period, no punishment was imposed on the Group due to violation of laws and regulations in relation to product quality and technical supervision.

- The Group has established comprehensive quality management systems, under which all the products must be thoroughly tested according to customer's requirements and relevant national standards before leaving the factory. Daye Metal has passed and obtained ISO9001 Quality Management System Certificate, ISO10012 Measurement Management System Certificate, ISO14001 Environmental Management System Certificate, ISO45001 Occupational Health and Safety Management System Certificate and ISO50001 Energy Management System Certificate. Daye Metal aims for zero defect in product quality by insisting on the quality policy of "first-class products, services in good faith, management excellence and market development".
- A strict product inspection system has been established to ensure high product quality in highly-effective production process. In addition to its established customer communication platform, Daye Metal also conducts annual customer satisfaction surveys, aiming to understand customers' opinions on the services of Daye Metal. Apart from regular technical seminars, Daye Metal also has a customer complaint mechanism. Containment actions will be taken within 24 hours upon receiving customer complaint to ensure that once a defective product is reported, the cause will be found out within seven days and preventive measures will be implemented, and the customer will be informed of follow-up measures on a timely basis, while internal review will be made and internal management will be improved.
- In order to foster a good quality management culture, Daye Metal promotes a quality-oriented philosophy among its employees, and carries out different quality assurance education and training for its management, technical staff and front-line operators, aiming to continuously improve their awareness of the importance of quality, the quality efficiency and legal compliance in quality through organizing the "Month of Quality" activities, targeted technical challenges and improvement in quality assurance methods.
- Daye Metal attaches great importance to the protection of customer privacy and undertakes to avoid disclosing customer information when signing contracts with customers to protect customer's privacy. Daye Metal did not receive any complaint resulted from the disclosure of customer information.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT 2022

4.1 KPIs:

A2.5 The total amount of packaging material used in the finished products (in tonnes) and, if applicable, the amount per unit of output.

The packaging materials used for the finished products are mainly steel belts, with a total consumption of 377.83 tonnes and 0.8 kg per tonne of production.

B6.1 The Group did not identify any cases of non-compliance of its products and services with the relevant health and safety legislation.

B6.2 According to the 2022 customer satisfaction survey, customer satisfaction with the Group is 98.45%.

B6.3 The Group is committed to complying with the national policies and laws and regulations pertaining to the protection of intellectual property rights. During the Reporting Period, the head office of the Group did not receive any reports on violations in the protection and safeguarding of intellectual property rights.

B6.4 The Group has established a product quality accountability management system, and conducts regular assessments of customer satisfaction, initiates quality accountability for complaints against the Company's major products (copper cathode, gold, silver and sulfuric acid), monitors the quality of production, operation and sales, formulates preventive measures and supervises their implementation.

B6.5 During the Reporting Period, the head office of the Group did not receive any complaints due to the leakage of customer information.

4.2 Application of Reporting Principles

The product responsibility of Daye Metal is identified according to the quality management system standard GB/T 19001-2016/ISO 9001:2015.

Total amount of packaging materials used in finished goods (in tonnes) and, if applicable, the amount per unit of output. The packaging material for finished goods are mainly steel belts, with a total consumption of 384.19 tonnes and 0.8 kg per tonne of production. The process of calculation is as follows: the total copper cathode production in 2022 is 472,293.19 tonnes and the finished copper cathode products are packaged at 2.50 ± 0.05 tonnes/bundle, resulting in 188,917 bundles. The weight of the packaging material is 2 kg/bundle, so the total weight of the packaging material will be $188,917 \text{ bundles} \times 2 \text{ kg/bundle} = 377,834 \text{ kg} = 377.83 \text{ tonnes}$, and the amount of packaging material per unit of production is $2 \text{ kg/bundle} \div 2.5 \text{ tonnes/bundle} = 0.8 \text{ kg/tonne}$.

4.3 Illustration

The Group's "Dajiang" brand copper cathode, "Dajiang" brand gold bullion and "Dajiang" brand silver have all been named as a Famous Brand Product of Hubei Province. Among them, "Dajiang" brand gold bullion and "Dajiang" brand silver have passed the qualification certification of the London Bullion Market Association (LBMA), and "Dajiang" brand Grade-A copper, which has been officially recognized by the international community for its quality, is a brand registered with the London Metal Exchange (LME) for delivery.

In 2022, copper cathode, sulfuric acid, gold bullion, silver and other products of the Group have been registered with domestic and foreign exchanges and have been inspected and confirmed by authoritative testing institutions at home and abroad. Their quality fully meets the standard requirements and reaches the international advanced level.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT 2022

5. Anti-corruption

The Group gives particular attention to improving the integrity of the Party members and maintains its anti-corruption efforts in strict compliance with the relevant national laws and regulations of the PRC as well as basic rules and regulations of the Company, including the Supervision Law of the People's Republic of China 《中華人民共和國監察法》) and the Regulation of the Communist Party of China on Disciplinary Actions 《中國共產黨紀律處分條例》), upholding the general line of making progress while maintaining stability, closely following the theme of high-quality development, conscientiously performing its supervision duties, giving full play to the role of supervising and guarding implementation and promoting and improving development, thereby providing a strong guarantee for the green and high-quality development of the Group. During the Reporting Period, the Group did not incur any cases of corruption and other violations.

- The Group perseveringly carries out various forms of alert education activities, and with focus on typical cases of violation of discipline and law that are investigated and dealt with at higher levels, conducts special education activities within the Group, allowing employees to learn profound lessons and enhance their awareness of integrity.
- The Group strengthens supervision and restraint, pushing the formulation, revision and improvement of a number of important systems with focus on important fields and key sectors such as bidding and procurement, trade business, and asset management to further standardize the operation of powers, thus squeezing the breeding room for corruption.
- The Group improves the reporting and accusation mechanism, making publicly available the complaint hotline, mailboxes and methods of sending letters and visits about reporting corruptive acts, with the aim of regulating the handling of all kinds of reported information.
- The Group strengthens the building of discipline inspection teams and mobilizes its discipline inspection officials to carry out intensive learning and training seminars, which has enhanced their political literacy and has improved their comprehensive ability to perform supervision and enforcement accountability.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT 2022

6. Community Investment

The Group attaches importance to the fulfillment of social responsibilities, and advocates the concepts of patriotism, integrity, law-abiding, innovation, amiability and responsibility to upgrade the employees' moral accomplishment. The Group actively participates in welfare, charity and public undertakings to contribute to the growth of enterprises and surrounding communities, and our employees' sense of social responsibilities has been continuously strengthened.

➤ Illustration

6.1 Launch of the "New Volunteers in Red" (新志願紅) cultural creation activity

On 26 August, the Company organized all the new trainees of the Bronze Training Camp (青銅訓練營) to go into seven communities, including Tongdu, Lujiapu, Shenniu, Shengli, Kangning, Datang and Tuanjie, to provide voluntary service and help the cultural creation of the City make progress at an "accelerated pace".



ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT 2022



On the same day, after the training on volunteer service knowledge, groups of “new volunteers in red” were busy under the burning sun, focusing on the problems on community environmental hygiene, building clean-up and public service advertisement investigation. At the same time, they took part in the star-rating assessment of civilized buildings and visited residents to promote the culture creation. Despite being drenched in sweat, they were still so energetic, not afraid of being tired and dirty, highlighting the mission and responsibility of colored youth in practicing civilization.

In line with the spirit of the 2022 Conference on Promotion of Building a National Civilized City in Huangshi, the Group actively fulfilled its social responsibilities and commitments as a state-owned enterprise in the work to meet the “National Inspection of Cultural Creation” and took the initiative to provide high-quality voluntary services. The team also conducted weekly “Volunteer Service Day” in the communities they covered. On 18 and 26 August, it organized more than 200 newly-recruited fresh graduates to go to 12 communities, including Tongdu community, to carry out “New Volunteers in Red” cultural creation activities. The activities were aimed at strengthening the cultivation and education of volunteer spirit for young employees, enhancing their awareness of voluntary service and making positive contributions to the building of civilized city in Huangshi.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT 2022

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORTING GUIDE INDEX

Scope set out in the Environmental, Social and Governance Reporting Guide	Key Environmental, Social and Governance Issues of the Group	Page
A. Environmental		
A1. Emissions	Environmental Protection	9
A2. Use of Resources	Use of Resources	10
A3. The Environment and Natural Resources	Environmental Protection	6
	Use of Resources	10
A4. Climate Change	Climate Change	12
B. Social		
B1. Employment	Employment Relationship and Labor Standards	32
B2. Health and Safety	Safe Development	17
B3. Development and Training	Employment Relationship and Labor Standards	32
B4. Labor Standards	Employment Relationship and Labor Standards	32
B5. Supply Chain Management	Supply Chain Management	34
B6. Product Responsibility	Product Responsibility	36
B7. Anti-corruption	Anti-corruption	38
B8. Community Investment	Community Investment	39