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

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

Stock Code: 01258

2022
Annual Report

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CORPORATE INFORMATION

REGISTERED OFFICE

Unit 1303, 13/F, Austin Tower
22–26 Austin Avenue
Tsimshatsui
Kowloon, Hong Kong

PRINCIPAL PLACE OF BUSINESS IN ZAMBIA

32 Enos Chomba Road
Kitwe, Zambia

PRINCIPAL PLACE OF BUSINESS IN THE DRC

Lubumbashi
Katanga Province
Congo (DRC)

COMPANY'S WEBSITE

www.cnmcl.net

STOCK CODE

01258

DIRECTORS

Executive Directors

Mr. He Yang *(Chairman)*
(appointed as Chairman and Executive Director on 13 October 2022)
Mr. Jinjun Zhang *(Chairman and President)*
(resigned as President on 4 August 2022 and resigned as Chairman and Executive Director on 13 October 2022)
Mr. Chunlai Wang
(resigned on 11 April 2022)

Non-Executive Director

Mr. Yaoyu Tan

Independent Non-Executive Directors

Mr. Dingfan Qiu
Mr. Jingwei Liu
Mr. Huanfei Guan

General view of CNMC Huachin Mabende

THE COMMITTEES OF THE BOARD

Audit Committee

Mr. Jingwei Liu *(Chairman)*
Mr. Yaoyu Tan
Mr. Huanfei Guan

Nomination Committee

Mr. Dingfan Qiu *(Chairman)*
Mr. He Yang (appointed on 13 October 2022)
Mr. Jingwei Liu
Mr. Jinjun Zhang (resigned on 13 October 2022)

Remuneration Committee

Mr. Huanfei Guan *(Chairman)*
Mr. He Yang (appointed on 13 October 2022)
Mr. Dingfan Qiu
Mr. Jinjun Zhang (resigned on 13 October 2022)

Compliance Committee

Mr. He Yang *(Chairman)*
(appointed on 13 October 2022)
Mr. Dingfan Qiu
Mr. Huanfei Guan
Mr. Jinjun Zhang *(Chairman)*
(resigned on 13 October 2022)

JOINT COMPANY SECRETARIES

Mr. Chaoran Zhu (appointed on 7 March 2022)
Mr. Dayong Yang (resigned on 7 March 2022)
Ms. Man Yi Wong

LEGAL ADVISER

Fangda Partners
26/F., One Exchange Square
8 Connaught Place
Central
Hong Kong

AUDITOR

Ernst & Young
Certified Public Accountants and Registered Public Interest Entity Auditor
27/F, One Taikoo Place
979 King's Road
Quarry Bay
Hong Kong

HONG KONG SHARE REGISTRAR

Computershare Hong Kong Investor Services Limited
Shops 1712–1716, 17th Floor
Hopewell Centre, 183 Queen's Road East
Wanchai, Hong Kong

CHAIRMAN'S STATEMENT

Chairman of the Board
He Yang

Dear Shareholders,

China Nonferrous Mining Corporation Limited (hereinafter referred to as "the Company") entered Zambia in 1998 to develop Chambishi copper mine, which is the first Chinese mining enterprise to implement the "Going Out" initiative. Over the years of more than two decades, adhering to the cooperation concept of "mutual benefit and common development", the Company has deeply focused on Central and Southern Africa, and has built a batch of (copper) mines and smelteries. After entering the Hong Kong capital market in 2012, under the concern and companion of the majority of shareholders, the Company has been improving gradually each year and has made great efforts to become a world-class mining enterprise with global competitiveness.

In 2022, the external operating environment faced by the Company is relatively complex and severe. The global economic growth was weak, commodity trading was shrinking, the average price of LME copper fell by US$500 per tonne compared with that of last year, the average price of MBCo fell by US$6,187 per tonne compared with that of last year, the value of Zambia Kwacha depreciated by 8.2%, the power supply of Congo (DRC) was tight, the transportation capacity was insufficient, the port of South Africa suffered from flood, and a series of external factors, such as the dramatic decrease in the efficiency of the flow of personnel and materials caused by COVID-19 pandemic, all of the these had a great impact on the normal production and operation of the Company.

However, with the concern and support of the majority of shareholders, all the employees of the Company cheered up their spirits, tackled difficulties, hedged the uncertainty of the external environment to the greatest extent through their own efforts, and ensured the smooth operation of the Company. In 2022, the Company's comprehensive copper output was 520,000 tonnes, with a year-on-year growth of 2.8%, including about 380,000 tonnes of crude copper/anode copper and about 140,000 tonnes of cathode copper; the production of cobalt hydroxide containing cobalt was 1,673 tonnes in total; the production of sulfuric acid was about 1.01 million tonnes, and the production guidance issued at the beginning of the year was well completed. Operating income of US$4,095 million was realized throughout the year, which remained stable year-on-year; Realized net profit was US$382 million, attributable to the parent net profit was US$264 million, decreased by 26% on a year-on-year basis; Earnings per share was US¢ 7.05 (equivalent to HK$0.55).

In the capital market, in 2022, the Company's shares were successively included in the "Hong Kong Stock Connect Program" and the "MSCI China Small Cap Index", the stock price was steadily rising, the stock liquidity was significantly enhanced, and was concerned and recognized by more investors and in secondary markets, which laid a good foundation for the Company's subsequent high-quality development in the capital market.

Since 2023, the international economic situation is still complex and evolving, the geographical environment of the hotspot area is more complex, the regulatory policies of the major economies play each other, the global economic growth is under great pressure, the strategic and financial attributes of the international commodities represented by copper are further enhanced, and the price trend has great uncertainty. At the same time, the situation in some African countries, transportation, energy and electricity supply, currency stability, inflation level will also bring many challenges to the production and operation of non-enterprises. However, we should also see that with the global economy entering the era of "post-pandemic", the aggregate social demand of all major economies is gradually recovering. Especially after the adjustment of China's epidemic prevention and control policy, as the world's second largest economy with the consumption of refined copper accounting for half of the total sales volume of the world, the recovery of China's economy will inject strong impetus into the basic raw material industry, and the rapid development of new energy, new materials and other emerging industries cannot be separated from the supply of large quantities of basic raw materials. As a supplier of basic raw materials, the Company faces many difficulties and challenges, but it will also usher in new and valuable development opportunities.

The Company will firmly establish the concept of high-quality development, through a series of pragmatic measures such as increasing the output, controlling the cost and strengthening the management, the Company will constantly dig the internal potential; Further expand the reserves of copper and cobalt resources by strengthening deep-side prospecting and resource acquisition, so as to continuously strengthen the sustainable development; By carrying out process improvement and technical research, constantly generate benefits from scientific and technological innovation; Through strengthening the construction of compliance risk control system to constantly promote the improvement of corporate governance; We will continue to strengthen the maintenance of investor relations, constantly improve the brand value and market reputation, and strive to make new breakthroughs in equity financing, resource acquisition and asset injection.

The Company will continue to adhere to the development concept of "innovation, coordination, green, opening and sharing", attach great importance to safe production, environmental protection and sustainable use of resources, strictly abide by the laws and regulations in the country where we operate business, earnestly protect the rights and interests of Chinese and foreign employees, take care of the concerns of suppliers, communities and other stakeholders, and achieve win-win cooperation and harmonious development.

The years are not living, and so are the times. On behalf of the board of directors, I would like to thank the shareholders for their company and concern. In the new year, the Company will continue to step up and down to the ground. We firmly believe that with the support of investors and friends from all walks of life, the Company will surely usher in a better future and create more value for shareholders and for the society.

He Yang
Chairman of the Board
China Nonferrous Mining Corporation Limited

30 March 2023

RESULTS HIGHLIGHTS

OPERATING RESULTS

In 2022, the Group recorded revenue of US$4,094.7 million, representing an increase of US$44.1 million from US$4,050.6 million in 2021. In 2022, the Group recorded profit attributable to owners of the Company of US$263.7 million, decreased by US$93.4 million from US$357.1 million in 2021.

CHANGES IN PRODUCT OUTPUT

In 2022, the Group accumulatively produced 140,684 tonnes of copper cathodes, representing an increase of 13.2% year-on-year; 319,398 tonnes of blister copper and copper anodes, representing a decrease of 1.6% year-on-year; 1,673 tonnes of cobalt contained in cobalt hydroxides, representing an increase of 177.9% year-on-year; 1,010,164 tonnes of sulphuric acid, representing a decrease of 3.0% year-on-year; 19,651 tonnes liquid sulphur dioxide, representing a decrease of 24.4% year-on-year; and the processed copper products by the Group amounted to 59,538 tonnes, representing an increase of 1.6% year-on-year.

STEADY PROGRESS IN PROJECT DEVELOPMENT

The Open Pit Mine Project at Baluba Center has a designated capacity of 1.5 million tonnes of quality oxide copper mine per annum. At present, the design demonstration of open cast mining has been completed, and the construction and stripping work has started in July 2022.

The Resumed Project of Kambove West Mine was officially approved in October 2022 and is expected to be put into production in 2026.

MANAGEMENT DISCUSSION AND ANALYSIS

FINANCIAL REVIEW

Results of Operations

The following table sets forth sales volume, average selling price, revenue and percentage contribution to total revenue of the products of the Group during the years indicated.

	For the year ended 31 December							
	2022				2021			
	Sales Volume (1)	**Average Selling Price**	**Revenue**	**% of Total Revenue**	Sales Volume (1)	Average Selling Price	Revenue	% of Total Revenue
	(Tonnes)	***(US$ per tonne)***	***(US$'000)***	***(%)***	*(Tonnes)*	*(US$ per tonne)*	*(US$'000)*	*(%)*
Blister copper and copper anodes	**325,049**	**8,069**	**2,622,744**	**64.1**	333,499	8,667	2,890,597	71.4
Copper cathodes	**146,808**	**7,870**	**1,155,328**	**28.2**	114,521	8,334	954,423	23.6
Cobalt contained in cobalt hydroxide	**1,314**	**34,008**	**44,687**	**1.1**	363	40,193	14,584	0.3
Sulphuric acid	**705,470**	**301**	**212,121**	**5.2**	765,565	172	132,023	3.2
Liquid sulphur dioxide	**19,415**	**1,184**	**22,979**	**0.6**	25,833	871	22,498	0.6
Copper products processing services(2)	**59,507**	**619**	**36,857**	**0.8**	58,615	622	36,463	0.9
Total			**4,094,716**	**100.0**			4,050,588	100.0

Notes: (1) The sales volumes of blister copper and copper anodes, copper cathodes are on a contained-copper basis.

(2) The copper products processing services refer to the processing and production of copper products by the Group's smelters as entrusted by the external enterprises and the Group receives processing fees from these enterprises.

Revenue

The revenue of the Group increased by 1.1% from US$4,050.6 million in 2021 to US$4,094.7 million in 2022. In 2022, the Group's revenue generated from blister copper and copper anodes, copper cathodes and sulphuric acid accounted for 64.1%, 28.2% and 5.2%, respectively, of the total revenue.

The revenue from blister copper and copper anodes decreased by 9.3% from US$2,890.6 million in 2021 to US$2,622.7 million in 2022, mainly due to the decrease in global copper prices and the decrease in sales volume.

The revenue from copper cathodes increased by 21.0% from US$954.4 million in 2021 to US$1,155.3 million in 2022, mainly due to the increase in sales volume, as compared with the same period last year.

The revenue from sulphuric acid increased by 60.7% from US$132.0 million in 2021 to US$212.1 million in 2022, mainly attributed to the increase in the unit selling price as compared with the same period last year.

Cost of Sales

The following table sets forth the cost of sales, unit cost of sales, gross profits and gross profit margins of the products of the Group during the periods indicated.

	For the year ended 31 December							
	2022				2021			
	Cost of sales	**Unit cost of sales**	**Gross profit**	**Gross profit margin**	Cost of sales	Unit cost of sales	Gross profit	Gross profit margin
	(US$'000)	***(US$ per tonne)***	***(US$'000)***	***(%)***	*(US$'000)*	*(US$ per tonne)*	*(US$'000)*	*(%)*
Blister copper and copper anodes	**2,468,591**	**7,595**	**154,153**	**5.9**	2,363,683	7,088	526,914	18.2
Copper cathodes	**695,964**	**4,741**	**459,364**	**39.8**	522,953	4,566	431,470	45.2
Cobalt contained in cobalt hydroxides	**19,598**	**14,915**	**25,089**	**56.1**	4,919	13,557	9,665	66.3
Sulphuric acid	**70,063**	**99**	**142,058**	**67.0**	39,926	52	92,097	69.8
Liquid sulphur dioxide	**5,500**	**283**	**17,479**	**76.1**	4,320	167	18,178	80.8
Copper products processing services [Note]	**27,779**	**467**	**9,078**	**24.6**	29,752	508	6,711	18.4
Total	**3,287,495**		**807,221**	**19.7**	2,965,553		1,085,035	26.8

Note: The copper products processing services refer to the processing and production of copper products by the Group's smelters as entrusted by the external enterprises and the Group receives processing fees from these enterprises.

The cost of sales of the Group increased by 10.9% from US$2,965.6 million in 2021 to US$3,287.5 million in 2022, primarily due to the year-on-year increase in the sales volume of copper cathodes and the increase in the unit production costs of blister copper and copper anodes.

The cost of sales in respect of blister copper and copper anodes increased by 4.4% from US$2,363.7 million in 2021 to US$2,468.6 million in 2022, primarily due to the increase in the unit production costs.

The cost of sales in respect of copper cathodes increased by 33.1% from US$523.0 million in 2021 to US$696.0 million in 2022, primarily due to the year-on-year increase of sales volume.

The cost of sales in respect of sulphuric acid increased by 75.7% from US$39.9 million in 2021 to US$70.1 million in 2022, primarily due to the transportation expenses of sulphuric acid for the period which constituting the performance costs of customer contracts, which were charged to the cost of sales.

Gross profit and gross profit margin

The Group recorded a gross profit of US$807.2 million in 2022, representing a decrease of 25.6% from US$1,085.0 million in 2021. The gross profit margin decreased from 26.8% in 2021 to 19.7% in 2022. In particular:

The gross profit margin of blister copper and copper anodes decreased from 18.2% in 2021 to 5.9% in 2022, primarily attributable to the year-on-year decrease in global copper prices and the increase in the unit production costs of blister copper and copper anodes.

The gross profit margin of copper cathodes decreased from 45.2% in 2021 to 39.8% in 2022, mainly due to the year-on-year decrease in global copper prices and the year-on-year increase in the unit production cost of copper cathodes.

The gross profit margin of sulphuric acid decreased from 69.8% in 2021 to 67.0% in 2022, primarily due to the transportation expenses of sulphuric acid for the period which constituting the performance costs of customer contracts, which were charged to the cost of sales.

Distribution and selling expenses

The distribution and selling expenses of the Group amounted to US$39.8 million in 2022, representing a decrease of 51.6% from US$82.3 million in 2021, primarily due to the decrease in the costs of sales for the period due to the transportation expenses constituting the performance costs of customer contracts which were charged to the costs of sales.

Administrative expenses

The administrative expenses of the Group increased by 36.2% from US$122.9 million in 2021 to US$167.4 million in 2022, primarily due to the expanding scale of production of the Group as Kambove Mining put into production in October 2021 officially.

Finance costs

The finance costs of the Group were US$33.9 million in 2022, decreased by 9.1% from US$37.3 million in 2021, mainly due to a decline in financing due to the repayments of bank borrowings.

Other gains and losses

Other gains and losses of the Group decreased by US$17.0 million from a net loss of US$35.7 million in 2021 to a net loss of US$18.7 million in 2022, mainly due to the decrease of loss on change in fair value of financial instruments as compared with the same period last year.

Income tax expense

The income tax expense of the Group decreased by US$121.2 million from US$291.6 million in 2021 to an expense of US$170.4 million in 2022, mainly due to the decrease in total profit as compared with the same period last year, as well as the resource tax can be deducted before income tax in Zambia.

Profit and net profit margin attributable to owners of the Company

As a result of the foregoing, the profit attributable to owners of the Company decreased by 26.2% from US$357.1 million in 2021 to a profit of US$263.7 million in 2022. The profit margins attributable to owners of the Company (being the profit attributable to the owners of the Company as a percentage of revenue) were 8.8% in 2021 and 6.4% in 2022, respectively.

LIQUIDITY AND CAPITAL RESOURCES

Cash flows

The following table sets forth certain information regarding the consolidated statements of cash flows of the Group for the periods indicated:

	For the year ended 31 December	
	2022	2021
	(US$'000)	*(US$'000)*
Net cash from operating activities	**782,522**	536,383
Net cash used in investing activities	**(75,705)**	(204,393)
Net cash used in financing activities	**(578,999)**	(225,050)
Net increase in cash and cash equivalents	**127,818**	106,940
Cash and cash equivalents at beginning of year	**606,746**	497,829
Effect of foreign exchange rate changes on the balance of cash held in foreign currencies	**(1,641)**	1,977
Cash and cash equivalents at end of year, represented by:		
Bank balances and cash	**732,923**	606,746

Net cash flows generated from operating activities

Cash inflows generated from operating activities are primarily attributable to the sales revenue of copper and sulphuric acid products and cash outflows are primarily attributable to the purchase of raw materials and various operating expenses. Net cash flows generated from the operating activities of the Group increased by 45.9% from an inflow of US$536.4 million in 2021 to an inflow of US$782.5 million in 2022, primarily attributable to the year-on-year decrease in the balances of inventories and trade receivables.

Net cash flows used in investing activities

Cash outflows used in investing activities are mainly for the purchase and construction of property, plant and equipment for copper production. The net cash flows used in investing activities of the Group amounted to US$75.7 million in 2022, decreased by US$128.7 million from an outflow of US$204.4 million in 2021, mainly due to the commissioning of Kambove Main Mine Leach Copper Smelting Project which resulted in the decrease in fixed assets investments during the reporting period.

Net cash flows used in financing activities

The cash inflows generated from financing activities primarily consist of new bank borrowings and other borrowings. The cash outflows from financing activities primarily consist of repayments for bank borrowings, payments of dividends and interest payments. The net cash outflows in financing activities of the Group increased by US$353.9 million from an outflow of US$225.1 million in 2021 to an outflow of US$579.0 million in 2022, primarily due to the repayments of bank borrowings in 2022.

Time deposits, bank balances and cash

The Group's time deposits, bank balances and cash (including cash, time deposits and demand deposits) increased by US$156.2 million from US$606.7 million as at 31 December 2021 to US$762.9 million as at 31 December 2022.

Trade receivables at amortised cost/Trade receivables at FVTPL

As at 31 December 2022, the Group recorded trade receivables at amortised cost of US$39.9 million and trade receivables at FVTPL of US$368.7 million. The trade receivables at FVTPL were the trade receivables arising from the sales of copper products under provisional pricing arrangements. The aggregate trade receivables amounted to US$408.6 million, which decreased by US$147.2 million from US$555.8 million as at 31 December 2021, primarily attributable to a year-on-year decrease in receivables corresponding to year-end sales revenue.

Inventories

The inventories held by the Group decreased by US$28.2 million from US$848.3 million as at 31 December 2021 to US$820.1 million as at 31 December 2022, which was mainly due to the decrease in finished goods as compared with the same period last year.

Significant investments held, material acquisitions and disposals of subsidiaries and future plans for material investments or acquisition of capital asset

Saved as disclosed in this annual report, there were no other significant investments held, material acquisitions or disposals of subsidiaries during the year ended 31 December 2022, and there was no plan approved by the Board for other material investments or acquisition of capital assets as at the date of this annual report.

Charge on assets

As of 31 December 2022, the carrying amount of the Group's charge of assets amounted to US$10,078,000 (31 December 2021: Nil).

Capital Management

The capital structure of the Group consists of net debt (which includes bank and other borrowings, net of restricted bank balances, time deposits, bank balances and cash) and equity attributable to owners of the Company (comprising share capital and retained profits). Details of capital management of the Group as at 31 December 2022 are included in note 32 to the audited consolidated financial statements of this annual report.

Gearing ratio

As at 31 December 2022, as the Group had a net cash position* of approximately US$ 239.6 million, it is therefore not considered to have any net gearing (2021: net gearing ratio# 16.9%).

* Net cash position is defined as bank balances and cash, time deposits, and restricted bank balances less bank and other borrowings.

\# Net gearing ratio is defined as bank and other borrowings minus bank balances and cash, and restricted bank balances, divided by the total equity attribute to owners of the Company.

Contingent liabilities

Other than disclosed in this annual report, there were no other material contingent liabilities.

Bank and other borrowings

Details of bank and other borrowings as at 31 December 2022 are included in note 24 to the audited consolidated financial statements of this annual report. The loans of the Group are made in US$. All of the loans of the Group have floated interest rate.

Trade payables at amortised cost/Trade payables designated at FVTPL

As at 31 December 2022, the Group recorded trade payables at amortised cost of US$265.2 million and trade payables designated at FVTPL of US$289.7 million. The trade payables designated at FVTPL were the trade payables arising from the purchase of copper concentrates under provisional pricing arrangements. The aggregate trade payables amounted to US$554.9 million, which decreased by US$36.2 million from US$591.1 million as at 31 December 2021, primarily due to the decrease in the amounts payable for ancillary materials and spare parts.

Capital expenditure

	For the year ended 31 December	
	2022	2021
	(US$'000)	*(US$'000)*
Mining and ore processing facilities at Chambishi Southeast Mine of NFCA	**25,552**	33,578
Other mining and ore processing facilities of NFCA	**7,210**	21,784
Other facilities at Luanshya	**2,374**	–
Mining and leaching facilities at Luanshya (Muliashi Project)	**6,165**	15,017
Mining facilities at Luanshya (Roan Mine)	**5,372**	1,848
Smelting facilities at CCS	**8,854**	5,333
Leaching facilities at SML	**4,252**	2,660
Leaching facilities at Huachin Leach	**2,853**	1,604
Mining rights and leaching facilities at CNMC Huachin Mabende	**726**	3,473
Smelting facilities at Lualaba Copper Smelter	**39,410**	473
Mining and the processing facilities at Kambove Mining	**21,935**	135,912
Other facilities	**95**	38
Total	**124,798**	221,720

The total capital expenditure of the Group amounted to US$124.8 million in 2022, decreased by US$96.9 million as compared with US$221.7 million in 2021, mainly due to the decrease in the investments in mining and ore processing facilities at Kambove Mining.

Financial policies

During the year ended 31 December 2022, the Group had in place the Financial Budget Management System, the Funds Management System, the Inventories Management System, the Fixed Assets Management System, the Financial Information Disclosure Management System, Management Measures on Approval Procedures and Permissions of Financial Income and Expenses of the Central Office and other financial policies, which aim to regulate and enhance internal control of relevant activities of the Group to ensure the safety of the Group's assets, protect investors' interests and improve operation and management level for compliance with relevant laws and regulations of Hong Kong as well as the Listing Rules.

Please also refer to note 33 to the audited consolidated financial statements contained in this annual report for the financial instruments (which include the financial risk management objectives and policies).

Principal risks and uncertainties

Although the Company has established a risk management system to identify, analyse, evaluate and respond to risks, our business activities are still subject to the following risks, which could have material impacts on our strategy, operations, compliance and financial condition. We urge you to carefully consider the risks described below.

Commodity price risk

The Group's commodity price risk mainly derives from the exposure to fluctuations in the market price of copper, since copper is the major commodities purchased, produced and sold by the Group. The sharp fluctuations of copper price mainly reflect the changes in supply and demand of copper products, the market uncertainties and other factors which are out of the control of the Group, including but not limited to the overall economic situation, political unrest, armed conflicts, terrorist acts, economic condition in major copper producing countries, accessibility of other metals, domestic and overseas regulations of governments, natural disasters and weather conditions. Price fluctuations will have a material impact on the business, cash flow and revenue of the Group. To mitigate this risk, the Group has adopted the sales strategy with combination of long-term and short-term orders and combined with hedging to enhance the turnover of spot inventory, so as to strive to reduce the commodity price risks.

Foreign currency exchange risk

The Group operates business in Zambia and the DRC and most of its sales and purchases in the past were denominated in US dollar, its functional currency, while certain sales and purchases were settled in currencies other than its functional currency (mainly ZMK, Congolese Franc and RMB), which exposed the Group to foreign currency risk. To mitigate such risk, the Group engaged in foreign currency exchange hedging activities through various methods including locking the signing and settlement currency and expediting tax rebates.

Interest rate risk

The Group is exposed to interest rate risk of cash flow under the impact of interest rates changes of interest-bearing financial assets and liabilities, which mainly include interest-bearing restricted bank balances, bank balances and bank and other borrowings at variable interest rates. The Group currently does not have any interest rate hedging policy. However, the Group will consider hedging significant interest rate risk should the need arise.

OVERVIEW

In 2022, the Group extensively carried out energy expansion, cost reduction, innovation and quality improvement to enhance efficiency and strived hard to expand the market and grasp internal management, achieving remarkable results in maintaining, stabilizing and increasing production capacity with stable production and operation.

During the reporting period, affected by fluctuations in copper and cobalt prices, as well as higher costs of production and other components, revenue of the Group has increased by 1.1% to US$4,094.7 million over the last year, the profit attributable to owners of the Group amounted to US$263.7 million, representing a decrease of 26.2% as compared with the same period last year.

BUSINESS REVIEW

The Group is a leading, fast-growing and vertically integrated copper producer focusing on mining, ore-processing, leaching, smelting and sales of copper and cobalt, based in the Republic of Zambia ("Zambia") and the Democratic Republic of the Congo ("DRC"). In particular, sulphuric acid and liquid sulphur dioxide are by-products generated during the blister copper smelting process. The Group is making greater efforts to develop cobalt business.

The businesses of the Group are principally carried out through the following companies: NFC Africa Mining PLC (中色非洲礦業有限公司*) ("NFCA"), CNMC Luanshya Copper Mines PLC (中色盧安夏銅業有限公司*) ("Luanshya"), Chambishi Copper Smelter Limited (謙比希銅冶煉有限公司*) ("CCS") and Sino-Metals Leach Zambia Limited (贊比亞謙比希濕法冶煉有限公司*) ("SML") located in Zambia, as well as Huachin Metal Leach SA (中色華鑫濕法冶煉股份有限公司*) ("Huachin Leach"), CNMC Huachin Mabende, Lualaba Copper Smelter and Kambove Mining SAS (剛波夫礦業簡易股份有限公司*) ("Kambove Mining") located in the DRC.

In 2022, the Group accumulatively produced 319,398 tonnes of blister copper and copper anodes, representing a year-on-year decrease of 1.6%; sulphuric acid of 1,010,164 tonnes, representing a year-on-year decrease of 3.0%; copper cathodes of 140,684 tonnes, representing a year-on-year increase of 13.2%; cobalt contained in cobalt hydroxide of 1,673 tonnes, representing a year-on-year increase of 177.9%; and liquid sulphur dioxide of 19,651 tonnes, representing a year-on-year decrease of 24.4%. The processed copper products for the Group amounted to 59,538 tonnes. In 2022, revenue of the Group increased by 1.1% to US$4,094.7 million in 2022 from US$4,050.6 million in 2021 as a result of the continued growth in sales volumes of the Group's products and the impact of a year-on-year decrease of international copper price.

RESOURCES AND RESERVES

Assumptions adopted for the annual update of resources and/or reserves

The same assumptions as those applied in the 2012 prospectus of the Company in accordance with the JORC Code were adopted for the annual update of resources and/or reserves in this annual report. Relevant updates were made according to new exploration and based on the historical data used by technical consultants.

The main changes in resources and/or reserves were attributable to the adjustments arising from production wastage and intensified exploration.

As of 31 December 2022, the Group's mineral resources and mineral reserves reported in accordance with the JORC Code were as follows:

(1) Resources

Chambishi Main Mine

	31 December 2022				31 December 2021			
		Average grade				Average grade		
JORC category	**Ore** *(Mt)*	**Total copper**	**Oxide copper**	**Cobalt**	Ore *(Mt)*	Total copper	Oxide copper	Cobalt
Measured	**9.65**	**2.37%**	**–**	**–**	9.67	2.35%	–	–
Indicated	**7.39**	**2.52%**	**–**	**–**	7.48	2.50%	–	–
Inferred	**6.68**	**2.20%**	**–**	**–**	6.68	2.20%	–	–

Note: In 2022, 55,000 tonnes of ore were extracted.

Chambishi West Mine

	31 December 2022				31 December 2021			
		Average grade				Average grade		
JORC category	**Ore *(Mt)***	**Total copper**	**Oxide copper**	**Cobalt**	Ore *(Mt)*	Total copper	Oxide copper	Cobalt
Oxide ore								
Measured	**3.64**	**2.03%**	**1.00%**	**–**	3.64	2.03%	1.00%	–
Indicated	**1.46**	**1.83%**	**0.96%**	**–**	1.46	1.83%	0.96%	–
Inferred	**1.45**	**2.32%**	**1.10%**	**–**	1.45	2.32%	1.10%	–
Sulphide ore								
Measured	**15.27**	**2.06%**	**–**	**–**	14.89	2.08%	–	–
Indicated	**5.16**	**2.11%**	**–**	**–**	6.25	2.23%	–	–
Inferred	**6.14**	**1.94%**	**–**	**–**	7.77	2.04%	–	–

Note: 1,740,000 tonnes of ore were extracted from sulphide ore in 2022, and supplemental exploration was carried out.

Chambishi Southeast Mine

	31 December 2022				31 December 2021			
		Average grade				Average grade		
JORC category	**Ore *(Mt)***	**Total copper**	**Oxide copper**	**Cobalt**	Ore *(Mt)*	Total copper	Oxide copper	Cobalt
Measured	**36.93**	**2.30%**	**–**	**0.13%**	38.99	2.29%	–	0.13%
Indicated	**29.27**	**1.92%**	**–**	**0.11%**	33.04	1.87%	–	0.11%
Inferred	**58.16**	**1.75%**	**–**	**0.08%**	55.89	1.76%	–	0.08%

Note: In 2022, 2,250,000 tonnes of ore were extracted.

Mwambashi Mine

	31 December 2022				31 December 2021			
		Average grade				Average grade		
JORC category	**Ore *(Mt)***	**Total copper**	**Oxide copper**	**Cobalt**	Ore *(Mt)*	Total copper	Oxide copper	Cobalt
Measured	**0.60**	**1.31%**	**1.17%**	**–**	0.76	2.26%	1.25%	–
Indicated	**4.71**	**1.97%**	**0.54%**	**–**	4.25	2.13%	0.58%	–
Inferred	**2.92**	**2.11%**	**0.28%**	**–**	2.49	2.35%	0.31%	–

Note: In 2022, 363,400 tonnes of ore were extracted.

Samba Mine

	31 December 2022				31 December 2021			
		Average grade				Average grade		
JORC category	**Ore (Mt)**	**Total copper**	**Oxide copper**	**Cobalt**	Ore (Mt)	Total copper	Oxide copper	Cobalt
Measured	**0.32**	**1.17%**	**–**	**–**	–	–	–	–
Indicated	**9.26**	**1.47%**	**–**	**–**	3.89	1.74%	–	–
Inferred	**5.53**	**1.43%**	**–**	**–**	5.14	1.55%	–	–

Note: In 2022, supplemental exploration was carried out at Samba Mine.

Baluba Center Mine

	31 December 2022				31 December 2021			
		Average grade				Average grade		
JORC category	**Ore (Mt)**	**Total copper**	**Oxide copper**	**Cobalt**	Ore (Mt)	Total copper	Oxide copper	Cobalt
Oxide ore								
Measured	**3.61**	**1.93%**	**1.11%**	**0.12%**	3.86	1.98%	1.15%	0.12%
Indicated	**5.07**	**1.80%**	**0.78%**	**0.11%**	5.53	1.86%	0.87%	0.12%
Inferred	**1.43**	**2.06%**	**1.15%**	**0.17%**	1.33	2.18%	1.36%	0.19%
Sulphide ore								
Measured	**1.03**	**2.22%**	**0.13%**	**0.15%**	1.59	2.23%	0.11%	0.15%
Indicated	**1.76**	**2.05%**	**0.19%**	**0.15%**	2.61	2.02%	0.15%	0.14%
Inferred	**1.07**	**2.10%**	**0.24%**	**0.15%**	1.56	2.01%	0.22%	0.14%

Note: 750,000 tonnes of ore were extracted from sulphide ore in 2022.

Muliashi North Mine

	31 December 2022				31 December 2021			
		Average grade				Average grade		
JORC category	**Ore (Mt)**	**Total copper**	**Oxide copper**	**Cobalt**	Ore (Mt)	Total copper	Oxide copper	Cobalt
Oxide ore								
Measured	**1.35**	**1.33%**	**0.53%**	**0.04%**	3.14	1.26%	0.47%	0.03%
Indicated	**3.69**	**1.73%**	**0.58%**	**0.01%**	4.83	1.66%	0.56%	0.02%
Inferred	**11.88**	**1.48%**	**0.52%**	**0.02%**	18.50	1.31%	0.43%	0.02%
Sulphide ore								
Measured	**0.03**	**1.32%**	**0.13%**	**0.06%**	–	–	–	–
Indicated	**6.04**	**1.46%**	**0.23%**	**0.04%**	–	–	–	–
Inferred	**6.85**	**1.47%**	**0.21%**	**0.04%**	–	–	–	–

Note: 3,450,000 tonnes of ore were extracted from oxide ore in 2022, and supplemental exploration was carried out.

Mashiba Mine

	31 December 2022				31 December 2021			
		Average grade				Average grade		
JORC category	**Ore (Mt)**	**Total copper**	**Oxide copper**	**Cobalt**	Ore (Mt)	Total copper	Oxide copper	Cobalt
Measured	**6.62**	**1.88%**	**0.42%**	**0.03%**	–	–	–	–
Indicated	**3.03**	**1.92%**	**0.20%**	**0.01%**	6.62	1.88%	–	0.03%
Inferred	**1.05**	**1.68%**	**0.27%**	**0.01%**	1.05	1.68%	–	0.01%

Note: In 2022, SRK reassessed and audited the extent and quality of the historical exploration work, updated the ore body model, reclassified the resource types, and re-estimated the amount of resources.

Baluba East Mine

	31 December 2022				31 December 2021			
		Average grade				Average grade		
JORC category	**Ore (Mt)**	**Total copper**	**Oxide copper**	**Cobalt**	Ore (Mt)	Total copper	Oxide copper	Cobalt
Measured	**10.47**	**1.67%**	**0.56%**	**–**	10.47	1.67%	0.56%	–
Indicated	**1.67**	**1.23%**	**0.20%**	**–**	1.67	1.23%	0.20%	–
Inferred	**0.79**	**1.08%**	**0.18%**	**–**	0.79	1.08%	0.18%	–

Note: No mining activities were carried out in 2022.

Roan Basin

	31 December 2022				31 December 2021			
		Average grade				Average grade		
JORC category	**Ore (Mt)**	**Total copper**	**Oxide copper**	**Cobalt**	Ore (Mt)	Total copper	Oxide copper	Cobalt
Measured	**5.90**	**2.44%**	**1.76%**	**0.02%**	5.32	2.38%	1.75%	0.02%
Indicated	**2.01**	**2.13%**	**1.53%**	**0.02%**	1.95	2.10%	1.51%	0.02%
Inferred	**1.24**	**2.29%**	**1.51%**	**0.02%**	1.24	2.29%	1.51%	0.02%

Note: 100,000 tonnes of ore were extracted and supplemental exploration was conducted in 2022.

Roan Ext. West

JORC category	31 December 2022 Ore (Mt)	31 December 2022 Average grade Total copper	31 December 2022 Average grade Oxide copper	31 December 2022 Cobalt	31 December 2021 Ore (Mt)	31 December 2021 Average grade Total copper	31 December 2021 Average grade Oxide copper	31 December 2021 Cobalt
Measured	**1.17**	**2.57%**	**2.18%**	**–**	1.17	2.57%	2.18%	–
Indicated	**–**	**–**	**–**	**–**	–	–	–	–
Inferred	**–**	**–**	**–**	**–**	–	–	–	–

Note: No mining activities were conducted in 2022.

Roan Ext. East

JORC category	31 December 2022 Ore (Mt)	31 December 2022 Average grade Total copper	31 December 2022 Average grade Oxide copper	31 December 2022 Cobalt	31 December 2021 Ore (Mt)	31 December 2021 Average grade Total copper	31 December 2021 Average grade Oxide copper	31 December 2021 Cobalt
Measured	**3.65**	**2.57%**	**2.00%**	**–**	4.70	2.54%	2.03%	–
Indicated	**1.28**	**2.36%**	**2.06%**	**–**	–	–	–	–
Inferred	**0.20**	**1.75%**	**1.83%**	**–**	–	–	–	–

Note: In 2022, supplemental exploration was carried out at Roan Ext. East, and 1,230,000 tonnes of ore were extracted.

Smelting Slag

JORC category	31 December 2022 Ore (Mt)	31 December 2022 Average grade Total copper	31 December 2022 Average grade Oxide copper	31 December 2022 Cobalt	31 December 2021 Ore (Mt)	31 December 2021 Average grade Total copper	31 December 2021 Average grade Oxide copper	31 December 2021 Cobalt
Measured	**–**	**–**	**–**	**–**	–	–	–	–
Indicated	**4.33**	**0.98%**	**0.28%**	**–**	6.58	1.03%	0.31%	–
Inferred	**–**	**–**	**–**	**–**	–	–	–	–

Note: 700,000 tonnes of ore were extracted in 2022, and the resource model was upgraded.

Kambove Main Mine

	31 December 2022				31 December 2021			
		Average grade				Average grade		
JORC category	**Ore** ***(Mt)***	**Total copper**	**Oxide copper**	**Cobalt**	Ore *(Mt)*	Total copper	Oxide copper	Cobalt
Measured	**–**	**–**	**–**	**–**	–	–	–	–
Indicated	**6.17**	**2.82%**	**–**	**0.12%**	6.41	2.80%	–	0.12%
Inferred	**6.08**	**2.95%**	**–**	**0.12%**	4.25	2.88%	–	0.10%

Notes: In 2022, supplemental exploration was carried out, with 960,000 tonnes of ore being consumed.

Kambove Main Open Pit Tailings

	31 December 2022				31 December 2021			
		Average grade				Average grade		
JORC category	**Ore** ***(Mt)***	**Total copper**	**Oxide copper**	**Cobalt**	Ore *(Mt)*	Total copper	Oxide copper	Cobalt
Measured	**–**	**–**	**–**	**–**	–	–	–	–
Indicated	**–**	**–**	**–**	**–**	–	–	–	–
Inferred	**1.39**	**0.67%**	**–**	**0.15%**	1.41	0.69%	–	0.17%

Notes: In 2022, 170,000 tonnes of tailings were consumed.

Kambove West Open Pit Tailings

	31 December 2022				31 December 2021			
		Average grade				Average grade		
JORC category	**Ore** ***(Mt)***	**Total copper**	**Oxide copper**	**Cobalt**	Ore *(Mt)*	Total copper	Oxide copper	Cobalt
Measured	**–**	**–**	**–**	**–**	–	–	–	–
Indicated	**–**	**–**	**–**	**–**	–	–	–	–
Inferred	**2.35**	**1.15%**	**–**	**0.22%**	2.35	1.15%	–	0.22%

Note: No mining activities were conducted in 2022.

(2) Reserves

Chambishi Main Mine

JORC category	31 December 2022 Ore (Mt)	Average grade Total copper	Oxide copper	Cobalt	31 December 2021 Ore (Mt)	Average grade Total copper	Oxide copper	Cobalt
Proved	**5.88**	**1.81%**	**–**	**–**	5.59	1.74%	–	–
Probable	**1.67**	**1.69%**	**–**	**–**	1.63	1.63%	–	–

Note: 55,000 tonnes of ore were extracted in 2022.

Chambishi West Mine

JORC category	31 December 2022 Ore (Mt)	Average grade Total copper	Oxide copper	Cobalt	31 December 2021 Ore (Mt)	Average grade Total copper	Oxide copper	Cobalt
Sulphide ore								
Proved	**10.74**	**1.75%**	**–**	**–**	11.72	1.70%	–	–
Probable	**1.33**	**1.85%**	**–**	**–**	2.20	1.84%	–	–

Note: 1,740,000 tonnes of ore were extracted from sulphide ore in 2022, and supplemental exploration was carried out.

Chambishi Southeast Mine

JORC category	31 December 2022 Ore (Mt)	Average grade Total copper	Oxide copper	Cobalt	31 December 2021 Ore (Mt)	Average grade Total copper	Oxide copper	Cobalt
Proved	**36.36**	**1.93%**	**–**	**0.11%**	36.92	1.93%	–	0.11%
Probable	**9.37**	**1.69%**	**–**	**0.08%**	10.90	1.62%	–	0.07%

Note: 2,250,000 tonnes of ore were extracted in 2022.

Mwambashi Mine

	31 December 2022				31 December 2021			
		Average grade				Average grade		
JORC category	**Ore** *(Mt)*	**Total copper**	**Oxide copper**	**Cobalt**	Ore *(Mt)*	Total copper	Oxide copper	Cobalt
Proved	**0.53**	**2.26%**	**1.18%**	**–**	0.74	2.23%	1.22%	–
Probable	**1.40**	**2.32%**	**0.96%**	**–**	1.49	2.31%	0.97%	–

Note: 363,400 tonnes of ore were extracted in 2022.

Baluba Center Mine

	31 December 2022				31 December 2021			
		Average grade				Average grade		
JORC category	**Ore** *(Mt)*	**Total copper**	**Oxide copper**	**Cobalt**	Ore *(Mt)*	Total copper	Oxide copper	Cobalt
Oxide ore								
Proved	**2.17**	**2.07%**	**1.42%**	**–**	–	–	–	–
Probable	**1.92**	**2.17%**	**1.47%**	**–**	–	–	–	–
Sulphide ore								
Proved	**–**	**–**	**–**	**–**	0.50	1.30%	–	–
Probable	**–**	**–**	**–**	**–**	1.33	1.36%	–	–

Note: In 2022, oxide ore of Baluba Center Mine was designed for open cast mining. 750,000 tonnes of ore were extracted from sulphide ore, and its reserves have been exhausted and the pit has been closed.

Muliashi North Mine

	31 December 2022				31 December 2021			
		Average grade				Average grade		
JORC category	**Ore** *(Mt)*	**Total copper**	**Oxide copper**	**Cobalt**	Ore *(Mt)*	Total copper	Oxide copper	Cobalt
Proved	**0.21**	**2.18%**	**0.91%**	**–**	0.58	1.98%	0.62%	–
Probable	**0.73**	**2.01%**	**0.66%**	**–**	1.16	1.95%	0.62%	–

Mashiba Mine

JORC category	**31 December 2022** Ore **(Mt)**	**Average grade** Total copper	Oxide copper	**Cobalt**	31 December 2021 Ore (Mt)	Average grade Total copper	Oxide copper	Cobalt
Proved	**2.71**	**1.93%**	**0.30%**	**–**	2.71	1.93%	0.30%	–
Probable	**1.78**	**1.83%**	**0.19%**	**–**	1.78	1.83%	0.19%	–

Note: No mining activities were conducted at Mashiba Mine in 2022.

Baluba East Mine

JORC category	**31 December 2022** Ore **(Mt)**	**Average grade** Total copper	Oxide copper	**Cobalt**	31 December 2021 Ore (Mt)	Average grade Total copper	Oxide copper	Cobalt
Proved	**3.53**	**2.06%**	**0.89%**	**–**	3.53	2.06%	0.89%	–
Probable	**0.04**	**1.48%**	**0.48%**	**–**	0.04	1.48%	0.48%	–

Note: No mining activities in Baluba East Mine were carried out in 2022.

Roan Ext. East

JORC category	**31 December 2022** Ore **(Mt)**	**Average grade** Total copper	Oxide copper	**Cobalt**	31 December 2021 Ore (Mt)	Average grade Total copper	Oxide copper	Cobalt
Proved	**2.42**	**2.37%**	**1.99%**	**–**	3.07	2.32%	1.96%	–
Probable	**0.74**	**2.27%**	**2.01%**	**–**	–	–	–	–

Note: Additional mining exploration was conducted in Roan Ext. East and 1,230,000 tonnes of ore were extracted in 2022.

Roan Basin

JORC category	31 December 2022 Ore *(Mt)*	Average grade Total copper	Average grade Oxide copper	Cobalt	31 December 2021 Ore *(Mt)*	Average grade Total copper	Average grade Oxide copper	Cobalt
Proved	**1.21**	**2.73%**	**1.71%**	**–**	1.33	2.67%	1.71%	–
Probable	**0.09**	**2.80%**	**2.12%**	**–**	0.09	2.79%	2.12%	–

Note: 100,000 tonnes of ore in Roan Basin were extracted in 2022.

Smelting Slag

JORC category	31 December 2022 Ore *(Mt)*	Average grade Total copper	Average grade Oxide copper	Cobalt	31 December 2021 Ore *(Mt)*	Average grade Total copper	Average grade Oxide copper	Cobalt
Proved	**–**	**–**	**–**	**–**	–	–	–	–
Probable	**4.33**	**0.98%**	**0.28%**	**–**	6.58	1.03%	0.31%	–

Note: 700,000 tonnes of ore were extracted from Smelting Slag in 2022.

Kambove Main Mine

JORC category	31 December 2022 Ore *(Mt)*	Average grade Total copper	Average grade Oxide copper	Cobalt	31 December 2021 Ore *(Mt)*	Average grade Total copper	Average grade Oxide copper	Cobalt
Proved	**–**	**–**	**–**	**–**	–	–	–	–
Probable	**5.75**	**2.59%**	**–**	**0.11%**	6.03	2.61%	–	0.11%

Note: In 2022, supplemental exploration was carried out, with 960,000 tonnes of ore being consumed.

PRODUCTION OVERVIEW

NFCA

NFCA mainly operates three mines, namely the Chambishi Main Mine, Chambishi West Mine and Chambishi Southeast Mine, as well as the ancillary processing plant.

In 2022, copper anodes produced by NFCA amounted to 68,104 tonnes in total, representing a year-on-year increase of 3.2%. Such increase was primarily due to the fact that the production of copper anodes at the southeast ore body amounted to 36,042 tonnes, representing a year-on-year increase of 2.9%.

Luanshya

Luanshya operates five copper mines under production, namely Baluba Underground Mine (closed by the end of 2022), Baluba Center Mine, Muliashi North Mine, Roan Ext. East Mine and Roan Basin Mine, and also operates Muliashi Leach Plant.

In 2022, copper cathodes produced by Luanshya amounted to 43,117 tonnes, remained stable compared to last year; the total amount of copper anodes produced amounted to 12,482 tonnes, representing a year-on-year decrease of 9.8%, mainly due to the decrease in grade of slag raw ores and the decrease in processing volume and selected average grade of raw ores in Baluba Mine.

CCS

CCS mainly operates the Chambishi Smelting Plant.

In 2022, CCS produced 251,629 tonnes in total of blister copper and copper anodes, including the processed copper products of 90,270 tonnes for enterprises within the Group, representing a year-on-year increase of 1.0%; produced 712,538 tonnes of sulphuric acid, remained stable compared to last year.

SML

SML mainly operates Mwambashi Mine and the Chambishi Leach Plant.

In 2022, the copper cathodes produced by SML amounted to 7,465 tonnes, representing a year-on-year decrease of 18.2%, mainly due to decrease in the volume and grade of oxide ore purchased from external. SML produced 9,684 tonnes of blister copper and copper anodes, representing a year-on-year increase of 43.0%, mainly attributable to the increase in commissioned processing of copper concentrates purchased from external.

CNMC Huachin Mabende

In 2022, CNMC Huachin Mabende produced 38,080 tonnes of copper cathodes, representing a year-on-year increase of 5.4%, mainly attributable to the increase in processing volume of ore and recycling capacity of backwater from tailings through process optimization.

Huachin Leach

Huachin Leach produced 24,605 tonnes of copper cathodes in 2022, including the processed copper products of 866 tonnes for enterprises outside of the Group, representing a year-on-year decrease of 8.9%, mainly due to the local power supply shortage; and produced 345 tonnes of cobalt contained in cobalt hydroxide, representing a year-on-year increase of 27.3%, mainly due to the improvement of the processing capacity of cobalt base liquid through technical transformation. Huachin Leach produced 13,654 tonnes of sulphuric acid.

Lualaba Copper Smelter

Lualaba Copper Smelter mainly operates the Lualaba Smelting Plant.

Lualaba Copper Smelter produced 126,441 tonnes of blister copper, including the processed copper products of 58,672 tonnes for enterprises outside of the Group, representing a year-on-year decrease of 5.6%; produced 283,972 tonnes of sulphuric acid, representing a year-on-year decrease of 12.0%; produced 19,651 tonnes of liquid sulphur dioxide, representing a year-on-year decrease of 24.4%, mainly due to the major repair work implemented from July to August 2022.

Kambove Mining

The Kambove Main Mine achieved production capacity and quality, and produced 28,283 tonnes of copper cathodes and 1,328 tonnes of cobalt contained in cobalt hydroxide in 2022.

The table below presents the production volume of the products of the Group and the year-on-year situation for the periods indicated.

	Production volume for 2022 [(1), (2), (3)] *(Tonnes)*	Production volume for 2021 [(1), (2), (3)] *(Tonnes)*	Year-on-year increase/ (decrease) *(%)*
Blister copper and copper anodes	**319,398**	324,501	(1.6)
Copper cathodes	**140,684**	124,327	13.2
Cobalt contained in cobalt hydroxide	**1,673**	602	177.9
Sulphuric acid	**1,010,164**	1,041,490	(3.0)
Liquid sulphur dioxide	**19,651**	26,002	(24.4)
Copper products processing services	**59,538**	58,615	1.6

Notes:

(1) The production of all products is based on the copper content, except for sulphuric acid, liquid sulphur dioxide, and cobalt hydroxide.

(2) Copper product processing services refer to the processing and production of copper product made by the smelters of the Group under the entrust of enterprises outside of the Group, and the Group earns processing fees from these enterprises.

(3) Among the above copper products, production volume of copper by self-owned mine are as follows:

	Production volume for year ended 31 December 2022 *(Tonnes)*	Production volume for year ended 31 December 2021 *(Tonnes)*
Blister copper and copper anodes produced by self-owned mine	**75,491**	76,377
Copper cathodes produced by self-owned mine	**75,695**	54,399
Total	**151,186**	130,776

EXPLORATION, DEVELOPMENT AND MINING COSTS OF THE GROUP

Costs of exploration, development, and mining activities of the Group for the year ended 31 December 2022 are set out below:

	NFCA			Luanshya			SML		CCS	CNMC Huachin Mabende	Kambove Mining		
Unit: Million US dollars	Chambishi West Mine	Chambishi Southeast Mine	Baluba Center Sulphide Mine	Muliashi North Mine	Baluba East Mine	Roan Basin	Mwambashi Mine	Exploration Right 27089	PE5468	PE1060 Mine	Main Mineral Deposit	MSESA Mine	Total
Exploration activities													
Including:													
Drilling and analysis	1.14	2.31	–	0.14	0.93	0.42	–	0.80	0.75	0.15	0.26	0.74	7.64
Others	0.10	–	–	–	–	–	–	–	–	0.14	–	–	0.24
Sub-total	**1.24**	**2.31**	**–**	**0.14**	**0.93**	**0.42**	**–**	**0.80**	**0.75**	**0.29**	**0.26**	**0.74**	**7.88**
Development activities (including mine construction)													
Including:													
Purchases of assets and equipment	3.86	1.90	–	–	–	–	–	–	–	–	–	–	5.76
Civil work for construction of tunnels and roads	3.29	23.43	–	–	–	–	–	–	–	–	–	–	26.72
Sub-total	**7.15**	**25.33**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**32.48**
Mining activities (excluding ore processing)													
Including:													
Staff cost	2.51	8.20	2.30	0.10	–	–	–	–	–	–	–	–	13.11
Materials and equipment	12.23	38.40	2.85	2.81	1.43	0.17	–	–	–	–	–	–	57.89
Fuel, electricity, water and others services	14.54	11.32	7.75	28.79	–	–	–	–	–	–	–	–	62.40
Non-income taxes, royalties and other government expenses	1.26	2.62	6.74	24.71	8.11	4.06	–	–	–	–	–	–	47.50
Sub-contracting charges	36.47	48.42	16.96	35.88	21.15	2.13	9.22	–	–	–	22.02	–	192.25
Depreciation	5.98	41.16	10.39	14.92	0.16	0.11	1.34	–	–	–	–	–	74.06
Sub-total	**72.99**	**150.12**	**46.99**	**107.21**	**30.85**	**6.47**	**10.56**	**–**	**–**	**–**	**22.02**	**–**	**447.21**

MINING EXPLORATION, MINING DEVELOPMENT AND ORE MINING ACTIVITIES

Mining Exploration

During the reporting period, NFCA, SML, Luanshya, CNMC Huachin Mabende, Kambove Mining, CCS, each being subsidiaries of the Company, conducted mining exploration for production and exploration purposes, respectively. In particular:

At Chambishi Main Mine, Chambishi West Mine and Chambishi Southeast Mine of NFCA, 392 drilling holes in the pit and deep exploration drilling holes were completed, with 28,020.41 m drilled, of which 133 underground drilling holes were completed at Chambishi Main Mine and Chambishi West Mine in aggregate, with 10,280.44 m drilled, and 259 drilling holes in the pit were completed at Chambishi Southeast Mine in aggregate, with 17,739.97 m drilled.

At Samba Copper Main Mine of SML, 7 drilling holes in the deep exploration drilling holes were completed, with 2,326.56 m drilled. In perimeter surveys, 1:10000 soil geochemical survey was completed, with an area of 10.42 km^2, 1:10000 ground magnetic method high-precision survey (100 meters × 20 meters) was completed, with an area of 30 km^2, 1:10000 intermediate gradient IP survey (100 meters × 20 meters) profile survey was completed, with an area of 10.40 km^2, 1:10000 high-density resistivity method survey (point distance 10 meters) was completed, with 505 points completed, and 1 drilling holes for physical and chemical anomaly verification was completed, with 151.70 m drilled.

Luanshya conducted mining exploration projects including the "Extended Section of Roan to Muliashi South Project" and the "Near-surface Oxidation Ore Exploration Project in the North Wing of the Roan Basin SS19-SS35 Line" and production prospecting. In particular, 5 surface drilling with a drilling footage of 4,655.63 m were completed at the Extended Section of Roan to Muliashi South Project, 35 surface drilling with a drilling footage of 2,745.86 m were completed at the near-surface oxidation ore exploration project in the north wing of the Roan Basin SS19-SS35 line. The mining work was carried out at Baluba Underground Mine and the Extend Section of East Roan. In particular, 10 intensive drilling holes in the pit with a drilling footage of 390.80 m were completed at Baluba Underground Mine, and 14 intensive drilling holes in the open pit with a drilling footage of 782.94 m were completed at the Extend Section of East Roan.

CNMC Huachin Mabende completed shallow drilling of 2,668 m at the PE5276 tenement.

Kambove Main Mining conducted the supplementary exploration of the south ore body, with a footage of 1,469 m/10 holes, and the MSESA ore body has completed the supplementary exploration, with a footage of 2,717.64 m/9 holes.

CCS conducted geophysical and geochemical explorations for PE5468, during which 1/25,000 soil geochemical survey was completed, with an area of 119 km^2, 1/10,000 soil geochemical survey was completed, with an area of 16 km^2, 1/10,000 low-altitude high-precision magnetic survey was conducted, with an area of 150 km^2, EH-4 geophysical survey was conducted, with 125 points completed, and trenching was conducted, with an area of 1,684 m3 and 1,898.9 m drilled, 880 pieces of chemical samples and 30 pieces of bulk density.

Mining Development

For details of mining development, please refer to "Projects Under Progress" on page 30.

Mining Activities

For details of mining activities, please refer to "Production Overview" on pages 26 to 27.

PROJECTS UNDER PROGRESS

Luanshya

Open Pit Mine Project at Baluba Center Mine

The Open Pit Mine Project at Baluba Center Mine has a designated capacity of 1.5 million tonnes of quality oxide copper mine per annum. At present, the design demonstration of open cast mining has been completed, and the construction and stripping work has started in July 2022.

Kambove Mining

The Resumed Project of Kambove West Mine

The Resumed Project of Kambove West Mine was officially approved in October 2022 and is expected to be put into production in 2026. In 2022, US$245,400 were invested, and the total investment will be US$2,606,900.

Human resources

As of 31 December 2022, the Group employed a total of 9,115 employees (as of 31 December 2021: 8,756 employees), which comprised 889 Chinese and 8,226 local employees in Zambia and the DRC. Employees' remuneration was determined by the Group based on their performance, experience and the prevailing market practice. For the year ended 31 December 2022, the total cost of employees reflected in the consolidated statement of profit or loss and other comprehensive income amounted to approximately US$120.3 million (2021: US$130.1 million).

2023 OUTLOOK

The year 2022 was an extraordinary year, with the world's geopolitical situation ever changing, international copper prices experiencing significant fluctuations, and COVID-19 pandemic still plaguing our production and life, which brought a lot of uncertainties to the Company's production and operation and daily management. However, under the correct leadership of the Board of Directors and with the strong support of our shareholders, all employees of the Company overcame various difficulties to maintain production, reduce costs, increase efficiency and improve quality, and completed the various production and operation tasks in a better way. In the capital market, the Company has been included in the "Hong Kong Stock Connect" and MSCI China Small Cap Index successively, gaining the attention of more investors. The performance of the share price has been stable to positive, the maintenance of shareholder relations has been recognized, and the Company's ability to deliver and realize value has been significantly enhanced. These changes have reinforced the confidence of investors and laid a solid foundation for the Company's high quality development.

In 2023, we will enter into a new stage of development and obtain development opportunities. The recovery of the economy in PRC, the world's second-largest economy, which consumes more than half of the world's refined copper, will give the industry a boost. While international hotspots are constantly in conflict and the geopolitical environment is more complex, market expectations of global economic trends and changes in policies of Federal Reserve will bring certain uncertainty to the copper price. However, the rebound of the traditional power and real estate industries and the rapid growth of the new energy industry will provide strong support to copper prices.

In the foreseeable future, opportunities lie within challenges. The goals are distant but can be reached, the tasks are challenging but can be accomplished. The Company will work together with all investors to take solid steps and forge ahead to deliver satisfactory results to the market in 2023.

DIRECTORS AND SENIOR MANAGEMENT BIOGRAPHIES

BOARD OF DIRECTORS

The Board of Directors is responsible for the management and conduct of the business. As at the Latest Practicable Date, the Board consists of five Directors, including one executive Director, one non-executive Director and three independent non-executive Directors. The table below sets forth certain information in respect of the members of the Board of Directors:

Name	Age	Position/Title
He Yang *(appointed as Chairman, Executive Director on 13 October 2022)*	42	Chairman and Executive Director
Jinjun Zhang (Note 1) *(resigned as President on 4 August 2022, resigned as Chairman and Executive Director on 13 October 2022)*	54	Chairman, Executive Director and President
Chunlai Wang (Note 2) *(resigned on 11 April 2022)*	62	Executive Director
Yaoyu Tan	49	Non-executive Director
Dingfan Qiu	81	Independent Non-executive Director
Jingwei Liu	55	Independent Non-executive Director
Huanfei Guan	65	Independent Non-executive Director

Note 1: For the details of Jinjun Zhang's biography, please refer to the section headed "Directors and Senior Management Biographies" in 2021 annual report.

Note 2: For the details of Chunlai Wang's biography, please refer to the section headed "Directors and Senior Management Biographies" in 2020 annual report.

He Yang (楊赫), aged 42, has been appointed as the Chairman of the Board, an executive Director of the Company, the Chairman of the Compliance Committee, a member of the Remuneration Committee, a member of the Nomination Committee with effect from 13 October 2022. He obtained a bachelor's degree in financial management from the University of International Business and Economics in 2003 and a master's degree in finance from the Central University of Finance and Economics in 2007. Mr. Yang has been the head of the enterprise development department of China Nonferrous Metal Mining (Group) Co., Ltd.* (中國有色礦業集團有限公司) ("CNMC", a controlling shareholder of the Company) since February 2022 and the chairman of the board of directors of China Nonferrous Mining Development Limited (a wholly-owned subsidiary of CNMC) since October 2022. He successively held management positions including the deputy director and director of the business management office of the enterprise development department and the deputy head of the enterprise development department of CNMC, the director of China Nonferrous Mining Hong Kong Investment Limited (a subsidiary of the Company), the deputy general manager of 中色發展投資有限公司 (CNMC Development & Investment Co., Ltd.*) and the general manager of CNMC Ningxia Orient Group Co., Ltd.* (中色(寧夏)東方集團有限公司). Mr. Yang has over 15 years of experience in corporate management and is a senior economist.

Advanced ore processing equipment of the southeast mine of NFCA

Copper cathode stripping operation in the electrowinning workshop of the Kambove Mining Leach Plant

Chambishi leach extraction and electrowinning workshop production site

Yaoyu Tan (譚耀宇), aged 49, is a non-executive Director of the Company and was appointed to the Board on 27 May 2021. He joined CNMC in May 2019 and served as the deputy director of the Finance Department (Funds Management Center). Mr. Tan has concurrently served as the chairman of Nonferrous Metal Mining Group Finance Co., Ltd.* (有色礦業集團財務有限公司), a subsidiary of CNMC, since September 2019. Mr. Tan has served as the director of the Finance Department of CNMC since June 2020. Prior to joining CNMC, Mr. Tan joined Daye Nonferrous Metals Co., Ltd., a non-wholly-owned subsidiary of China Daye Non-Ferrous (see definition below), in December 2008 and had served as the director of Finance Department until October 2009, and later served as the chief accountant of Daye Nonferrous Metals Group Holding Co., Ltd., the controlling shareholder of China Daye Non-Ferrous Metals Mining Limited (中國大冶有色金屬礦業有限公司) ("China Daye Non-Ferrous", Hong Kong listed company code: 00661). Mr. Tan had served as the executive director of China Daye Non-Ferrous since 2012, and served as the chairman of China Daye Non-Ferrous from September 2017 and resigned as the executive director and chairman of China Daye Non-Ferrous in May 2019. Mr. Tan has over 21 years of experience in the mining industry and rich practical experience in operation of listed companies. Mr. Tan graduated from the Party School of Hubei Province in 2007 majoring in economics and management and was accredited as a senior accountant by the Professional Title Reform Office of Hubei Province in December 2010.

Dingfan Qiu (邱定蕃), aged 81, is an independent non-executive Director of the Company. He was appointed to the Board on 30 July 2021. Mr. Qiu graduated from Nanchang University in 1962. He then joined Beijing General Research Institute of Mining & Metallurgy (北京礦冶研究總院), and successively served as a technician of the metallurgical research institute, senior engineer and professor-level senior engineer. He became the director of metallurgical energy saving research institute in 1983, and served as the vice president of the institute from 1985 to 2002 and was primarily in charge of the scientific research of the whole institute. In 1990, after passing the examination of the Government sponsored Program of Studying Abroad, he left for study at Queen's University in Canada (as a senior visiting scholar), and served as the associate tutor of graduate students. In 1991, he returned to China and continued to serve as the vice president of Beijing General Research Institute of Mining & Metallurgy. He was elected as an academician at Chinese Academy of Engineering in 1999. He is currently a professor and doctoral tutor of Beijing General Research Institute of Mining & Metallurgy. He once concurrently served as a deputy director at Department of Chemical, Metallurgy and Materials of Chinese Academy of Engineering, vice-president of the Nonferrous Metals Society of China (中國有色金屬學會), and an adjunct professor at each of Peking University, Tsinghua University and University of Science and Technology Beijing. Mr. Qiu has 59 years of experience in mining industry. Mr. Qiu once served as an independent non-executive director in Tongling Nonferrous Metals Group Holdings Co., Ltd. (銅陵有色金屬集團控股有限公司) (a company listed on the Shenzhen Stock Exchange, stock code: SZ000630) and China Nonferrous Metal Industry's Foreign Engineering and Construction Co., Ltd. (中國有色金屬建設股份有限公司) (a company listed on the Shenzhen Stock Exchange, stock code: SZ000758), and resigned from them on 13 January 2016 and 12 April 2019, respectively.

General view of Huachin Leach

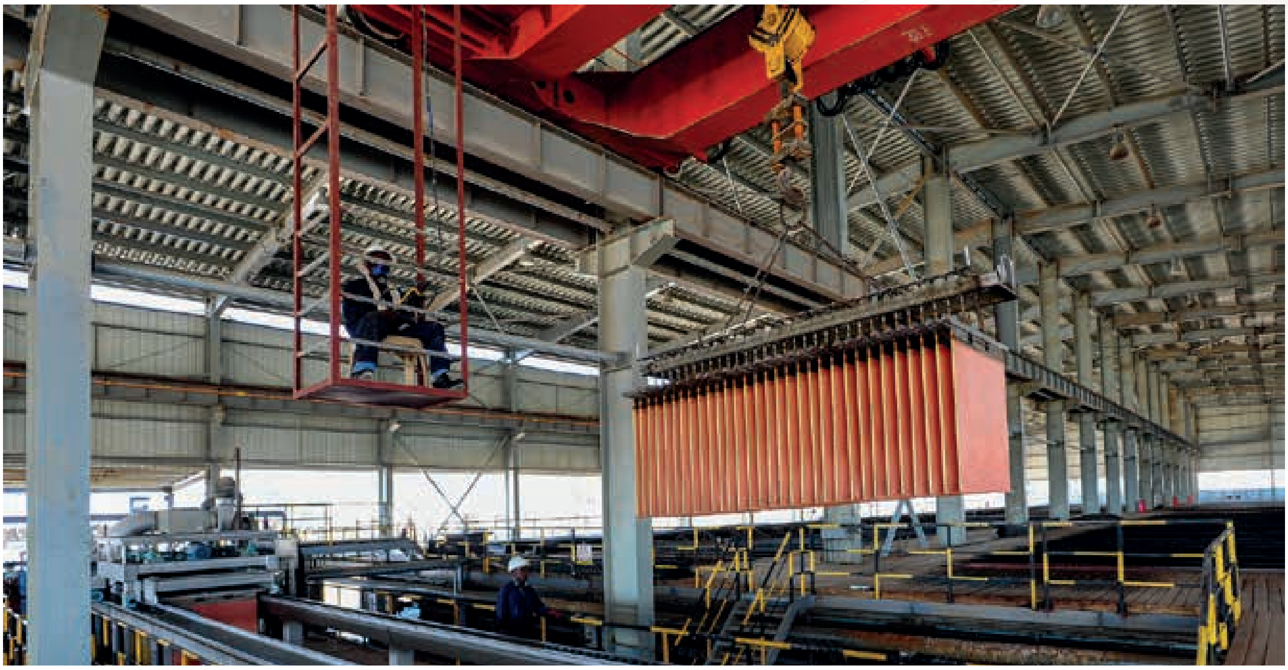
Jingwei Liu (劉景偉), aged 55, is an independent non-executive Director of the Company, the chairman of the Audit Committee and a member of the Nomination Committee, and was appointed to the Board on 27 April 2012. He is a partner of Shinewing Certified Public Accountants (信永中和會計師事務所). Mr. Liu previously served as the head of the Forestry Fund Management Headquarters of the Ministry of Forestry, a lecturer at Beijing Forestry University and a director and deputy general manager of Beijing Jincheng Gardening Co., Ltd.* (北京金城園林公司). He currently serves as an independent director of Guiyang Longmaster Information & Technology Co., Ltd.* (貴陽朗瑪信息技術股份有限公司) (a company listed on the Shenzhen Stock Exchange, SZ300288), an independent director of Beijing StarNeto Technology Co., Ltd.* (北京星網宇達科技股份有限公司) (a company listed on the Shenzhen Stock Exchange, SZ002829), an independent director of Shanghai Yaohua Pilkington Glass Group Co., Ltd.* (上海耀皮玻璃集團股份有限公司) (a company listed on the Shanghai Stock Exchange, SH600819), a non-executive director of Shoucheng Holdings Limited (首程控股有限公司 (formerly known as Shougang Concord International Enterprises Company Limited (首長國際企業有限公司)) (a company listed on the Main Board of Hong Kong Stock Exchange, HK0697) and an independent non-executive director of AVIC Joy Holdings (HK) Limited (HK0260) appointed in September 2020. Mr. Liu graduated from the School of Economics of Beijing Forestry University (北京林業大學經濟管理學院) in 1989 and from Shanghai Advanced Institute of Finance with a master's degree in 2016. He is a PRC Certified Public Accountant.

Huanfei Guan (關浣非), aged 65, is an independent non-executive Director of the Company, chairman of the Remuneration Committee, a member of each of the Audit Committee and the Compliance Committee, and was appointed to the Board on 28 August 2014. Mr. Guan has extensive experience in the finance and insurance industry in Hong Kong and China. He served various senior managerial positions in People's Insurance Company of China* (Jilin Branch) (中國人民保險公司吉林省分公司), Hong Kong and Macao Regional Office of China Insurance Group* (中國保險港澳管理處), Ming An Insurance Company (Hong Kong) Limited (香港民安保險有限公司) and China Pacific Insurance Co., (HK) Ltd. (中國太平洋保險 (香港)有限公司). Mr. Guan also held offices at the Bank of Communications, including the deputy chairman of the risk asset management

Tailings pond of CNMC Huachin Mabende

committee, deputy chairman of credit asset management committee, chairman of loan verification committee, deputy general manager of the Bank of Communications Hong Kong Branch, the director of Bank of Communications Trustee Limited (交通銀行信託有限公司), the chairman and chief executive of China BOCOM Insurance Co., Ltd. (中國交銀保險有限公司) and an executive director and general manager of BoCommLife Insurance Company Limited. Mr. Guan is also an economic and technical consultant of Jilin Provincial Government. Mr. Guan is now an independent non-executive director of Sunwah Kingsway Capital Holdings Limited (Hong Kong listed company code 0188), Huarong International Financial Holdings Limited (Hong Kong listed company code 0993), China Shandong Hi-Speed Financial Group Limited (Hong Kong listed company code 0412) and Guangdong – Hong Kong Greater Bay Area Holdings Limited (Hong Kong listed company code: 01396) (shares of those companies are listed on the Main Board of the Hong Kong Stock Exchange). He once served as the chairman emeritus of Culturecom Holdings Limited (a company listed in Hong Kong) (Hong Kong listed company code 0343). Mr. Guan was an independent non-executive director, executive director, president and senior consultant of Silver Base Group Holdings Limited (Hong Kong listed company code 0886) for the period from March 2008 to December 2012. He once served as an executive director of CCT Land Holdings Limited (currently named GBA Holdings Group) (Hong Kong listed company code 0261). On 15 May 2020, he resigned as an independent non-executive director of HongDa Financial Holding Limited (currently named China Wood International Holding Co., Limited) (Hong Kong listed company code 1822). He served as an independent non-executive director of Solis Holdings Limited (Hong Kong listed company code 2227) from 23 August 2019 to 30 September 2020. He served as an executive director and the chairman of the board of Enterprise Development Holdings Limited (Hong Kong listed company code 1808) from 2 June 2020 to 22 May 2021. He was appointed as an independent non-executive director of Shanghai Zendai Property Limited (Hong Kong listed company code 0755) on 11 January 2021. Mr. Guan obtained a doctor's degree in Economics in 2000 from Wuhan University and has been a part-time researcher of the Insurance Research Centre of Fudan University since 2004. He has also been appointed as a part-time lecturer of professional degree of Fudan University since 2013.

Underground large-scale mining equipment in NFCA



Luanshya Copper cathodes production site

SENIOR MANAGEMENT

As at the Latest Practicable Date, the senior management of the Company includes:

Jinping Ma (馬金平), aged 60, is a vice president of the Company, and was appointed as a member of the senior management of the Company on 25 February 2021, in charge of planning, coordination, etc. Mr. Ma has been appointed to temporarily perform the duties of the president of the Company since 4 August 2022. He is a professor-level senior engineer. Mr. Ma has served for the Central Iron & Steel Research Institute under the Ministry of Metallurgy and the overseas engineering department of China Nonferrous Metal Industry's Foreign Engineering and Construction Co., Ltd. Mr. Ma successively served as the deputy general manager, interim deputy secretary to the Party committee and secretary to the commission for discipline inspection, and interim secretary to the Party committee of NFC Africa Mining PLC (中色建設非洲礦業有限責任公司) from September 1998 to August 2003. He served as the general manager of China Nonferrous Metals International Mining Co., Ltd. from August 2003 to April 2005. He successively served as the deputy general manager and a member of the Party committee of China Nonferrous Metal Industry's Foreign Engineering and Construction Co., Ltd. from April 2005 to February 2021. Mr. Ma graduated from the graduate faculty of the Center Iron & Steel Research Institute in June 1988 and obtained a master's degree in metal materials and heat treatment. Mr. Jinping Ma has 35 years of experience in the non-ferrous metal industry, and has worked overseas for many years with extensive practical experience in the operation of group companies.

Peiwen Zhang (張培文), aged 55, is a vice president of the Company who is in charge of SML. He was appointed as and joined the senior management of the Company on 24 March 2016 and currently acts as a director of SML. He resigned as a director of CNMC Huachin Mabende in June 2017. Mr. Zhang has 32 years of experience in mining industry and acted as the vice general manager of SML from 2005 to 2016. In 2004, he was appointed as the technology director of Kunming Rui Yuan Ju Corporation (昆明瑞源巨公司), the 2,000-tonne hydrometallurgical plant of Yunnan Jinsha Corporation (雲南金沙公司). From 2001 to 2004, he acted as the vice director of the scientific research institute of Yunnan Jinsha Mining Co., Ltd. From 1995 to 2000, he has successively acted as the vice director, director, the assistant to the head of and deputy head of the metallurgical research institute under the scientific research institute of former Yunnan Dongchuan Copper Mines Administration (雲南東川礦務局) and the director of 500-tonne hydrometallurgical plant. Mr. Zhang graduated from Changsha Non-ferrous College (長沙有色金屬專科學校) in 1989 with a major in non-ferrous metal metallurgy and was recognised as a metallurgical engineer in 1998.

Zhimin Chen (陳志敏), aged 46, is a vice president of the Company, and was appointed as and joined the senior management of the Company on 21 February 2022, who is in charge of the production and operation and compliance operation of CNMHK. Mr. Chen has over 24 years of experience in metal industry. He served as the office secretary of former Shizishan Copper Mine of Tongling Nonferrous and deputy secretary of youth league committee of Dongguashan Copper Mine of Tongling Nonferrous. From April 2008 to February 2022, Mr. Chen successively served as the general counsel, manager and deputy general manager of general office of NFCA and chairman of SML. Mr. Chen graduated from University of Science and Technology Beijing and obtained a master's degree of mining engineering in 2015.

Dayong Yang (楊大勇), aged 53, is a vice president of the Company and was appointed as and joined the senior management of the Company on 6 July 2019, who is in charge of compliance management. He was appointed as the chief compliance officer and a joint company secretary ("Joint Company Secretary") of the Company on 1 April 2020 and 27 April 2020, respectively. He resigned as a Joint Company Secretary on 7 March 2022. Mr. Yang commenced his career at the former Ministry of Foreign Trade and Economic Cooperation of the PRC (currently known as the Ministry of Commerce of the PRC ("MOFCOM")) in 1992. He used to serve as the deputy division head and the division head of the Department of Outward Investment and Economic Cooperation of the MOFCOM. Mr. Yang's rich public administration experience also includes his services at the Economic and Commercial Counsellor's Office of the Embassy of the PRC in the Swiss Confederation and the Economic and Commercial Counsellor's Office of the Embassy of the PRC in the Republic of France. From September 2012 to January 2019, Mr. Yang served as the deputy director of the strategic planning department (previously known as "strategic research office") of CNMC, a controlling shareholder of the Company. Mr. Yang has graduated from Beijing Foreign Studies University with a bachelor's degree in French language. From September 2011 to August 2012, Mr. Yang attended an international public administration study programme at École Nationale d'Administration as a candidate sponsored by the French government.

Xiwen Sun (孫希文), aged 46, is a vice president of the Company, and was appointed as and joined the senior management of the Company on 18 May 2021, who is in charge of the development of overseas mineral resources. Mr. Sun has over 16 years of experience in nonferrous metal industry. He worked for the China Non-Ferrous Metals Resource Geological Survey Centre and Sinomine Resource Exploration Co., Ltd. From December 2012 to May 2021, he successively served as the deputy head of geological division of mineral exploration department, head of resource development division of mineral exploration department, head of resource development division of investment mineral exploration department, head of African region of international business department of China Nonferrous Group. Mr. Sun graduated from the University of Utah and obtained a master's degree of geology science in 2006.

Bo You (游波), aged 48, is the chief financial officer of our Company and was appointed as and joined the senior management of Company on 27 February 2023. She currently serves as a director of CNMHKI. Ms. You has 24 years of experience in financial management. Ms. You joined China Nonferrous Metal Industry's Foreign Engineering and Construction Co., Ltd. (中國有色金屬建設股份有限公司) (a subsidiary of CNMC) in 1996, and successively served as the chief accountant, the head, the deputy manager of its Financial Department, the manager and director of the Audit Department. She joined our Company in 2023 and has served as chief financial officer ever since. Ms. You graduated from Jiangxi University of Finance and Economics with a bachelor's degree in economics and a bachelor's degree in laws in 1996. She also obtained the title of non-practising registered accountant, tax adviser and senior accountant in 2003, 2006 and 2009, respectively.

Shougao Wang (王首高), aged 56, is a vice president of the Company and was appointed as the senior management of the Company on 21 October 2022. He is in charge of Kambove Mining SAS. Mr. Wang has over 33 years of experience in nonferrous metal industry. Prior to joining the Company, he worked in China Nonferrous Metal Industry's Foreign Engineering and Construction Co., Ltd. (中國有色金屬建設股份有限公司) ("China Nonferrous Metal Industry's Foreign Engineering and Construction") (a subsidiary of CNMC), and has successively served as project manager, deputy general representative and general representative of the representative office of China Nonferrous Metal Industry's Foreign Engineering and Construction in foreign countries (including Zambezia), deputy general manager and general manager of subsidiaries of China Nonferrous Metal Industry's Foreign Engineering and Construction, manager of the Quality and Environmental Protection Department of China Nonferrous Metal Industry's Foreign Engineering and Construction, and the deputy general manager of China Nonferrous Metal Industry's Foreign Engineering and Construction since 1996. Mr. Wang joined the Company in 2022 as vice president. Mr. Wang graduated from Kunming Institute of Technology with a bachelor's degree in engineering in 1989. He graduated from Renmin University of China with a master's degree in management in 2013.

Zhanyan Li (李占炎), aged 53, is a vice president of the Company and was appointed as a member of the senior management of the Company on 17 March 2023, who is in charge of NFCA. He currently acts as a general manager of NFCA. Mr. Li has over 30 years of experience in nonferrous metal industry. He joined NFCA in 2006 and served as an engineer of technology department. Mr. Li joined Luanshya in 2009 and successively served as the technology manager and assistant to general manager. He has successively served as deputy general manager and general manager of NFCA since 2016. Mr. Li joined the company in 2023 as vice president. Mr. Li obtained a bachelor's degree in mining engineering from the Department of Mining of Southern Institute of Metallurgy in 1992 and a postgraduate master's degree in mining engineering from University of Science and Technology Beijing in 2016. He obtained the title of professor-level senior engineer in 2011.

Jingjun Wang (王晶軍), aged 55, is a vice president of the Company, and was appointed as the senior management of the Company on 17 March 2023, who is in charge of Luanshya, and is currently the chairman and general manager of Luanshya. Mr. Wang has over 30 years of experience in nonferrous metals industry. He joined Luanshya in 2009 and has successively served as deputy general manager, general manager, and chairman. Mr. Wang joined the Company as vice president in 2023. Mr. Wang graduated from Southern Institute of Metallurgy in 1992 with a Bachelor of Engineering degree in safety engineering from the Department of Mining. He graduated from University of Science and Technology Beijing with a master's degree in engineering specializing in mining engineering in 2017. He obtained the title of professor-level senior engineer in 2018.

Tian Wang (王闐), aged 49, is a vice president of the Company, was appointed as the senior management of the Company on 17 March 2023, who is in charge of the CCS and is currently the chairman of CCS. Mr. Wang has over 26 years of experience in nonferrous metallurgy. Since 2019, he has served as the deputy general manager of CCS and the deputy general manager of Luanshya for the same period. In 2021, he became the chairman of the board of directors of CCS. Mr. Wang joined the Company in 2023 as vice president. Mr. Wang graduated from Central South University of Technology in 1996 with a Bachelor of Engineering degree in Metallurgy from the Department of Nonferrous Metallurgy. He graduated from Central South University in 2009 and Missouri State University in 2011 with a master's degree in engineering in metallurgical engineering and a master's degree in business administration, respectively. He obtained the title of professor-level senior engineer in 2017.

Zhiguo Meng (孟志國), aged 42, is a vice president of the Company, was appointed as the senior management of the Company on 17 March 2023, who is in charge of Lualaba Copper Smelter. He is also the chairman of the board of directors of Lualaba Copper Smelter and the chairman of Kingsail. Mr. Meng has over 14 years of corporate management experience, including over 12 years in Zambia and the DRC. Mr. Meng joined the Lualaba Copper Smelter in 2019 and has served as deputy general manager and deputy director of the DRC office. Mr. Meng joined the Company in 2023 as vice president. Mr. Meng graduated from Anshan University of Science and Technology with a bachelor's degree in finance in 2003. He graduated from the University of Tours, France in 2007 and the University of Angers, France in 2009 with a bachelor's degree in economics and a master's degree in trading of plant products and plant processing products, respectively.

Note: Jinjun Zhang (張晉軍) resigned as President on 4 August 2022, resigned as Chairman and Executive Director on 13 October 2022. Chunlai Wang (王春來) resigned as an executive director of the Company on 11 April 2022. Xingrong Du (杜興榮) resigned as a vice president of the Company on 21 February 2022. Shili Zhang (張士利) resigned as a vice president of the Company on 20 April 2022. Guobin Hu (胡國斌), resigned as a vice president of the Company on 13 October 2022. Xinghua Liu (劉興華) resigned as the chief financial officer of the Company on 27 February 2023. Yuan Jiang (江源) resigned as a vice president of the Company on 17 March 2023.

JOINT COMPANY SECRETARIES

As at the Latest Practicable Date, the Company's joint company secretaries are as follows:

Chaoran Zhu (朱超然), aged 35, has been appointed as a joint company secretary of the Company with effect from 7 March 2022. Mr. Zhu joined CNMC in August 2018 and was responsible for capital operation and equity financing and other relevant works. Mr. Zhu began his career as a department director in CNPC Greatwall Drilling Company ("CNPC Greatwall Drilling", a subsidiary of China National Petroleum Corporation) for the period from 2012 to 2016 and was responsible for the administrative and operational affairs of CNPC Greatwall Drilling. From 2016 to 2018, Mr. Zhu successively served as senior management in the securities affairs department and then the general office of CECEP Wind Power Corporation Co., Ltd. (an A share company listed on the Shanghai Stock Exchange). From August 2018 onwards, Mr. Zhu has served as the director of the secretariat of general office, the member of the preparatory group and deputy director of equity financing division of capital operation department in CNMC. Mr. Zhu obtained the bachelor degree in Economics and master degree in Public Administration from Renmin University of China and subsequently obtained the doctoral degree in Laws from China University of Political Science and Law. Mr. Zhu held both the Fund Professional Qualification Certificate issued by the Asset Management Association of China and the Qualification Certificate for Board Secretaries of Listed Companies issued by the Shanghai Stock Exchange.

Man Yi Wong (黃敏儀), aged 47, has been appointed as a joint company secretary of the Company with effect from 27 April 2018. Ms. Wong has over 10 years of experience in company secretarial services industry. From March 2015 to January 2020, she was the company secretary of Hao Wen Holdings Limited (shares of which are listed on GEM operated by the Hong Kong Stock Exchange). Ms. Wong was previously a joint company secretary of the Company for the period from June 2012 to December 2013. Ms. Wong graduated from City University of Hong Kong with a Bachelor degree of Business Administration (Honours) in Business Management in 2006 and a Master of Science degree in Professional Accounting and Corporate Governance in 2009. Ms. Wong is an associate member of The Hong Kong Chartered Governance Institute (formerly known as The Hong Kong Institute of Chartered Secretaries) and The Chartered Governance Institute.

Note: Dayong Yang (楊大勇) resigned as a joint company secretary of the Company on 7 March 2022. Please refer to the paragraph headed "Senior Management" for his biography in details.

CORPORATE GOVERNANCE REPORT

CORPORATE GOVERNANCE PRACTICES

The Board of Directors and the management of the Group are committed to achieving and maintaining high standards of corporate governance, which they consider critical in safeguarding the integrity of the Company's operations and maintaining investors' trust in the Company. Except for deviation from code provision C.2.1 of the CG Code, which is explained in paragraph headed "Chairman and Chief Executive" below, the Company had complied with all the code provisions as set out in the CG Code contained in Appendix 14 of the Listing Rules during the year ended 31 December 2022.

During the year, the Company has applied the principles set out in the Corporate Governance Code. The Company's corporate governance structure has applied the provisions of the CG Code. In leading, managing and monitoring the Group's business and making strategic decisions, the Board requires each director to act in good faith, be transparent, accountable, compliant with applicable laws and regulations, make decisions in the interests of the Company and its shareholders and balance the interests of stakeholders in order to promote the healthy growth and effective performance of the Company's functions, thereby enhancing investors' value.

CODE OF CONDUCT REGARDING SECURITIES TRANSACTIONS BY DIRECTORS

The Company has adopted a code of conduct regarding securities sample transactions by directors on terms no less exacting than the required standard of dealings as set out in the "Model Code for Securities Transactions by Directors of Listed Issuers as contained in Appendix 10 of the Listing Rules".

The Company had made specific enquiry to all the Directors and confirmed that all of them complied with the Model Code for the year ended 31 December 2022.

BOARD OF DIRECTORS

As at 31 December 2022, the Board comprised one executive Director, namely Mr. He Yang; one non-executive Director, namely Mr. Yaoyu Tan; and three independent non-executive Directors, namely Mr. Dingfan Qiu, Mr. Jingwei Liu and Mr. Huanfei Guan. Mr. He Yang is the Chairman of the Board.

Mr. Chunlai Wang and Mr. Jinjun Zhang resigned as executive Directors on 11 April 2022 and 13 October 2022, respectively.

To the best knowledge of the Company, there are no financial, business, family or other material relationships among members of the Board.

Lualaba Main Smelting Plant

For the year ended 31 December 2022, all the members of the Board and board committees actively attended relevant meetings. The attendances at the meetings of the Board and its committees and the general meetings held in person or through other electronic means of communication are as follows:

	For the year ended 31 December 2022						
	Board Meeting	Audit Committee Meeting	Nomination Committee Meeting	Remuneration Committee Meeting	Compliance Committee Meeting	Chairman and INED Meeting	General Meeting
Minimum number of meetings	4	2	1	1	2	1	1
Number of meetings held in 2022	5	2	1	2	4	1	1
Mr. He Yang *(appointed on 13 October 2022)*	2/2	N/A	0/0	1/1	1/1	1/1	0/0
Mr. Jinjun Zhang *(resigned on 13 October 2022)*	2/3	N/A	0/1	0/1	2/3	0/0	1/1
Mr. Chunlai Wang *(resigned on 11 April 2022)*	2/2	N/A	N/A	N/A	N/A	N/A	0/0
Mr. Yaoyu Tan	5/5	2/2	N/A	N/A	N/A	N/A	1/1
Mr. Dingfan Qiu	5/5	N/A	1/1	2/2	4/4	1/1	1/1
Mr. Jingwei Liu	5/5	2/2	1/1	N/A	N/A	1/1	1/1
Mr. Huanfei Guan	5/5	2/2	N/A	2/2	4/4	1/1	2/2

The Board shall meet at least four times a year at approximately quarterly intervals. The Audit Committee shall meet not less than twice a year to review and discuss the interim and annual consolidated financial statements. The Compliance Committee shall meet at least two times a year to review the Company's internal control policies and corporate management. Both of the Nomination Committee and the Remuneration Committee shall meet at least once a year. In addition, the Chairman of the Board shall meet with independent non-executive Directors without the attendance of executive Directors at least once a year. The Company was in compliance with all the requirements in respect of meetings of Board committee throughout the year of 2022.

CNMC Huachin Mabende extraction electrowinning workshop

The Board is responsible for leading, supervising and managing the Company. Its main duties include but are not limited to: (i) formulating and reviewing the corporate governance policies and practice of the Company; (ii) reviewing and inspecting trainings and continuing development of Directors and senior management; (iii) reviewing and monitoring relevant policies and rules of the Company in relation to compliance with laws and regulations; (iv) developing, reviewing and monitoring the code of conduct and compliance manual applicable to employees and Directors; and (v) reviewing the Company's compliance with Corporate Governance Code and the disclosure of relevant information in the Corporate Governance Report. The Board supervises the business, strategy and decision making as well as performance of the Group, in a bid to achieve sound growth momentum to improve shareholder value. Each Director executes his duties in good faith and make objective decisions in compliance with requirements of applicable laws and regulations. The Board delegates day-to-day operations of the Company to the management of the Group and also instructs the management to implement the Board's decisions and resolutions. The delegated functions are periodically reviewed. Approval has to be obtained from the Board prior to any significant transaction being entered into. Non-executive Directors and independent non-executive Directors actively participated in the meetings of the Board and its committees to exercise their independent judgment on issues of strategy, policy, performance, accountability, resources, key appointments and standards of conduct of the Company. All of the non-executive Directors and independent non-executive Directors made positive contributions to the strategy and policies of the Company's development through independent, constructive and informed comments. In addition, the Board has also delegated various responsibilities to the Audit Committee, the Nomination Committee, the Remuneration Committee and the Compliance Committee.

The Board recognises the importance of having access to independent views and opinions. As at 31 December 2022 and up to the Latest Practicable Date, the Board comprises five members, 3 of whom are independent non-executive Directors, representing 60%. Where necessary, the board of directors and each committee seek external independent professional advice to facilitate performing its duties, and the expenses shall be borne by the Company. Through the above measures and procedures, the Company has reviewed the effectiveness of the Board's access to independent views and input during the year and considers that the above policies and measures are able to ensure the independent views and input are available to the Board.

The Board also has a balance of skills and experience appropriate for the requirements of the Company's business and it ensures that changes to its composition can be managed without undue disruption. There is a sufficient number of non-executive Directors for their views to carry weight. As not less than one-third of the Board shall be made up of independent non-executive Directors, there is also a strong independent element on the Board, which facilitates the exercise of independent judgment by the Board. One of the independent non-executive Directors, Mr. Jingwei Liu, holds the appropriate professional qualifications as required under Rule 3.10(2) of the Listing Rules.

Directors are provided in a timely manner with appropriate information in the form and quality to enable them to make an informed decision and perform their duties and responsibilities.

Each newly appointed Director receives formal, comprehensive and tailored induction on the first occasion of his/her appointment, so as to ensure that he/she understands the business and operations of the Company and that he/she is fully aware of his/her responsibilities and obligations under the Listing Rules and other relevant regulatory requirements.

The Directors are continually provided with information relating to the developments in the legal and regulatory regime and the business and market environments to facilitate the execution of their responsibilities. Continuing briefings and professional development training for the Directors were arranged by the Company and its professional advisers.

During the year ended 31 December 2022, all the Directors complied with code provision C.1.4 and took continuous professional development trainings in order to refresh their knowledge and skills and provided relevant records to the Company.

The types of trainings in which all Directors participated during 2022 are as follows:

	Type of Trainings
Executive Directors	
Mr. He Yang *(appointed on 13 October 2022)*	A, B
Mr. Jinjun Zhang *(resigned on 13 October 2022)*	A, B
Mr. Chunlai Wang *(resigned on 11 April 2022)*	B
Non-Executive Director	
Mr. Yaoyu Tan	A
Independent Non-Executive Directors	
Mr. Dingfan Qiu	A
Mr. Jingwei Liu	A
Mr. Huanfei Guan	A

A: attending seminars, conferences and/or expert briefings relevant to the business or directors' duties

B: paying visits to the Group's local management and facilities

Pursuant to Rule 3.13 of the Listing Rules, the Company has received written annual confirmation from each independent non-executive Director for his independence and considers that all independent non-executive Directors are independent in accordance with the guidelines set out in the Listing Rules.

The Company has arranged appropriate insurance cover in respect of legal action against all the Directors.

CHAIRMAN AND CHIEF EXECUTIVE

Mr. Jinjun Zhang was appointed as the Chairman of the Board on 8 January 2021, and continued to serve as the President of the Company (the "President") until his resignation as the President on 4 August 2022. Following the resignation of Mr. Jinjun Zhang as the President, Mr. Jinping Ma, the Vice President of the Company, has temporarily performed the duties of the President. From 8 January 2021 to 4 August 2022, the Company has deviated from code provision C.2.1 of the Corporate Governance Code, which provides that the roles of Chairman and chief executive should be separate and should not be performed by the same individual.

The Board believes that the balance of power and authority is adequately ensured by the operation of the Board, which comprises experienced talents with a sufficient number of Directors being independent non-executive Directors, and therefore, the performance of the roles of the Chairman of the Board and the President of the Company concurrently by Mr. Jinjun Zhang will not impair the balance of power and authority between the Board and the management of the Company and the deviation from code provision C.2.1 of the CG Code is appropriate in such circumstance. As to the deviation from code provision C.2.1 of the CG Code, the Board will continue to review the current structure from time to time and shall make necessary changes when appropriate and inform the shareholders accordingly. Mr. Jinjun Zhang resigned as President on 4 August 2022, and the positions of Chairman and President of the Company have been held by different individuals. Mr. Jinjun Zhang was resigned as Chairman and Executive Director on 13 October 2022, and Mr. He Yang was appointed as Chairman and Executive Director of the Company on the same date.

APPOINTMENT AND RETIREMENT OF DIRECTORS

According to article 107 of the Articles of Association of the Company and Rule 4(2) of Appendix 3 of Main Board Listing Rules, Directors who were appointed by the Board to fill a casual vacancy or to increase the number of members of the Board during the year 2022 shall retire at the forthcoming annual general meeting. He is eligible for re-election and will offer himself for re-election.

In accordance with article 102 of the Articles of Association of the Company, at each annual general meeting, one-third of the Directors or, if their number is not three (3) or a multiple of three (3), the number which is nearest to and is at least one-third, shall retire from office by rotation at least once every three (3) years. A retiring Director shall be eligible for re-election. Pursuant to article 103 of the Articles of Association, the directors to retire by rotation shall be those who have been longest in office since their last appointment or reappointment, but as between persons who became or were last reappointed directors on the same day those to retire shall (unless they otherwise agree among themselves) be determined by lot.

The Nomination Committee is responsible for reviewing the Board composition, developing and formulating the relevant procedures for nomination and appointment of Directors, monitoring the appointment and succession planning of Directors and assessing the independence of independent non-executive Directors.

Each of the executive Directors has signed a service agreement and a supplemental service agreement with the Company for an initial term of three years and to renew for three years automatically (subject to termination in certain circumstances as stipulated in the relevant service agreement). Each of the non-executive Directors (including three independent non-executive Directors) has signed a letter of appointment and/or a supplemental letter of appointment with the Company for an initial term of three years and to renew for three years automatically (subject to termination in certain circumstances as stipulated in the relevant letters of appointment).

Save as disclosed herein, none of the Directors has or is proposed to have entered into any service agreement or letter of appointment with any member of the Group (excluding agreements expiring or determinable by any member of the Group within one year without the payment of compensation other than statutory compensation).

PRACTICES OF BOARD MEETINGS

Notices of regular Board meetings are given to all the Directors at least 14 days before the meetings. Schedules and agenda of each meeting are made available to the Directors in advance. All the Directors are given an opportunity to include matters in the agenda for regular Board meetings. For other Board and committee meetings, notices are given within reasonable time in advance. Minutes of all Board meetings and committee meetings are kept by the joint company secretaries and open for the Directors' inspection. Draft and final version of minutes are circulated to the Directors for their comments and records within a reasonable time after the Board meeting is held. Minutes of the meetings of the Board and Committees recorded sufficient details of the matters considered and decisions reached at relevant meetings, including any concerns raised by Directors or dissenting views expressed.

The Directors, upon reasonable request, will be provided with independent professional advice, at the Company's expense, to assist them to perform their duties. They may also have access to the senior management whenever necessary. Senior management would attend all regular Board meetings as and whenever necessary to report and advise the Board on business developments, financial and accounting matters, statutory and regulatory compliance, corporate governance and other major aspects of the Company. All Directors are entitled to have access to Board papers and related materials. The Company shall provide prompt and full responses to queries raised by the Directors as soon as it possibly can.

Pursuant to the provision of the Articles of Association, a Director shall not vote nor be counted in the quorum at the Board meeting on any resolution approving any contract or arrangement or concerning a matter in which he or any of his associate(s) has, directly or indirectly, a material interest (other than an interest in shares, debentures or other securities of, or otherwise in or through, the Company) unless his interest arises because of specified matters set out in the Articles.

BOARD COMMITTEES

The Board has established the Audit Committee, the Nomination Committee, the Remuneration Committee and the Compliance Committee to oversee particular aspects of the affairs of the Company. Each of these committees is set up with specific written terms of reference and the same has been published on the website of Hong Kong Stock Exchange. Each committee is delegated with authorities and duties within its terms of reference. The agenda of Board committees and relevant documents will be sent to all Directors at least three days before the intended date of relevant meetings. Each committee shall report to the Board according to its terms of reference.

AUDIT COMMITTEE

The Company has an audit committee which was established with written terms of reference in compliance with Rule 3.22 of the Listing Rules and code provision D.3 of the CG Code as set out in Appendix 14 of the Listing Rules. The primary role and function of the Audit Committee are to supervise the financial reporting process and internal control and risk management systems of the Group. As at the date of this report, the Audit Committee consists of one non-executive Director, being Mr. Yaoyu Tan, and two independent non-executive Directors as its members, being Mr. Jingwei Liu and Mr. Huanfei Guan. The chairman of the Audit Committee is Mr. Jingwei Liu, who has appropriate professional qualifications, accounting and related financial management expertise as required under rule 3.10(2) of the Listing Rules. The Group's financial statements for the year ended 31 December 2022 have been reviewed by the Audit Committee, who was of the opinion that such statements complied with the applicable accounting standards, the Listing Rules and legal requirements, and that adequate disclosures had been made.

The Audit Committee is also responsible for overseeing and monitoring the risk management and internal control systems of the Company on an ongoing basis and review with our external auditors and management periodically, not less than once a year, the scope, adequacy and effectiveness of the Company's corporate accounting and financial controls, risk management and internal control systems and any related significant findings regarding risks or disclosure, and consider recommendations for improvement of such controls. The review should cover all material controls, including financial, operational and compliance controls. In conducting annual review, the Audit Committee should, in particular, consider the factors including (a) the changes, since the last annual review, in the nature and extent of significant risks, and the issuer's ability to respond to changes in its business and the external environment; (b) the scope and quality of management's ongoing monitoring of risks and of the internal control systems, and where applicable, the work of its internal audit function and other assurance providers; (c) the extent and frequency of communication of monitoring results to the board which enables it to assess control of the issuer and the effectiveness of risk management; (d) significant control failings or weaknesses that have been identified during the period. Also, the extent to which they have resulted in unforeseen outcomes or contingencies that have had, could have had, or may in the future have, a material impact on the issuer's financial performance or condition; and (e) the effectiveness of the issuer's processes for financial reporting and Listing Rule compliance.

The Audit Committee is also responsible for reviewing the Company's internal audit function, ensuring coordination within the Group and between the Company's internal and external auditors, and ensuring that the internal audit function is adequately resourced and has appropriate standing within the Company and to review and monitor its effectiveness.

During this year, the work of the Audit Committee of the Company was summarized as follows:

During this year, the work of the Audit Committee of the Company includes reviewing the unaudited financial statements of the Group for the six months ended 30 June 2022, the 2022 interim result announcement and 2021 annual result announcement, the 2022 interim report and the 2021 annual report for approval by the Board; providing all Directors with views on the financial statements, the auditor's report, accounting policies and comments; reviewing the continuing connected transactions for the year ended 31 December 2021; and reviewing the risk management and internal control reports.

The Company's and the Group's audited financial statements for the year ended 31 December 2022 have also been reviewed by the Audit Committee, who was of the opinion that the financial statements complied with the applicable accounting standards, the Listing Rules and the legal requirements, and that adequate disclosures had been made.

For the Year, the Audit Committee held two meetings and the attendance records of individual members are set out below:

Name of Directors	Number of meetings attended/held
Mr. Jingwei Liu	2/2
Mr. Yaoyu Tan	2/2
Mr. Huanfei Guan	2/2

NOMINATION COMMITTEE

The Nomination Committee consists of three members. Mr. Jinjun Zhang resigned as a member of the Nomination Committee on 13 October 2022. Mr. He Yang has been appointed as a replacement on the same day. As at the date of this report, the Nomination Committee consists of one executive director, being Mr. He Yang, and two independent non-executive Directors as its members, being Mr. Dingfan Qiu and Mr. Jingwei Liu. The chairman of Nomination Committee is Mr. Dingfan Qiu, an independent non-executive Director. The Company has adopted the board diversity policy since 30 August 2013. The primary role and function of the Nomination Committee include, but are not limited to, reviewing the structure, size, diversity (including but not limited to gender, age, culture and educational background), and composition of the Board of Directors, assessing the independence of independent non-executive Directors and making recommendations to the Board on matters relating to the appointment of Directors. The Nomination Committee is authorised by the Directors to obtain advice from external counsel or other independent professional consultants if necessary. It may invite external individuals with relevant experience and professional knowledge to attend the meeting when needed. The Nomination Committee will be provided adequate resources to perform its duties.

The Nomination Committee has fulfilled the primary duties mentioned above. At the meeting held by the Nomination Committee in 2022, it reviewed the structure, size, composition and diversity of the Board to ensure that the Board has a balance of expertise, skills and experience appropriate for the business of the Company, and assessed the independence of the independent non-executive Directors. The Nomination Committee reviewed the appointment of each Director prior to that Director seeking re-election at the forthcoming annual general meeting and was pleased to recommend the re-election of eligible Directors to the Board.

For the Year, the Nomination Committee held one meeting and the attendance records of individual members are set out below:

Name of Directors	Number of meetings attended/held
Mr. Dingfan Qiu	1/1
Mr. He Yang *(appointed on 13 October 2022)*	0/0
Mr. Jinjun Zhang *(resigned on 13 October 2022)*	0/1
Mr. Jingwei Liu	1/1

Nomination Process

The Nomination Committee shall assess whether any vacancy on the Board has been created or is expected on a regular basis or as required.

The Nomination Committee utilises various methods for identifying director candidates, including recommendations from Board members, management, and professional search firms. All Director candidates, including incumbents and candidates nominated by Shareholders are evaluated by the Nomination Committee based upon the Director qualifications. While Director candidates will be evaluated on the same criteria through review of resume, personal interview and performance of background checks, the Nomination Committee retains the discretion to establish the relative weighting of such criteria, which may vary based on the composition, skill sets, age, gender and experiences of the collective Board rather than on the individual candidate for the purpose of diversity perspectives appropriate to the requirement of the Company's business.

Selection Criteria

The Nomination Committee will take into account whether a candidate has the qualifications, skills, experience and gender diversity that add to and complement the range of skills, experience and background of existing Directors by considering the highest personal and professional ethics and integrity of the director candidates, proven achievement and competence in the nominee's field and the ability to exercise sound business judgment, skills that are complementary to those of the existing Board, the ability to assist and support management and make significant contributions to the Company's success and such other factors as it may deem are in the best interests of the Company and the Shareholders.

During the year, the above procedures and selection criteria were adopted for the nomination and selection of new directors.

Board Diversity Policy

The composition of the Board is reviewed on an annual basis by the Nomination Committee to ensure that the Board has the appropriate mix of expertise and experience, and collectively possesses the necessary core competence for informed decision-making and effective functioning. The Company adopted its own board diversity policy and recognises the benefits of having diversity in the composition of the Board.

The summary of the Board Diversity Policy:

General Policy

With a view to achieve a sustainable and balanced development, the Company sees increasing diversity at the Board level as an essential element in supporting the attainment of its strategic objectives and its sustainable development. In designing the Board's composition, Board diversity will be considered from a number of factors, including but not limited to gender, age, cultural and educational background, ethnicity, professional experience, skills, knowledge and length of service. All Board appointments will be based on meritocracy, and candidates will be considered against objective criteria, having due regard for the benefits of diversity on the Board.

Measurable Objectives

Selection of candidates will be based on a range of diversity perspectives, including but not limited to gender, age, cultural and educational background, ethnicity, professional experience, skills, knowledge and length of service. The Company will also take into account factors based on its own business model and specific needs from time to time. The ultimate decision will be based on merit and contribution that the selected candidates will bring to the Board.

As at 31 December 2022, all members of Board are male. The Company expects to promote gender diversity by appointment of at least one female director before the end of 2024. As at 31 December 2022, the workforce (include the staff of the subsidiaries) of the Group consists of 8,736 male staff and 379 female staff, representing approximately 95.8% and 4.2% of the workforce, respectively. While all members of the senior management of the Company are male as at 31 December 2022, the Company has appointed the first female member of senior management in February 2023.

Implementation of the Policy

Although the mining industry is traditionally male-dominated, the Group plans to consider not only the basic qualifications of the candidates, but also select female employees if suitable, in order to increase the proportions of female employees and, in the long run, increase the likelihood of the Company having more female directors and senior management in the future, when recruiting senior management, as well as middle and senior staff.

The Nomination Committee will review annually on the Board's composition under diversified perspectives, including but not limited to progress on achieving any measurable objectives that set for implementing the Policy, and monitor the implementation of the Policy.

Composition of the Diversified Board

As at the Latest Practicable Date, the Board comprises five Directors. The following table further illustrate the composition and diversity of the Board in terms of age and length of service with the Group, educational background and professional experience as at the date of this annual report:

	Age Group			Length of Service	
Name of Director	**40 to 49**	**50 to 59**	**60 or above**	**less than 3 years**	**more than 3 years**
Mr. He Yang	✓			✓	
Mr. Yaoyu Tan	✓			✓	
Mr. Dingfan Qiu			✓	✓	
Mr. Jingwei Liu		✓			✓
Mr. Huanfei Guan			✓		✓

	Educational Background			Professional Experience		
Name of Director	**Economics**	**Mining**	**Accounting and Finance**	**Mining**	**Accounting and Finance**	**Management**
Mr. He Yang	✓		✓	✓		✓
Mr. Yaoyu Tan	✓		✓	✓		✓
Mr. Dingfan Qiu		✓		✓		
Mr. Jingwei Liu			✓		✓	✓
Mr. Huanfei Guan	✓				✓	✓

REMUNERATION COMMITTEE

The Remuneration Committee consists of three members. Mr. Jinjun Zhang resigned as a member of the Remuneration Committee on 13 October 2022. Mr. He Yang has been appointed as a replacement on the same day. As at the date of this report, the Remuneration Committee consists of one executive director, being Mr. He Yang, and two independent non-executive Directors as its members, being Mr. Dingfan Qiu and Mr. Huanfei Guan. The Remuneration Committee is chaired by Mr. Huanfei Guan, an independent non-executive Director. The primary role and function of the Remuneration Committee include, but are not limited to, the following: (i) making recommendations to the Board on the Company's policy and structure for all remuneration of the Directors (including executive Directors) and senior management and on the establishment of a formal and transparent procedure for development policy on such remuneration; (ii) reviewing and approving performance-based remuneration by reference to corporate goals and objectives resolved by the Board from time to time; (iii) evaluating the performance of executive Directors; and (iv) approving the terms of executive Directors' service contracts. The Remuneration Committee is authorised by the Directors to obtain advice from external counsel or other independent professional consultants if necessary. It may invite external individuals with relevant experience and professional knowledge to attend the meeting when needed. The Remuneration Committee is provided with adequate resources to perform its duties.

The remuneration payable to each of the directors is determined by the Remuneration Committee with reference to his contribution of time, effort and expertise on the Company's matters.

The Remuneration Committee of the Company has performed the primary role and function mentioned above. During the year, the work of the Remuneration Committee is summarized as reviewing and recommending to the Board the remuneration arrangements for directors and senior management of the Company in accordance with the Provisional Management Measures of Senior Management's Remuneration and recommending and proposing to the Board amendments to the relevant terms of reference of the Remuneration Committee. For the purposes of code provision E.1.2(c) of Corporate Governance Code, the mode adopted by the Company is for the Remuneration Committee to recommend to the Board the remuneration packages of individual executive directors and senior management, including non-monetary benefits, pension entitlements and compensation payments (including compensation for loss of office or termination or appointment).

For the remuneration of the Directors for the year ended 31 December 2022, please refer to note 11 to the audited consolidated financial statements of this annual report.

Please see below for the remuneration of the senior management of the Group by band for the year ended 31 December 2022:

	Number of senior management
HK$0 to HK$500,000	9
HK$500,001 to HK$1,000,000	7
HK$1,000,001 to HK$1,500,000	1
Over HK$1,500,000	5

For the Year, the Remuneration Committee held two meetings and the attendance records of individual members are set out below:

Name of Directors	Number of meetings attended/held
Mr. Huanfei Guan	2/2
Mr. He Yang *(appointed on 13 October 2022)*	1/1
Mr. Jinjun Zhang *(resigned on 13 October 2022)*	0/1
Mr. Dingfan Qiu	2/2

COMPLIANCE COMMITTEE

The Compliance Committee consists of three members. Mr. Jinjun Zhang resigned as the Chairman of the Compliance Committee on 13 October 2022. Mr. He Yang has been appointed as a replacement on the same day. As at the date of this report, the Compliance Committee consists of one executive director, being Mr. He Yang, and two independent non-executive Directors as its members, being Mr. Dingfan Qiu and Mr. Huanfei Guan. Mr. He Yang is the Chairman of the Compliance Committee. The terms of reference of the Compliance Committee include the terms of code provision A.2.1 of the CG Code. The primary role and functions of the Compliance Committee include, but are not limited to, overseeing and monitoring the compliance status of the Company's business and operations based on the applicable legal and regulatory requirements as well as the Company's own internal control policies and procedures; reviewing regular and special reports submitted by the compliance principal in each subsidiary and requiring such compliance principals to prepare specific reports dealing with particular internal control or compliance issues for review; holding regular meeting to discuss, investigate and make plans for the legal and compliance matters; formulating and reviewing the Company's policies and practice on corporate government and making recommendations to the Board; and reviewing the Company's compliance with the Corporate Governance Code set out in the Listing Rules and disclosure in the Corporate Governance Report section of the Company's annual report.

The Compliance Committee has performed the primary role and function mentioned above.

For the Year, the Compliance Committee held four meetings and the attendance records of individual members are set out below:

Name of Directors	Number of meetings attended/held
Mr. He Yang *(appointed on 13 October 2022)*	1/1
Mr. Jinjun Zhang *(resigned on 13 October 2022)*	2/3
Mr. Dingfan Qiu	4/4
Mr. Huanfei Guan	4/4

INDEPENDENT AUDITOR

On 28 June 2022, Deloitte Touche Tohmatsu retired as the auditor of the Group and Ernst & Young was appointed as the auditor of the Group. Details of the change of auditors are set out in the Company's announcements dated 10 June 2022 and 28 June 2022.

The Group's independent external auditor is Ernst & Young ("EY"). EY is responsible for presenting independent opinions on the consolidated financial statements of the Group in accordance with the results of their audit work, and reporting to the Shareholders on the same. Apart from the statutory audit of the annual consolidated financial statements, EY was also engaged to perform a review of the interim consolidated financial statements of the Group for the six months ended 30 June 2022 and to provide assurance service on continuing connected transactions.

The remuneration paid to EY and its affiliates in respect of audit services and other non-audit services (those are tax consulting services, due diligence services and risk management consulting services for subsidiaries) for the year ended 31 December 2022 amounted to US$983,956 (equivalent to RMB6,648,000) and US$350,779 (equivalent to RMB2,370,000) respectively.

JOINT COMPANY SECRETARIES

Mr. Dayong Yang resigned as a joint company secretary of the Company on 7 March 2022. Mr. Chaoran Zhu has been appointed as a replacement on the same day, after a waiver to the Company from strict compliance with the requirements under Rule 3.28 and Rule 8.17 of the Listing Rules for a period of three years starting from the date of Mr. Zhu's appointment, has been granted by the Stock Exchange. As at the date of this report, Mr. Chaoran Zhu and Ms. Man Yi Wong are the joint company secretaries of the Company.

Before Mr. Dayong Yang's resignation as a joint company secretary on 7 March 2022, Ms. Man Yi Wong's primary corporate contact person at the Company was Mr. Dayong Yang. Ms. Wong's primary contact person at the Company has been changed to Mr. Chaoran Zhu since 7 March 2022. The joint company secretaries have taken no less than 15 hours of relevant professional training during the year. Joint company secretaries of the Company shall report to chairman of the Board and/or chief executive.

FINANCIAL REPORTING

The Directors acknowledge their responsibility for preparing the consolidated financial statements of the Group, which were prepared in accordance with statutory requirements and applicable accounting standards. The management has provided detailed explanation and information to the Board, which will enable the Board to make informed assessment on the financial and other information put before the Board for approval. Updated information has been provided by the management to members of the Board on a monthly basis, containing fair and understandable assessment on performance, financial condition and prospect of the Group.

The auditor's report for the consolidated financial statements for the year ended 31 December 2022 is set out on pages 156 to 160 of this annual report.

RISK MANAGEMENT AND INTERNAL CONTROL

The Group is dedicated to maintaining and establishing quality corporate governance. Pursuant to code provisions of the Corporate Governance Code set out in Appendix 14 of Listing Rules, basic standards, guidelines for evaluation as well as other requirements under relevant laws and regulations, the Group has conducted self-evaluation on the effectiveness of its internal control in respect of design and operation. As at 31 December 2022, the internal control for businesses and matters involved in self-evaluation has been established and has operated effectively. Thus the internal control objective of the Group was achieved and the internal control of the Group was sound and effective.

The Board recognises its responsibility for maintaining an adequate and sound internal control system and assesses its effectiveness of internal control on a regular basis. Through the Audit Committee, the Compliance Committee and an external firm of qualified accountants providing internal control services, the Board conducts reviews on the effectiveness of these systems at least once a year, covering all material controls, including financial, operational and compliance controls, and risk management functions. In addition, the review also considers the adequacy of resources, staff qualifications and experience, training programmes and budget of the Group's accounting and financial reporting function.

RISK MANAGEMENT AND INTERNAL CONTROL REPORT

I. Responsibilities

The Board of the Company is fully responsible for maintaining a sound and effective risk management and internal control system, while the management is responsible for the design and implementation of the risk management and internal control system to manage the risks. The Board further clarifies that a sound and effective risk management and internal control system is designed to identify and manage the risk of failure to achieve business objectives, and only makes reasonable, but not absolute, assurance against material misstatement or loss.

II. Risk Management and Internal Control Structure of the Company

The Board is responsible for the Company's risk management and internal control system and reviews its effectiveness periodically. The Audit Committee and the Compliance Committee assist the Board in monitoring the Company's risk tolerance level, the designs of the risk management and internal control system and their operational effectiveness.

The Company strictly complies with the requirements of the Listing Rules and relevant laws and regulations on inside information management, and strictly supervises the dealing and publishing of inside information to keep such information in confidentiality before being disclosed, and be disclosed in an accurate and timely manner. When an employee becomes aware of a transaction, a project or information that he/she believes to be potentially inside information, he/she is obliged to notify the Head of Compliance or the Chief Compliance Officer as soon as possible. The Company's directors and senior management will conduct analysis and seek legal advice to determine whether there is any insider information that must be disclosed to the public under the SFO. This measure is in effect and is reviewed regularly.

The Audit Committee will continuously supervise and monitor the Company's risk management and internal control system, and will review with external auditors and senior management of the Company in a certain scope on a regular basis (at least once a year) the scope, adequacy and effectiveness of the Company's accounting and financial monitoring, risk management and internal control systems, as well as any relevant significant findings relating to risks or disclosure, and consider making recommendations for improvement of such controls. An annual review covers all material monitoring, including financial monitoring, operational monitoring and compliance monitoring. The matters that the Audit Committee reviews include, among others, the following:

(a) discussing the changes, since the last annual review, in the nature and extent of significant risks, and the Company's ability to respond to changes in its business and the external environment;

(b) the scope and quality of the continuous monitoring of risk management and internal control system by senior management, as well as (where applicable) internal audit functions and works of other assurance providers;

(c) reporting on the extent and frequency of communication of monitoring results to the Board to enable the Audit Committee to assess control of the Company and the effectiveness of risk management;

(d) significant control failings or weaknesses that have been identified during the reporting period and the extent to which they have resulted in unforeseen outcomes or contingencies that have had, may have or may in the future have, a material impact on the Company's financial performance;

(e) the effectiveness of the Company's procedures on financial reporting and the compliance of the Listing Rules;

(f) discussing the risk management and internal control system with senior management in order to ensure the proper establishment and maintenance of effective systems by senior management in the performance of its duties. The discussion should include the adequacy of resources, staff qualifications and experience, training programmes and budget of the Company's accounting, internal control and financial reporting functions;

(g) considering major findings from investigation on risk management and internal control matters as delegated by the Board or on its own initiative and considering management's response to these findings;

(h) reviewing the internal audit function, to ensure co-ordination between the internal and external auditors of the Company, to ensure that the internal audit function is adequately resourced and has appropriate standing within the Company, and to review and monitor its effectiveness;

(i) reporting to the Board of any actions that have been noted and which, depending on their severity, should be brought to the attention of the Board in respect of any alleged fraud, non-compliance, failure of risk management and internal control system, or alleged violations and irregularities, and to review the internal investigation findings of any alleged fraud, non-compliance, failure of risk management and internal control system, or alleged violations and irregularities in financial reporting; and

(j) reporting to the shareholders in the Corporate Governance Report its annual review of the effectiveness of risk management, internal control system and internal audit functions, or whether additional internal audit functions are required and explain why this function is not available (as the case may be), in order to make sure that the Company has complied with the disclosure requirements under the code provisions on risk management and internal control in the Corporate Governance Code and Corporate Governance Report under the Listing Rules.

The responsibilities of the Compliance Committee in risk management and internal control shall include, but are not limited to:

(a) devising mechanisms and procedures and making recommendations on improving the internal control system;

(b) improving and reviewing the effectiveness of the Company's risk management and internal control policies and making recommendations on their improvement;

(c) overseeing and monitoring the compliance of the Company's business and operations in accordance with applicable legal and regulatory requirements as well as with the risk management and internal control policies and procedures;

(d) fostering a conducive compliance and risk culture within the Company and considering key risk and compliance issues in relation to the Company's commercial activities.

Risk Management Structure of the Company

<table>
<tr><td rowspan="2">Top-down: monitor, identify, assess and control the risks at corporate level</td><th colspan="2">Board</th><th>Audit Committee</th><th>Compliance Committee</th></tr>
<tr><td>• Fully responsible for the Company's risk management and internal control system
• Set up strategic objectives to review the effectiveness of the Company's risk management and internal control system</td><td>• Assess and define the nature and extent of the risks
• Provide guidance on the importance of risk management and promote the risk management culture</td><td>• Continuously monitor the Company's risk management and internal control system and regularly review the scope, adequacy and effectiveness of the Company's accounting and financial monitoring, and risk management and internal control system</td><td>• Assist the Board in improving and checking the effectiveness of the Company's risk management and internal control policies and make recommendations for their improvement</td></tr>
<tr><td rowspan="4">Bottom-up: identify, assess and control the risks of business units at operations level</td><th colspan="2">Management</th><th colspan="2">Internal audit</th></tr>
<tr><td colspan="2">• Design, implement and monitor risk management and internal control system
• Assess the risks to the Company and its control measures</td><td colspan="2">• Assist the Audit Committee in reviewing the effectiveness of the Company's risk management and internal control system</td></tr>
<tr><th colspan="4">Business units at operations level</th></tr>
<tr><td colspan="2">• Identify, evaluate and manage business risks</td><td colspan="2">• Implement risk management procedures and internal control measures within each operational and functional scope</td></tr>
</table>

III. Risk Management and Internal Control Model

The risk management and internal control model of the Company is based on the model set down by the Committee of Sponsoring Organizations of the U.S. Treadway Commission (COSO), and has five components, namely: internal environment, risk assessment, control activities, information and communication, and internal supervision. In developing our internal control model based on the internal control model set by COSO, the Company has taken into consideration its organisation structure and nature of business activities.

Internal Environment – This creates suitable conditions for the risk management and internal control of the Company. The Company formed a management style focusing on corporate governance, and built a corporate culture with good professional ethics and accountability. The Company has formulated the Code on Corporate Governance Practices and promoted it to all employees. The Internal Control Management Manual of the Company has full coverage of the organisational structure, development strategies, human resources, social responsibility, corporate culture and other internal environment aspects, aims to build risk awareness and internal control responsibility into our culture and is regarded as the foundation of the Company's internal controls system.

Risk Assessment – The Company formed a risk management system for risk identification, risk analysis, risk assessment and risk response. The Board, management and all employees work together for continuing promotion of risk management. A law and compliance department was established by the Company to regularly follow up on risk management work, to prepare a compliance report every month so as to track the risk situation of the enterprise and to integrate the risk management function into the daily management work and the scope of business operation and functions of each enterprise. Meanwhile, the Company proactively conducted identification and assessment of key risks and analyzed and coped with risks in a timely manner.

Control Activities – The Company's core businesses of mining, ore processing, smelting and sales of copper have all established mature operational processes. The Company and all the investees have formed a sound system covering every production and business activity at the business and financial level. Besides, the Company has strengthened its information automation programme to effectively set restrictions on power and implement the separation of duties. With the help of digital technology, the operating efficiency was promoted.

Information and Communication – The Company established a sound information communication mechanism, for example, it promulgated the "Management System of Information Disclosure of China Nonferrous Mining Corporation Limited" and the "Management System of Financial Information Disclosure of China Nonferrous Mining Corporation Limited", set up a periodic reporting mechanism of monthly compliance information including statutory matters, internal control system, legal cases and related party transactions, and the Company continuously supervises and manages the financial information and compliance information of all the investees. All the investees have established a unified business finance management system to strengthen the integration and sharing of information.

Internal Supervision – The supervision procedure is organised and started by the Board, the Audit Committee and the Compliance Committee, and performed by the Legal and Compliance Department and the internal auditor. The Audit Committee and the Compliance Committee shall hold at least two meetings a year, to continuously monitor the risk management and internal control system. At management level, the Company has a complaint channel to carry out anti-fraud monitoring work, and the Legal and Compliance Department will arrange reviews on the risk management and internal control system annually.

IV. Review on the Effectiveness of the Risk Management and Internal Control System in 2022

The Company has organised an overall review on the risk management and internal control system in 2022. As at 31 December 2022, as confirmed by the management, the Board considered the risk management and internal control system effective and sufficient and did not identify any significant issues that may affect the Company's financial monitoring, operational monitoring, compliance monitoring and risk management functions.

During the course of review, the Board considered that the resources available to, qualifications and experience of staff responsible for the Company's accounting, internal audit and financial reporting, training and budget were sufficient.

V. Further Reinforcing the Company's Risk Management and Internal Control System

The Company has further reinforced its risk management and internal control system, with focus on the following:

Internal Environment – Stick to the development strategy of "resources-oriented, internationalization and high-end"

Focusing on the high-quality development as its mainstay, and taking innovation as a driving force, the Company is committed to upgrading its management capabilities and organizational efficiency, improving its quality and efficiency, and strengthening its composite competitiveness by seizing the opportunities brought by the three-year action of enterprise reform aiming at upgrading its corporate governance with reference to the world-class management practices. We will firmly consolidate our holistic view, overall planning and coordinated advancement.

Risk Assessment-Strengthen the guideline of "preventing risk and creating value"

In 2022, the Company's management continued to attach importance to the risk management, the same practice as 2021. The Company strengthens the ability and level of legal and compliant operation and management, continues to improve corporate governance, operational compliance, standardized management, and law-abiding operation. For example, Chambishi Copper Smelter Limited, Sino-metals Leach Zambia Limited, Gangpov Mining Co., Ltd.(剛波夫礦業股份有限公司), CNMC Luanshya Copper Mines PLC and China Nonferrous Mining Hong Kong Holdings Limited continues to optimize the internal control manual, set up an internal control information platform to strengthen internal control management. The Company adheres to the risk-based audit and the transformation/application of audit results and strengthens audit monitoring.

Control activities – Strive to overcome unstable production factors and adhere to the management concept of seeking progress while maintaining stability

Given that daily business activities are continuously affected by uncertain production factors such as the turbulent political environment and unstable investment environment, the Company aims to strictly control production costs, focus on cost reduction and efficiency improvement, and seek progress while maintaining stability, improves the management and control efficiency in financial management, capital management, procurement and sales management, strengthens departmental review, enhances discipline inspection and supervision, and pushes forward the building of its compliance system. The Company actively looks for upstream and downstream partners and has reached resource development and cooperation agreements, while complementing each other's advantages, making all-out efforts to find mines and speeding up the resource development work.

Information and Communication – Strengthen the information system building and improve the level of information management

The Company has always adhered to the investment in information system building, strengthened the level of information management, integrated its core business with financial management, and effectively solved the lack of exchange mechanisms, blocked communication, and data transmission delays through assistance of technical platforms such as data exchange and storage. Subsidiaries at all levels continue to improve their automation capabilities, Sino-metals Leach Zambia Limited, for example, has fully activated the OA integrated office system in 2022, upgraded management efficiency and standardization, and promoted its sustainable development. The Company attaches great importance to the introduction of modern information technology, encourages more efficient process innovation, cultivates a data-driven culture, and comprehensively improves the level of information management.

Internal Supervision – Push forward risk management and internal control

In 2022, based on regular internal control and assessment, the legal affair and compliance department organized a special evaluation of risk management and internal control systems while carrying out an in-depth all-round assessment on risk management and internal control of listed companies and capital contributors, the annual special assessment involves corporate governance, financial monitoring, business operation and compliance supervision while focusing on key links, maintaining daily education reminders and dealing with violations of laws and disciplines. Meanwhile, we shall perform an all-round improvement of the "5-in-1" (五位一體) risk control system covering risk evaluation, internal control, decision-making mechanism, legal support and audit monitoring.

VI. Future Development

Developing a risk management system that will be used by each operating unit to manage and control risks is an ongoing process. The Company will continue to enhance its risk management and control capabilities, improve its internal control structure, and strive to integrate risk management and internal control into its business processes.

VII. Risk Factors of the Company

As the basis for the risk management policy, the Company should be aware of the risk factors and risk changes it is currently exposed to. The following table sets out the nature and risk changes of some of the significant risks to the Company.

Risks	Description of risks change	Risks change in 2022
Political environment	• In 2022, domestic local armed forces, foreign anti-government organizations and government forces clashed in the DRC, and anti-government armed attacks occurred frequently, as a result, domestic political environment continued to be unstable, and the overall situation was relatively severe; Zambia's domestic political conditions basically remained stable, with a slow growth trend in the economy.	Maintained
Operating environment	• In 2022, Zambia's economic development was stable, and the resource endowment was still obvious (mining, water and land resources were abundant). Although production volume of copper in 2022 was below the government's expectations, the Government of Zambia has been actively and continuously providing concessions to mining companies and has improved the overall business environment. To a certain extent, this demonstrated the Government of Zambia's confidence and determination in the continued development of the economic environment in Zambia; DRC has continuously initiated a number of reform measures and actively opened up its domestic market to both domestic and foreign investors, with the domestic business environment continuing to improve.	Maintained
Product price	• Copper price surged at the beginning of 2022, which fluctuated significantly throughout the year. The market tightness was relieved in the fourth quarter and copper price returned to fundamentals, maintaining a better momentum.	Maintained

Risks	Description of risks change	Risks change in 2022
Provision of raw materials	• Despite the severe situation of mineral resources and the vicious competition in the market, the Company actively explored various resource protection measures, strived to develop target projects, steadily carried out exploration and mining search, and strived to find low-cost resources, which provided a strong guarantee to maintain the stability of the Company's raw materials and fully complete the annual production and operation targets.	Maintained
Production management	• The Company carried out the prevention and control work of the COVID-19 pandemic in a prudent manner, adhered to the normalization of the epidemic prevention measures of "one enterprise, one policy", and insisted on the bottom line of not having a gathering epidemic. At the same time, the Company vigorously carried out the cost reduction and efficiency increase plan to enhance its competitiveness. The Company insisted on improving safety management standard to achieve the goal of "0" production accidents in 2022.	Maintained
Asset management	• Asset impairment was mainly affected by copper prices, which fluctuated in 2022. Copper prices decreased slightly in the fourth quarter from the beginning of the year, and the risk of asset impairment maintained.	Maintained
Foreign exchange management	• The exchange rate of ZMK against the US dollar appreciated slightly in 2022 compared to 2021, alleviating the adverse effects of changes in exchange rates on production and operation.	Reduced
Legal litigation	• In 2022, the Company strictly enforced the internal legal affairs rules and regulations and management processes. There still existed various types of proceedings, but the cases were under good management.	Maintained

COMMUNICATION WITH SHAREHOLDERS AND INVESTORS

The Group emphasises the importance of maintaining good communication with the Shareholders and investors, so as to increase the Group's transparency and facilitate the performance of undertaking by the Shareholders. The annual general meeting provides a useful forum for Shareholders to exchange views with the Board. The chairman of the Board will attend and invite the chairmen of the Audit Committee, the Remuneration Committee and the Nomination Committee to attend the annual general meetings. The members of the Board are pleased to answer Shareholders' questions. To foster two-way communication amongst the Group, its Shareholders and potential investors, the Group has assigned personnel in respect of investor relations to respond to enquiries from Shareholders and the public. In the event that a Shareholder wishes to put forward a proposal to the Board, he may put forth his enquiry in writing to the investor relations personnel who will handle the same accordingly. The Group is also willing to maintain communication with shareholders and investors on a continuous basis through individual and group meetings. In addition, the Group is committed to maximising the use of its website as a channel to provide updated information in a timely manner and strengthen the communication with both the Shareholders and the public.

The 6th China Excellence IR
2022–2023 Best Shareholder Relationship Award

Pursuant to code provision F.2 of the CG Code as set out in Appendix 14 of the Listing Rules, the Company shall ensure that shareholders are given sufficient notice of general meetings, and shall ensure that shareholders are familiar with the detailed procedures of voting by poll and shall arrange for questions from the Shareholders to be answered at the general meeting.

Pursuant to Articles of Association, any extraordinary general meeting at which the passing of a special resolution is to be considered shall be called by notice of not less than 21 clear days. All other extraordinary general meetings may be called by notice of not less than 14 clear days but if permitted by the Articles of Association, a general meeting may be called by shorter notice.

In addition, in accordance with the provisions of the Articles of Association, an extraordinary general meeting may be convened on requisition as provided by the Companies Ordinance. According to the Companies Ordinance, the directors are required to call a general meeting if the company has received requests to do so from shareholders of the company representing at least 5% of the total voting rights of all the shareholders having a right to vote at general meetings. Such meeting must be held on a date not more than 28 days after the date of the notice convening the meeting. The directors also have a duty to circulate a resolution proposed as a written resolution by a shareholder (together with any statement of not more than 1,000 words on the subject of the resolution proposed by the shareholder) if the company has received such requests from the shareholders of the company representing not less than 5% of the total voting rights of all the shareholders entitled to vote on the resolution.

Shareholders may at any time send their enquiries and concerns to the Board in writing at Unit 1303, 13/F, Austin Tower, 22–26 Austin Avenue, Tsimshatsui, Kowloon, Hong Kong. Sufficient contact details are available to enable these enquiries to be properly attended to.

All resolutions put forward at a general meeting will be taken by poll pursuant to the Listing Rules except where the chairman, in good faith, decides to allow a resolution which relates purely to a procedural or administrative matter to be voted on by a show of hands. In addition, the poll results will be posted on the websites of the Company and the Hong Kong Stock Exchange after the relevant shareholders' meeting. Sufficient contact details are available for shareholders to send their advice.

Dividend Policy

The Company adopted a policy on payment of dividends (the "Dividend Policy") in March 2019, which establishes an appropriate procedure on declaring and recommending the dividend payment of the Company.

The Company will declare and/or recommend the payment of dividends to the Shareholders after considering the Company's ability to pay dividends, which will depend on a number of factors, including but not limited to:

(i) the Group's actual and expected financial performance;

(ii) the Group's expected working capital requirements, capital expenditure requirements and future expansion plans;

(iii) retained profits and distributable reserves of the Company and each of the members of the Group;

(iv) the Group's liquidity position;

(v) the general economic conditions and other internal or external factors that may have an impact on the business or financial performance and position of the Group; and

(vi) any other factors that the Board deems relevant.

The Board has complete discretion on whether to pay a dividend, subject to Shareholders' approval, where applicable. Even if the Board decides to recommend and pay dividends, the form, frequency and amount will depend upon the operations and earnings, capital requirements and surplus, general financial condition, contractual restrictions and other factors of and affecting the Group. The Board may also consider declaring interim dividends from time to time.

The Company shall review and reassess the Dividend Policy and its effectiveness on a regular basis or as required.

INVESTOR RELATIONS

There has been no changes to the Company's Articles of Association during the year ended 31 December 2022.

The Group believes that investor relations is an integral part of good corporate governance for listed companies. During the reporting period, the Group has been proactive in liaising with investors and updating them on industry conditions, company information and business development in a timely manner to create a fair, open and highly transparent disclosure platform. At present, the investor relations work of the Group is undertaken by Mr. Chaoran Zhu, the joint company secretary of the Company, with the full support of the Board and the senior management. Mr. Zhu can be reached by email: zhucr@cnmc.com.cn, telephone: +86 10 8442 6085 and fax: +86 10 8442 6376. hk1258-ir@cnmc.com.cn is an email address dedicated to the Group's investor relations. The Group actively participated in various investor relations activities during the year and provided investors with real-time information through the Company's website.

The Company attaches great importance to the maintenance and management of investor relations. In addition to the disclosure of annual and semi-annual reports and quarterly reports on its operations, the Company also keeps investors abreast of the Company's experience through various means, such as organizing results presentations, roadshows, and posting dynamic news on the Company's website and WeChat public account. During the year, the Company organized a total of 40 investor communication events, including annual and interim results conferences, 28 one-to-one roadshows and 10 one-to-many roadshows, covering more than 100 brokerage firms and institutional investors, and released result reports to the public via official media such as Xinhua Finance and Shanghai Securities News. The Company was awarded the Best Shareholder Relations Award for 2022-2023 in the Sixth China IR Excellence Awards. During the year, the Company has reviewed the implementation and effectiveness of its shareholder communication policy. Based on the feedback and response from investors and shareholders of the Company, the Company believes that its shareholder communication policy is effective.

Kambove Mining invited local chieftain to the company for exchange on its public open day

CONTINUOUS IMPROVEMENT OF INVESTOR RELATIONS

The Group published interim and annual results and disclosed discloseable inside information promptly in strict compliance with guidelines of Securities and Futures Commission and Hong Kong Stock Exchange, to provide financial performance, operating strategies and future prospects of the Company to the public in an accurate and effective manner.

The Group maintained close relationships with certain institutions including professional media outlets and investment banks, in a view to learn about the market recognition and expectation to the Group through various channels such as the media and analysts. In the meantime, the Group provided updates to the public in a bid to increase the Group's publicity.

Through on-going information dissemination, the Group's website (www.cnmcl.net) and the WeChat official account "中國有色礦業HK01258" serves as a platform to communicate with the public. The Group regularly updates the content of its website and WeChat official account, disseminates the latest updates, so as to enable the public to obtain such information in a timely manner. In 2022, the Group has published 49 announcements on its website, published 8 articles of company news on WeChat official account. In addition, the Group also swiftly responds to different enquiries made by the Shareholders, investors, analysts and media by means of email, facsimile and telephone. The Group also published announcements, press releases and other latest updates on the development of the Group, so as to strengthen the effectiveness of information dissemination.

Kambove Mining conducted building activities with local community and planted friendship tree with local chieftain

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

ABOUT THE REPORT

Overview

The Group is pleased to release the seventh Environmental, Social and Governance Report (the "Report"), which is intended to provide relevant stakeholders with the environmental, social and governance ("ESG") performance of the Group, so as to let them have a more comprehensive understanding of the Group's sustainable development philosophy.

Scope of Reporting

The Report covers the head office of the Group and its subsidiaries including NFCA, Luanshya, CCS, SML, Huachin Leach, CNMC Huachin Mabende, Lualaba Copper Smelter and Kambove Mining, as well as the sales of copper and sulfuric acid products, the main source of revenue of the Group, in the period from 1 January 2022 to 31 December 2022 (the "Reporting Period") unless otherwise stated.

Preparation Basis

The Report has been prepared by the Group in compliance with the ESG Reporting Guide (the "Guide") set out in Appendix 27 to the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited (the "Stock Exchange").

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

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

Reliability Assurance

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

Access and Feedback to the Report

The Report is published in the 2022 Annual Report of China Nonferrous Mining Corporation Limited. The electronic copy of the Report is available on the website of the Stock Exchange (https://www.hkexnews.hk) and the official website of China Nonferrous Mining Corporation Limited (http://www.cnmcl.net). Your valuable feedback is critical to our continuous improvement. If you have any enquiries and suggestions, please call 8610–84426085 or 8610–84426851.

SUSTAINABLE DEVELOPMENT MANAGEMENT

Statement from the Board

The Group recognises the establishment of a set of comprehensive sustainability management framework is critical for managing the ESG issues of the Company in a unified manner, and therefore we are committed to integrating sustainability into our corporate governance and daily operations. As the highest decision-making body for the Group's ESG work, the Board of the Group oversees and undertakes the final decision-making on the Group's ESG matters. The Group has established the Compliance Committee under the Board, and the relevant ESG responsibilities have been incorporated into the functions of the Compliance Committee, who leads the ESG working group to organize the Group's subsidiaries to implement the specific work of the ESG working group, including managing ESG objectives and assisting the Board to review the progress of ESG objectives on a regular basis, and adjusting or refining goals according to circumstances. During the Reporting Period, the Group has added ESG responsibilities to the terms of reference of the Compliance Committee so as to govern and monitor ESG matters in a more effective way. The Group will continue to optimize its ESG management model and review the effectiveness of its governance structure in accordance with the requirements of the Stock Exchange and in light of the actual situation of the Group.

The Group has always adhered to the goal of sustainable development and been committed to maintaining a high-level corporate governance system. The Group has established a comprehensive and prudent risk management and internal control system, which is maintained and improved by the Board, and designed and implemented by the management.

The Group actively responds to ESG-related risks. The Board is responsible for determining, evaluating, prioritising and managing ESG-related risks, and guaranteeing the effectiveness of ESG risk management and internal control systems. The Group has integrated ESG-related risks into the risk management system, where the monitoring process includes internal environment, risk assessment, control activities, information and communication, and internal supervision.

At the same time, the Group has established internal control procedures for the businesses and matters included in the evaluation scope, which have been effectively implemented and achieved the Group's internal control objectives. The Board is responsible for maintaining a sound and effective internal control system, and adheres to performing regular evaluations on the effectiveness of internal control.

ESG Risk Assessment and Management

During the Reporting Period, the Group has established the ESG risk database for 2022 with reference to the risk trends in the world and China, the Materiality Map of the Sustainability Accounting Standards Board and MSCI, as well as related risks of our peers, and assessed the impact of related risks on the Group. We judged the prioritization of the Group's ESG risks based on the analysis of the results to effectively identify the ESG risks that were critical to the operation and business during the Reporting Period, and reviewed relevant management measures to ensure that these risks were under effective control. During the Reporting Period, the Group has identified four material ESG risks:

Material ESG risks	Impact of risks on enterprises	Management measures
Geopolitical/ policy risks	• Inadequate understanding of policies, laws and regulations may lead to impacts on production, operations, local community relations, or failure to achieve expected outcomes in project construction.	• In 2022, the Compliance Committee held four meetings to review the Group's internal control policies and management status, and to discuss, study and plan legal and compliance training matters; • The Board was responsible for reviewing and supervising the policies and practices of the Group in complying with legal and regulatory requirements.
Hazardous emission management	• Metal and mining industries generate a large amount of non-mineral and mineral wastes, including waste rocks, tailings, mud, slag, sludge, smelting and industrial wastes, some of which may contain toxic, harmful or chemically reactive substances. Improper disposal or storage of hazardous materials or mining wastes may pose a material long-term threat to human health and ecosystems, because they may pollute groundwater or surface water used for drinking or agriculture. While implementing policies to manage the risks related to handling hazardous materials, companies that reduce waste streams may have lower regulatory and litigation risks, remedial responsibilities and costs.	• Regularly monitored and analyzed pollutant emission, carried out environmental risk inspection of the tailings ponds and monitored the surrounding soil conditions; • Strengthened the control over sulfuric acid production process to enhance sulfur utilization ratio; • Installed electrostatic precipitators and online monitoring equipment to reduce and detect the emission of pollutants; • Developed the Hazardous Wastes Management System; • Took measures to reduce the volume, weight and risk level of hazardous wastes, and used the Hazardous Wastes Management Ledger on a daily basis to record the amount of hazardous wastes generated; • Required all units to give priority to recycling when handling hazardous wastes to reduce the burden of subsequent treatment and disposal; • Hazardous wastes that cannot be recycled shall be disposed of by units with the appropriate capacity.

Material ESG risks	Impact of risks on enterprises	Management measures
Man-made environmental disasters	• Environmental-related violations may cause great damage to the environment, resulting in legal proceedings, fines, etc., and will also affect the reputation of enterprises.	• Divided the environmental emergencies into three different levels, and made different emergency plans for each level, to ensure timely response in the event of any emergency, minimizing the negative impact; • Strengthened environmental inspections with a focus on the operation of pollution prevention and control facilities. Any issues found were promptly and effectively rectified; • Formulated the Administrative Measures for the Ecological Environmental Protection, which provided that the significant impact on the environment and natural resources is required to be minimized during land development of construction project; • Construction project shall first be preceded by a feasibility study report or pre-feasibility study report, and the impact factors that may cause changes in the surrounding environment shall be analyzed and prevention measures would be proposed; • The construction site shall not be located in the areas that are legally designated as nature reserves, scenic areas, drinking water reserves or other areas that require special protection; • During the construction of the project on newly acquired land, a survey of environmental background value shall be conducted, and all projects are strictly controlled and subject to the local environmental impact assessment system.

Material ESG risks	Impact of risks on enterprises	Management measures
Supply chain management risks	• The instability of supply chain will affect the production cost and operation of enterprises. For example, in the face of emergencies (such as natural disasters, infectious diseases, political risks, etc.), the interruption of supply chain will affect the closely related logistics, information flow and capital flow among enterprises, which may cause business interruption, delay the delivery of goods, affect the reputation of enterprises and the cooperative relationship with customers, and affect the realization of strategic objectives of enterprises.	• Formulated relevant management systems, such as the Interim Measures for the Management of Biding and Purchasing of Materials of China Nonferrous Mining Hong Kong Holdings Limited, the Compilation of the Management Measures for the Supply Department, the Management Measures for Bidding and the Management Measures for Supplier Registration; • Adopted an online supplier management system to establish supplier management files and file information; • Comprehensively took into consideration their performance including the compliance status, the quality of products supplied, the delivery period, product prices, after-sale services and other factors when selecting suppliers; • Arranged personnel to conduct on-the-spot investigation and reviews based on actual conditions before entering into contracts with new suppliers; • Conducted annual assessment to suppliers and required them to fill in the Qualified Supplier Review Form; • Prioritized local suppliers.

Communication with Stakeholders

The Group has been actively maintaining good relationships with stakeholders. By establishing effective and comprehensive communication channels, we hope to understand the expectations and suggestions of stakeholders, and review the potential risks and opportunities related to ESG, so as to effectively promote the sustainable development of the Group. The table below shows the expectations of various stakeholders on the Group and the Group's daily communication channels with them:

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

Analysis on Material Issues

During the Reporting Period, the Group entrusted a third-party professional consultant to assist in the assessment of material issues, and concluded the material issues for 2022. Through the assessment of material issues, the Group discloses material issues in the ESG report, effectively responds to the concerns of various stakeholders, and strengthens our sustainable development management.

Based on the results of 2021 annual survey on material issues, we reviewed and identified relevant ESG issues with reference to the Guide, the United Nations Sustainable Development Goals and the issues involved in the metal and mining industry in the ESG rating of MSCI, in combination with the results of peer benchmarking analysis, so as to update the ESG issue database for 2022.

Subsequently, the Group collected stakeholders' opinions through questionnaires and analyzed the development trends of our peers based on full consideration of the business nature and development strategy. During the assessment process, we analyzed the two dimensions of each issue, i.e. "impact on the Group" and "impact on stakeholders", to assess and select material ESG issues during the Reporting Period, and arrived at the materiality analysis results. The analysis results were reviewed by the Board of the Group and the material ESG issues finally determined will be highlighted in the Report.

The Group's material issue assessment process includes the following four major steps:

1. **ESG issues identification**

   To identify the potential material issues that can reflect the effects of business of the Group on the environment and society and influence stakeholders' assessment and decision on the Group through background research, including internal management system, benchmarking analysis of our peers and other relevant documents.

2. **ESG issues ranking**

   To invite internal and external stakeholders to rank the materiality of potential ESG issues through anonymous online questionnaires, and to collect their opinions and expectations on the Group's ESG governance. Based on the survey results, to select the material issues.

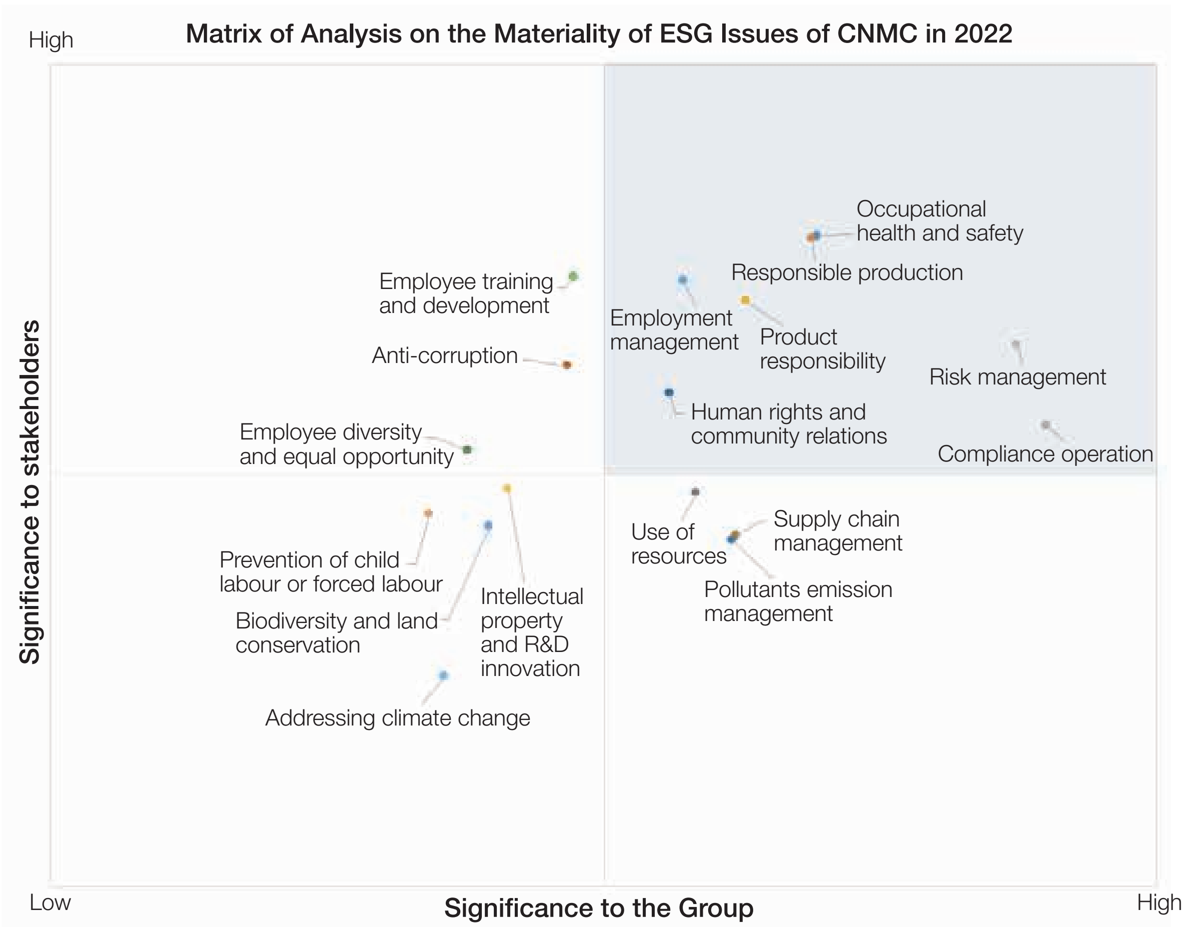
3. **Review of material issues**

   The Board reviews the material issues selected by stakeholders, confirms the impact of these issues on the Group and ultimately determines the 2022 ESG material issues.

4. Response to material issues

To determine the key issues for disclosure in the Report based on the ranking of materiality, to analyze key concerns of the stakeholders and prepare ESG management measures.

We actively invited the internal and external stakeholders of our Group to participate in this survey on material issues so as to understand the concern and attention that they attach to the ESG issues of the Group. We received a total of 591 responses to the questionnaire in this survey, and based on the analysis results, we formed the following matrix of material issues. The materiality analysis matrix of ESG issues of the Group in 2022 is demonstrated as below:



The senior management of the Group considered, reviewed and determined the results of the material issues analysis in terms of sustainability contribution, general concerns of stakeholders and the needs of strategic development of the Group, and finally selected the following seven material ESG issues. Those issues will serve as an important factor taken into account for the direction of sustainable development of the Company, and are also the key content for disclosure in the Report.

Risk management Product responsibility	Occupational health and safety Employment management	Responsible production Human rights and community relations	Compliance operation

SUSTAINABLE DEVELOPMENT ACTIONS

In response to the problems facing all countries, the United Nations has planned 17 sustainable development goals and 169 tracking indicators in "Transforming Our World: The 2030 Agenda for Sustainable Development". These goals call for the joint efforts of the international community. The Group is well aware of the importance of global sustainable development, so we have integrated those sustainable development goals into the process of sustainable development management of the Group, and we are committed to continuously improving our operation strategy, and disclosing the actions taken by the Group in response to those goals.

United Nations Sustainable Development Goals	Definition of the goals	Actions taken by the Group	Relevant chapters in the Report
3 GOOD HEALTH AND WELL-BEING	Ensure healthy lives and promote wellbeing for all at all ages.	• Provided medical benefits and allowances to our employees and their family, and strengthened the promotion, prevention, monitoring and treatment of epidemic infectious diseases with high incidence in part regions of Africa. • Formulated and implemented road safety-related policies, and established environmental protection management measures against exhaust gas, sewage and solid waste during the mining process to control pollution emissions from the source.	Building a Harmonious Enterprise, Ensuring Safety First, Fulfilling Environmental Responsibility
4 QUALITY EDUCATION	Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.	• Formulated and implemented internal policies in relation to employee training, carried out training adapted for different fields, and set up post self-study awards. • Provided opportunities for the children of outstanding local employees to study in China. • Supported local communities in the education cause in and provided educational subsidies to impoverished students.	Building a Harmonious Enterprise, Giving Back to the Community

United Nations Sustainable Development Goals	**Definition of the goals**	**Actions taken by the Group**	**Relevant chapters in the Report**
6 CLEAN WATER AND SANITATION	Ensure availability and sustainable management of water and sanitation for all.	• Followed the principle of recycling, and recycled and evaporated, after filtration of scum, production sewage, respectively, through copper leaching process and copper smelting process. • Discharged office and domestic sewage after treatment to reduce pollution.	Fulfilling Environmental Responsibility
8 DECENT WORK AND ECONOMIC GROWTH	Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.	• Eliminated use of child labor and forced labor, signed labor contracts with employees, and protected the legitimate rights and interests of employees. • Signed recognition agreements with many labor unions to ensure equal opportunities for employees. • Provided priority employment opportunities to the local society. • Formulated and implemented internal policies and emergency plans in relation to occupational health and safety. • Equipped employees with personal protective equipment, strengthened occupational safety training, conducted hazard monitoring and assessment, and purchased insurance for employees.	Building a Harmonious Enterprise

United Nations Sustainable Development Goals	Definition of the goals	Actions taken by the Group	Relevant chapters in the Report
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.	• Formulated and implemented internal policies in relation to patent application and intellectual property protection. • Intensified R&D and innovation of mining process, and formulated corresponding mining plans. • Encouraged production and management personnel to put forward constructive opinions on issues in production links such as quality control and high energy consumption. • Assisted some local communities in improving infrastructure construction, including well drilling, community maintenance and reconstruction, emergency repair of circuits, road repairs, etc.	Striving for Management Excellence, Giving Back to the Community
10 REDUCED INEQUALITIES	Reduce inequality within and among countries.	• Made continuous improvement in the corporate management system, and specified corporate management rules in accordance with relevant regulatory requirements. • Adhered to the principles of equality, diversity and antidiscrimination, and treated employees of different nationalities, races, and genders equally. • Provided priority employment opportunities to the local society. • Formulated and implemented internal policies in relation to community donation.	Striving for Management Excellence, Building a Harmonious Enterprise, Giving Back to the Community

United Nations Sustainable Development Goals	Definition of the goals	Actions taken by the Group	Relevant chapters in the Report
	Ensure sustainable consumption and production patterns.	• Took business sustainability into consideration during operation, and disclosed relevant information to the public. • Formulated and implemented internal policies in relation to environmental management. • Established management measures on waste gas, sewage, solid waste and ecological environment to reduce the impact of business operations on the environment. • Carried out resource management in terms of business operation, office and life, and improved the comprehensive utilization of resources in all aspects of the business. • Attached importance to R&D and innovation, and made relentless efforts to improve the mining process.	Striving for Management Excellence, Fulfilling Environmental Responsibility
	Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.	• Monitored the water quality of surrounding rivers. • Carried out afforestation activities.	Fulfilling Environmental Responsibility

United Nations Sustainable Development Goals	Definition of the goals	Actions taken by the Group	Relevant chapters in the Report
	Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels.	• Formulated and implemented internal policies in relation to anticorruption. • Provided employees with training on anti-corruption. • Established a reporting and complaint mechanism to report misconduct within the enterprise.	Striving for Management Excellence

ENSURING SAFETY FIRST

The Group regards safety production as its top priority, keep on improving our health and safety system, and conducts safety hazard investigation on a regular basis to ensure no omission in safety investigation. Adhering to the concepts of "safety production is paramount" and "intrinsic safety and active safety" and aiming at "zero injury", we have been enhancing the overall safety level of the Group. We have always adhered to the safety production policy of "safety first, prevention-oriented, and comprehensive management", insisted on the problem, objective and result-oriented approaches, and always paid close attention to safety to ensure the safety and stability of the Company's production.

Safety System

The Group has developed certain policy documents including Safety Production Responsibility System, the Measures for Safety Production Management, the Measures for Appraisal of Safety Production and the Rules for Report, Investigation and Handling of Production Safety Accidents, to effectively manage its production activities and safety issues.

The Group has been constantly improving the safety management system and promoting systematic, normalized, standardized and scientific safety management through six major scopes, including management organization, performance assessment, inspection and rectification, emergency management, education, training and occupational health protection.

Safety management organization

- The Group arranges safety responsibilities based on position levels. The general manager or am eligible mining manager shall be designated as the first person responsible for safety production. A dedicated safety director manages safety comprehensively and professionally, and clearly define responsibilities at each level.
- It establishes a safety and environmental protection department as special safety management function and allocates a reasonable number of full-time safety management personnel to form a safety management system covering the general manager, the safety and environmental protection department, workshops and grass-root teams to guarantee production safety.

Safety performance assessment

- The Group establishes the production safety performance system and assessment mechanism for persons in charge of units at all levels and conducts overall appraisal on safety management system, safety accident performance, potential hazards inspection and rectification as well as education and training on safety to increasingly improve safety management performance.

Safety inspection and rectification

- The Group follows the principle of "potential hazards amount to accidents" and pays continuous attention to safety inspection and rectification. It actively conducts identification, assessment and control on sources of danger and forms a safety inspection and rectification management model with self-inspection of departments and monitoring and inspection by the safety and environmental protection department.
- It will also publish the contents of safety inspection and the rectification results to promote monitoring and management, discover and eliminate potential hazards in time and prevent and reduce safety accidents.

Safety emergency management

- Based on the characteristics of production and operation, the Group establishes a mining rescue team, formulates various emergency plans and proactively conducts exercises, effectively improving the capability of the rescue team and relevant departments to cope with safety incidents.

Safety education and training

- The Group establishes the production safety performance system and assessment mechanism for persons in charge of units at all levels and conducts overall appraisal on safety management system, safety accident performance, potential hazards inspection and rectification as well as education and training on safety to increasingly improve safety management performance.

Occupational health protection

- In addition to ensuring that its plants conform to local occupational health standards, the Group consistently improves working conditions and environment of its overseas operations. It also regularly assesses risk factors relating to occupational diseases.
- It provides appropriate labour protective supplies and occupational health examination to staff exposed to occupational disease risks to prevent them from occupational diseases.

CCS also developed the Whistleblower Mechanism for Internal Production Safety to strengthen the production safety responsibility. If employees identify any internal safety concerns and violations of laws and regulations, they can report through the office telephone number of the safety and environmental protection department and WeChat account of relevant personnel, and the whistleblower can get appropriate rewards after the whistleblowing is verified.

Case: CNMC Huachin Mabende promoted the implementation of fifteen production safety measures

On 20 June 2022, the general manager of CNMC Huachin Mabende organized all-out efforts in safety and prevention work, resolutely controlled the safety situation and established a good safety environment.

Case: CCS held a meeting of the safety and environmental protection committee

On 18 June 2022, CCS organized a meeting of the safety and environmental protection committee, at which rearranged activities of the Safety Production Month based on the Group's deployment on safety and precaution work, requirements on stable production and guaranteed production and Covid-19 prevention and control, and emphasized its strict implementation. The Group made every effort to consolidate and upgrade the work in the Production Safety Enhancement Year and the three-year special actions for production safety rectification, continuously improved all employees' safety awareness and effectively enhanced accident prevention measures. A total of 21 participants from the Safety and Environmental Protection Committee of CCS attended the meeting.

Safety Operation

The Group is committed to maintaining safety operations and upholding safety production as the top priority. By adopting advanced, mature and reliable process and equipment, and formulating targeted standard operating procedures on process and equipment, we make every effort to build an impregnable fortress of safety production. Safety management and shift responsible persons hold a meeting before changing shift every day to explain key potential risk points before each operation and conduct operation protection. For special operation such as mine construction, safety management will check special operation files, operators' qualification and on-site equipment safety on time. We will set eye-catching safety signs for the areas and equipment prone to accidents or endangering the safety and health of personnel.

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

During the Reporting Period, the Group had 1 accident related to general equipment with 30 lost days due to work-related injury.

The following is the safety data of the past three years (including the Reporting Period):

Year	2022	2021	2020
Number of work-related fatalities	0	0	3
Rate of work-related fatalities[1]	0%	0%	0.0004%

Case: Huachin Leach worked out the 2022 Special Activity Plan for 100-day Potential Safety Hazard Inspection

In order to further strengthen the safety development concept and the safety red line awareness, Huachin Leach issued the 2022 Special Activity Plan for 100-day Potential Safety Hazard Inspection on 15 April 2022, which was implemented from 20 April to 31 July 2022. Meanwhile, Huachin Leach formulated the Award Standard for 100-day Potential Safety Hazard Inspection to encourage employees to participate in the inspection activities. Through this activity, Huachin Leach effectively promoted all Chinese and Congolese employees to investigate new potential safety hazards, summarized and sorted out the potential safety hazards identified by employees, and rewarded them according to the reward standard.

1 The rate of work-related fatalities is calculated by dividing the number of work-related fatalities by the number of workers.

Case: NFCA conducted inspection activities on potential safety hazards

In June 2022, the safety and environmental protection department of NFCA organized the main leaders and safety management personnel of the outsourcing units of the Southeast Mine and Main West Mine and the managers of the operation department, and the control center and the production departments of processing plants to go deep into the first-line workplace and conduct mutual inspection and exchange activities. Through on-site inspection and exchange of views, we can promote mutual improvement, reflect on our own shortcomings, and improve our respective safety management levels.

Case: Lualaba Copper Smelter carried out inspection activities on potential safety hazards

On 20 June 2022, Lualaba Copper Smelter carried out potential safety hazards investigation. The leaders led the heads of all units and divided into several groups to participate in the potential safety hazards investigation for key and prominent problems in different regions of the production area. In particular, the main contents of the inspection include asking the on-site personnel if they have knowledge of the theme of the Safety Production Month activity, the post safety accountability system and access to records, checking the on-site equipment and facilities, checking the on-site operator behaviors, etc. Problems and hidden dangers were identified in the inspection, and closed loop management was implemented.

Occupational Health and Safety

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

According to the local laws and regulations, the subsidiaries of the Group have compiled a series of occupational health and safety policies and emergency plans including the Regulations on Emergency Management of Production Safety, the Open Pit Safety Procedure, the Road Safety Rules, the Procedure for Emergency Response-Chemical Spillage, Administrative Measures on Industrial Injury Accidents, Administrative Measures on Labour Protective Supplies, Administrative Measures on Staff Health Examinations, Occupational Safety and Health Management Measures, the contents of which include warning and notification of occupational disease hazards, routine annual medical testing for employees exposed to dust, occupational disease prevention education, maintenance of protective equipment and facilities, monitoring and evaluation of hazards, reporting of hazard incidents and emergency rescue, and so on.

At the same time, the Group's subsidiaries set occupational health and safety objectives and indicators to effectively manage the implementation of their occupational health and safety management system. For example, Luanshya has set goals including but not limited to compliance with laws and regulations related to occupational health and safety, increasing the safety awareness of employees and contractors, reducing major traffic accidents and reducing work-related fatalities. We have provided employees with complete labour protective supplies according to working environment, including those for protection of head, breathing, eyes and face, ears, hand, foot, body, skin care, falling prevention and so on.

The Group conducts regular equipment inspections and educates employees on the proper use of personal protective equipment. Employees who enter production or construction areas must wear relevant protective gear. For example, SML requires each workshop to continuously improve the working conditions and working environment of employees, strengthen the management of ventilation and dust collection facilities, and guarantee that the overall working environment is in good condition. The Safety Production Department also regularly engages qualified units to monitor the dust, noise, acid mist and other workplaces in the plant area, and the monitoring results will be announced to employees in a timely manner. If any non-compliance is found in the monitoring, it shall be immediately rectified.

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

The Group has continuously improved our occupational safety and health protection system, purchased social insurance, medical insurance and other commercial insurance for eligible staff and offer health examinations every year and set up health record for our employees, to create a safe, healthy and comfortable working environment for employees. During the Reporting Period, Huachin Leach formulated the Administrative Regulations on Health Examination and Assessment of Chinese Employees, which states that health examination for Chinese employees who have joined the Company will be carried out once a year to ensure the health examination rate of Chinese employees reaching 100%. In addition, doctors from the staff & workers hospital will also be arranged to conduct regular on-site health monitoring of employees who work abroad and keep them documented.

Case: NFCA set up a mining emergency rescue team

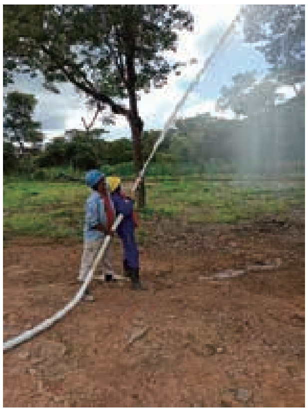
NFCA has set up a mining emergency rescue team, and carried out various mine rescue trainings and competitions under the united arrangement of Zambia Mine Emergency Association to improve its capability in emergency rescue.

Case: CCS carried out emergency drill

On 13 June 2022, the gas workshop, the power branch, the production technology department and the safety and environmental protection department organized the emergency drill of the "Instrument Pressure Sudden-drop Accident in the Whole Plant". Through the drill, we strengthened the on-site personnel's capacities in the operation of emergency handling procedures and improved their abilities in the emergency handling.

Case: CNMC Huachin Mabende conducted fire accident emergency drill

On 15 June 2022, CNMC Huachin Mabende launched a fire accident emergency drill. Through this emergency drill, the employees' ability to handle unexpected events has been improved, ensuring that emergency response work can be carried out efficiently and orderly in the event of a sudden production safety accident. Also, a complete and feasible emergency response plan for fire accidents has been developed through the execution during the drill, ensuring the safe operation of the extraction workshop. In this drill, every participant has achieved the purpose of learning again and raising awareness, while managers can find out the problems existing in the emergency plan through the drill and the improvement measures to raise the plan to a new height.



Case: Lualaba Copper Smelter carried out emergency drill of liquid SO_2 leakage in sulfuric acid branch

On 16 June 2022, the sulfuric acid branch of Lualaba Copper Smelter and the safety and environmental protection department organized an emergency drill on "liquid SO_2 leakage" to further improve the on-duty personnel's safety awareness and on-site disposal ability in the liquid SO_2 filling area. In order to effectively conduct this drill, the deputy director of the sulfuric acid branch explained the characteristics of liquid SO_2 and the implementation procedures of the whole drill plan to the Congolese head and related personnel who participated in the drill beforehand, and drawn up a detailed drill implementation plan. The chairman and deputy general manager of Lualaba Copper Smelter visited the site to observe and guide the drill and made a summary on the drill. They fully affirmed the conduct of the activity, and asserted that the person responsible for safety acted in a stable and orderly manner during the whole urgent process, and the drill achieved the expected goal.

Health and Safety Training

The Group hopes to enhance the works' awareness in the safety and environmental protection, prevent safety and environmental protection accidents and mitigate occupational hazards through diversified health and safety training. The Group has formulated the Implementation Plan of Safety Skill Improvement Action Plan, which aims to improve the safety skills of employees engaged in high-risk industries as a whole, as well as to ensure that all the on-the-job and newly recruited employees of each subsidiary receive the training on production safety knowledge and skill improvement, and achieve 100% passing in training assessment; and 100% of special operators are certified to work.

The subsidiaries of the Group have also established different training systems for the overall training objectives of the Group:

- Huachin Leach has put in place the Safety and Environmental Protection Training and Education System (Trial) to regulate safety and environmental protection education and training, and arrange appropriate training content for employees at different ranks by preparing annual safety and environmental education and training plans;

- In compliance with the Production Safety Law of the People's Republic of China and based on the Group's Action Implementation Plan for the Production Safety Enhancement Year, CCS developed the 2022 Production Safety Education and Training Plan which intends to effectively improve the safety awareness and safety operation skills of Chinese employees through safety production education and training, and ensure that employees have the necessary safety production instructions and are familiar with relevant safety production rules and regulations and safety operation protocols. The trainings were conducted from June to December 2022, and the learning content included the Production Safety Law, the Regulations on the Safety Management of Hazardous Chemicals, the Group's typical accident cases and basic knowledge training on production safety management. Employees who have completed the training are required to be assessed to ensure that they can effectively master and apply the knowledge in the training;

- Lualaba Copper Smelter has formulated the Safety and Environmental Protection Training Management System (Trial). The system stipulates that the employees in each unit shall receive three levels of safety and environmental protection training and education of the Company, branch (workshop/center) and team before taking up their posts, and new employees shall receive at least 24 hours of safety and environmental protection training before taking up their posts. Units involving dangerous chemicals and metal smelting shall conduct mandatory safety and environmental protection training for new temporary workers, contract workers, laborers, rotation workers, contract workers, etc. and not less than 72 hours to ensure that they have the knowledge and skills required for the safe operation, self and mutual rescue and emergency disposal of their positions before they are assigned to work.

Case: NFCA launched the safety month campaign

In June 2022, NFCA launched the safety month campaign, with the theme of "Abiding by the Production Safety Law and Being Qualified First Responsible Person". In particular, the safety trainings include safety technical skills special training, warning education and learning, knowledge contest, firefighting, electric shock first aid, high temperature heatstroke and other emergency drills.

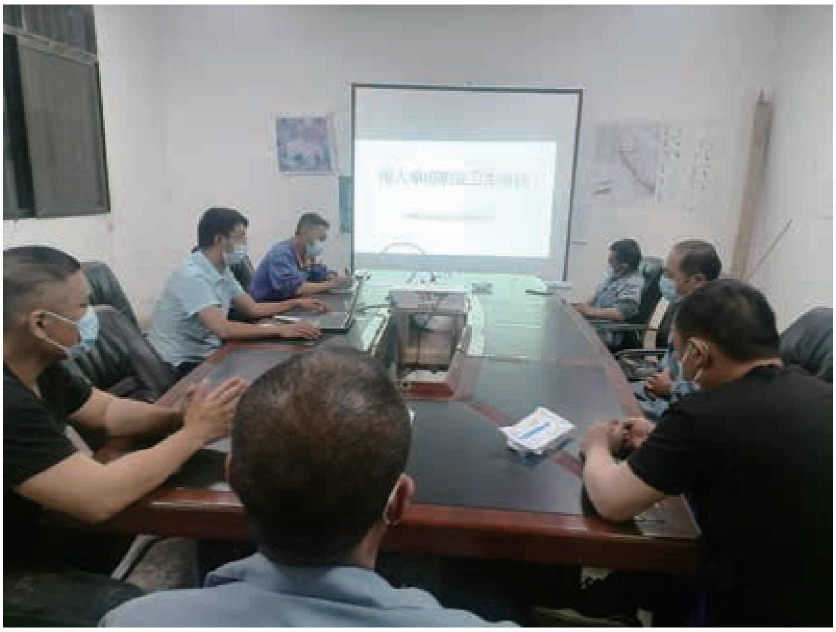
Case: CCS carried out training on safety awareness enhancement

On 20 June 2022, leaders of CCS organized a special training course on safety awareness enhancement. The theme is “Never play down safety awareness; never relax the safety mindset; never neglect safety education; and never ignore safety precautions”, aiming at enhancing employees’ safety awareness, enabling everyone to distinguish and eliminate unsafe behaviors and unsafe environmental factors, avoiding various injuries and accidents, and ensuring the positive safety culture and sustainable development. Meanwhile, CCS distributed the courseware of the “Production Safety Knowledge and Safety Awareness Enhancement Training” to all units for their learning arrangement, so as to improve safety production and management level of the departments, reduce unsafe behaviors and provide safety support for production and operation.

Case: Lualaba Copper Smelter carried out the safety education activity of "learning case, system and regulations" On 24 June 2022, Lualaba Copper Smelter carried out the safety education activity of "learning cases, systems and regulations", at which we revisited the TV features of "Life is of paramount importance" and watched the accident education program of "2022 Safety Accident Warning Education". Meanwhile, deputy general manager of Lualaba Copper Smelter led the learning of the Incentive Measure for Proactive Reporting and Whistleblowing of Hidden Dangers in Production Safety of China Nonferrous Mining Hong Kong Holdings Limited (Trial) and a typical accident case on double punishment. In addition, we also opened safety course for workers, made in-deep interpretation of the revision process, framework structure and main contents of the amendment of the new Production Safety Law, and put forward specific requirements for studying the new Production Safety Law. Through the learning activities, we further strengthened and guided managers and employees to establish the mindset of safety first, and earnestly bear safety responsibilities in mind and put it in action.


Case: Huachin Leach carried out training on occupational health

On 24 October 2022, in order to provide employees with a clearer understanding of the prevention, characteristics and hazards of occupational disease, Huachin Leach carried out training on occupational health. The training content includes three parts, namely what is occupational disease, factors of occupational disease hazards and occupational hazard prevention and protection. The training is intended to explain in detail the use, maintenance and storage of various personal protective equipment, personal respiratory protection misunderstandings and other occupational health matters, so that workers can take better preventive measures to reduce and eliminate the harm of hazardous substances to employees.



STRIVING FOR MANAGEMENT EXCELLENCE

Compliance Operation

The principal operations of the Group are concentrated in Zambia and the DRC. We have always complied with the laws and regulations of the places where we operate, including China, Zambia and the DRC. At the same time, we consistently improved our management system, and abided by business ethics to enhance the Group's competitiveness in the international market.

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

Nomination Committee, Remuneration Committee, Compliance Committee and Audit Committee have been set up under our Board of Directors, which are responsible for managing and maintaining the structure of the Board of Directors, the rights and interests of directors and senior management, sustainable development compliance and corporate compliance operations, respectively. At the same time, the Group has set up a compliance officer/corporate general counsel and the legal and compliance department to better adapt to the legal systems of Zambia and the DRC and ensure our overseas production and operation activities being compliance with local laws and regulations.

Product Responsibility

"Sustainable utilisation of resources" and "realisation of high-quality development" are the objectives of the Group. Taking the enhancement of quality, benefits and core competitiveness as its focus, we attach importance to responsible production, and expect to continuously improve the sustainability of resource and promote the standardisation on the management of products responsibility. We set goals such as improving utilisation rate of resources, safe and clean production, reducing production costs, and increasing product quality and economic benefits.

CERTIFICATE OF CONFORMITY

ZABS

Management System

CNMC LUANSHYA COPPER MINES PLC

ISO 9001:2015
ISO 14001:2015
ISO 45001:2018

Certification Authority

Luanshya has been granted the ISO 9001, ISO14001 and ISO45001 management system standard certification

The quality inspection of the Group's products is carried out in accordance with the relevant national inspection and quality standards. We follow the quality system standards required for LME registration: BS EN 1978:1998 Copper Cathodes, GB/T 467-2010 Copper Cathodes, ASTM B115-10 Standard Specification for Electrolytic Copper Cathode, and always provide customers with high-quality products. The quality of our copper cathodes is tested based on the national standards GB/T467-2010 for Copper Cathode in the People's Republic of China, while the quality of copper concentrate is tested with the standard for method of scientific analysis on copper concentrate under the national standards GB/T3884.1-3884.10-2000 in the People's Republic of China. The Group focuses on improving its product quality management system. For instance, during the Reporting Period, Luanshya has been granted the ISO 9001, ISO14001 and ISO45001 management system standard certification. To standardise the whole process including product exploitation, production and sales, we formulated the Measures for Quality Management of Strip Mine Project (《露天礦工程質量管理辦法》). Meanwhile, we also insist on the high-level quality of our products and Luanshya and SML has set up their quality inspection centers. The daily operation of the quality inspection centers is managed through the System for Quality Control of Quality Inspection Center (《質檢中心質量控制制度》), and staff carry out work by strictly abiding by the rules and regulations thereunder. The quality inspection centers will conduct inspections at all stages in the process of production. If any quality problems are found in the process, relevant departments will carry out research, handle and timely rectify them to ensure that customers are provided with high-quality products.

In July 2022, Luanshya completed the preparation of all application materials according to the list of materials required by the LME. As required for LME registration of copper, in addition to ISO9001:2015, Luanshya successively completed ISO14001:2015 and ISO45001-2018 international quality system certification, thus forming a system of "three-in-one" international quality certification.

In addition to insisting on quality management, the Group also attaches great importance to the service experience of customers and undertakes to constantly improve customer service. NFCA has formulated a series of complaints management measures, and employees must follow 14 guiding principles when handling client complaints. In the principle of commitment, employees need to actively make commitments to the provisions and implementation of the complaint handling process; in the principle of objectivity, employees shall treat each complaint equally, objectively and without prejudice in the complaint handling process. Once we receive complaints from our clients, we will immediately arrange relevant responsible departments to deal with them, report them to the management, and make understanding to the relevant departments, put forward solutions, and communicate with customers in a timely manner.

Moreover, the Group attaches great importance to information security and privacy. During the operations, we strictly keep confidential for the material non-public information of partners and clients, to prevent disclosure and loss of sensitive information. In particular, NFCA developed the Network Security Management System of NFCA during the Reporting Period, and will enter into the confidentiality agreements with its customers for confidential matters.

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

Construction of Integrity-based Governance

The Group maintains a "zero tolerance" attitude towards corruption and any unethical business practices. We have formulated a series of internal management rules including the Related Party Transaction Management Rules, Reporting and Complaints Management Rules and the Implementation Measures for Corruption Risk Prevention and Control to prevent fraud and strengthen the Group's governance and internal control, reduce legal risks, regulate business activities and ensure the sustainable and healthy development of the Company. The Group will continuously improve the anti-corruption management system and integrity-based governance rules, thus enabling anti-corruption work to be done in a standard, systematic and normalized way.

In order to manage integrity matters in a more systematic way and strengthen the supervision mechanism, the Group has incorporated anti-corruption into the planning, conducted internal supervision, and investigated and dealt with disciplinary cases. All subsidiaries have implemented relevant management measures according to the actual situation, for instance, NFCA has set up a special investigation team for the overseas illegal investment and operation. The Anti-fraud Work Regulations of Luanshya clearly defines the main responsibilities of the management in anti-fraud work, including but not limited to establishing and promoting a corporate culture of honesty and integrity, as well as assessing fraud risks and establishing specific control procedures and mechanisms. Anti-fraud policies and procedures and related measures are also effectively communicated or trained in Luanshya in various forms, such as employee handbooks, company rules and regulations release or bulletin boards, etc., to ensure that employees receive training on relevant laws, regulations and professional ethics, and understand the concepts covered by the Code of Conduct. In addition, we encourage employees to report inappropriate behaviors. Reporting emails and telephones have been set up by the Group and its subsidiaries, and relevant complaints are dealt with by specialised agencies. In case that any serious violations are found, they will be dealt with by the judicial department.

In addition, the Group adopts strict management measures for key anti-corruption links such as bidding and procurement, and clearly sets relevant anti-corruption clauses in the procurement contract to ensure the openness and transparency of the bidding process, and strictly prevent all kinds of fraudulent acts. For example, during the selection of suppliers, Lualaba Copper Smelter has formulated a strict avoidance system for specific related persons, and required partners (including cooperative merchants in procurement, sales, transportation and services) to actively identify personnel who have certain relations with the procurement, sales and other positions of Lualaba Copper Smelter through files, and to abstain from business cooperation.

We have included integrity information in our daily training, and continuously enhanced our employees' awareness of integrity by regularly organizing middle and senior employees to learn anti-corruption policies, carry out anti-corruption education, integrity talks and other activities. During the Reporting Period, the Group actively conducted training on anti-corruption. The Group held a meeting on the construction of integrity-based governance and anti-corruption on 27 January 2022, which all Directors of the Group attended. Subsidiaries such as SML also organized education sessions on integrity-based governance for their directors and employees.

Integrity-based governance construction meeting of SML

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

Research and Innovation

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

Case: Huachin Leach conducted cobalt system process upgrading

In January 2022, Huachin Leach commenced the development and construction cycle of cobalt system process upgrading. After the technological upgrading is fully completed, we expect to achieve the stable and orderly production in cobalt precipitation workshop, increase the treatment capacity of extraction fluids, improve the cobalt output and the cobalt hydroxide quality, enhance the crude cobalt hydroxide quality, and reduce the transportation volume.

Case: SML conducted the modification of the semi-autogenous mill end body liner in the processing workshop

In October 2022, SML initiated the modification of the semi-autogenous mill end body liner in the processing workshop. The main project task is to change the material of the inner and outer ring liner and its bending plate at the feed end of 5518 semi-autogenous mill from alloy liner to rubber alloy liner, the outer ring liner, large and small lattice plates and bending plates at the discharge end from alloy liner to rubber alloy liner; and the front and rear end covers of the 2736 ball mill from alloy liner to rubber alloy liner. We expect that the liner service life of 5518 semi-autogenous mill and 2736 ball mill can increase by 1-2 times, so as to reduce downtime and improve production efficiency.

Supply Chain Management

The Group maintains long-term and stable cooperative relationships with its suppliers and expects them to adhere to the high standards of governance consistent with the Group. The Group has developed a sound supplier management system to regulate the code of conduct of suppliers. In particular, the subsidiaries formulates relevant systems according to the Group's system and based on their own actual conditions, such as internal management documents including the Interim Measures for the Management of Biding and Purchasing of Materials of China Nonferrous Mining Hong Kong Holdings Limited (《中色香港控股有限公司物資採購招標管理暫行辦法》), the Compilation of the Management Measures for the Supply Department (《供應部管理辦法匯編》) of Lualaba Copper Smelter, and the Management Measures for Bidding (《招投標管理辦法》) and the Management Measures for Supplier Registration (《供應商註冊管理辦法》) of NFCA. Relevant management systems set out in detail a sound supplier supervision, review and management mechanism. As the Group's suppliers are located in different places, most of the subsidiaries also adopt an online supplier management system to establish supplier management files and file information for ease of management.

When selecting suppliers, we comprehensively take into consideration their performance including the compliance status, the quality of products supplied, the delivery period, product prices, after-sale services and other factors. The Group will arrange personnel to conduct on-the-spot investigation and reviews according to relevant regulations of the management measures and based on actual conditions of the Company before entering into contracts with new suppliers, thus to ensure that the quality and operations of suppliers meet the requirements of the Group. The Group conducts reviews on suppliers' performance annually and requires them to fill in the Qualified Supplier Review Form. In addition to quality and service, we also attach importance to suppliers' environmental and social performance, including their sustainable development management standards, environmental management, employment of child labour or forced labour, etc., and include them into the scope of assessment. The unqualified suppliers will be warned or disqualified based on the degree of violation.

In evaluating our suppliers, we will not lose sight of their environmental and social risks. Subsidiaries assess suppliers' risks on a case-by-case basis at the tender or review stage. NFCA will require bidders and judges to fill in the Integrity and Discipline Commitment (《廉潔守紀承諾書》) at the bidding stage to ensure that all parties have complied with the principles of business ethics at the first step of the screening process. When entering into contracts with suppliers, Luanshya will require its suppliers to comply with local laws and regulations in respect of employment and social security to eliminate the risk of child labor or forced labor. Lualaba Copper Smelter conducts file reviews and on-site reviews of suppliers. The text review includes the review and evaluation of the supplier's qualifications, technical capabilities, production capabilities, contract performance capabilities, service capabilities, performance and other certification files. The subsidiaries will require suppliers to present certificates corresponding to their qualifications, such as certifications related to quality, safety and environmental protection systems, proven capabilities to perform contracts, business operations and major relevant performance certificates. At the same time, the Group has understood the importance of promoting multiple use of environmentally friendly products or services when selecting suppliers. In the future, we will actively consider how to cope with the actual business conditions, optimize and improve the procurement process of suppliers and products, and increase the adoption rate of environmentally friendly products and services.

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

As at the end of the Reporting Period, the Group's subsidiaries had a total of 572 key suppliers, of which 524 were from within Zambia and the DRC, and 42 were from within and outside Zambia and the DRC. The Group has implemented relevant supplier management practices for all of them.

Building a Harmonious Enterprise

The Group promotes a "people-oriented" corporate governance philosophy and advocates equal and standardized employment policies, as well as fully respects the background culture of employees and protects the rights and interests of employees. The Group continues to improve the talent management system and has been recruiting talents in a fair and equal manner while ensuring the protection of employees' legitimate rights and interests. In addition, the Group also attaches importance to the cultivation of talents and actively establishes an effective incentive mechanism to provide diversified training and a quality growth environment for employees, so as to create a healthy and harmonious working and living environment for employees.

Employment Management

The Group and its subsidiaries have formulated a series of employment policies including Administrative Measures for Labour Contracts with Employees, Administrative Measures for Recruitment of Employees, Administrative Measures for Resignation of Employees, Measures for the Management of Employee Performance and Certain Provisions on Personnel Management of China Nonferrous Mining Hong Kong Holdings Limited, so as to ensure legal compliance of the employment.

Remuneration and performance appraisal	• The subsidiaries of the Group have formulated the Wage Management Measures, Interim Measures for Wage Management of China Nonferrous Mining Hong Kong Holdings Limited, Measures for the Management of Employee Performance, and Administrative Measures for the Selection and Appointment of Cadres, Administrative Measures for the Career Path of Employees, and other internal management measures, to provide employees with competitive remuneration systems and open and transparent appraisal and promotion mechanisms.
Recruitment	• The subsidiaries of the Group have formulated the Administrative Measures for Employment of Chinese Employees to standardize the appointment and management of Chinese employees, and to form a mechanism for selecting and employing candidates by ability, suitability, achieving full potential and merit. The system specifies the recruitment principle of "openness, equality, competition and merit selection", the recruitment and hiring process, the rights of hired staff and the management of promotion. Employees are given room for promotion, and we will conduct an intra-grade floating appraisal and adjustment for employees at the end of each year according to their annual performance appraisal results.
Dismissal	• According to the relevant regulations, if an employee applies for termination on his or her own initiative, he or she shall submit a written resignation application signed by him or her to the person in charge of the unit where he or she works, and the Human Resources Department shall go through the subsequent termination procedures. If an employee is dismissed for reasonable reasons, the Human Resources Department will notify him/her one month in advance or go through the subsequent termination procedures after paying one month's salary (position salary compensation).
Holiday benefits	• The Group, complying with the laws and regulations of the countries (regions) in which it is located, ensures that employees' working hours shall not exceed the statutory working hours. Aside from statutory holidays, it also provides employees with paid holidays including annual leave, sick leave, maternity leave, marriage leave and bereavement leave. Moreover, it offers overtime compensation, night shift allowances and high-temperature subsidies to further improve employees' welfare, protect the legitimate rights and interests of employees and promote their work-life balance.
Employment equity	• The Group believes that maintaining employee diversity, upholding the principles of equal treatment and anti-discrimination is fundamental to employee management. We believe that only by establishing a fair and reasonable talent management system can strengthen the sustainable development of the Group. The Group continues to promote the implementation of the "talent internationalisation and localisation" strategy, treat employees of different nationalities, races, and genders equally. We treat staff with sincerity, respect the culture and custom of foreign staff. We will give priority to local staff in Zambia and the DRC in respect of employment to increase the proportion of localized staff in the Group. In order to guarantee the rights of employees, NFCA has entered into recognition agreements with many trade unions to ensure that each employee can be treated in a reasonable manner and that the legitimate interests of the staff can be effectively safeguarded.

The Group has "zero" tolerance for child labor and forced labor. During the recruitment process, we will strictly review the identity information of candidates to ensure that they reach the legal age for employment and are eligible for employment, and adhere to strict prohibition of child labour or of forced labour no matter in any way. In case of any child labour or forced labour found, the Group will immediately dismiss the relevant person and hold the recruiter accountable. After confirming the employment, all employees will sign a labor contract with us, which specifies the remuneration, position and reasons for termination of employment, guarantee their legitimate interests. Luanshya explicitly states in the Employment Screening Rules that the employment of child labor or any minor under the age of 18 is prohibited. NFCA also set up a labor union, and conducts collective bargaining with the union every year to ensure that labor issues can be properly resolved. During the Reporting Period, there was no violation of any laws and regulations related to employment or labour practices, and there was no child labor or forced labor in the Group.

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

		Number of staff *(Persons)*	**Turnover Rate**[2]
Total		9,115	11.46%
By gender	Male	8,736	10.93%
	Female	379	23.75%
By age group	30 years old and below	2,130	16.24%
	30-50 years old	6,165	9.83%
	50 years old and above	820	11.34%
By employment type	Full-time staff	9,115	–
	Part-time staff	0	–
By geographical region	Chinese staff	889	10.35%
	Local staff	8,226	11.59%

2 The turnover rate is calculated by dividing the number of staff lost under each class during the Reporting Period by the number of staff under that class as at the end of the Reporting Period.

Employee care

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

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

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

During the Reporting Period, CCS distributed comfort letters and Spring Festival packages to the family members of employees who could not go home for vacation during the Covid-19 outbreak period, and distributed Spring Festival packages to the family members of all employees (excluding family workers) in China with comfort letters. In addition, CNMC Huachin Mabende not only distributed epidemic prevention materials to employees, including hand sanitizers, disinfection tablets, disposable gloves and wash-free hand sanitizers, but also provided Chinese employees with international logistics cost for their procurement in order to solve the difficulties that Chinese employees could not take vacations and make personalized consumption as usual during the Covid-19 outbreak period.

Case: Luanshya held a fun sports meeting to celebrate May Day

On 1 May 2022, Luanshya held a grand third fun sports meeting to celebrate May Day on the lawn of the living quarters. There were four collective competitions, namely wheel rolling, trolleybus, fun volleyball and online football, and four entertainment programs, namely lucky darts, fun bowling balls, the great shift and the crab race. All Chinese employees participated in the sports meeting. After the games, Luanshya also held a grassland barbecue activity to express holiday regards to all the managers and workers.

Fun volleyball match

Wheel rolling race

Case: Huachin Leach and CNMC Huachin Mabende held a series of cultural and sports activities

From September to October 2022, Huachin Leach and CNMC Huachin Mabende carried out various kinds of mass cultural and sports activities, including reading activities, photography collection activities and basketball and badminton sports competitions. All activities were diverse and colorful.

Badminton activities

Case: Kambove Mining held the 2022 Outstanding Staff Commendation Meeting

On 24 December 2022, Kambove Mining held the 2022 Outstanding Staff Commendation Meeting themed "Benchmarking Outstanding Staff and Growing Together", and the families of 30 outstanding employees who received the commendation witnessed this glorious moment. On that day, employees showed their families around the workplace, received honorary certificates and delivered acceptance speeches. The event was filled with a strong corporate culture atmosphere of "China and Congo and employees from both countries are a family". The outstanding employees also received color TVs and floor fans as gifts.

Deputy General Manager of Kambove Mining presented honorary certificates to outstanding employees

Outstanding employees received color TVs and floor fans

Talent Development

The Group regards the employee capability development as the cornerstone of its long-term success. Adhering to the principle of "bolstering enterprise with talents" as one of key strategy, we attach great importance to the long-term employee development, and also build diversified and comprehensive training programs to meet the needs of employees' personal development and the Group's business development. We expect employees to continuously improve their personal capabilities through training and grow together with the Group. During the Reporting Period, the Group had a total of 97 senior engineers, 113 intermediate engineers, 53 assistant engineers and 267 technicians.

CCS, a subsidiary of the Group, has formulated the Staff Training Management Measures to further standardize its staff training and improve its staff ability and quality. CCS mainly carries out competency-oriented training and practical problem-oriented training, and its human resources department will prepare the training work plan and budget plan for next year every December. CCS encourages employees to take part in on-the-job master's or doctor's education in their spare time to improve their academic degrees according to their own quality, job needs and career development plan. After the relevant qualification application is approved by the department, employees can get self-education bonus as a reward.

During the Reporting Period, the Group's subsidiaries actively conducted management and safety skills improvement training. Among them, NFCA carried out training on human resources policy, emergency rescue and blasting; CCS conducted training on conflict management, quality inspection and verification and leadership skills; SML carried out first aid training, and Huachin Leach carried out three-level safety education and workshop security team education for new employees; CNMC Huachin Mabende conducted training on typical accident case warning, etc.; and Lualaba Copper Smelter carried out training on fire safety, production safety first aid knowledge, general work technology and so on. Through comprehensive skills training, the comprehensive quality, technical skills, safety awareness and management ability of the staff were improved, providing sufficient talents for the Group's safety management.

In order to improve the local labor force quality, and cultivate and upgrade the high-skilled talents, Luanshya, a subsidiary of the Group, has been operating Sino-Zam Vocational College of Science and Technology since 2009. As of the end of the Reporting Period, the College has trained more than 2,000 graduates and over 3,000 technicians for the enterprises. In 2022, there were 185 graduates (two-year system), majoring in five majors, namely fitter assembly, metal processing, factory assembly, heavy-duty equipment maintenance and computer.

Case: Huachin Leach and CNMC Huachin Mabende organized training on energy conservation and environmental protection

Huachin Leach and CNMC Huachin Mabende successively organized six trainings on energy-saving and environmental protection, and a total of 536 people participated in the trainings directly or indirectly (conveyed by heads of the workshop/department), focusing on the relevant document instructions on energy and environmental protection, the knowledge of energy-saving and environmental protection, carbon neutrality and carbon peak, etc.

Case: CCS organized a series of annual training on management staff capacity building

CCS provided first-round training for a total of more than 30 staff from Zambian management, all business departments of the plant and both Chinese and Zambian management personnel, focusing on the Company's basic policies and learning and improvement of management skills. Through comprehensive training of Zambian management personnel, it has improved their deep understanding and implementation of the Company's management system, promoted the integration of the Company's systems and Zambian laws and regulations, facilitated the management integration of Chinese and Zambian employees, and stimulated all employees' enthusiasm, initiative and creativity.

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

Employment type		**Number of staff trained** *(Persons)*	**Coverage rate**[3]	**Training hours** *(Hour)*	**Average training hours**[4] *(Hour)*
By gender	Male	8,183	95.73%	253,375	29.00
	Female	365	4.27%	8,712	22.99
By employment rank	Senior management	66	0.77%	1,875	31.25
	Mid-level management	280	3.28%	5,664	18.10
	General Staff	8,202	95.95%	254,549	29.12

3 The coverage rate is calculated by dividing the number of staff trained under each class by the total number of staff trained ×100%.

4 The average training hours is calculated by dividing the training hours of staff under each class by the total number of staff trained under that class.

GIVING BACK TO THE COMMUNITY

Upholding Human Rights

The Group attaches great importance to respect human rights and strives to comply with the International Labour Convention and incorporates human rights into the Group's risk management system and induction training. We expect every employee to understand the importance of respecting human rights, continue to promote social and cultural diversity and equal opportunities, and provide equal opportunities for our employees regardless of their gender or nationality. The Group practices and upholds the concept of respecting human rights in their daily work so as to promote sustainable development.

With the philosophy of "win-win cooperation and mutual development", the Group has been actively communicating with the communities where we operate for many years. We took the initiative to strengthen communication and contacted with stakeholders such as local government departments, regulatory agencies, social service agencies, and community members, and set up a public relations department to manage the relationship between the company and the local community. We responded to community development demands through visits, press conferences, interviews, and daily reports and other ways. At the same time, we fully respected the religious beliefs and cultural traditions of the regions where each project was located, encouraged and held cultural exchange activities, and promoted exchanges and understanding with the local people. Therefore, we actively organized employees to participate in activities organized by the local community, and maintained good relations between the Group and the local community through exchanges and interactions with the community.

Case: NFCA celebrated the International Day of the Girl Child

The International Day of the Girl Child focuses on solving the challenges faced by girls, promoting their empowerment and realizing their human rights. The Group has always actively promoted human rights-related issues in the place where it operates, so NFCA advocated the gender equality message at the occasion of the International Day of the Girl Child. At the invitation of the local government, NFCA visited Pamodzi Girls Secondary School on 11 October 2022 and gave a speech to encourage and give support to girls.

Distributed feminine products to girls

Group photo of the on-site activity

Focusing on public welfare

The Group has been actively discharging its corporate social responsibilities and giving back to the society by way of different forms of public welfare activities held in communities. All subsidiaries have formulated the Administrative Measures on External Donation in light of the demand from communities where the projects are located, and the realities of the Group, to standardize the principle, types, channels, approval process, supervision and administration for charitable donation. We prepare a detailed external donation plan at the beginning of year, including reasons for donation, beneficiaries, channels and budget amount, and summarise the performance of those plans at year end, to strengthen management. The Group proactively makes social charitable donation as its capacity allows, and has established friendly relationship with local public and social organisations, creating favorable external environment for the operation of the Group.

Our public welfare work in communities primarily includes the improvement of infrastructural construction and medical treatment and public health conditions in communities. We had helped with digging new well, maintenance and renovating communal facilities for communities, hospitals and farm produce fair in the regions where some of our projects were located, provided assistance for local power supplier to restore power supply, restoration of roads, prevention of diseases such as AIDS, malaria and so on. In addition, to support education cause in local communities, we built school campuses, provided poverty-stricken students with subsidies on their education, as well as donated books and stationery to orphans there. Furthermore, we had also donated money on important days such as Youth Day, Women's Day, Labour Day, Teachers' Day, World Environment Day, etc., making constant contribution to local public welfare.

In the meantime, the Group actively assisted Zambia-China Friendship Hospital affiliated to the controlling shareholder in responding to Covid-19 pandemic; proactively organized employees to carry out Covid-19 testing, vaccination and treatment; actively participated in the formulation of the Covid-19 treatment plan of Zambia-China Friendship Hospital, and continued to make effective efforts in containing Covid-19 pandemic.

Charitable donations made by the Group during the Reporting Period amounted to US$1,005,000.

Case: NFCA repaired community facilities

The roads around Chambishi Town in Kalulushi Region of Copperbelt Province have been in disrepair for a long time and seriously eroded by rain. NFCA donated enough gravel for road repair and road heightening before the rainy season in 2022, and built drainage channels, which created convenient commuting conditions for local people. The repairing project ran through the whole Reporting Period.

	
Road erosion status	After paving the road with gravel

Case: NFCA funded schools for building a dormitory

In October 2022, in response to the Group's work arrangement under the "Hundred Enterprises and Thousand Villages" plan, NFCA funded the boarding school in Chati Town, Kalulushi Region in the name of the Group, for building a dormitory according to local standards under the supervision of the Ministry of Education of Zambia. The dormitory was completed in February 2023, which is believed to help schools provide more students with educational opportunities.

Construction status of boarding school in Chati Town, Kalulushi Region

Case: Luanshya donated asphalt materials to the local government

On 28 March 2022, Luanshya held a grand and simple asphalt material donation ceremony. Chairman, general manager and other management members of Luanshya, the mayor of Luanshya City, the commissioner of Luanshya region, the relevant departments heads of the municipal government, the representatives of construction contractor and community residents attended the donation activity. As the Luanshya government was organizing the maintenance for the damaged roads within its jurisdiction, Luanshya donated a batch of asphalt materials for road repairing to help faster completion of the infrastructure maintenance project and benefit the communities and residents in Luanshya. The asphalt materials amounted to 4,000 liters, with a value of ZMK 165,000. The charity donation activity has been widely concerned by mainstream media in Zambia, with six media including Zambia National Broadcasting Corporation, Zambia Daily Mail, Times of Zambia and Diamond TV Zambia witnessing and reporting the donation activity.

Asphalt materials donated

Donation ceremony site

Case: SML donated police vehicles to Chambishi Police Station

On 20 December 2022, SML donated police vehicles to Chambishi Police Station for daily security patrol and community security maintenance, and held a brief donation ceremony. SML has maintained a long-lasting and good cooperation with Chambishi Police Station. The donation would make it more convenient for the police station to patrol the surrounding areas in Chambishi and improve the police response speed, in particular for thanking their great help in supporting SML in combating the theft of Mwambashi ores.

Group photo of vice general manager of SML and guests attending the donation ceremony

Vehicle keys handover ceremony

Case: Kambove Mining presented gifts for Likasi Sunday children’s activities

On 25 December 2022, the Likasi ESF school held a Sunday children’s activity, in which Kambove Mining was invited to participate, and presented 230 gifts and sporting goods such as football, basketball and volleyball to the Likasi ESF school. The chairman, general manager and other leaders of Kambove Mining presented the students with cookies, sweets, chocolates, Christmas hats and other gifts, and visited the school’s infrastructure. In the process of its development, Kambove Mining will continue to support local education, infrastructure, medical care, public welfare and other undertakings, and contribute its share to community development.

The chairman and general manager of Kambove Mining presented gifts to students.

Likasi ESF school students gave performances

Case: Huachin Leach and Panda Community of Likasi City held the social responsibility letter signing ceremony

On 28 December 2022, the chairman of Huachin Leach, the Minister of Mining of Upper Katanga Province, the Mayor of Likasi City and the head of Panda District jointly launched the social responsibility letter signing ceremony, witnessed by local resident representatives in Likasi and the Congolese media. In the next five years, Huachin Leach will invest US$1.5 million for the construction of 11 projects in Panda District, including education, medical care, electric power and agriculture, building water wells for five surrounding villages, providing ambulances for districts and towns, implementing electricity supply projects, and establishing an up-to-standard primary school, so as to continuously strive to build a closer community with a shared future between China and Africa in the new era.

Social responsibility letter signing ceremony

FULFILLING ENVIRONMENTAL RESPONSIBILITY

Adhering to the principles of "protection priority, prevention first, comprehensive governance, public participation, accountability for damage", the Group establishes a long-term mechanism for safe environment and resource protection and management and actively fulfills its social responsibility for environmental protection and resource management. With the goal of building an eco-friendly enterprise, the Group actively carries out energy conservation and emission reduction, and strengthens the supervision and monitoring of pollution emissions to ensure cleaner production. At the same time, we put emphasis on the recycling and sustainable use of resources, focus on the use of environmentally-friendly equipment and advanced technology for production, and endeavor to advance the construction of environmental management system and enhance the recycling of resources and environmental protection standard.

Environmental Management System

The Group strictly implements a series of environmental management measures formulated by CNMC, the controlling shareholder, including the Administrative Measures for Protection of the External Investment and Cooperation Environment, General Principles of the Environmental Protection and Risk Management and Emergency Plan for Environmental Emergencies. The Group's subsidiaries have set up their safety and environmental protection department, which are in charge of daily management for environment and supervisions, and assigns responsibilities to designated personnel in key areas to ensure full coverage of supervision and management. At the same time, we divided the environmental emergencies into three different levels, and made different emergency plans for each level, to ensure timely response in the event of an emergency, minimising the negative impact. In addition, the Group also stepped up its on-going efforts in environment inspection with the focus on operation of pollution prevention and treatment facilities and made timely and effective rectification for the problems identified.

In order to further promote green and sustainable development, prevent and reduce the adverse impact of production and operation activities on the environment and natural resources, and protect the ecological environment, Lualaba Copper Smelter has developed related internal policies such as the Administrative Measures for Environmental Protection, which sets out detailed systematic guidance on environmental protection management and environmental assessment goals and clarifies management responsibilities. A comprehensive plan for environmental emergencies was also developed. Luanshya has formulated a series of measures for resource management, including the Measures for Appraisal on Load Utilisation, the Measures for Appraisal on Consumption of Ancillary Vehicles of the Company, the Measures for Management of Energy Utilisation, the System for Management of Energy Saving and Emission Reduction, the Administrative Measures for Energy Saving and the Administrative Measures for Ecological Environmental Protection, continuing to contribute to energy saving and emission reduction goals.

Luanshya states in the Administrative Measures for the Ecological Environmental Protection that it is required to minimize the significant impact on the environment and natural resources during land development of construction project. The project will first be preceded by a feasibility study report or pre-feasibility study report, in which the compliance with Zambian laws and regulations on ecological environment protection will be discussed, and the impact factors that may cause changes in the surrounding environment will be analyzed and prevention measures will be proposed. Meanwhile, during the construction of the project, Luanshya will meet the environmental planning requirements of Zambia, and the construction site will not be located in the areas that are legally designated as nature reserves, scenic areas, drinking water reserves or other areas that require special protection. During the construction of the project on newly acquired land, a survey of environmental background value will be conducted and filed with the Zambian environmental authorities. All projects are strictly controlled and subject to Zambia's environmental impact assessment system to ensure that projects are developed in a way that minimizes the impact on environmental resources.

During the Reporting Period, the Group has set relevant directional targets in five environmental aspects: air pollutant emission, greenhouse gas emission, waste generation and management, use of energy and use of water resources. At the same time, the short-term (1-2 years) and long-term (5-10 years) target time frames have been set according to the actual situation, and implemented according to the actual situation of subsidiaries:

Category of targets	Environmental targets	Indicators	Time limits	Action plans
Air pollutant emission	Improve the utilization efficiency of air pollution prevention and control facilities	Obtain the latest information on environmental technology	Long-term (5-10 years)	Learn the relevant laws, regulations and policies in China and the place where its subsidiaries are located, and obtain information through the Internet and media.
	Reduce air pollutant emission	Increase the frequency of monitoring and analysis of pollutant emission [5]	Long-term (5-10 years)	Continuously carry out quality inspection of tail gas and wastewater discharge in accordance with the laws and regulations as well as environmental licensing requirements of Zambia and the DRC.
		Beef up measures to curb dust	Long-term (5-10 years)	Set up dust collecting devices and use sprinklers to sprinkle water for dust reduction; Install wet dust collectors in industrial sites that produce dust and fugitive dust; engage a third-party unit to regularly monitor the dust in industrial sites.
Greenhouse gas emission	Contribute to carbon peak and carbon neutrality targets	Establish and improve carbon peak standards and management systems [6]	Long-term (5-10 years)	Establish a carbon emission monitoring and statistical system.
		Determine quantitative emission reduction targets [7]	Long-term (5-10 years)	Set the overall emission reduction targets and time limits, and all subsidiaries set their own emission reduction targets.
		Increase tree planting rate [8]	Long-term (5-10 years)	Continuously carry out the greening construction within the factory area, and plant various trees around the dormitory of the new living quarters.

5 It is not applicable to Luanshya and Kambove Mining.
6 It is not applicable to NFCA, Luanshya and CCS.
7 It is not applicable to CCS and SML.
8 It is only applicable to Lualaba Copper Smelter.

Category of objectives	Environmental objectives	Indicators	Time limits	Action plans
Waste generation and management	Increase the amount of waste recovery	Promote waste recycling[9]	Long-term (5-10 years)	Continuously promote waste-related work and strengthen the management of hazardous wastes in accordance with the laws and regulations as well as environmental licensing requirements of Zambia and the DRC.
	Implement the reduction of waste at source	Reduce the use of disposable materials [10]	Long-term (5-10 years)	Phase out the use of disposable materials in procurement/ construction with uncertain reduction times/review the project stage (process) to remove unnecessary packaging materials.
	Reduction of solid waste	Increase the filling rate of waste rocks[11]	Short-term (1-2 years)[12], long-term (5-10 years)	Encourage production units to fill the excavated waste rocks into the mining field to reduce the waste rocks from lifting to the surface; Start the damming project of Muliashi tailings ponds, use the waste rocks stripped from Muliashi North Strip Mine to plan to carry out the west dam damming project in 2023.

9 It is not applicable to NFCA.
10 It is not applicable to NFCA and CCS.
11 It is not applicable to NFCA, CCS and SML.
12 Short-term target is limited to Luanshya.

Category of objectives	Environmental objectives	Indicators	Time limits	Action plans
Use of energy	Promote the development of green energy	Increase the use ratio of renewable energy[13]	Long-term (5-10 years)	Adopt photovoltaic street lamp lighting system in living quarters and mining areas; construct steam turbine generator set; add a certain proportion of sulfur into the furnace material, which can increase the calorific value of the material, reduce the coal consumption and increase the sulfuric acid output at the same time; use the waste heat of flue gas for electricity generation by using steam turbine, reducing the production power load.
	Increase the efficiency of energy use	Regularly follow up the energy consumption of energy-consuming equipment	Long-term (5-10 years)	Make a maintenance plan, regularly inspect energy-consuming equipment, and regularly conduct maintenance and upgrading of machines in the mine to optimize energy efficiency.
		Formulate and improve resource management measures [14]	Short-term (1-2 years), long-term (5-10 years)[15]	In 2022, the Group has formulated and issued the Measures for the Management of Mineral Resources and Reserves of China Nonferrous Mining Corporation Limited; Lualaba Copper Smelter will develop its energy management measures, set up energy-saving leading organization, make statistical analysis on energy consumption, and reduce energy consumption.

13 It is not applicable to Luanshya, CCS and SML.
14 It is only applicable to NFCA and Lualaba Copper Smelter.
15 It is short-term target for NFCA, and long-term target for Lualaba Copper Smelter.

Category of objectives	Environmental objectives	Indicators	Time limits	Action plans
		Low energy consumption equipment penetration rate	Long-term (5-10 years)	Each subsidiary adopts equipment that complies with relevant regulations based on actual production needs, and conducts equipment maintenance, replacement, etc. according to the usage of the equipment
		Establish a energy-saving management leading group	Long-term (5-10 years)	Each subsidiary sets up an energy-saving management leading group by stages to formulate energy-saving management work plans and measures.
Use of water resources	Increase investment in water-saving facilities	Regularly inspect and maintain water pipes and water supply systems[16]	Long-term (5-10 years)	Inspect water pumps and water supply pipes every week, and conduct routine inspection and maintenance of equipment and facilities.
	Reduce average water consumption	Restrict high water consumption projects [17]	Short-term (1-2 years)[18], long-term (5-10 years)	Strengthen the inspection of water supply system, and replace the pipes with serious corrosion in water supply network; check and summarize the water use situation every month; check the water consumption monthly.

16 It is only applicable to NFCA and Lualaba Copper Smelter.
17 It is not applicable to NFCA, Luanshya and Hong Kong Holdings (Huachin Leach and CNMC Huachin Mabende).
18 Short-term target is limited to Kambove Mining.

Category of objectives	Environmental objectives	Indicators	Time limits	Action plans
		Improve the utilization rate of water cycle [19]	Short-term (1-2 years)[20], long-term (5-10 years)	Set washing water recovery devices in the sulfuric acid purification area and reuse it in the slag cooling system; by-pass filtration devices are installed in each circulating water system to reduce the use of a large amount of new water caused by changing water in the pool; by-pass filtration devices are added to the circulating water of sulfuric acid, which reduce the waste of water resources caused by a large number of water changes due to high turbidity in the circulating pool and improve the utilization rate of water circulation.
		Improve employee's awareness of water-saving	Long-term (5-10 years)	Conduct water-saving training from time to time, and incorporate water-saving training into the safety training for new employees, so as to gradually enhance employees' awareness of water-saving.

19 It is not applicable to NFCA.
20 Short-term target is limited to Kambove Mining.

Development of Green Mine

The Group's business involves the development of mines. Therefore, we have established relevant systems to reduce the environmental impact brought by the development of mines. The Group focuses on the up-to-standard pollutants emission, environmental risk prevention and control of the tailings ponds and ecological restoration of mines to carry out the control and governance of the ecological environment, so as to ensure the continuous improvement of the ecological environment of mines. The Group regularly monitors and analyzes pollutant emissions, provides early warning, formulates targeted control measures, and carries out environmental risk inspection of the tailings ponds and monitors the surrounding soil conditions to ensure that no pollution occurs. At the same time, the Group carries out afforestation annually in accordance with the plan to reduce the surface area of bare ground.

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

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

Meanwhile, the Group put emphasis on land reclamation. NFCA conducted reclamation for abandoned waste rock dumps and tailings ponds in the mine, which provide habitats for aquatic animal, small terrestrial animal and bird and protect species diversity. In addition, NFCA has also planted grass and protected slopes surrounding the tailings ponds to prevent soil erosion, and actively participated in various activities on protection of species diversity organized by the Zambia Environmental Management Agency.

Case: Waste rock recycling of NFCA

During the Reporting Period, NFCA vigorously advanced the underground paste backfilling technology, and completed the construction of the first deep well paste backfilling system in Africa in the Southeast Mine, with an annual tailings filling rate of 55.19%, which effectively reduced tail discharge. NFCA filled a total of 161,514 cubic meters of waste rock during the Reporting Period, with a waste rock filling rate of 20.6%; a stone factory has been built on the surface, where waste rock is processed into stone for sale, improving the value of waste utilization. It sold 86,000 tonnes of stone and 354,000 tonnes of waste rock during the year, effectively reducing the generation of solid waste.

Case: Waste rock damming project of Luanshya's Muliashi tailings pond

In April 2022, Luanshya initiated the waste rock damming project of the Muliashi tailings pond (using waste rock stripped from the Muliahi North Strip Mine). During the Reporting Period, the South Dam waste rock damming project of Muliashi tailings pond was completed and a total of 1,250 metres was dammed, and continued to advance the damming project the West Dam and a total of 50 metres was dammed. The final completion of this project can not only increase the stability of the tailings pond, but also save the land resources occupied by waste rock, and reduce environmental pollution.

Pollution Control

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

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

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

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

In order to further standardize the management of hazardous waste, effectively prevent environmental pollution caused by hazardous waste and protect human health, Subsidiaries have developed the Hazardous Wastes Management System in light of its own actual situation. For example, Lualaba Copper Smelter requires all units to build special facilities and sites for proper preservation and their own treatment and disposal in accordance with the relevant provisions, or hand it over to units with corresponding capacity for collection, transportation, storage, treatment and disposal. In the process of treatment and disposal, measures should be taken to reduce the volume, weight and level of risk of hazardous waste, and the Hazardous Waste Management Ledger will be used on a daily basis to record the amount of hazardous waste generated. At the same time, Lualaba Copper Smelter hopes to achieve resource recovery, and therefore requires each unit to give priority to recycling when handling hazardous waste to reduce the burden of subsequent treatment and disposal. Hazardous waste that cannot be recycled will be disposed of by units with the appropriate capacity.

In terms of wastewater management, the Group adopts the principle of maximized recycling. For copper leaching process, we cover the tailings pond with high density polyethylene (HDPE) film and have built an integrated sewage recycling system to fully recycle the metallurgical sewage generated in production, thus saving water resources and achieving “zero” emission; for copper smelting process, most production sewage enters the slag flotation workshop before ultimate evaporation in the tailings pond. The Group has built a risk inspection system for safety and environmental protection of tailings pond with a specially-assigned person in charge, strengthened the tailings pond inspection to deal with the problems immediately, reducing the environmental risks of the enterprises. The Group’s office and sanitary sewer enter septic tanks and are discharged after treatment. We regularly sample and submit inspections of the water surrounding the plant and monitored well water from a groundwater source, and compare and analyze them according to the standards of the area where the project is located, and then issue an analysis report and make improvements based on it. In addition, subsidiaries such as CCS and NFCA have permits from the environmental management authority of Zambia to discharge wastewater into the natural environment, as well as permits for mine drainage and water usage. They submit two annual reports to the environmental management authority of Zambia and the Mine Safety Department on the quality of wastewater discharged to the natural environment.

Case: NFCA carried out water resources management in multiple aspects

During the Reporting Period, the main west mine and the southeast mine production control center of NFCA formulated a series of underground production water recycling measures, supplying production water to the processing plants on both sides. Through reasonable planning, the water gushing from four shafts in the southeast mine is all used for underground production water. In addition, drainage pipes are installed in the auxiliary shaft of the southeast mine, the main water outlet point in the auxiliary shafts is drained to the production water supply tank, so that the underground production water can realize self-circulation without surface water replenishment. During the Reporting Period, the water discharge of southeast mine decreased by about 1,000 m^3 per day, which greatly reduced the drainage cost, lowered the new water intake and the water resources pollution.

Case: Kambove Mining conducted environmental monitoring

In October 2022, Kambove Mining engaged a local environmental monitoring institution to carry out atmospheric monitoring at 8 monitoring points in mines and wet-process plants, and organized monitoring of soil, groundwater and noise. The environmental monitoring institution sampled waste water from five underground water inspection wells, including wet process plants and tailing ponds, and 1# and 2# tailing ponds, sampled soil from wet-process plants, tailing ponds and mining fields, installed four atmospheric detectors in wet-process plants, tailing ponds and mining fields for air quality monitoring, and conducted noise monitoring in wet-process plants.

Wise Use of Natural Resources

The Group firmly adheres to the corporate mission of "development of resources, contributions to the society". We promise to shoulder social responsibility while developing our business to achieve comprehensive sustainable development of environment, enterprise, industry, and society. The Group adopts strict resource management measures in respect of operations and life. It reasonably uses resources, and strives to improve the utilisation ratio of resources in mining, ore processing and smelting.

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

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

- Adding a certain amount of sulfur to the feeds in the smelting furnace to increase the sulfur content in the furnace charge, increase the heat in the smelting process, and reduce the demand for coal;

- Deploying steam turbines in the production process to generate electricity using high-temperature and high-pressure steam to replenish the demand for power resources.

As for energy efficiency, in order to enhance energy consumption management at multiple levels, the Group has formulated monthly production plans and control targets of total energy consumption, and implemented strict performance appraisals for them. The Group's subsidiaries have in place a range of applicable measures. For example, NFCA:

- Formulated the Mechanical and Electrical Energy Assessment Measures, which adopts the actual use load as the assessment indicator of relevant departments according to the actual situation. During the Reporting Period none of the entities under assessment went beyond the planned indicators, effectively reducing energy consumption;

- Formulated the Electric Energy Measurement Management System to further improve the electric energy measurement management level, give full play to the role of the electric energy management and control system, scientifically and reasonably control peak loads, and control internal electric energy consumption. The system regulates the supervision procedures for electric energy measurement, including that various measuring instruments shall be submitted for inspection on time;

- Certified the testing data of various electric energy measuring instruments through random inspection;

- Periodically checked the electric energy measuring instruments in use, and if they were unqualified, they should be promptly reported for replacement; carefully made various original records, kept them properly, and shall not be arbitrarily altered or lost.

- Further conducted comprehensive quality control and economic accounting based on the electrical energy metering data, and used the data to detect the completion of the operating indicators of each unit.

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

As for the use of water resources, the Group has not encountered any problems in obtaining suitable water sources due to its rich underground water yield of mine. In order to effectively use water resources and avoid wasting the same, the Group diverts the underground water to the surface pool with the volume capacity of 10,000 tonnes. After clarification in the surface pool, the water will be used for production in processing plant and mine lot and certain underground water will be further purified and then used for domestic purposes.

Case: Huachin Leach carried out technical upgrading of cobalt precipitation workshop

During the Reporting Period, Huachin Leach carried out technical upgrading of cobalt precipitation workshop, and the cobalt system raffinate treatment capacity increased from 1,400m^3/d at the beginning of 2022 to 1,600-1,700m^3/d, and it is estimated that the raffinate treatment capacity for the whole year will exceed 500,000 m^3. After cobalt precipitation, all the liquid can be returned to the grinding workshop to be used as supplementary water, saving about 500,000 m^3 of new external supplementary water, reducing the water expansion pressure in the tailing ponds while producing 350 metal tonnes of cobalt products.

Addressing Climate Change

Climate change is a pressing global issue. The Group proactively identifies climate risks that have a significant impact on its business, and formulates corresponding measures to reduce the impact of various climate risks. The Group has laid down the Notice on Preparing the Action Plan for Carbon Peak of Group Companies to standardize the statistics and management of data and reports related to carbon emissions of subsidiaries.

Among our subsidiaries, Lualaba Copper and NFCA identified physical risks as significant risks affecting their business, and the extreme climates that affected them included but not limited to rainstorm, thunder and lightning and drought.

Physical Risk	Influence	Countermeasures
Rainstorm	• Increasing underground drainage pressure and endangering surface equipment and facilities; affecting the stability of tailings dam body.	• Covering open-air materials to reduce dust and rainwater runoff loss; • Strengthening drainage ditch inspection and cleaning during the rainy season to avoid poor drainage of ditches, resulting in flooding of facilities and equipment; ensuring normal operation of the tailing dam drainage system to ensure the safety of the tailing dam; • In the event of extreme weather that affects production, operations will be stopped in a timely manner, and designated persons will be assigned to guard core safety and environmental protection equipment and facilities.
Thunder and lightning	• Bringing risks to important places such as electrical equipment, facilities, gas stations, and explosive depots.	• Timely attention to weather forecasts and early warnings for extreme weather; • Stopping outdoor lifting and high places operation.
Drought	• Dry seasons can lead to fires that endanger the Group's surface buildings, equipment and facilities; • Zambia is primarily a hydroelectric power generation country, and a prolonged drought will result in a shortage of electricity supply to the grid throughout Zambia, which will have a serious impact on business production.	• Strengthening the management of the dams, pay continuous attention to water level changes, and reduce the management of overflow water from pumping pools.

In addition, NFCA assessed the risks of climate change and taken corresponding measures. According to the environmental impact assessment of the tailings dam, the spillway is designed for a once-in-a-century flood event. Therefore, in order to cope with the related flood storms, NFCA built a drainage system in the plant area and built a spillway in the tailings dam. The board of directors of NFCA would also learn about production safety, environmental safety and corporate social responsibility performance through regular quarterly production and operation reports to ensure that various risks are properly managed.

Environmental Performance Indicators

Table of Emission Data

Type of emission	Unit	2022	2021
Air pollutant emissions			
Emissions of sulfur oxide [21]	Tonne	4,209.2	4,211.2
Emissions of nitric oxide [21]	Tonne	0.1	0.3
Emissions of dust [21]	Tonne	131.3	124.0
Greenhouse gases emissions			
Total emissions of greenhouse gases	Tonne	226,554.7	207,635.2
• Emissions of greenhouse gases (scope 1)	Tonne	223,758.7	204,030.3
• Emissions of greenhouse gases(scope 2)	Tonne	2,796.0	3,604.9
Intensity of greenhouse gases	Kg/US$'000	55.3	51.3
Waste discharge			
Amount of hazardous wastes [24]	0'000 Tonnes	0.03	0.03
Intensity of hazardous wastes	Tonne/US$'000	0.0001	0.0001
Treatment ratio of hazardous wastes	%	100	100
Amount of non-hazardous wastes [26]	0'000 Tonnes	5,907.22	4,322.7
Intensity of non-hazardous wastes	Tonne/US$'000	14.43	10.7
Treatment ratio of non-hazardous wastes	%	100	100
Mining wastewater [27]	0'000 Tonnes	1,404.5	1,308.8
Intensity of mining wastewater	Tonne/US$'000	3.4	3.2
Other wastewater	0'000 Tonnes	33.5	35.6
Intensity of other wastewater	Tonne/US$'000	0.1	0.1

21 The data involved are derived from the data recorded by the subsidiaries of the Group and the most reliable conservative estimates based on past performance or with reference to similar facilities.

22 Due to the optimization of statistics, nitric oxide emissions for 2021 was recalculated.

23 GHG emissions are based on the 2006 IPCC Guidelines for National Greenhouse Gas Inventories issued by the Intergovernmental Panel on Climate Change.

24 Including waste lubricating oil (including motor oil), waste lead batteries, waste catalysts and other hazardous wastes.

25 Due to the optimization of statistics, amount of hazardous wastes for 2021 was recalculated.

26 Including waste slag, scrap steel, mining waste ore, mining filling waste, domestic and office waste and other non-hazardous waste.

27 Including wastewater produced from mining, beneficiation and smelting.

28 The denominator is the Group's annual gross income per thousand US dollars. The total revenue of the Group in 2022 is US$4,094.7 million, and the total revenue in 2021 is US$4,050.6 million.

Table of Resource Consumption Data

Type of resource	Unit	2022	2021
Total energy consumption	MWh	1,889,812.0	1,837,829.9
Direct energy consumption [29]	MWh	516,866.1	488,980.6
• Diesel	Litre	25,287,829.5	22,408,039.8
• Gasoline	Litre	181,118.0	213,627.5
• Coal	Tonne	33,238.9	33,654.9
• Coke	Tonne	3,378.0	1,694.0
• Acetylene	Kg	27,444.6	21,515.1
• Liquefied petroleum gas	Kg	18,690.0	16,060.0
Indirect energy consumption	MWh	1,372,946.0	1,348,849.3
• Purchased electricity	MWh	1,372,946.0	1,348,849.3
Comprehensive energy consumption equivalent to standard coal	Tonne of standard coal	221,012.2	201,014.3
Intensity of comprehensive energy consumption	Kg standard coal/ US$'000	54.0	49.6
Water consumption			
Consumption of fresh water	0'000 Tonnes	1,339.2	1,241.7
Intensity of fresh water	Tonne/US$'000	3.3	3.1

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

APPENDIX I LAWS AND REGULATIONS WITH SIGNIFICANT IMPACT ON THE GROUP

Laws and Regulations with Significant Impact on the Group[30]	Compliance of the Group
A. Environmental Aspect A1: Emissions • Environmental Protection Law of the People's Republic of China • Mine Safety Law of the People's Republic of China • Guidelines for Environmental Protection in Outbound Investment and Cooperation • Environmental Protection and Pollution Control Act (Chapter 204 of the Laws of Zambia) • The Mines and Minerals Development Act, 2015) • The Mines and Minerals Act (Chapter 213 of the Laws of Zambia) • Air Pollution Control (Licensing and Emission Standards) Regulations, 1996 • The Water Pollution Control (Effluent and Waste Water) Regulations, 1993 • The Water Resources Management Act, 2011 • The Forest Act, 2015 • The Hazardous Waste Management Regulations, 2001 • The Solid Waste Regulation and Management Act, 2018 • Laws No.007/2002, the Mining Code	During the Reporting Period, the Group did not violate any laws and regulations related to air emissions, discharges into water and land, generation of hazardous and non-hazardous waste listed in "Appendix I" of the Report.

30 The Group's operation complies with laws and regulations; and the laws and regulations which the Group has complied with include but are not limited to the contents listed in "Appendix I".

Laws and Regulations with Significant Impact on the Group[30]	Compliance of the Group
B. Social	
Aspect B1: Employment • Labor Law of the People's Republic of China • Labor Contract Law of the People' s Republic of China • The Industrial and Labour Relations Act (Chapter 269 of the Laws of Zambia) • The Minimum Wages and Conditions of Employment Act (Chapter 276 of the Laws of Zambia) • The Employment Act (Chapter 268 of the Laws of Zambia) • The Labour Code, 2002 • The Occupational Health and Safety Act, 2010	During the Reporting Period, the Group did not violate any laws and regulations related to compensation and dismissal, recruitment and promotion, working hours, rest periods, equal opportunities, diversity, anti-discrimination, and other benefits and welfare listed in "Appendix I" of the Report.
Aspect B2: Health and Safety • The Mines and Minerals Development Act, 2018 • The Factories Act (Chapter 441 of the Laws of Zambia) • Law No.001/2018, the Mining Code	During the Reporting Period, the Group did not violate any laws and regulations related to providing a safe working environment and protecting employees from occupational hazards listed in "Appendix I" of the Report.

30 The Group's operation complies with laws and regulations; and the laws and regulations which the Group has complied with include but are not limited to the contents listed in "Appendix I".

Laws and Regulations with Significant Impact on the Group[30]	Compliance of the Group
Aspect B4: Labor Standards	
• Law of the People's Republic of China on the Protection of Minors • Provisions on the Prohibition of Using Child Labor • CODE DU TRAVAIL, 2002	During the Reporting Period, the Group did not violate any laws and regulations related to preventing child labor and forced labor listed in "Appendix I" of the Report.
Aspect B6: Product Responsibility	
• Product Quality Law of the People's Republic of China • Patent Law of the People's Republic of China • Trademark Law of the People's Republic of China • Copyright Law of the People's Republic of China	During the Reporting Period, the Group did not violate any laws and regulations related to health and safety, advertising, labelling and privacy relating to products and services listed in "Appendix I" of the Report.
Aspect B7: Anti-corruption	
• Anti-Unfair Competition Law of the People's Republic of China • The Anti-Corruption Act, 2012 • Corruption, Illegal income, Influence Peddling and Misconduct of Civil Servant (section 7 under chapter 9 of part 2 of the Criminal Code of the DRC)	During the Reporting Period, the Group did not violate any laws and regulations related to bribery, extortion, fraud and money laundering listed in "Appendix I" of the Report.

30 The Group's operation complies with laws and regulations; and the laws and regulations which the Group has complied with include but are not limited to the contents listed in "Appendix I".

APPENDIX II ESG GUIDE CONTENT INDEX

Mandatory disclosure requirements	Description	Corresponding section in the Report or other descriptions
Governance Structure	A statement from the board containing the following elements: (i) a disclosure of the board's oversight of ESG issues; (ii) the board's ESG management approach and strategy, including the process used to evaluate, prioritise and manage material ESG-related issues (including risks to the issuer's businesses); and (iii) how the board reviews progress made against ESG-related goals and targets with an explanation of how they relate to the issuer's businesses.	Sustainable Development Management
Reporting Principles	A description of, or an explanation on, the application of the following Reporting Principles in the preparation of the ESG report: **Materiality**: The ESG report should disclose: (i) the process to identify and the criteria for the selection of material ESG factors; (ii) if a stakeholder engagement is conducted, a description of significant stakeholders identified, and the process and results of the issuer's stakeholder engagement. **Quantitative**: Information on the standards, methodologies, assumptions and/or calculation tools used, and source of conversion factors used, for the reporting of emissions/energy consumption (where applicable) should be disclosed. **Consistency**: The issuer should disclose in the ESG report any changes to the methods or KPIs used, or any other relevant factors affecting a meaningful comparison.	About the Report
Reporting Boundary	A narrative explaining the reporting boundaries of the ESG report and describing the process used to identify which entities or operations are included in the ESG report. If there is a change in the scope, the issuer should explain the difference and reason for the change.	About the Report

General disclosures and key performance indicators ("KPIs")	Description	Corresponding section in the Report or other descriptions
ENVIRONMENTAL		
Aspect A1: Emissions		
General disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to air and greenhouse gas emissions, discharges into water and land, and generation of hazardous and non-hazardous waste.	Environmental Management System
KPI A1.1	Types of emissions and respective emissions data.	Environmental Performance Indicators
KPI A1.2	Direct (Scope 1) and energy indirect (Scope 2) greenhouse gas emissions (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	Environmental Performance Indicators
KPI A1.3	Total hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	Environmental Performance Indicators
KPI A1.4	Total non-hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	Environmental Performance Indicators
KPI A1.5	Description of emissions targets set and steps taken to achieve the targets.	Environmental Management System
KPI A1.6	Description of how hazardous and non-hazardous wastes are handled, and description of waste reduction goals set and the steps taken to achieve the targets.	Environmental Management System

General disclosures and key performance indicators ("KPIs")	Description	Corresponding section in the Report or other descriptions
Aspect A2: Use of Resources		
General disclosure	Policies on the efficient use of resources, including energy, water and other raw materials.	Wise Use of Natural Resources
KPI A2.1	Direct and/or indirect energy consumption by type (e.g. electricity, gas or oil) in total (kWh in '000s) and intensity (e.g. per unit of production volume, per facility).	Wise Use of Natural Resources
KPI A2.2	Water consumption in total and intensity (e.g. per unit of production volume, per facility).	Environmental Performance Indicators
KPI A2.3	Description of energy use efficiency target(s) set and steps taken to achieve them.	Environmental Management System
KPI A2.4	Description of whether there is any issue in sourcing water that is fit for purpose, water efficiency targets set and steps taken to achieve the targets.	Wise Use of Natural Resources; Environmental Management System
KPI A2.5	Total packaging materials used for finished products (in tonnes) and, if applicable, with reference to per unit produced.	Due to the nature of the Group's products and business, we are not involved in the use of packaging materials.
Aspect A3: The Environment and Natural Resources		
General disclosure	Policies on minimizing the issuer's impact on the environment and natural resources.	Development of Green Mine
KPI A3.1	Description of significant environmental and natural resources impacts and actions taken to manage them.	Development of Green Mine
Aspect A4: Climate Change		
General disclosure	Policies on identification and mitigation of significant climate-related issues which have impacted, and those which may impact, the issuer.	Addressing Climate Change
KPI A4.1	Description of the significant climate-related issues which have impacted, and those which may impact, the issuer, and the actions taken to manage them.	Addressing Climate Change

General disclosures and key performance indicators ("KPIs")	Description	Corresponding section in the Report or other descriptions
SOCIAL		
Employment and Labour Practices		
Aspect B1: Employment		
General disclosure	General Disclosure Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to compensation and dismissal, recruitment and promotion, working hours, rest periods, equal opportunity, diversity, anti-discrimination, and other benefits and welfare.	Employment Management
KPI B1.1	Total workforce by gender, employment type (for example, part-time or full-time), age group and geographical region.	Employment Management
KPI B1.2	Employee turnover rate by gender, age group and geographical region.	Employment Management
Aspect B2: Health and Safety		
General disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to providing a safe working environment and protecting employees from occupational hazards.	Safety System
KPI B2.1	Number and rate of work-related fatalities occurred in each of the past three years including the reporting year.	Safety Operation
KPI B2.2	Lost days due to work injury.	Safety Operation
KPI B2.3	Description of occupational health and safety measures adopted, how they are implemented and monitored.	Ensuring Safety First
Aspect B3: Development and Training		
General disclosure	Policies on improving employee knowledge and skills for discharging duties at work. Description of training activities.	Health and Safety Training, Talent Development
KPI B3.1	Percentage of trained employees, by gender and category (e.g. senior management, middle management).	Talent Development
KPI B3.2	Average training hours completed per employee, by gender and category.	Talent Development

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

General disclosures and key performance indicators ("KPIs")	Description	Corresponding section in the Report or other descriptions
KPI B6.3	Description of practices relating to observing and protecting intellectual property rights.	Research and Innovation
KPI B6.4	Description of quality assurance process and recall procedures.	Product Responsibility
KPI B6.5	Description of consumer data protection and privacy policies, how they are implemented and monitored.	Product Responsibility
Aspect B7: Anti-corruption		
General disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to bribery, extortion, fraud and money laundering.	Construction of Integrity-based Governance
KPI B7.1	Number of concluded legal cases regarding corrupted practices brought against the issuer or its employees during the reporting period and the outcomes of the cases.	Construction of Integrity-based Governance
KPI B7.2	Description of preventive measures and whistleblowing procedures, how they are implemented and monitored.	Construction of Integrity-based Governance
KPI B7.3	Description of anti-corruption training provided to directors and staff.	Construction of Integrity-based Governance
Community		
Aspect B8: Community Investment		
General disclosure	Policies on community engagement to understand the needs of the communities where the issuer operates and to ensure its activities take into consideration the communities' interests.	Giving Back to the Community
KPI B8.1	Focus areas of contribution (e.g. education, environmental concerns, labor needs, health, culture, sport).	Giving Back to the Community
KPI B8.2	Resources contributed (e.g. money or time) to the focus area.	Giving Back to the Community

REPORT OF THE DIRECTORS

The Directors present the annual report and the audited consolidated financial statements of the Group for the year ended 31 December 2022.

PRINCIPAL ACTIVITIES

The principal activity of the Company is investment holding. The Company's subsidiaries are principally engaged in exploration, mining, ore processing, leaching, smelting of copper and cobalt, and sale of copper cathodes, blister copper and copper anodes, copper-cobalt alloy, cobaltous hydroxide and sulfuric acid. There has been no significant change in the Group's principal activities for the year ended 31 December 2022.

RESULTS

The Group's operating results for the year ended 31 December 2022 and the financial position of the Group as at 31 December 2022 are set out on pages 161 to 258 in the audited consolidated financial statements contained in this annual report.

DIVIDENDS

The Board proposes a payment of final dividends of US¢2.8209 per share for the year ended 31 December 2022. The proposed final dividend will be paid on Thursday, 13 July 2023 after approval at the forthcoming AGM of the Company.

SUMMARY OF FINANCIAL INFORMATION

A summary of the consolidated results, assets and liabilities of the Group for the last five financial years, as extracted from the audited consolidated financial statements of the Group, is set out on page 259 in this annual report.

BUSINESS REVIEW

Overview and Performance of the Year

A review of the business of the Group and analysis of the Group's performance using financial key performance indicators is provided in the Results Highlights and the Management Discussion and Analysis sections on page 7 and pages 8 to 30, respectively, of this annual report.

Environmental Policies and Performance

The Group attaches great importance to environmental protection. Under the guidance of "environmental protection and sustainable development", the Group proactively promotes environmental management and resources utilisation and carries out environmental protection activities to build a "green enterprise making contributions to clear water and blue sky". During the reporting period, there was no material event causing litigation or corresponding punishment against the Group due to violation of laws in respect of environment.

Particulars in relation to the Group's environmental policies and performance are set out on pages 68 to 135 in the "Environmental, Social and Governance Report" section in this annual report.

Compliance with relevant Laws and Regulations

Relevant laws and regulations that have a significant impact on the Group mainly include:

(1) Mines and Minerals Development Act No. 11 of 2015 of the Laws of Zambia;

(2) Environmental Management Act No. 12 of 2011 of the Laws of Zambia;

(3) Employment Act Chapter 268 of the Laws of Zambia;

(4) Explosives Act Chapter 115 of the Laws of Zambia and Explosives Regulations;

(5) Factories Act Chapter 441 of the Laws of Zambia;

(6) Occupational Health and Safety Act No. 36 of 2010 of the Laws of Zambia;

(7) Workers Compensation Act No. 10 of 1999 of the Laws of Zambia;

(8) Acte Uniforme Relatif au Droit des Societes Commerciales et du Groupement D'Intereteconomique of the Laws of DRC;

(9) Law No. 001/2018, the Mining Code of the Laws of DRC; and

(10) Decree No. 18/24, the Mining Regulation of the DRC.

The Group has established and improved the manual for internal control in relation to overall business chains and management processes with subsequent monthly and annual supervision and review to ensure compliance with the relevant laws and regulations. For the year ended 31 December 2022, the Group complied with relevant laws and regulations which had significant impact on the businesses and operations of the Group in all material aspects. During the year ended 31 December 2022, the Group was subject to any penalty due to violation of the aforesaid laws, regulations and other public policies.

The Group has complied with the requirements under the Companies Ordinance, the Listing Rules, the SFO and the CG Code for, among other things, the disclosure of information and corporate governance. The Group has adopted the Model Code.

Key Relationships with Stakeholders

The support and trust of our stakeholders is integral to the Group's growth and success. Our stakeholders include shareholders and creditors, employees and employee organisations, governments and regulatory authorities, the public communities, charities and non-government organisations (NGOs) and clients as well as suppliers. We place emphasis on communications with our stakeholders and have established an open and transparent communication channel for each category of stakeholders to understand their expectations and requests. Please refer to the "Environmental, Social and Governance Report" set out in this annual report for more information.

We continued to strengthen the quality and effectiveness of information disclosure, comply with applicable laws and regulations, and actively participate in public welfare activities, with the purpose of achieving mutual development and value sharing with our stakeholders. We have also formulated key indicators based on the focuses and concerns of different stakeholders to reflect our management performance on the above subject matters. Some of our key indicators include return on equity and payout ratio for shareholders and creditors; employee training frequency and turnover rate for employees and employee organisations; violations of laws and regulations and safety and environment performance concerned by the government; public opinion and corporate image concerned by the public; response rate on enquiries for charities and NGOs; satisfactory reports for clients etc.. Going forward, we will endeavor to improve our current policies, strive to maximise our stakeholders' value and achieve a mutually beneficial outcome.

Key Risks and Uncertainties

A description of principal risks and uncertainties that the Group may be facing is provided on pages 14 to 15 in the "Management Discussion and Analysis" and "Corporate Governance Report" sections of this annual report.

Prospects

Please refer to the Chairman's Statement on pages 4 to 6 and pages 8 to 30 in the "Management Discussion and Analysis" section of this annual report.

Subsequent Event After the End of Financial Year

Save as disclosed in this annual report, there were no other significant events in relation the Group after the reporting period.

BANK AND OTHER BORROWINGS

Details of bank borrowings of the Group as at 31 December 2022 are set out in note 24 to the consolidated financial statements.

CHARITABLE DONATIONS

Charitable donations made by the Group during the year ended 31 December 2022 amounted to US$1,005,000. In addition, the Group subsidised schools and community hospitals, provided financial aid for the construction and maintenance of public sports facilities such as football fields and swimming pools, and participated in programmes to fight against malaria, AIDS and cholera, thereby earnestly fulfilling its social responsibility.

Production materials donation to local farmers
by Luanshya

Donation to local community schools
by Kambove Mining

Donation to the local area
by Chambishi Copper Smelter Ltd

PROPERTY, PLANT AND EQUIPMENT

Details of movements in the property, plant and equipment of the Group during the year ended 31 December 2022 are set out in note 14 to the consolidated financial statements.

As at 31 December 2022, the Group did not own any properties for investment purposes or held for development and/or sale where one or more percentage ratios (as defined under Rule 14.04(9) of the Listing Rules) exceed 5%.

RESERVES

Details of change in the reserves of the Group during the year ended 31 December 2022 are set out in the consolidated statement of changes in equity.

DISTRIBUTABLE RESERVES

As at 31 December 2022, the Company had distributable reserves amounting to US$157,131,000.

SHARE CAPITAL

There was no change in the share capital of the Company during the year ended 31 December 2022.

PRE-EMPTIVE RIGHTS

There is no provision for pre-emptive rights under the Articles of Association and there is no restriction against such rights which would oblige the Company to offer new Shares on a pro-rata basis to existing Shareholders.

PURCHASE, SALE OR REDEMPTION OF LISTED SECURITIES OF THE COMPANY

Neither the Company nor any of its subsidiaries purchased, redeemed or sold any of the Company's listed securities during the year ended 31 December 2022.

MAJOR CUSTOMERS AND SUPPLIERS

During the year ended 31 December 2022, sales to the Group's five largest customers accounted for 86.9% of the Group's total sales, and sales to its largest customer, being the Retained Group, accounted for 48.8% of the Group's total sales. The second largest customer was the group comprising a non-controlling shareholder of subsidiaries and its subsidiaries.

During the year ended 31 December 2022, purchases from the Group's five largest suppliers in aggregate accounted for approximately 62.6% of the total purchases, and purchases from the largest supplier accounted for approximately 17.1% of total purchases.

Save as disclosed above, none of the Directors, their associates or any shareholders of the Company (which, to the best knowledge of the Directors, own 5% or more of the Company's issued share capital) had any interest in the Group's five largest customers and suppliers during the year ended 31 December 2022.

SIGNIFICANT CONTRACT

Save as disclosed in "Connected Transactions", no other significant contract was entered into between the Company or any of its subsidiaries, and a controlling shareholder or any of its subsidiaries during the year ended 31 December 2022.

MANAGEMENT CONTRACTS

No contracts concerning the management and administration of the whole or any substantial part of the business of the Company were entered into or existed during the year ended 31 December 2022.

DIRECTORS

The Directors during the Year and up to the date of this report were as follows:

Executive Directors
Mr. He Yang (appointed on 13 October 2022)
Mr. Jinjun Zhang (resigned on 13 October 2022)
Mr. Chunlai Wang (resigned on 11 April 2022)

Non-Executive Director
Mr. Yaoyu Tan

Independent Non-Executive Directors
Mr. Dingfan Qiu
Mr. Jingwei Liu
Mr. Huanfei Guan

According to article 107 of the Articles of Association of the Company and Rule 4(2) of Appendix 3 of Main Board Listing Rules, Directors who were appointed by the Board to fill a casual vacancy or to increase the number of members of the Board during the year 2022 shall retire at the forthcoming annual general meeting. He is eligible for re-election and will offer himself for re-election. In accordance with article 102 of the Articles of Association, at each annual general meeting, one-third of the directors or, if their number is not three (3) or a multiple of three (3), the number which is nearest to and is at least one-third, shall retire from office by rotation at least once every three (3) years. A retiring director shall be eligible for re-election. Pursuant to article 103 of the Articles of Association, the directors to retire by rotation shall be those who have been longest in office since their last appointment or reappointment, but as between persons who became or were last reappointed directors on the same day, those to retire shall (unless they otherwise agree among themselves) be determined by lot.

The Company has received annual confirmation of independence from the three independent non-executive Directors in accordance with Rule 3.13 of the Listing Rules and considers them to be independent.

The names of all directors who have served on the boards of the subsidiaries of the Company during the year ended 31 December 2022 or during the period from 1 January 2023 to 30 March 2023 are set out below and those marked with an asterisk(*) are directors as at 30 March 2023:

Dayong Yang*
Helin Xu*
Jingwen Qin
Chunguang Pang*
Zhimin Chen*
Ran Zhu*
Cosmas V Mwananshiku*
Tian Wang*
Shengjun Shao*
Wenyan Xu*
Siukam Ng*
Hassan Moukachar*
Zhiguo Meng*
Xingeng Luo*
Gaetan Tshibangu Luabeya*
Yi Yao
Wenjun Wu*
Jian Guo*
Zuotai Zhou
Hailiang Cui*
Shili Zhang
Yuliang Yan*

Xinghua Liu
Yibin Liu*
Rongman Huang*
Zhanyan Li*
Mufingwe Ng' ambi*
Jingjun Wang*
Yuanyuan Liu
Situmbeko Mubano*
Yani Gong*
Xi Yi*
Peiwen Zhang*
Xingrong Du
Chengyi Fang*
Siuhong Ng*
Shaocheng Li*
Xinguo Yang
Qiongzhi Pu*
Jingen Han*
Jinjun Zhang
Yuelong Ma
Yunjun Li*
Shougao Wang*

Jinping Ma *
Jiapeng Cui*
Guobin Hu
Fawu Shi*
Mingming Cheng*
Luke Chenjelani Mbewe
Chuanjiang Yao
Mrs. Tamara S Ngoma*
Wei Yang*
Weimin Xu*
Ligang Yang*
Jianming Zhu*
Yuan Jiang*
Peng Hu*
Guoming Zhang
Simon Tsibangu Ngoy*
Clotilde Wamana Kalongo*
Muchang Xu*
Zhenkun Xiong*
Bing Zhang*
Lixian Yu*

Note: The list is in no particular order.

DIRECTORS AND SENIOR MANAGEMENT

The biographies of the Directors and senior management are set out on pages 31 to 41 in this annual report.

DIRECTORS' INTERESTS IN TRANSACTION, ARRANGEMENT AND CONTRACT OF SIGNIFICANCE

No Directors and their connected entities had an interest, either directly or indirectly, in any transactions, arrangements or contract of significance to the business of the Group to which the Company, or any of its holding companies, subsidiaries or fellow subsidiaries was a party during the year ended 31 December 2022.

None of the Directors proposed for re-election at the forthcoming annual general meeting has a service contract with the Company which is not terminable by the Company within one year without payment of compensation, other than statutory compensation.

DIRECTOR'S PERMITTED INDEMNITY PROVISION

Pursuant to the Company's Articles of Association, every Director or other office of the Company shall be entitled to be indemnified out of the assets of the Company against all costs, charges, expenses, losses and liabilities which he may sustain or incur in or about the execution of the duties of his office or otherwise in relation thereto. The Company has arranged appropriate directors' and officers' liability insurance coverage for the Directors and officers of the Group during the year ended 31 December 2022, and such coverage remained in full force as at the date of this report.

DIRECTOR'S INTERESTS IN COMPETING BUSINESS

None of the Directors of the Company had engaged in any business or had any interest in business which competes or may constitutes competition directly or indirectly (within the meaning of the Listing Rules) with the business of the Group during the year ended 31 December 2022.

DIRECTORS' RIGHTS TO ACQUIRE SHARES OR DEBENTURES

The Company or any of its subsidiaries did not have any arrangement in place at any time during the reporting period whereby the Directors or their respective spouse or children under the age of 18 years can obtain benefit by acquiring shares of the Company or other body corporate.

DIRECTORS' AND CHIEF EXECUTIVE'S INTERESTS AND SHORT POSITIONS IN SHARES AND UNDERLYING SHARES

As at 31 December 2022, none of the Directors or chief executive had any interests or short positions in the shares, underlying shares and debentures of the Company or any of its associated corporations (within the meaning of Part XV the SFO) which would fall to be disclosed to the Company or the Hong Kong Stock Exchange pursuant to Division 7 and 8 under the Part XV of the SFO; or interests or short positions required to be recorded in the register kept by the Company pursuant to Section 352 of the SFO; or interests or short positions which fall to be disclosed to the Company and the Hong Kong Stock Exchange pursuant to the Model Code.

EMOLUMENTS OF THE DIRECTORS, SENIOR MANAGEMENT AND THE FIVE HIGHEST PAID INDIVIDUALS

The Directors' remuneration is determined by the Remuneration Committee with reference to the time, effort and expertise contributed by each Director to the affairs of the Company. The Group adopts relevant remuneration management rules such as the "Provisional Management Rules for Senior Management's Remuneration" and the "Staff Remuneration Management Rules" to continuously enhance the core competitiveness of the Group for healthy development.

Please refer to notes 11 and 35 to the consolidated financial statements for details of the emoluments of the Directors, senior management and the five highest paid individuals of the Company.

SUBSTANTIAL SHAREHOLDERS' AND OTHER PERSONS' INTERESTS AND SHORT POSITIONS IN SHARES AND UNDERLYING SHARES

As at 31 December 2022, so far as it is known to the Director and chief executive of the Company, interests or short positions which would fall to be disclosed to the Company and the Hong Kong Stock Exchange pursuant to the provisions of Division 2 and 3 under the Part XV of the SFO is as follows:

Substantial shareholder	Capacity/Nature of interest	Long/short position	Number of shares	Approximate percentage of shareholdings
CNMD *(Note)*	Registered owner	Long position	2,600,000,000	69.54%
CNMC	Interest in a controlled corporation	Long position	2,600,000,000	69.54%

Note: CNMD is a wholly-owned subsidiary of CNMC and therefore, by virtue of the SFO, CNMC is deemed or taken to be interested in all the shares which are owned by CNMD .

Save as disclosed above, as at 31 December 2022, no person had registered an interest or short position in the shares or underlying shares of the Company that was required to be recorded pursuant to Section 336 of the SFO.

As at 31 December 2022, each of the following entities were directly or indirectly interested in 10% or more of the nominal value of any class of share capital carrying rights to vote in all circumstances at the general meeting of any other members of the Group:

Member of the Group	Entity with 10% or more interest (other than member of the Group)	Percentage of that entity's interest
NFCA	ZCCM-IH	15%
Luanshya	ZCCM-IH	20%
CCS	Yunnan Copper Group	40%
SML	Hong Kong Zhongfei	30%
Huachin Leach	Huachin SARL	32.5%
CNMC Huachin Mabende	Huachin SARL	35%
CNMHK	Hong Kong Zhongfei	30%
Kambove Mining	La Generale Des Carrieres Et Des Mines SA	45%
Lualaba Copper Smelter	YH Metal	38%
Kingsail	YH Metal	40%

RETIREMENT BENEFIT SCHEMES

Details of the retirement benefit schemes of the Group are set out in note 36 to the consolidated financial statements.

SHARE SCHEME

The Group has not adopted any share scheme.

EQUITY-LINKED AGREEMENT

Save as disclosed in this annual report, there was no equity-linked agreement entered into by the Company during the year ended 31 December 2022.

REMUNERATION POLICIES

Based on the overall development strategy, the Group actively improves the scientific remuneration management system to attract outstanding talents, retain key talents and mobilize human resources. The Directors' remuneration is determined by the Remuneration Committee with reference to the time, effort and expertise contributed by each Director to the affairs of the Company. The Group adopts relevant remuneration management rules such as the "Provisional Management Rules for Senior Management's Remuneration" and the "Staff Remuneration Management Rules" to continuously enhance the core competitiveness of the Group for healthy development.

CONNECTED TRANSACTIONS

Non-exempted Connected Transactions

During the Year, the Group carried out the following transaction which constituted connected transaction under Chapter 14A of the Listing Rules.

Acquisition of Target Assets

On 1 June 2022, SML, a subsidiary of the Company, entered into an Acquisition Agreement (the "Acquisition Agreement") with ZCETCZ. Pursuant to the Acquisition Agreement, SML agreed to purchase and ZCETCZ agreed to dispose of the land, buildings on the land and relevant living facilities to be transferred under the Acquisition Agreement which are located in Garneton, Zambia ("Target Assets") at a consideration of US$2,240,900.

During the year ended 31 December 2022, the transfer procedures of the ownership of the Buildings and the Land in relation to the acquisition of Target Assets has been completed.

SML is a subsidiary of the Company. As CNMC is the controlling shareholder of the Company and holds 95% equity interests in ZCETCZ, ZCETCZ is a connected person of the Company under the Listing Rules, and the acquisition of the Target Assets constitutes a connected transaction of the Company.

For details of the Acquisition Agreement and the transactions contemplated thereunder, please refer to the announcement of the Company dated 1 June 2022.

Non-exempted Continuing Connected Transactions

During the Year, the Group carried out the following transactions which constituted continuing connected transactions under Chapter 14A of the Listing Rules and were subject to annual review.

1. CNMC Copper Supply Framework Agreement

On 18 April 2017, the Company entered into the CNMC Copper Supply Framework Agreement ("2017 CNMC Copper Supply Framework Agreement") with CNMC for a term of three years from 1 January 2018 to 31 December 2020, pursuant to which the Company agreed to sell, or procure its subsidiaries to sell, copper products including blister copper and copper cathode to the Retained Group, subject to the approval of the Independent Shareholders. The Independent Shareholders approved the 2017 CNMC Copper Supply Framework Agreement and the proposed annual caps at the EGM held on 31 May 2017. Details of the 2017 CNMC Copper Supply Framework Agreement were disclosed in the announcement and circular of the Company dated 18 April 2017 and 15 May 2017 respectively.

On 23 April 2018, the Company revised the annual caps under the 2017 CNMC Copper Supply Framework Agreement and obtained the approval of the Independent Shareholders at the AGM held on 28 June 2018. Details of the revision were disclosed in the announcement and circular of the Company dated 23 April 2018 and 13 June 2018 respectively.

On 30 October 2020, the Company entered into the CNMC Copper Supply Framework Agreement ("2020 CNMC Copper Supply Framework Agreement") with CNMC for a term of three years from 1 January 2021 to 31 December 2023, pursuant to which the Company agreed to sell, or procure its subsidiaries to sell, copper products including blister copper and copper cathode to the Retained Group, subject to the approval of the Independent Shareholders. The Independent Shareholders approved the 2020 CNMC Copper Supply Framework Agreement and the proposed annual caps at the EGM held on 16 December 2020. Details of the 2020 CNMC Copper Supply Framework Agreement were disclosed in the announcement and circular of the Company dated 30 October 2020 and 20 November 2020 respectively.

On 9 September 2021, the Company revised the annual caps under the 2020 CNMC Copper Supply Framework Agreement and obtained the approval of the Independent Shareholders at the EGM held on 21 October 2021. Details of the revision were disclosed in the announcement and circular of the Company dated 9 September 2021 and 30 September 2021 respectively.

During the year ended 31 December 2022, the revenue and gains from the sale of copper products (including loss on change in fair value) to the Retained Group amounted to US$1,926,414,000, which is below the annual cap amount of US$3,461,640,000.

2. Yunnan Copper Supply Framework Agreement

On 18 April 2017, the Company entered into the Yunnan Copper Supply Framework Agreement ("2017 Yunnan Copper Supply Framework Agreement") with Yunnan Copper Group, for a term of three years from 1 January 2018 to 31 December 2020, pursuant to which the Company agreed to sell, or procure its subsidiaries to sell, copper products including blister copper and copper cathode to the Yunnan Copper Group and its subsidiaries. Details of the 2017 Yunnan Copper Supply Framework Agreement were disclosed in the announcement of the Company dated 18 April 2017.

On 23 April 2018, the Company revised the annual caps under the 2017 Yunnan Copper Supply Framework Agreement. Details of the revision were disclosed in the announcement of the Company dated 23 April 2018.

On 30 October 2020, the Company entered into the Yunnan Copper Supply Framework Agreement ("2020 Yunnan Copper Supply Framework Agreement") with Yunnan Copper Group, for a term of three years from 1 January 2021 to 31 December 2023, pursuant to which the Company agreed to sell, or procure its subsidiaries to sell, copper products including blister copper and copper cathode to the Yunnan Copper Group and its subsidiaries. Details of the 2020 Yunnan Copper Supply Framework Agreement were disclosed in the announcement of the Company dated 30 October 2020.

On 9 September 2021, the Company revised the annual caps under the 2020 Yunnan Copper Supply Framework Agreement. Details of the revision were disclosed in the announcement of the Company dated 9 September 2021.

During the year ended 31 December 2022, the revenue and gains from the sale of copper products (including loss on change in fair value) to Yunnan Copper Group and its subsidiaries amounted to US$794,026,000, which is below the annual cap amount of US$1,617,000,000.

Yunnan Copper Group and its subsidiary Yunnan & Hongkong Metal Company Limited（雲港金屬有限公司）are respectively the substantial shareholders of CCS and LCS, holding 40% and 38% of the issued share capital of CCS and LCS, respectively. Yunnan Copper Group and its subsidiaries constitute connected persons of the Company under the Listing Rules.

3. Mabende Ore Supply Framework Agreement

On 18 April 2017, the Company entered into the Huachin Ore Supply Framework Agreement ("2017 Huachin Ore Supply Framework Agreement") with Mabende Mining, for a term of three years from 1 January 2018 to 31 December 2020, pursuant to which the Company agreed to buy, or procure its subsidiaries to buy, copper ores mined by Mabende Mining. Details of the 2017 Huachin Ore Supply Framework Agreement were disclosed in the announcement of the Company dated 18 April 2017.

On 23 April 2018, the Company revised the annual caps under the 2017 Huachin Ore Supply Framework Agreement. Details of the revision were disclosed in the announcement of the Company dated 23 April 2018.

On 30 October 2020, the Company entered into the Mabende Ore Supply Framework Agreement ("2020 Mabende Ore Supply Framework Agreement") with Mabende Mining, for a term of three years from 1 January 2021 to 31 December 2023, pursuant to which Mabende Mining has principally agreed to sell all of the ores mined by Mabende Mining, except that with the Company's consent, Mabende Mining may sell ores in excess of the Group's demand to third parties. In respect of transactions, the nature of which is similar to that of the transactions under the 2017 Huachin Ore Supply Framework Agreement. Details of the 2020 Mabende Ore Supply Framework Agreement were disclosed in the announcement of the Company dated 30 October 2020.

On 28 October 2021 and 12 November 2021, the Company revised the annual caps under the 2020 Mabende Ore Supply Framework Agreement. Details of the revision were disclosed in the announcements of the Company dated 28 October 2021 and 12 November 2021.

During the year ended 31 December 2022, the Group purchased ores amounting to US$102,272,000 from Mabende Mining, which is below the annual cap amount of US$189,000,000.

Huachin Leach and CNMC Huachin Mabende are 32.5% and 35%, respectively, indirectly owned by Mr. Siu Kam Ng, who also owns 70% interest in Mabende Mining. Mabende Mining constitutes a connected person of the Company under the Listing Rules.

4. **Mutual Supply Framework Agreement**

On 18 April 2017, the Company entered into the Mutual Supply Framework Agreement ("2017 Mutual Supply Framework Agreement") with CNMC for a term of three years from 1 January 2018 to 31 December 2020, pursuant to which both parties agreed to provide, or procure their respective subsidiaries to provide certain raw materials, products and services to each other, and CNMC agreed to provide, or procure its subsidiaries to provide transportation and logistics services to the Group, subject to the approval of the Independent Shareholders. The Independent Shareholders approved the 2017 Mutual Supply Framework Agreement and the proposed annual caps at the AGM held on 31 May 2017. Details of the 2017 Mutual Supply Framework Agreement were disclosed in the announcement and circular of the Company dated 18 April 2017 and 15 May 2017 respectively.

On 23 April 2018, the Company revised the annual caps under the 2017 Mutual Supply Framework Agreement and obtained the approval of the Independent Shareholders at the AGM held on 28 June 2018. Details of the revision were disclosed in the announcement and circular of the Company dated 23 April 2018 and 13 June 2018 respectively.

On 27 April 2020, the Company revised the annual caps for the year ended 31 December 2020 under the 2017 Mutual Supply Framework Agreement and obtained the approval of the Independent Shareholders at the AGM held on 29 June 2020. Details of the revision were disclosed in the announcement and circular of the Company dated 27 April 2020 and 26 May 2020 respectively.

On 30 October 2020, the Company entered into the Mutual Supply Framework Agreement ("2020 Mutual Supply Framework Agreement") with CNMC for a term of three years from 1 January 2021 to 31 December 2023, pursuant to which both parties agreed to provide, or procure their respective subsidiaries to provide certain raw materials, products and services to each other, and CNMC agreed to provide, or procure its subsidiaries to provide transportation and logistics services to the Group, subject to the approval of the Independent Shareholders. The Independent Shareholders approved the 2020 Mutual Supply Framework Agreement and the proposed annual caps at the EGM held on 16 December 2020. Details of the 2020 Mutual Supply Framework Agreement were disclosed in the announcement and circular of the Company dated 30 October 2020 and 20 November 2020 respectively.

On 9 September 2021, the Company revised the annual caps under the 2020 Mutual Supply Framework Agreement and obtained the approval of the Independent Shareholders at the EGM held on 21 October 2021. Details of the revision were disclosed in the announcement and circular of the Company dated 9 September 2021 and 30 September 2021 respectively.

During the year ended 31 December 2022, the amount paid by the Group for the provision of raw materials, products and services provided by the Retained Group amounted to US$459,248,000, and the revenue from the provision of raw materials, products and services to the Retained Group amounted to US$94,715,000, both of which are below the annual caps of US$656,018,000 and US$213,159,000, respectively.

5. **Huachin Copper Supply Framework Agreement**

On 13 October 2020, the Company and Huachin entered into the Huachin Copper Supply Framework Agreement ("2020 Huachin Copper Supply Framework Agreement"), pursuant to which the Company agreed to sell, or procure its subsidiaries to sell, Copper Products to Huachin Group. The term of the 2020 Huachin Copper Supply Framework Agreement commences on 13 October 2020, and remains valid until 31 December 2020. Details of the 2020 Huachin Copper Supply Framework Agreement were disclosed in the announcement of the Company dated 13 October 2020.

On 30 October 2020, the Company and Huachin entered into the Huachin Copper Supply Framework Agreement ("2020 Huachin Copper Supply Framework Agreement"), for a term of three years from 1 January 2021 to 31 December 2023, pursuant to which the Company agreed to sell, or procure its subsidiaries to sell, Copper Products to Huachin Group. Details of the 2020 Huachin Copper Supply Framework Agreement were disclosed in the announcement of the Company dated 30 October 2020.

On 9 September 2021, the Company revised the annual caps under the 2020 Huachin Copper Supply Framework Agreement. Details of the revision were disclosed in the announcement of the Company dated 9 September 2021.

During the year ended 31 December 2022, the revenue and gains from the sale of copper products (including loss on change in fair value) to Huachin International Trading Limited amounted to US$38,365,000, which is below the annual cap amount of US$153,000,000.

Huachin is wholly-owned by an associate of Mr. Siu Kam Ng, and Mr. Siu Kam Ng indirectly owns 32.5% and 35% equity interests in Huachin Leach and CNMC Huachin Mabende, respectively. Therefore, Mr. Siu Kam Ng is a connected person of the Company at the subsidiary level under the Listing Rules.

6. **Properties Leasing Framework Agreement**

On 18 April 2017, the Company entered into the Properties Leasing Framework Agreement ("2017 Properties Leasing Framework Agreement") with CNMC for a term of three years from 1 January 2018 to 31 December 2020, pursuant to which CNMC has agreed to lease the Leased Properties to the Group for general business and ancillary purposes. Details of the 2017 Properties Leasing Framework Agreement were disclosed in the announcement of the Company dated 18 April 2017.

On 30 October 2020, the Company entered into the Properties Leasing Framework Agreement ("2020 Properties Leasing Framework Agreement") with CNMC for a term of three years from 1 January 2021 to 31 December 2023, pursuant to which CNMC has agreed to lease the Leased Properties to the Group for general business and ancillary purposes. Details of the 2020 Properties Leasing Framework Agreement were disclosed in the announcement of the Company dated 30 October 2020.

During the year ended 31 December 2022, the total property rentals paid amounted to US$5,797,000, which is below the annual cap amount of US$9,530,000.

7. **Huachin Leach Ore Processing Agreement**

On 29 April 2022, Huachin Leach entered into the Huachin Leach Ore Processing Agreement ("Huachin Leach Ore Processing Agreement") with GCM in respect of ore processing for a term from 29 April 2022 to 28 April 2023. Pursuant to the Huachin Leach Ore Processing Agreement, Huachin Leach shall provide ore processing service to GCM with the ores provided by GCM that are mined from the Kamatanda and Kamfundwa areas of the DRC, and GCM shall pay processing fees to Huachin Leach accordingly. Details of the Huachin Leach Ore Processing Agreement were disclosed in the announcement of the Company on 29 April 2022.

During the year ended 31 December 2022, GCM has paid US$3,558,000 Huachin Leach as processing fees. Pursuant to the Huachin Leach Ore Processing Agreement, the annual cap for the transactions contemplated under the Huachin Leach Ore Processing Agreement for the year from 29 April 2022 to 28 April 2023 is US$75,600,000.

Huachin Leach is a subsidiary of the Company. GCM holds 45% shares in Kambove Mining, a subsidiary of the Company, and is therefore a connected person of the Company at the subsidiary level under Chapter 14A of the Listing Rules.

8. **Huachin Cobalt Products Supply Framework Agreement**

On 4 November 2022, the Company and Huachin entered into the Huachin Cobalt Products Supply Framework Agreement ("Huachin Cobalt Products Supply Framework Agreement") for a term from 4 November 2022 to 31 December 2023, in respect of the supply of cobalt products, pursuant to which the Company agreed to sell, or procure its subsidiaries to sell, cobalt products to Huachin Group. Details of the Huachin Cobalt Products Supply Framework Agreement were disclosed in the announcement of the Company on 4 November 2022.

During the year ended 31 December 2022, the Company did not sell nor procure its subsidiaries to sell any cobalt products to Huachin Group. The annual cap for the same period is US$10,800,000.

Huachin is wholly-owned by an associate of Mr. Siu Kam Ng, and Mr. Siu Kam Ng indirectly owns 32.5% and 35% equity interests in Huachin Leach and CNMC Huachin Mabende, respectively. Therefore, Mr. Siu Kam Ng is a connected person of the Company at the subsidiary level under the Listing Rules. Therefore, Huachin, being an associate of Mr. Siu Kam NG, is also a connected person of the Company at the subsidiary level under the Listing Rules. Accordingly, the transactions contemplated under the Huachin Cobalt Products Supply Framework Agreement constitute continuing connected transactions of the Company under Chapter 14A of the Listing Rules.

9. **Continuing Connected Transactions under Rule 14A.60 of the Listing Rules**

As at 30 March 2022, the Group and La Generale des Carrieres et des Mines SA ("GCM") have signed a series of agreements on mining rights, mine development and related assistance services (collectively, the "Transaction Agreements"), including:

(1) CNMC Huachin Mabende Mining Rights Agreement

CNMC Huachin Mabende agrees to pay a royalty fee calculated on the basis of 2.5% of the annual turnover from the development of this mine to GCM.

(2) CNMC Huachin Leach Mining Rights Agreement

CNMC Huachin Leach agrees to pay a royalty fee calculated on the basis of 2.5% of the annual turnover from the development of this mine to GCM.

(3) Kambove Joint Venture Agreement and its Supplemental Agreements

In consideration for the ore consumption in the Kambove Mine, Kambove Mining agreed to pay GCM a royalty fee calculated on the basis of 2.5% of the total turnover of Kambove Mining in each financial year.

(4) Kambove Mining Service Agreement

Pursuant to the Kambove Mining Service Agreement, Kambove Mining shall annually pay the following fees to GCM: (i) a fixed annual fee of US$2,000,000; and (ii) a supplementary annual fee of US$1,000,000. The supplementary annual fee will be only applicable to the period when the average price of copper per tonne is above US$6,200 at the London Metal Exchange. During the year ended 31 December 2022, the amount of annual fees that Kambove Mining has paid to GCM for provision of general assistance and consulting services required for Kambove Mining to carry out daily operating activities was US$3,000,000.

Details of the Transaction Agreements were disclosed in the announcement of the Company on 30 March 2022.

At 30 March 2022, GCM was a substantial shareholder of Kambove Mining. The related applicable percentage ratios of Kambove Mining as defined under Rule 14A.09 of the Listing Rules didn't exceed 5% for the financial year ended 31 December 2020 and didn't exceed 10% for each of the three consecutive financial years ended 31 December 2020. Therefore, Kambove Mining was an insignificant subsidiary of the Company under Rule 14A.09(1) of the Listing Rules, pursuant to which, GCM was not a connected person of the Company under Chapter 14A of the Listing Rules. Based on the annual results announcement for the financial year ended 31 December 2021 published by the Company on 30 March 2022, the related applicable percentage ratios of Kambove Mining as defined under Rule 14A.09 of the Listing Rules exceeded 5% for the financial year ended 31 December 2021, pursuant to which, Kambove Mining was no longer an insignificant subsidiary of the Company under Rule 14A.09(1) of the Listing Rules, and therefore, GCM has become a connected person of the Company at the subsidiary level under the Listing Rules. Considering GCM has become a connected person of the Company at the subsidiary level under Chapter 14A of the Listing Rules, the continuing transactions proposed under the Transaction Agreements will constitute the continuing connected transactions of the Company under Chapter 14A of the Listing Rules.

Details of related party transactions of the Company for the year ended 31 December 2022 are set out in note 35 to the consolidated financial statements. Save for the related party transactions as set out in respect of remuneration of key management personnel, all the related party transactions set out in note 35 constitute connected transactions under Chapter 14A of the Listing Rules. The Company confirms that all such related party transactions complied with the applicable requirements under Chapter 14A of the Listing Rules.

The independent non-executive Directors have reviewed the nature and process of the business transactions, discussed the pricing policies of those transactions, and have confirmed that these continuing connected transactions of the Group have been entered into: (i) in the ordinary and usual course of business of the Group; (ii) on normal commercial terms; and (iii) in accordance with the relevant agreements governing them on terms that are fair and reasonable and in the interests of the Shareholders of the Company as a whole.

The Company has designated the Compliance Committee to continuously monitor the continuing connected transactions with the abovementioned connected persons. The Compliance Committee continuously traces and regularly monitors the progress of the continuing connected transactions and reports to management of the Company. The Compliance Committee reviews the continuing connected transactions with the finance department to ensure that annual caps are not exceeded. The heads of different departments of the Company will also be informed on a periodic basis in relation to the terms and pricing policies of the continuing connected transactions. The Compliance Committee will communicate with the Audit Committee, management and the Board of Directors, monthly or as needed, to report the progress of the continuing connected transactions, and request for approval of new changes of existing transaction terms. The Audit Committee and the Compliance Committee have also assigned the independent internal audit team the task to ensure that the Company's internal control measures in respect of the continuing connected transactions remain effective and complete. With these measures, the independent non-executive Directors could therefore assess and give the confirmations in the preceding paragraph.

The Company's auditor has been engaged to report on the continuing connected transactions of the Group in accordance with Hong Kong Standard on Assurance Engagements 3000 "Assurance Engagements Other Than Audits or Reviews of Historical Financial Information" and with reference to Practice Note 740 "Auditor's Letter on Continuing Connected Transactions under the Hong Kong Listing Rules" issued by the Hong Kong Institute of Certified Public Accountants. The auditor has issued its letter containing its conclusions, in respect of the above-mentioned continuing connected transactions disclosed by the Company in this annual report in accordance with Rule 14A.56 of the Listing Rules.

In respect of the continuing connected transactions disclosed (the "Disclosed Continuing Connected Transactions"), the Company's auditor confirmed that:

a. nothing has come to their attention that causes them to believe that the Disclosed Continuing Connected Transactions have not been approved by the Company's board of directors;

b. for transactions involving the provision of goods or services by the Group, nothing has come to their attention that causes them to believe that the transactions were not, in all material respects, in accordance with the pricing policies of the Group;

c. nothing has come to their attention that causes them to believe that the transactions were not entered into, in all material respects, in accordance with the relevant agreements governing such transactions;

d. with respect to the aggregate amount of each of the continuing connected transactions set out in the letter, nothing has come to their attention that causes them to believe that the Disclosed Continuing Connected Transactions have exceeded the annual cap disclosed in the announcements of the Company dated 18 April 2017, 23 April 2018, 27 April 2020, 13 October 2020, 30 October 2020, 9 September 2021, 28 October 2021, 12 November 2021, 30 March 2022, 29 April 2022 and 4 November 2022 made by the Company in respect of each of the Disclosed Continuing Connected Transactions.

A copy of the auditor's letter has been provided by the Company to the Hong Kong Stock Exchange.

NON-COMPETITION UNDERTAKING

As disclosed in the Prospectus, the independent non-executive Directors will review, on an annual basis, the compliance by CNMC and its associates with the Non-Competition Undertaking under the Deed of Non-Competition Undertaking, including whether to pursue any business opportunities which may be referred or offered to the Company by the Retained Group. The Company has received an annual confirmation from CNMC in respect of its compliance with the Non-Competition Undertaking. The independent non-executive Directors of the Company have reviewed the status of compliance of the Non-Competition Undertaking for the year ended 31 December 2022 and confirmed that all the undertakings under the Deed of Non-Competition Undertaking have been complied with by CNMC.

COMPLIANCE WITH PROVISIONS OF THE CORPORATE GOVERNANCE CODE

Mr. Jinjun Zhang was appointed as the Chairman of the Board on 8 January 2021, and continued to serve as the President of the Company ("President") until his resignation of the President on 4 August 2022. After Mr. Jinjun Zhang's resignation of the President, Jinping Ma, the vice president of the Company, has temporarily performed the duties of the President. Save as that Mr. Jinjun Zhang served as the Chairman and President of the Company with effect from 8 January 2021 to 4 August 2022 which was at variance with code provision C.2.1 of the CG Code (as defined below), the Company had complied with all the code provisions as set out in the Corporate Governance Code ("CG Code") contained in Appendix 14 of the Listing Rules during the year ended 31 December 2022.

The Board believes that the balance of power and authority is adequately ensured by the operation of the Board, which comprises experienced talents with a sufficient number of Directors being independent non-executive Directors (the majority of Board members are independent non-executive Directors), and therefore, the performance of the roles of the Chairman of the Board and the President of the Company concurrently by Mr. Jinjun Zhang will not impair the balance of power and authority between the Board and the management of the Company and the deviation from code provision C.2.1 of the CG Code is appropriate in such circumstance. As disclosed above, the roles of the Chairman and the President of the Company have been performed by different persons since Mr. Jinjun Zhang has resigned the President on 4 August 2022.

SUFFICIENCY OF PUBLIC FLOATING

Based on the information that is publicly available to the Company and as far as the Directors are aware, the Company has maintained at least 25% of public float as at the date of this annual report.

AUDIT COMMITTEE

The Company has an audit committee which was established with written terms of reference in compliance with Rule 3.22 of the Listing Rules and paragraph D.3 of the CG Code of the Listing Rules. The primary duties of the Audit Committee are to supervise the financial reporting process and internal control and risk management systems of the Group. As at the date of this report, the Audit Committee consists of three members, being Mr . Jingwei Liu (independent non - executive Director) , Mr . Yaoyu Tan (non - executive Director) and Mr . Huanfei Guan (independent non - executive Director) . The chairman of the Audit Committee is Mr. Jingwei Liu. The Group's financial statements for the year ended 31 December 2022 have been reviewed by the Audit Committee, who was of the opinion that such statements complied with the applicable accounting standards, the Listing Rules and legal requirements, and that adequate disclosures had been made.

Approved on behalf of the Board of Directors
He Yang
Chairman

30 March 2023

INDEPENDENT AUDITOR'S REPORT

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To the members of China Nonferrous Mining Corporation Limited
(Incorporated in Hong Kong with limited liability)

Opinion

We have audited the consolidated financial statements of China Nonferrous Mining Corporation Limited (the "Company") and its subsidiaries (the "Group") set out on pages 161 to 258, which comprise the consolidated statement of financial position as at 31 December 2022, and the consolidated statement of profit or loss and other comprehensive income, the consolidated statement of changes in equity and the consolidated statement of cash flows for the year then ended, and notes to the consolidated financial statements, including a summary of significant accounting policies.

In our opinion, the consolidated financial statements give a true and fair view of the consolidated financial position of the Group as at 31 December 2022, and of its consolidated financial performance and its consolidated cash flows for the year then ended in accordance with Hong Kong Financial Reporting Standards ("HKFRSs") issued by the Hong Kong Institute of Certified Public Accountants ("HKICPA") and have been properly prepared in compliance with the Hong Kong Companies Ordinance.

Basis for opinion

We conducted our audit in accordance with Hong Kong Standards on Auditing ("HKSAs") issued by the HKICPA. Our responsibilities under those standards are further described in the *Auditor's responsibilities for the audit of the consolidated financial statements* section of our report. We are independent of the Group in accordance with the HKICPA's *Code of Ethics for Professional Accountants* (the "Code"), and we have fulfilled our other ethical responsibilities in accordance with the Code. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Key audit matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements of the current period. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters. For each matter below, our description of how our audit addressed the matter is provided in that context.

We have fulfilled the responsibilities described in the *Auditor's responsibilities for the audit of the consolidated financial statements* section of our report, including in relation to these matters. Accordingly, our audit included the performance of procedures designed to respond to our assessment of the risks of material misstatement of the consolidated financial statements. The results of our audit procedures, including the procedures performed to address the matters below, provide the basis for our audit opinion on the accompanying consolidated financial statements.

Key audit matters (continued)

Key audit matter	How our audit addressed the key audit matter

Impairment assessment on property, plant and equipment of NFC Africa Mining PLC ("NFCA")

As at 31 December 2022, the carrying amount of property, plant and equipment("PPE") of NFCA, a subsidiary of the Company, was US$753,281,000, which was material to the consolidated financial statements.

As at 31 December 2022, owing to increasing copper price above management's expectation set out in prior years, management identified an indicator that the impairment loss recognised in prior years for NFCA's PPE may have decreased.

Management performed an impairment assessment on NFCA's PPE by determining the recoverable amounts of the cash-generating unit ("CGU") to which the PPE were allocated. The calculation of recoverable amount of the CGU to which NFCA's PPE were allocated involved significant management estimates, including mining plans, future copper prices, production cost and discount rates applied to forecasted future cash flows, and any changes in these estimates may have a significant impact on the Group's consolidated financial statements.

According to management's impairment assessment on the CGU, no impairment loss was reversed for the year ended 31 December 2022.

The Group's disclosures about the impairment assessment on property, plant and equipment of NFCA are included in Note 2.4 Significant accounting policies, Note 3 Significant accounting judgements and estimates and Note 14 Property, plant and equipment to the consolidated financial statements.

We performed audit procedures as below:

(i) understood and evaluated the key controls over the impairment assessment of PPE;

(ii) understood and evaluated management assessment of impairment indicators;

(iii) reviewed the underlying data used by the management;

(iv) tested the arithmetic accuracy of the impairment assessment;

(v) evaluated the significant assumptions used in the calculations, including mining plans, future copper prices and production cost used in the cash flow projections; and analysed the history of management's estimates;

(vi) involved our valuation specialist to assist us in assessing the reasonableness of valuation methodologies and management's estimate of discount rate;

(vii) assessed the adequacy of the Group's relevant disclosures included in the consolidated financial statements.

Other information included in the Annual Report

The directors of the Company are responsible for the other information. The other information comprises the information included in the Annual Report, other than the consolidated financial statements and our auditor's report thereon.

Our opinion on the consolidated financial statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the consolidated financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the consolidated financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Responsibilities of directors for the consolidated financial statements

The directors of the Company are responsible for the preparation of the consolidated financial statements that give a true and fair view in accordance with HKFRSs issued by the HKICPA and the Hong Kong Companies Ordinance, and for such internal control as the directors determine is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, the directors are responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the directors of the Company either intend to liquidate the Group or to cease operations or have no realistic alternative but to do so.

The directors of the Company are assisted by the Audit Committee in discharging their responsibilities for overseeing the Group's financial reporting process.

Auditor's responsibilities for the audit of the consolidated financial statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Our report is made solely to you, as a body, in accordance with section 405 of the Hong Kong Companies Ordinance, and for no other purpose. We do not assume responsibility towards or accept liability to any other person for the contents of this report.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with HKSAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

Auditor's responsibilities for the audit of the consolidated financial statements (continued)

As part of an audit in accordance with HKSAs, we exercise professional judgment and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.

- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the directors.

- Conclude on the appropriateness of the directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.

- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with the Audit Committee regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

Auditor's responsibilities for the audit of the consolidated financial statements (continued)

We also provide the Audit Committee with a statement that we have complied with relevant ethical requirements regarding independence and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, actions taken to eliminate threats or safeguards applied.

From the matters communicated with the Audit Committee, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

The engagement partner on the audit resulting in the independent auditor's report is Mr. Bennett S.H. Wai.

Ernst & Young
Certified Public Accountants
Hong Kong
30 March 2023

CONSOLIDATED STATEMENT OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME

Year ended 31 December 2022

	NOTES	**2022** ***US$'000***	2021 *US$'000*
Revenue from contracts with customers	4, 5	**4,094,716**	4,050,588
Cost of sales		**(3,287,495)**	(2,965,553)
Gross profit		**807,221**	1,085,035
Other income	6	**11,912**	9,656
Other gains and losses	7	**(18,697)**	(35,743)
Distribution and selling expenses		**(39,763)**	(82,313)
Administrative expenses		**(167,445)**	(122,902)
Other expenses		**(6,802)**	(9,381)
Finance costs	8	**(33,920)**	(37,316)
Profit before tax		**552,506**	807,036
Income tax expense	9	**(170,377)**	(291,641)
Profit and total comprehensive income for the year	10	**382,129**	515,395
Profit and total comprehensive income attributable to:			
Owners of the Company		**263,694**	357,121
Non-controlling interests		**118,435**	158,274
		382,129	515,395
Earnings per share			
– Basic and diluted *(US cents per share)*	13	**7.05**	9.78
– Basic and diluted *(equivalent to approximately HK$ per share)*	13	**0.55**	0.76

CONSOLIDATED STATEMENT OF FINANCIAL POSITION

31 December 2022

	NOTES	**2022** **US$'000**	2021 US$'000
ASSETS			
Non-current assets			
Property, plant and equipment	14	**1,591,299**	1,697,104
Right-of-use assets	15	**5,543**	9,930
Mining rights	16	**115,062**	130,216
Restricted bank balances	20	**1,505**	1,505
Deferred tax assets	30	**8,643**	13,102
Prepayments and other receivables	19	**52,886**	68,283
		1,774,938	1,920,140
Current assets			
Inventories	17	**820,069**	848,301
Trade receivables at amortised cost	18	**39,897**	25,863
Trade receivables at fair value through profit or loss ("FVTPL")	18	**368,669**	529,904
Prepayments and other receivables	19	**250,229**	229,784
Restricted bank balances	20	**4,291**	3,246
Time deposit	20	**30,000**	–
Bank balances and cash	20	**732,923**	606,746
		2,246,078	2,243,844
Total assets		**4,021,016**	4,163,984

31 December 2022

	NOTES	2022 US$'000	2021 US$'000
EQUITY AND LIABILITIES			
Capital and reserves			
Share capital	27	**740,119**	740,119
Retained profits		**922,927**	802,083
Equity attributable to owners of the Company		**1,663,046**	1,542,202
Non-controlling interests		**669,890**	629,682
Total equity		**2,332,936**	2,171,884
Non-current liabilities			
Deferred tax liabilities	30	**146,573**	141,373
Bank and other borrowings – due after one year	24	**351,500**	848,133
Lease liabilities	25	**299**	6,411
Provision for restoration, rehabilitation and environmental costs	29	**53,119**	37,400
Deferred income	28	**12,776**	13,940
		564,267	1,047,257
Current liabilities			
Trade payables at amortised cost	21	**265,172**	359,327
Trade payables designated at FVTPL	21	**289,691**	231,803
Other payables and accrued expenses	22	**224,738**	112,507
Income tax payable		**145,921**	196,669
Bank and other borrowings – due within one year	24	**177,609**	24,225
Lease liabilities	25	**7,596**	7,472
Contract liabilities	23	**1,742**	9,069
Financial liabilities designated at FVTPL	26	**11,344**	3,771
		1,123,813	944,843
Total liabilities		**1,688,080**	1,992,100
Total equity and liabilities		**4,021,016**	4,163,984

The consolidated financial statements on pages 161 to 258 were approved and authorised for issue by the board of directors on 30 March 2023 and are signed on its behalf by:

He Yang
DIRECTOR

Yaoyu Tan
DIRECTOR

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

Year ended 31 December 2022

	Equity attributable to owners of the Company				
	Share capital *US$'000* *(Note 27)*	**Retained profits** *US$'000*	**Total** *US$'000*	**Non-controlling interests** *US$'000*	**Total equity** *US$'000*
At 1 January 2021	613,233	498,531	1,111,764	547,178	1,658,942
Issue of shares	127,482	–	127,482	–	127,482
Share issuance cost	(596)	–	(596)	–	(596)
Profit and total comprehensive income for the year	–	357,121	357,121	158,274	515,395
Dividend declared by subsidiaries	–	–	–	(75,770)	(75,770)
Dividend declared by the Company *(Note 12)*	–	(53,569)	(53,569)	–	(53,569)
At 31 December 2021	740,119	802,083	1,542,202	629,682	2,171,884
Profit and total comprehensive income for the year	**–**	**263,694**	**263,694**	**118,435**	**382,129**
Dividend declared by subsidiaries	**–**	**–**	**–**	**(78,227)**	**(78,227)**
Dividend declared by the Company *(Note 12)*	**–**	**(142,850)**	**(142,850)**	**–**	**(142,850)**
At 31 December 2022	**740,119**	**922,927**	**1,663,046**	**669,890**	**2,332,936**

CONSOLIDATED STATEMENT OF CASH FLOWS

Year ended 31 December 2022

	NOTES	2022 US$'000	2021 US$'000
OPERATING ACTIVITIES			
Profit before tax		**552,506**	807,036
Adjustments for:			
Finance costs	8	**33,920**	37,316
Interest income	6	**(5,482)**	(262)
Depreciation of property, plant and equipment		**217,958**	198,926
Depreciation of right-of-use assets	10	**5,255**	4,965
Amortisation of mining rights		**14,085**	5,971
Impairment losses, net of reversal	7		
– input value added tax ("VAT") receivables		**21,551**	28,977
– financial assets under expected credit loss ("ECL") model		**(124)**	2,473
Losses on disposal of property, plant and equipment, net	7	**241**	6,745
(Gains)/losses arising on fair value change of financial assets/liabilities at FVTPL	10	**(20,585)**	3,981
Losses on impairment of property, plant and equipment	7	**5,676**	–
Write-down of inventories to net realisable value	10	**4,491**	2,120
Release of premium for electricity supply		**1,772**	1,274
Deferred income recognised	6	**(1,164)**	(2,405)
Foreign exchange losses/(gains)		**1,641**	(1,977)
Operating cash flows before movements in working capital		**831,741**	1,095,140
Decrease/(increase) in inventories		**41,351**	(178,994)
Increase in trade and other receivables and prepayments		**(51,986)**	(247,342)
Increase in trade and other payables and accrued expenses		**125,828**	2,522
Decrease in contract liabilities		**(7,327)**	(2,072)
Cash generated from operations		**939,607**	669,254
Income tax paid		**(157,085)**	(132,871)
NET CASH FROM OPERATING ACTIVITIES		**782,522**	536,383

CONSOLIDATED STATEMENT OF CASH FLOWS (CONTINUED)

Year ended 31 December 2022

	NOTES	2022 US$'000	2021 US$'000
INVESTING ACTIVITIES			
Interest received		**5,482**	262
Proceeds on disposal of property, plant and equipment		**–**	803
Purchases of property, plant and equipment		**(50,142)**	(204,501)
Placement of restricted bank balances		**(1,364)**	(3,613)
Increase in time deposit		**(30,000)**	–
Proceeds from release of restricted bank balances		**319**	2,656
NET CASH USED IN INVESTING ACTIVITIES		**(75,705)**	(204,393)
FINANCING ACTIVITIES			
Net proceeds from issue of shares		**–**	126,886
Dividends paid to shareholders of the Company		**(142,850)**	(68,270)
Dividends paid to non-controlling shareholders of subsidiaries		**(53,281)**	(53,269)
Interest paid		**(31,516)**	(34,602)
Repayments of bank and other borrowings		**(594,133)**	(718,847)
Repayments of lease liabilities		**(7,219)**	(6,948)
New bank and other borrowings		**250,000**	530,000
NET CASH USED IN FINANCING ACTIVITIES		**(578,999)**	(225,050)
NET INCREASE IN CASH AND CASH EQUIVALENTS		**127,818**	106,940
CASH AND CASH EQUIVALENTS AT BEGINNING OF YEAR		**606,746**	497,829
Effect of foreign exchange rate changes on the balance of cash held in foreign currencies		**(1,641)**	1,977
CASH AND CASH EQUIVALENTS AT END OF YEAR, represented by:			
Bank balances and cash	20	**732,923**	606,746

1. GENERAL INFORMATION

China Nonferrous Mining Corporation Limited (the "Company") was incorporated in Hong Kong on 18 July 2011 and its shares are listed on The Stock Exchange of Hong Kong Limited. In the opinion of the directors of the Company (the "Directors"), the Company's immediate holding company is China Nonferrous Mining Development Limited, a private company incorporated in the British Virgin Islands and the Company's ultimate holding company is China Nonferrous Metal Mining (Group) Co., Ltd. ("CNMC"), an enterprise established in the People's Republic of China (the "PRC") and wholly-owned by State-owned Assets Supervision and Administration Commission of the State Council. The registered office of the Company is located Unit 1303, 13/F, Austin Tower, 22-26 Austin Avenue, Tsimshatsui, Kowloon, Hong Kong, and its principal places of business are located at 32 Enos Chomba Road, Kitwe, the Republic of Zambia ("Zambia") and Bloc B-Luano City-Route Aeroport Commune Annexe Lubumbashi, the Democratic Republic of Congo ("DRC").

The principal activity of the Company is investment holding. The Company's subsidiaries are principally engaged in exploration, mining, ore processing, leaching, smelting and sale of copper cathodes, blister copper and copper anodes, and production and sale of cobalt hydroxide, sulphuric acid and liquid sulphur dioxide. The activities of the subsidiaries of the Company are set out in Note 37.

2.1 BASIS OF PREPARATION

These financial statements have been prepared in accordance with Hong Kong Financial Reporting Standards ("HKFRSs") (which include all Hong Kong Financial Reporting Standards, Hong Kong Accounting Standards ("HKASs") and Interpretations) issued by the Hong Kong Institute of Certified Public Accountants ("HKICPA"), accounting principles generally accepted in Hong Kong and the Hong Kong Companies Ordinance. They have been prepared under the historical cost convention, except for certain trade receivables, trade liabilities and copper future contracts accounted for as financial assets or liabilities at fair value through profit or loss which have been measured at fair value. The consolidated financial statements of the Company and its subsidiaries (collectively referred to as the "Group") are presented in United States dollars ("US$"), which is also the functional currency of the Company. And all values are rounded to the nearest thousand except when otherwise indicated.

2.1 BASIS OF PREPARATION (continued)

Basis of consolidation

The consolidated financial statements include the financial statements of the Company and its subsidiaries (collectively referred to as the "Group") for the year ended 31 December 2022. A subsidiary is an entity (including a structured entity), directly or indirectly, controlled by the Company. Control is achieved when the Group is exposed, or has rights, to variable returns from its involvement with the investee and has the ability to affect those returns through its power over the investee (i.e., existing rights that give the Group the current ability to direct the relevant activities of the investee).

Generally, there is a presumption that a majority of voting rights results in control. When the Company has, directly or indirectly, less than a majority of the voting or similar rights of an investee, the Group considers all relevant facts and circumstances in assessing whether it has power over an investee, including:

(a) the contractual arrangement with the other vote holders of the investee;

(b) rights arising from other contractual arrangements; and

(c) the Group's voting rights and potential voting rights.

The financial statements of the subsidiaries are prepared for the same reporting period as the Company, using consistent accounting policies. The results of subsidiaries are consolidated from the date on which the Group obtains control, and continue to be consolidated until the date that such control ceases.

Profit or loss and each component of other comprehensive income are attributed to the owners of the parent of the Group and to the non-controlling interests, even if this results in the non-controlling interests having a deficit balance. All intra-group assets and liabilities, equity, income, expenses and cash flows relating to transactions between members of the Group are eliminated in full on consolidation.

The Group reassesses whether or not it controls an investee if facts and circumstances indicate that there are changes to one or more of the three elements of control described above. A change in the ownership interest of a subsidiary, without a loss of control, is accounted for as an equity transaction.

If the Group loses control over a subsidiary, it derecognises (i) the assets (including goodwill) and liabilities of the subsidiary, (ii) the carrying amount of any non-controlling interest and (iii) the cumulative translation differences recorded in equity; and recognises (i) the fair value of the consideration received, (ii) the fair value of any investment retained and (iii) any resulting surplus or deficit in profit or loss. The Group's share of components previously recognised in other comprehensive income is reclassified to profit or loss or retained profits, as appropriate, on the same basis as would be required if the Group had directly disposed of the related assets or liabilities.

2.2 CHANGES IN ACCOUNTING POLICIES AND DISCLOSURES

The Group has adopted the following revised HKFRSs for the first time for the current year's financial statements.

Amendments to HKFRS 3	*Reference to the Conceptual Framework*
Amendments to HKFRS 16	*Property, Plant and Equipment: Proceeds before Intended Use*
Amendments to HKAS 37	*Onerous Contracts - Cost of Fulfilling a Contract*
Annual Improvements to HKFRSs 2018-2020	Amendments to HKFRS 1, HKFRS 9, Illustrative Examples accompanying HKFRS 16, and HKAS 41

The nature and the impact of the revised HKFRSs that are applicable to the Group are described below:

(a) Amendments to HKFRS 3 replace a reference to the previous *Framework for the Preparation and Presentation of Financial Statements* with a reference to the *Conceptual Framework for Financial Reporting* (the "Conceptual Framework") issued in June 2018 without significantly changing its requirements. The amendments also add to HKFRS 3 an exception to its recognition principle for an entity to refer to the Conceptual Framework to determine what constitutes an asset or a liability. The exception specifies that, for liabilities and contingent liabilities that would be within the scope of HKAS 37 or HK(IFRIC)-Int 21 if they were incurred separately rather than assumed in a business combination, an entity applying HKFRS 3 should refer to HKAS 37 or HK(IFRIC)-Int 21 respectively instead of the Conceptual Framework. Furthermore, the amendments clarify that contingent assets do not qualify for recognition at the acquisition date. The Group has applied the amendments prospectively to business combinations that occurred on or after 1 January 2022. As there were no business combinations during the year, the amendments did not have any impact on the financial position and performance of the Group.

(b) Amendments to HKAS 16 prohibit an entity from deducting from the cost of an item of property, plant and equipment any proceeds from selling items produced while bringing that asset to the location and condition necessary for it to be capable of operating in the manner intended by management. Instead, an entity recognises the proceeds from selling any such items, and the cost of those items as determined by HKAS 2 *Inventories*, in profit or loss. The Group has applied the amendments retrospectively to items of property, plant and equipment made available for use on or after 1 January 2021. Since there was no significant sale of items produced prior to the property, plant and equipment being available for use, therefore the amendments had no material impact on the financial position or performance of the Group.

2.2 CHANGES IN ACCOUNTING POLICIES AND DISCLOSURES (continued)

The nature and the impact of the revised HKFRSs that are applicable to the Group are described below: (continued)

(c) Amendments to HKAS 37 clarify that for the purpose of assessing whether a contract is onerous under HKAS 37, the cost of fulfilling the contract comprises the costs that relate directly to the contract. Costs that relate directly to a contract include both the incremental costs of fulfilling that contract (e.g., direct labour and materials) and an allocation of other costs that relate directly to fulfilling that contract (e.g., an allocation of the depreciation charge for an item of property, plant and equipment used in fulfilling the contract as well as contract management and supervision costs). General and administrative costs do not relate directly to a contract and are excluded unless they are explicitly chargeable to the counterparty under the contract. The Group has applied the amendments prospectively to contracts for which it has not yet fulfilled all its obligations at 1 January 2022 and no onerous contracts were identified. Therefore, the amendments did not have any impact on the financial position or performance of the Group.

(d) *Annual Improvements to HKFRSs 2018-2020* sets out amendments to HKFRS 1, HKFRS 9, Illustrative Examples accompanying HKFRS 16, and HKAS 41. Details of the amendment that is applicable to the Group are as follows:

- HKFRS 9 *Financial Instruments*: clarifies the fees that an entity includes when assessing whether the terms of a new or modified financial liability are substantially different from the terms of the original financial liability. These fees include only those paid or received between the borrower and the lender, including fees paid or received by either the borrower or lender on the other's behalf. The Group has applied the amendment prospectively from 1 January 2022. As there was no modification or exchange of the Group's financial liabilities during the year, the amendment did not have any impact on the financial position or performance of the Group.

2.3 ISSUED BUT NOT YET EFFECTIVE HONG KONG FINANCIAL REPORTING STANDARDS

The Group has not applied the following new and revised HKFRSs, that have been issued but are not yet effective, in these financial statements.

Amendments to HKFRS 10 and HKAS 28 (2011)	*Sale or Contribution of Assets between an Investor and its Associate or Joint Venture*[3]
Amendments to HKFRS 16	*Lease Liability in a Sale and Leaseback*[2]
HKFRS 17	*Insurance Contracts*[1]
Amendments to HKFRS 17	*Insurance Contracts*[1,5]
Amendment to HKFRS 17	*Initial Application of HKFRS 17 and HKFRS 9 – Comparative Information*[6]
Amendments to HKAS 1	*Classification of Liabilities as Current or Non-current* (the "2020 Amendments")[2,4]
Amendments to HKAS 1	*Non-current Liabilities with Covenants* (the "2022 Amendments")[2]
Amendments to HKAS 1 and HKFRS Practice Statement 2	*Disclosure of Accounting Policies*[1]
Amendments to HKAS 8	*Definition of Accounting Estimates*[1]
Amendments to HKAS 12	*Deferred Tax related to Assets and Liabilities arising from a Single Transaction*[1]

1 Effective for annual periods beginning on or after 1 January 2023

2 Effective for annual periods beginning on or after 1 January 2024

3 No mandatory effective date yet determined but available for adoption

4 As a consequence of the 2022 Amendments, the effective date of the 2020 Amendments was deferred to annual periods beginning on or after 1 January 2024. In addition, as a consequence of the 2020 Amendments and 2022 Amendments, Hong Kong Interpretation 5 *Presentation of Financial Statements - Classification by the Borrower of a Term Loan that Contains a Repayment on Demand Clause* was revised to align the corresponding wording with no change in conclusion

5 As a consequence of the amendments to HKFRS 17 issued in October 2020, HKFRS 4 was amended to extend the temporary exemption that permits insurers to apply HKAS 39 rather than HKFRS 9 for annual periods beginning before 1 January 2023

6 An entity that chooses to apply the transition option relating to the classification overlay set out in this amendment shall apply it on initial application of HKFRS 17

Further information about those HKFRSs that are expected to be applicable to the Group is described below.

2.3 ISSUED BUT NOT YET EFFECTIVE HONG KONG FINANCIAL REPORTING STANDARDS (continued)

Amendments to HKFRS 10 and HKAS 28 (2011) address an inconsistency between the requirements in HKFRS 10 and in HKAS 28 (2011) in dealing with the sale or contribution of assets between an investor and its associate or joint venture. The amendments require a full recognition of a gain or loss resulting from a downstream transaction when the sale or contribution of assets between an investor and its associate or joint venture constitutes a business. For a transaction involving assets that do not constitute a business, a gain or loss resulting from the transaction is recognised in the investor's profit or loss only to the extent of the unrelated investor's interest in that associate or joint venture. The amendments are to be applied prospectively. The previous mandatory effective date of amendments to HKFRS 10 and HKAS 28 (2011) was removed by the HKICPA in January 2016 and a new mandatory effective date will be determined after the completion of a broader review of accounting for associates and joint ventures. However, the amendments are available for adoption now.

Amendments to HKFRS 16 specify the requirements that a seller-lessee uses in measuring the lease liability arising in a sale and leaseback transaction to ensure the seller-lessee does not recognise any amount of the gain or loss that relates to the right of use it retains. The amendments are effective for annual periods beginning on or after 1 January 2024 and shall be applied retrospectively to sale and leaseback transactions entered into after the date of initial application of HKFRS 16 (i.e., 1 January 2019). Earlier application is permitted. The amendments are not expected to have any significant impact on the Group's financial statements.

Amendments to HKAS 1 *Classification of Liabilities as Current or Non-current* clarify the requirements for classifying liabilities as current or non-current, in particular the determination over whether an entity has a right to defer settlement of the liabilities for at least 12 months after the reporting period. Classification of a liability is unaffected by the likelihood that the entity will exercise its right to defer settlement of the liability. The amendments also clarify the situations that are considered a settlement of a liability. In 2022, the HKICPA issued the 2022 Amendments to further clarify that, among covenants of a liability arising from a loan arrangement, only those with which an entity must comply on or before the reporting date affect the classification of that liability as current or non-current. In addition, the 2022 Amendments require additional disclosures by an entity that classifies liabilities arising from loan arrangements as non-current when it has a right to defer settlement of those liabilities that are subject to the entity complying with future covenants within 12 months after the reporting period. The amendments are effective for annual periods beginning on or after 1 January 2024 and shall be applied retrospectively. Earlier application is permitted. An entity that applies the 2020 Amendments early is required to apply simultaneously the 2022 Amendments, and vice versa. The Group is currently assessing the impact of the amendments and whether existing loan agreements may require revision. Based on a preliminary assessment, the amendments are not expected to have any significant impact on the Group's financial statements.

2.3 ISSUED BUT NOT YET EFFECTIVE HONG KONG FINANCIAL REPORTING STANDARDS (continued)

Amendments to HKAS 1 *Disclosure of Accounting Policies* require entities to disclose their material accounting policy information rather than their significant accounting policies. Accounting policy information is material if, when considered together with other information included in an entity's financial statements, it can reasonably be expected to influence decisions that the primary users of general purpose financial statements make on the basis of those financial statements. Amendments to HKFRS Practice Statement 2 provide non-mandatory guidance on how to apply the concept of materiality to accounting policy disclosures. Amendments to HKAS 1 are effective for annual periods beginning on or after 1 January 2023 and earlier application is permitted. Since the guidance provided in the amendments to HKFRS Practice Statement 2 is non-mandatory, an effective date for these amendments is not necessary. The Group is currently revisiting the accounting policy disclosures to ensure consistency with the amendments.

Amendments to HKAS 8 clarify the distinction between changes in accounting estimates and changes in accounting policies. Accounting estimates are defined as monetary amounts in financial statements that are subject to measurement uncertainty. The amendments also clarify how entities use measurement techniques and inputs to develop accounting estimates. The amendments are effective for annual reporting periods beginning on or after 1 January 2023 and apply to changes in accounting policies and changes in accounting estimates that occur on or after the start of that period. Earlier application is permitted. The amendments are not expected to have any significant impact on the Group's financial statements.

Amendments to HKAS 12 narrow the scope of the initial recognition exception in HKAS 12 so that it no longer applies to transactions that give rise to equal taxable and deductible temporary differences, such as leases and decommissioning obligations. Therefore, entities are required to recognise a deferred tax asset (provided that sufficient taxable profit is available) and a deferred tax liability for temporary differences arising from these transactions. The amendments are effective for annual reporting periods beginning on or after 1 January 2023 and shall be applied to transactions related to leases and decommissioning obligations at the beginning of the earliest comparative period presented, with any cumulative effect recognised as an adjustment to the opening balance of retained profits or other component of equity as appropriate at that date. In addition, the amendments shall be applied prospectively to transactions other than leases and decommissioning obligations. Earlier application is permitted.

The Group has applied the initial recognition exception and did not recognise a deferred tax asset and a deferred tax liability for temporary differences for transactions related to leases and decommissioning obligations (Note 2.4). Upon initial application of these amendments, the Group will recognise deferred tax for all temporary differences related to leases at the beginning of the earliest comparative period presented. The Group will apply the amendments from 1 January 2023 and is currently assessing the impact of the amendments.

2.4 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Fair value measurement

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair value measurement is based on the presumption that the transaction to sell the asset or transfer the liability takes place either in the principal market for the asset or liability, or in the absence of a principal market, in the most advantageous market for the asset or liability. The principal or the most advantageous market must be accessible by the Group. The fair value of an asset or a liability is measured using the assumptions that market participants would use when pricing the asset or liability, assuming that market participants act in their economic best interest.

A fair value measurement of a non-financial asset takes into account a market participant's ability to generate economic benefits by using the asset in its highest and best use or by selling it to another market participant that would use the asset in its highest and best use.

The Group uses valuation techniques that are appropriate in the circumstances and for which sufficient data are available to measure fair value, maximising the use of relevant observable inputs and minimising the use of unobservable inputs.

All assets and liabilities for which fair value is measured or disclosed in the financial statements are categorised within the fair value hierarchy, described as follows, based on the lowest level input that is significant to the fair value measurement as a whole:

Level 1 – based on quoted prices (unadjusted) in active markets for identical assets or liabilities

Level 2 – based on valuation techniques for which the lowest level input that is significant to the fair value measurement is observable, either directly or indirectly

Level 3 – based on valuation techniques for which the lowest level input that is significant to the fair value measurement is unobservable

For assets and liabilities that are recognised in the financial statements on a recurring basis, the Group determines whether transfers have occurred between levels in the hierarchy by reassessing categorisation (based on the lowest level input that is significant to the fair value measurement as a whole) at the end of each reporting period.

2.4 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Related parties

A party is considered to be related to the Group if:

(a) the party is a person or a close member of that person's family and that person

- (i) has control or joint control over the Group;
- (ii) has significant influence over the Group; or
- (iii) is a member of the key management personnel of the Group or of a parent of the Group;

or

(b) the party is an entity where any of the following conditions applies:

- (i) the entity and the Group are members of the same group;
- (ii) one entity is an associate or joint venture of the other entity (or of a parent, subsidiary or fellow subsidiary of the other entity);
- (iii) the entity and the Group are joint ventures of the same third party;
- (iv) one entity is a joint venture of a third entity and the other entity is an associate of the third entity;
- (v) the entity is a post-employment benefit plan for the benefit of employees of either the Group or an entity related to the Group; (If the Group is itself such a plan) and the sponsoring employers of the post-employment benefit plan;
- (vi) the entity is controlled or jointly controlled by a person identified in (a);
- (vii) a person identified in (a)(i) has significant influence over the entity or is a member of the key management personnel of the entity (or of a parent of the entity); and
- (viii) the entity, or any member of a group of which it is a part, provides key management personnel services to the Group or to the parent of the Group.

Cash and cash equivalents

For the purpose of the consolidated statement of cash flows, cash and cash equivalents comprise cash on hand and demand deposits, and short term highly liquid investments that are readily convertible into known amounts of cash, are subject to an insignificant risk of changes in value, and have a short maturity of generally within three months when acquired, less bank overdrafts which are repayable on demand and form an integral part of the Group's cash management.

For the purpose of the consolidated statement of financial position, cash and cash equivalents comprise cash on hand and at banks, including term deposits, and assets similar in nature to cash, which are not restricted as to use.

2.4 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Revenue from contracts with customers

The Group recognises revenue when (or as) a performance obligation is satisfied, i.e., when "control" of the goods or services underlying the particular performance obligation is transferred to the customer.

A performance obligation represents a good or service (or a bundle of goods or services) that is distinct or a series of distinct goods or services that are substantially the same.

Control is transferred over time and revenue is recognised over time by reference to the progress towards complete satisfaction of the relevant performance obligation if one of the following criteria is met:

- the customer simultaneously receives and consumes the benefits provided by the Group's performance as the Group performs;
- the Group's performance creates and enhances an asset that the customer controls as the Group performs; or
- the Group's performance does not create an asset with an alternative use to the Group and the Group has an enforceable right to payment for performance completed to date.

Otherwise, revenue is recognised at a point in time when the customer obtains control of the distinct good or service.

A contract asset represents the Group's right to consideration in exchange for goods or services that the Group has transferred to a customer that is not yet unconditional. It is assessed for impairment in accordance with HKFRS 9 *Financial Instruments* ("HKFRS 9"). In contrast, a receivable represents the Group's unconditional right to consideration, i.e., only the passage of time is required before payment of that consideration is due.

A contract liability represents the Group's obligation to transfer goods or services to a customer for which the Group has received consideration (or an amount of consideration is due) from the customer.

A contract asset and a contract liability relating to the same contract are accounted for and presented on a net basis.

Sale of goods

Revenue from the sale of goods is recognised when control of the goods has transferred based on the terms of the sale contracts.

In most cases, the control of goods has transferred upon delivery when the goods have been shipped at the Group's premises. In some other cases, the control of goods has transferred upon delivery at specific destination ports.

2.4 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Revenue from contracts with customers (continued)

Sale of goods (continued)

The Group sells copper products under provisional pricing arrangements where final grades of copper, gold, silver and cobalt in copper products are agreed based on third-party examination and final prices are set at a specified date based on market prices. Revenues are recognised using forward prices for the expected date of final settlement. The period between revenue recognition and final settlement is within one to three months. The contractual cash flows of trade receivable vary depending on the market price at the date of final settlement, and do not represent solely payments of principal and interest on the principal amount outstanding. Consequently, these trade receivables resulted from provisionally priced contracts are measured at FVTPL.

Services

Revenue from the rendering of copper products processing service is recognised when control of the completed processing copper products has transferred based on the terms of the service contracts.

Contract costs

Costs to fulfil a contract

Other than the costs which are capitalised as inventories and property, plant and equipment, costs incurred to fulfil a contract with a customer are capitalised as an asset if all of the following criteria are met:

(a) the costs relate directly to a contract or to an anticipated contract that the Group can specifically identify;

(b) the costs generate or enhance resources of the Group that will be used in satisfying (or in continuing to satisfy) performance obligations in the future; and

(c) the costs are expected to be recovered.

The asset so recognised is subsequently amortised to profit or loss on a systematic basis that is consistent with the transfer to the customer of the services to which the assets relate. The asset is subject to impairment review.

Dividend and interest income

Dividend income from investments is recognised when the shareholders' right to receive payment has been established.

Interest income is accrued on a timely basis, by reference to the principal outstanding and at the effective interest rate applicable, which is the rate that exactly discounts estimated future cash receipts through the expected life of the financial asset to that asset's net carrying amount on initial recognition.

2.4 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Leases

Definition of a lease

A contract is, or contains, a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration.

For contracts entered into or modified on or after the date of initial application of HKRS16 or arising from business combinations, the Group assesses whether a contract is or contains a lease based on the definition under HKFRS 16 at inception, modification date or acquisition date, as appropriate. Such contract will not be reassessed unless the terms and conditions of the contract are subsequently changed.

The Group as a lessee

Allocation of consideration to components of a contract

For a contract that contains a lease component and one or more additional lease or non-lease components, the Group allocates the consideration in the contract to each lease component on the basis of the relative stand-alone price of the lease component and the aggregate stand-alone price of the non-lease components.

The Group applies a practical expedient under which the Group does not to separate non-lease components from the lease component, and instead accounts for the lease component and any associated non-lease components as a single lease component.

Short-term leases

The Group applies the short-term lease recognition exemption to leases of buildings that have a lease term of 12 months or less from the commencement date and do not contain a purchase option. Lease payments on short-term leases are recognised as expense on a straight-line basis or another systematic basis over the lease term.

Right-of-use assets

The cost of right-of-use asset includes:

- the amount of the initial measurement of the lease liability;
- any lease payments made at or before the commencement date, less any lease incentives received; and
- any initial direct costs incurred by the Group.

Right-of-use assets are measured at cost, less any accumulated depreciation and impairment losses, and adjusted for any remeasurement of lease liabilities.

2.4 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Leases (continued)

The Group as a lessee (continued)

Right-of-use assets (continued)

Right-of-use assets are depreciated on a straight-line basis over the shorter of its estimated useful life and the lease term.

The Group presents right-of-use assets as a separate line item on the consolidated statement of financial position.

Lease liabilities

At the commencement date of a lease, the Group recognises and measures the lease liability at the present value of lease payments that are unpaid at that date. In calculating the present value of lease payments, the Group uses the incremental borrowing rate at the lease commencement date if the interest rate implicit in the lease is not readily determinable.

The lease payments include:

- fixed payments (including in-substance fixed payments) less any lease incentives receivable; and
- variable lease payments that depend on an index or a rate, initially measured using the index or rate as at the commencement date; and
- Variable lease payments that reflect changes in market rental rates are initially measured using the market rental rates as at the commencement date.

After the commencement date, lease liabilities are adjusted by interest accretion and lease payments.

The Group remeasures lease liabilities (and makes a corresponding adjustment to the related right-of-use assets) whenever:

- the lease term has changed or there is a change in the assessment of exercise of a purchase option, in which case the related lease liability is remeasured by discounting the revised lease payments using a revised discount rate at the date of reassessment.
- the lease payments have changed due to changes in market rental rates following a market rent review/expected payment under a guaranteed residual value, in which cases the related lease liability is remeasured by discounting the revised lease payments using the initial discount rate.

The Group presents lease liabilities as a separate line item on the consolidated statement of financial position.

2.4 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Leases (continued)

The Group as a lessee (continued)

Lease modifications

The Group accounts for a lease modification as a separate lease if:

- the modification increases the scope of the lease by adding the right to use one or more underlying assets; and
- the consideration for the leases increases by an amount commensurate with the stand-alone price for the increase in scope and any appropriate adjustments to that stand-alone price to reflect the circumstances of the particular contract.

For a lease modification that is not accounted for as a separate lease, the Group remeasures the lease liability based on the lease term of the modified lease by discounting the revised lease payments using a revised discount rate at the effective date of the modification.

The Group accounts for the remeasurement of lease liabilities by making corresponding adjustments to the relevant right-of-use assets. When the modified contract contains a lease component and one or more additional lease or non-lease components, the Group allocates the consideration in the modified contract to each lease component on the basis of the relative stand-alone price of the lease component and the aggregate stand-alone price of the non-lease components.

The Group as a lessor

Classification and measurement of leases

Leases for which the Group is a lessor are classified as finance or operating leases. Whenever the terms of the lease transfer substantially all the risks and rewards incidental to ownership of an underlying asset to the lessee, the contract is classified as a finance lease. All other leases are classified as operating leases.

Amounts due from lessees under finance leases are recognised as receivables at commencement date at amounts equal to net investments in the leases, measured using the interest rate implicit in the respective leases. Interest income is allocated to accounting periods so as to reflect a constant periodic rate of return on the Group's net investment outstanding in respect of the leases.

Rental income from operating leases is recognised in profit or loss on a straight-line basis over the term of the relevant lease. Initial direct costs incurred in negotiating and arranging an operating lease are added to the carrying amount of the leased asset, and such costs are recognised as an expense on a straight-line basis over the lease term.

2.4 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Foreign currencies

The functional currency of the companies comprising the Group is US$. In preparing the financial statements of each individual group entity, transactions in currencies other than US$ (foreign currencies) are recognised at the rates of exchange prevailing on the dates of the transactions. At the end of the reporting period, monetary items denominated in foreign currencies are retranslated at the rates prevailing at that date. Non-monetary items that are measured in terms of historical cost in a foreign currency are not retranslated.

Exchange differences arising on the settlement of monetary items, and on the retranslation of monetary items, are recognised in profit or loss in the period in which they arise.

Borrowing costs

Borrowing costs directly attributable to the acquisition, construction or production of qualifying assets, which are assets that necessarily take a substantial period of time to get ready for their intended use or sale, are added to the cost of those assets until such time as the assets are substantially ready for their intended use or sale.

Any specific borrowing that remain outstanding after the related asset is ready for its intended use or sale is included in the general borrowing pool for calculation of capitalisation rate on general borrowings. Investment income earned on the temporary investment of specific borrowings pending their expenditure on qualifying assets is deducted from the borrowing costs eligible for capitalisation.

All other borrowing costs are recognised in profit or loss in the period in which they are incurred.

Government grants

Government grants are not recognised until there is reasonable assurance that the Group will comply with the conditions attaching to them and that the grants will be received.

Government grants are recognised in profit or loss on a systematic basis over the periods in which the Group recognises as expenses the related costs for which the grants are intended to compensate. Specifically, government grants whose primary condition is that the Group should purchase, construct or otherwise acquire non-current assets are recognised as deferred income in the consolidated statement of financial position and transferred to profit or loss on a systematic and rational basis over the useful lives of the related assets.

Government grants related to income that are receivable as compensation for expenses or losses already incurred or for the purpose of giving immediate financial support to the Group with no future related costs are recognised in profit or loss in the period in which they become receivable. Such grants are presented under “other income”.

2.4 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Employee benefits

Retirement benefit costs

Payments to defined contribution retirement benefit plans are recognised as an expense when employees have rendered service entitling them to the contributions.

The employees of the Group's subsidiaries in Zambia and DRC are members of the state-managed retirement benefit schemes operated by the Zambia government and DRC government, respectively. The subsidiaries are required to contribute a certain percentage of their payroll to the retirement benefit schemes to fund the benefits. Certain employees of the Group are members of the state-managed retirement benefit scheme operated by the PRC government and the Group contributes a certain percentage of their payroll to the retirement benefit scheme to fund the benefit.

Short-term employee benefits

Short-term employee benefits are recognised at the undiscounted amount of the benefits expected to be paid as and when employees rendered the services. All short-term employee benefits are recognised as an expense unless another HKFRS requires or permits the inclusion of the benefit in the cost of an asset.

A liability is recognised for benefits accruing to employees (such as wages and salaries, annual leave and sick leave) after deducting any amount already paid.

Taxation

Income tax expense represents the sum of the tax currently payable and deferred tax.

The tax currently payable is based on taxable profit for the year. Taxable profit differs from profit or loss before tax because of income or expense that are taxable or deductible in other years and items that are never taxable or deductible. The Group’s liability for current tax is calculated using tax rates that have been enacted or substantively enacted by the end of the reporting period.

2.4 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Taxation (continued)

Deferred tax is recognised on temporary differences between the carrying amounts of assets and liabilities in the consolidated financial statements and the corresponding tax bases used in the computation of taxable profit. Deferred tax liabilities are generally recognised for all taxable temporary differences. Deferred tax assets are generally recognised for all deductible temporary differences to the extent that it is probable that taxable profits will be available against which those deductible temporary differences can be utilised. Such deferred tax assets and liabilities are not recognised if the temporary difference arises from the initial recognition (other than in a business combination) of assets and liabilities in a transaction that affects neither the taxable profit nor the accounting profit.

Deferred tax liabilities are recognised for taxable temporary differences associated with investments in subsidiaries and associates, except where the Group is able to control the reversal of the temporary difference and it is probable that the temporary difference will not reverse in the foreseeable future. Deferred tax assets arising from deductible temporary differences associated with such investments and interests are only recognised to the extent that it is probable that there will be sufficient taxable profits against which to utilise the benefits of the temporary differences and they are expected to reverse in the foreseeable future.

The carrying amount of deferred tax assets is reviewed at the end of each reporting period and reduced to the extent that it is no longer probable that sufficient taxable profits will be available to allow all or part of the asset to be recovered.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the period in which the liability is settled or the asset is realised, based on tax rates (and tax laws) that have been enacted or substantively enacted by the end of the reporting period.

The measurement of deferred tax liabilities and assets reflects the tax consequences that would follow from the manner in which the Group expects, at the end of the reporting period, to recover or settle the carrying amount of its assets and liabilities.

For the purposes of measuring deferred tax for leasing transactions in which the Group recognises the right-of-use assets and the related lease liabilities, the Group first determines whether the tax deductions are attributable to the right-of-use assets or the lease liabilities.

2.4 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Taxation (continued)

For leasing transactions in which the tax deductions are attributable to the lease liabilities and provision for decommissioning and restoration in which the tax deductions are attributable to ultimate costs incurred, the Group applies HKAS 12 requirements to the assets and related liabilities separately. Temporary differences on initial recognition of the relevant assets and the related liabilities are not recognised due to application of the initial recognition exemption. Temporary differences arising from subsequent revision to the carrying amounts of the assets and the related liabilities, resulting from remeasurement of the liabilities and lease modifications, that are not subject to initial recognition exemption are recognised on the date of remeasurement or modification.

Deferred tax assets and liabilities are offset when there is a legally enforceable right to set off current tax assets against current tax liabilities and when they relate to income taxes levied to the same taxable entity by the same taxation authority.

Current and deferred tax are recognised in profit or loss, except when they relate to items that are recognised in other comprehensive income or directly in equity, in which case, the current and deferred tax are also recognised in other comprehensive income or directly in equity respectively. Where current tax or deferred tax arises from the initial accounting for a business combination, the tax effect is included in the accounting for the business combination.

In assessing any uncertainty over income tax treatments, the Group considers whether it is probable that the relevant tax authority will accept the uncertain tax treatment used, or proposed to be used by individual group entities in their income tax filings. If it is probable, the current and deferred taxes are determined consistently with the tax treatment in the income tax filings. If it is not probable that the relevant taxation authority will accept an uncertain tax treatment, the effect of each uncertainty is reflected by using either the most likely amount or the expected value.

Property, plant and equipment

Property, plant and equipment including buildings held for use in the production or supply of goods or services, or for administrative purpose (other than construction in progress as described below), are stated in the consolidated statement of financial position at cost, less subsequent accumulated depreciation and subsequent accumulated impairment losses, if any.

2.4 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Property, plant and equipment (continued)

Properties in the course of construction for production, supply or administrative purposes are carried at cost, less any recognised impairment loss. Costs include any costs directly attributable to bringing the asset to the location and condition necessary for it to be capable of operating in the manner intended by management and, for qualifying assets, borrowing costs capitalised in accordance with the Group's accounting policy. Depreciation of these assets, on the same basis as other property assets, commences when the assets are ready for their intended use.

Depreciation is recognised so as to write off the cost of assets other than construction in progress less their residual values over their estimated useful lives, using the straight-line method or the unit-of-production method.

Mining properties in the course of development or construction are included in construction in progress and are not depreciated. Capitalised mining properties costs are depreciated once commercial production commences, as described in mining properties below.

Depreciation for other property, plant and equipment (other than construction in progress) is calculated using the straight-line method to allocate their cost to their residual values over their estimated useful lives, as follows:

Land and buildings	10 to 30 years
Machinery and equipment	3 to 10 years
Motor vehicles	5 years

The estimated useful lives, residual values and depreciation method are reviewed at the end of each reporting period, with the effect of any changes in estimate accounted for on a prospective basis.

An item of property, plant and equipment is derecognised upon disposal or when no future economic benefits are expected to arise from the continued use of the asset. Any gain or loss arising on the disposal or retirement of an item of property, plant and equipment is determined as the difference between the sales proceeds and the carrying amount of the asset and is recognised in profit or loss.

Mining properties

The costs of mining properties, which include the costs of acquiring and developing mining properties, are firstly capitalised as property, plant and equipment under the heading of "Construction in progress" in the year in which they are incurred and then reclassified to the heading of "Mining properties" when they are ready for commercial production.

When a decision is taken that a mining property is viable for commercial production, all pre-production primary development expenditure other than land, buildings, plant and equipment is capitalised as part of the cost of the mining property until the mining property is capable of commercial production. From that point, capitalised mining properties costs are depreciated on a unit-of-production basis over the total estimated remaining commercial reserves of each property or a group of properties.

2.4 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Property, plant and equipment (continued)

Mining properties (continued)

Stripping costs incurred in the development of a mine (or pit) before the production commences are capitalised as part of the cost of constructing the mine (or pit) and subsequently amortised over the life of the mine (or pit) on a unit of production basis. Stripping costs and secondary development expenditure, mainly comprising costs on blasting, haulage and excavation incurred during the production stage of an ore body to the extent that the benefit from these activities is realised in the form of improved access ore, is recognised as a non-current asset ("Mining properties ") when certain criteria are met, whereas the costs of normal on-going operational stripping activities are accounted for in accordance with HKAS 2.

In circumstances where a mining property is abandoned, the cumulative capitalised costs relating to the property are written off in the period.

Commercial reserves are proved and probable reserves. Changes in the commercial reserves affecting unit of production calculations are dealt with prospectively over the revised remaining reserves.

Mining rights

The cost of mining rights either as an individual asset purchase or as part of a business combination is capitalised and represents the asset's fair value at the date of acquisition.

Subsequent to initial recognition, mining rights are reported at costs less accumulated amortisation and any accumulated impairment losses. The costs of mining rights are amortised or depreciated on a unit-of-production basis over the total estimated remaining commercial reserves of each mine.

A mining right is derecognised on disposal, or when no future economic benefits are expected from use or disposal. Gains and losses arising from derecognition of a mining right, measured as the difference between the net disposal proceeds and the carrying amount of the asset, are recognised in profit or loss when the asset is derecognised.

Impairment on property, plant and equipment, right-of-use assets and mining rights

At the end of each reporting period, the Group reviews the carrying amounts of its property, plant and equipment, right-of-use assets and mining rights to determine whether there is any indication that these assets have suffered an impairment loss. If any such indication exists, the recoverable amount of the relevant asset is estimated in order to determine the extent of the impairment loss (if any).

The recoverable amount of property, plant and equipment, right-of-use assets and mining rights are estimated individually. When it is not possible to estimate the recoverable amount individually, the Group estimates the recoverable amount of the cash-generating units ("CGUs") to which the assets belong.

2.4 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Impairment on property, plant and equipment, right-of-use assets and mining rights (continued)

Recoverable amount is the higher of fair value less costs of disposal and value in use. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset (or a CGU) for which the estimates of future cash flows have not been adjusted.

If the recoverable amount of an asset (or a CGU) is estimated to be less than its carrying amount, the carrying amount of the asset (or a CGU) is reduced to its recoverable amount. For corporate assets or portion of corporate assets which cannot be allocated on a reasonable and consistent basis to a CGU, the Group compares the carrying amount of a group of CGUs, including the carrying amounts of the corporate assets or portion of corporate assets allocated to that group of CGUs, with the recoverable amount of the group of CGUs. In allocating the impairment loss, the impairment loss is allocated to the assets on a pro-rata basis based on the carrying amount of each asset in the unit or the group of CGUs. The carrying amount of an asset is not reduced below the highest of its fair value less costs of disposal (if measurable), its value in use (if determinable) and zero. The amount of the impairment loss that would otherwise have been allocated to the asset is allocated pro rata to the other assets of the unit or the group of CGUs. An impairment loss is recognised immediately in profit or loss.

Where an impairment loss subsequently reverses, the carrying amount of the asset (or CGU or a group of CGUs) is increased to the revised estimate of its recoverable amount, but not to an amount exceeding the carrying amount that would have been determined had no impairment loss been recognised for the asset (or a CGU or a group of CGUs) in prior years. A reversal of an impairment loss is recognised immediately in profit or loss.

Inventories

Inventories are stated at the lower of cost and net realisable value. Costs of inventories are determined on a weighted average method. Net realisable value represents the estimated selling price for inventories less all estimated costs of completion and costs necessary to make the sale. Costs necessary to make the sale include incremental costs directly attributable to the sale and non-incremental costs which the Group must incur to make the sale.

Costs of inventories are determined on the following bases:

- Purchased copper concentrates and all other materials, including spare parts and consumables, are valued on weighted average basis.

- Finished products are valued at raw material cost plus costs of conversion, comprising labour costs and an attributable proportion of manufacturing overheads based on normal levels of activity.

Net realisable value represents the estimated selling price for inventories less all estimated costs of completion and costs necessary to make the sale.

2.4 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Environmental rehabilitation

An obligation to incur restoration, rehabilitation and environmental costs arises when environmental disturbance is caused by the development or ongoing production of a mine or production facilities. Costs arising from facility decommissioning and dismantling, removal or treatment of waste materials and site and land rehabilitation, discounted to net present value, are provided for and a corresponding amount is capitalised at the start of each project, as soon as the obligation to incur such costs arises. These costs are charged to profit or loss over the life of the operation through the depreciation of the asset and the unwinding of the discount on the provision. The cost estimates are reviewed periodically and are adjusted to reflect known developments which may have an impact on the cost estimates or life of operations. The cost of the related asset is adjusted for changes in the provision due to factors such as updated cost estimates, new disturbance and revisions to discount rates. The adjusted cost of the asset is depreciated prospectively over the life of the operation. The unwinding of the discount is shown as a finance cost in profit or loss.

Costs for restoration of subsequent site damage which is caused on an ongoing basis during production are provided for at their net present values and charged to profit or loss as extraction progresses. Where the costs of site restoration are not anticipated to be significant, they are expensed as incurred.

Financial instruments

Financial assets and financial liabilities are recognised when a group entity becomes a party to the contractual provisions of the instrument.

Financial assets and financial liabilities are initially measured at fair value except for trade receivables arising from contracts with customers which are initially measured in accordance with HKFRS 15 *Revenue from Contracts with Customers* ("HKFRS 15"). Transaction costs that are directly attributable to the acquisition or issue of financial assets and financial liabilities (other than financial assets and financial liabilities at FVTPL) are added to or deducted from the fair value of the financial assets or financial liabilities, as appropriate, on initial recognition. Transaction costs directly attributable to the acquisition of financial assets or financial liabilities at FVTPL are recognised immediately in profit or loss.

The effective interest method is a method of calculating the amortised cost of a financial asset or financial liability and of allocating interest income and interest expense over the relevant period. The effective interest rate is the rate that exactly discounts estimated future cash receipts and payments (including all fees and points paid or received that form an integral part of the effective interest rate, transaction costs and other premiums or discounts) through the expected life of the financial asset or financial liability, or a shorter period, where appropriate, to the net carrying amount on initial recognition.

2.4 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Financial instruments (continued)

Financial assets

Classification and subsequent measurement of financial assets

Financial assets that meet the following conditions are subsequently measured at amortised cost:

- the financial asset is held within a business model whose objective is to collect contractual cash flows; and
- the contractual terms give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

Financial assets that meet the following conditions are subsequently measured at fair value to other comprehensive income ("FVTOCI"):

- the financial asset is held within a business model whose objective is achieved by both selling and collecting contractual cash flows; and
- the contractual terms give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

All other financial assets are subsequently measured at FVTPL, except that at initial recognition of a financial asset the Group may irrevocably elect to present subsequent changes in fair value of an equity investment in other comprehensive income if that equity investment is neither held for trading nor contingent consideration recognised by an acquirer in a business combination to which HKFRS 3 *Business Combinations* ("HKFRS 3") applies.

A financial asset is held for trading if:

- it has been acquired principally for the purpose of selling in the near term; or
- on initial recognition it is a part of a portfolio of identified financial instruments that the Group manages and has a recent actual pattern of short-term profit-taking; or
- it is a derivative that is not designated and effective as a hedging instrument.

In addition, the Group may irrevocably designate a financial asset that are required to be measured at the amortised cost or FVTOCI as measured at FVTPL if doing so eliminates or significantly reduces an accounting mismatch.

2.4 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Financial instruments (continued)

Financial assets (continued)

Classification and subsequent measurement of financial assets (continued)

(i) Amortised cost and interest income

Interest income is recognised using the effective interest method for financial assets measured subsequently at amortised cost. Interest income is calculated by applying the effective interest rate to the gross carrying amount for a financial asset except for financial assets that have subsequently become credit-impaired. For financial assets that have subsequently become credit-impaired, interest income is recognised by applying the effective interest rate to the amortised cost of the financial asset from the next reporting period. If the credit risk on the credit-impaired financial instrument improves so that the financial asset is no longer credit-impaired, interest income is recognised by applying the effective interest rate to the gross carrying amount of the financial asset from the beginning of the reporting period following the determination that the asset is no longer credit-impaired.

(ii) Financial assets at FVTPL

Financial assets that do not meet the criteria for being measured at amortised cost or FVTOCI or designated as FVTOCI are measured at FVTPL.

Trade receivables under provisional priced sales arrangements are measured at FVTPL. Considering that the contractual cash flows of trade receivables vary depending on the market price at the date of final settlement, and do not give rise to cash flows that are solely payments of principal and interest on the principal amount outstanding.

Financial assets at FVTPL are measured at fair value at the end of each reporting period, with any fair value gains or losses recognised in profit or loss. The net gain or loss recognised in profit or loss excludes any dividend or interest earned on the financial asset and is included in the “other gains and losses” line item.

2.4 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Financial instruments (continued)

Financial assets (continued)

Impairment of financial assets and other item subject to impairment assessment under HKFRS 9

The Group performs impairment assessment under expected credit loss ("ECL") model on financial assets (including trade receivables at amortised cost, other receivables, deposits in futures margin accounts, restricted bank balances, bank deposit and bank balances) and other item (finance lease receivables) which are subject to impairment assessment under HKFRS 9. The amount of ECL is updated at each reporting date to reflect changes in credit risk since initial recognition.

Lifetime ECL represents the ECL that will result from all possible default events over the expected life of the relevant instrument. In contrast, 12-month ECL ("12m ECL") represents the portion of lifetime ECL that is expected to result from default events that are possible within 12 months after the reporting date. Assessments are done based on the Group's historical credit loss experience, adjusted for factors that are specific to the debtors, general economic conditions and an assessment of both the current conditions at the reporting date as well as the forecast of future conditions.

The Group always recognises lifetime ECL for trade receivables at amortised cost and finance lease receivables. The ECL on these assets are assessed individually.

For all other instruments, the Group measures the loss allowance equal to 12m ECL, unless when there has been a significant increase in credit risk since initial recognition, in which case the Group recognises lifetime ECL. The assessment of whether lifetime ECL should be recognised is based on significant increases in the likelihood or risk of a default occurring since initial recognition.

2.4 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Financial instruments (continued)

Financial assets (continued)

Impairment of financial assets and other item subject to impairment assessment under HKFRS 9 (continued)

(i) Significant increase in credit risk

In assessing whether the credit risk has increased significantly since initial recognition, the Group compares the risk of a default occurring on the financial instrument as at the reporting date with the risk of a default occurring on the financial instrument as at the date of initial recognition. In making this assessment, the Group considers both quantitative and qualitative information that is reasonable and supportable, including historical experience and forward-looking information that is available without undue cost or effort.

In particular, the following information is taken into account when assessing whether credit risk has increased significantly:

- significant deterioration in external market indicators of credit risk, e.g. a significant increase in the credit spread, the credit default swap prices for the debtor;
- existing or forecast adverse changes in business, financial or economic conditions that are expected to cause a significant decrease in the debtor's ability to meet its debt obligations;
- an actual or expected significant deterioration in the operating results of the debtor;
- an actual or expected significant adverse change in the regulatory, economic, or technological environment of the debtor that results in a significant decrease in the debtor's ability to meet its debt obligations.

Irrespective of the outcome of the above assessment, the Group presumes that the credit risk has increased significantly since initial recognition when contractual payments are more than 30 days past due, unless the Group has reasonable and supportable information that demonstrates otherwise.

The Group regularly monitors the effectiveness of the criteria used to identify whether there has been a significant increase in credit risk and revises them as appropriate to ensure that the criteria are capable of identifying significant increase in credit risk before the amount becomes past due.

2.4 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Financial instruments (continued)

Financial assets (continued)

Impairment of financial assets and other item subject to impairment assessment under HKFRS 9 (continued)

(ii) Definition of default

For internal credit risk management, the Group considers an event of default occurs when information developed internally or obtained from external sources indicates that the debtor is unlikely to pay its creditors, including the Group, in full (without taking into account any collaterals held by the Group).

The Group considers that default has occurred when a financial asset is more than 90 days past due unless the Group has reasonable and supportable information to demonstrate that a more lagging default criterion is more appropriate.

(iii) Credit-impaired financial assets

A financial asset is credit-impaired when one or more events that have a detrimental impact on the estimated future cash flows of that financial asset have occurred. Evidence that a financial asset is credit-impaired includes observable data about the following events:

(a) significant financial difficulty of the issuer or the borrower;

(b) a breach of contract, such as a default or past due event;

(c) the lender(s) of the borrower, for economic or contractual reasons relating to the borrower's financial difficulty, having granted to the borrower a concession(s) that the lender(s) would not otherwise consider;

(d) it is becoming probable that the borrower will enter bankruptcy or other financial reorganisation; or

(e) the disappearance of an active market for that financial asset because of financial difficulties.

(iv) Write-off policy

The Group writes off a financial asset when there is information indicating that the counterparty is in severe financial difficulty and there is no realistic prospect of recovery, for example, when the counterparty has been placed under liquidation or has entered into bankruptcy proceedings. Financial assets written off may still be subject to enforcement activities under the Group's recovery procedures, taking into account legal advice where appropriate. A write-off constitutes a derecognition event. Any subsequent recoveries are recognised in profit or loss.

2.4 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Financial instruments (continued)

Financial assets (continued)

Impairment of financial assets and other item subject to impairment assessment under HKFRS 9 (continued)

(v) Measurement and recognition of ECL

The measurement of ECL is a function of the probability of default, loss given default (i.e. the magnitude of the loss if there is a default) and the exposure at default. The assessment of the probability of default and loss given default is based on historical data and forward-looking information. Estimation of ECL reflects an unbiased and probability-weighted amount that is determined with the respective risks of default occurring as the weights.

Generally, the ECL is the difference between all contractual cash flows that are due to the Group in accordance with the contract and the cash flows that the Group expects to receive, discounted at the effective interest rate determined at initial recognition. For a lease receivable, the cash flows used for determining the ECL are consistent with the cash flows used in measuring the lease receivables in accordance with HKFRS 16.

Interest income is calculated based on the gross carrying amount of the financial asset unless the financial asset is credit impaired, in which case interest income is calculated based on amortised cost of the financial asset.

The Group recognises an impairment gain or loss in profit or loss for all financial instruments subject to impairment under HKFRS 9 by adjusting their carrying amounts, with the exception of trade receivables at amortised cost and other receivables where the corresponding adjustment is recognised through a loss allowance account.

Derecognition of financial assets

The Group derecognises a financial asset only when the contractual rights to the cash flows from the asset expire, or when it transfers the financial asset and substantially all the risks and rewards of ownership of the asset to another entity. If the Group neither transfers nor retains substantially all the risks and rewards of ownership and continues to control the transferred asset, the Group recognises its retained interest in the asset and an associated liability for amounts it may have to pay. If the Group retains substantially all the risks and rewards of ownership of a transferred financial asset, the Group continues to recognise the financial asset and also recognises a collateralised borrowing for the proceeds received.

On derecognition of a financial asset measured at amortised cost, the difference between the asset's carrying amount and the sum of the consideration received and receivable is recognised in profit or loss.

2.4 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Financial instruments (continued)

Financial liabilities and equity

Classification as debt or equity

Debt and equity instruments are classified as either financial liabilities or as equity in accordance with the substance of the contractual arrangements and the definitions of a financial liability and an equity instrument.

Equity instruments

An equity instrument is any contract that evidences a residual interest in the assets of an entity after deducting all of its liabilities. Equity instruments issued by the Company are recognised at the proceeds received, net of direct issue costs.

Perpetual instruments, which include no contractual obligation for the Group to deliver cash or other financial assets or the Group has the sole discretion to defer payment of distribution and redemption of principal amount indefinitely are classified as equity instruments.

Repurchase of the Company's own equity instruments is recognised and deducted directly in equity. No gain or loss is recognised in profit or loss on the purchase, sale, issue or cancellation of the Company's own equity instruments.

Financial liabilities

All financial liabilities are subsequently measured at amortised cost using the effective interest method or at FVTPL.

Financial liabilities at FVTPL

Financial liabilities are classified as at FVTPL when (i) the financial liability is a contingent consideration of an acquirer in a business combination to which HKFRS 3 applies, (ii) it is held for trading or (iii) it is designated as at FVTPL.

A financial liability is held for trading if:

- it has been acquired principally for the purpose of repurchasing it in the near term; or
- on initial recognition it is part of a portfolio of identified financial instruments that the Group manages and has a recent actual pattern of short-term profit-taking; or
- it is a derivative, except for a derivative that is a financial guarantee contract or a designated and effective hedging instrument.

2.4 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Financial instruments (continued)

Financial liabilities and equity (continued)

Financial liabilities at FVTPL (continued)

A financial liability other than a financial liability held for trading or contingent consideration of an acquirer in a business combination may be designated as at FVTPL upon initial recognition if:

- such designation eliminates or significantly reduces a measurement or recognition inconsistency that would otherwise arise; or
- the financial liability forms part of a group of financial assets or financial liabilities or both, which is managed and its performance is evaluated on a fair value basis, in accordance with the Group's documented risk management or investment strategy, and information about the grouping is provided internally on that basis; or
- it forms part of a contract containing one or more embedded derivatives, and HKFRS 9 permits the entire combined contract to be designated as at FVTPL.

For financial liabilities that are designated as at FVTPL, the amount of change in the fair value of the financial liability that is attributable to changes in the credit risk of that liability is recognised in other comprehensive income, unless the recognition of the effects of changes in the liability's credit risk in other comprehensive income would create or enlarge an accounting mismatch in profit or loss. For financial liabilities that contain embedded derivatives, such as trade payables arising from provisionally priced purchases, the changes in fair value of the embedded derivatives are excluded in determining the amount to be presented in other comprehensive income. Changes in fair value attributable to a financial liability's credit risk that are recognised in other comprehensive income are not subsequently reclassified to profit or loss; instead, they are transferred to retained profits upon derecognition of the financial liability.

The trade payables arising from provisional pricing arrangements of copper concentrates purchase are settled at final prices set at a specified future period after shipment by suppliers based on prevailing spot prices. These trade payables are designated at FVTPL on contract by contract basis.

Financial liabilities at amortised cost

Financial liabilities including bank and other borrowings, trade payables other than those designated at FVTPL and other payables are subsequently measured at amortised cost, using the effective interest method.

Derecognition of financial liabilities

The Group derecognises financial liabilities when, and only when, the Group's obligations are discharged, cancelled or have expired. The difference between the carrying amount of the financial liability derecognised and the consideration paid and payable is recognised in profit or loss.

2.4 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Financial instruments (continued)

Derivative financial instruments

The Group uses derivative financial instruments to hedge its commodity price risk. The Group's derivative financial instruments mainly include copper future contracts (mainly standardised copper cathode future contracts in London Metal Exchange ("LME")) and those embedded in provisional price arrangements.

Derivatives are initially recognised at fair value at the date when derivative contracts are entered into and are subsequently remeasured to their fair value at the end of the reporting period. The resulting gain or loss is recognised in profit or loss unless the derivative is designated and effective as a hedging instrument, in which case the timing of the recognition in profit or loss depends on the nature of the hedge relationship.

Embedded derivatives

Derivatives embedded in hybrid contracts that contain financial asset hosts within the scope of HKFRS 9 are not separated. The entire hybrid contract is classified and subsequently measured in its entirety as either amortised cost or fair value as appropriate.

Derivatives embedded in non-derivative host contracts that are not financial assets within the scope of HKFRS 9 are treated as separate derivatives when they meet the definition of a derivative, their risks and characteristics are not closely related to those of the host contracts and the host contracts are not measured at FVTPL.

3. SIGNIFICANT ACCOUNTING JUDGEMENTS AND ESTIMATES

In the application of the Group's accounting policies, which are described in Note 2.4, the Directors are required to make judgments, estimates and assumptions about the carrying amounts of assets and liabilities that are not readily apparent from other sources. The estimates and associated assumptions are based on historical experience and other factors that are considered to be relevant. Actual results may differ from these estimates.

The estimates and underlying assumptions are reviewed on an on-going basis. Revisions to accounting estimates are recognised in the period in which the estimate is revised if the revision affects only that period, or in the period of the revision and future periods if the revision affects both current and future periods.

3. SIGNIFICANT ACCOUNTING JUDGEMENTS AND ESTIMATES (continued)

Key sources of estimation uncertainty

The followings are the key assumptions concerning the future, and other key sources of estimation uncertainty at the end of the reporting period, that may have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year.

Impairment assessment of property, plant and equipment

Property, plant and equipment are stated at costs less accumulated depreciation and impairment loss, if any. In determining whether an asset is impaired, the Group has to exercise judgement and make estimation, particularly in assessing: (1) whether an event has occurred or any indicators that may affect the asset value; (2) whether the carrying value of an asset can be supported by the recoverable amount, in the case of value in use, the net present value of future cash flows which are estimated based upon the continued use of the asset; and (3) the appropriate key assumptions to be applied in estimating the recoverable amounts including cash flow projections and an appropriate discount rate. When it is not possible to estimate the recoverable amount of an individual asset, the Group estimates the recoverable amount of the CGU to which the assets are allocated, including allocation of corporate assets when a reasonable and consistent basis of allocation can be established, otherwise recoverable amount is determined at the smallest group of CGUs, for which the relevant corporate assets have been allocated. Changing the assumptions and estimations, including the discount rate or the growth rate in the cash flow projections, could materially affect the net present value used in the impairment test.

As at 31 December 2022, the carrying amount of property, plant and equipment subject to impairment assessment was US$758,957,000 (31 December 2021: US$776,373,000). An impairment loss of US$5,676,000 in respect of property, plant and equipment has been recognised. Details of the impairment test of property, plant and equipment are disclosed in Note 14.

Depreciation of mining properties

Mining properties costs are depreciated using the unit of production (the "UOP") method. The calculation of the rate of depreciation by UOP, and therefore the annual depreciation charge to operations, can fluctuate from initial estimates. This could generally result when there are significant changes in any of the factors or assumptions used in estimating mine reserves, notably changes in the geology of the reserves and assumptions used in determining the economic feasibility of the reserves. Such changes in reserves could similarly impact the useful lives of assets depreciated on a straight-line basis, where those lives are limited to the life of the project, which, in turn is limited to the lives of the proved and probable mineral reserves. Estimates of proved and probable reserves are prepared by experts in extraction, geology and reserve determination. Assessments of rates by UOP against the estimated reserve base and the operating and development plan are performed regularly.

3. SIGNIFICANT ACCOUNTING JUDGEMENTS AND ESTIMATES (continued)

Key sources of estimation uncertainty (continued)

Restoration, rehabilitation and environmental costs

Provision is made for costs associated with restoration and rehabilitation of mining sites and certain production facilities of the Group as soon as the obligation to incur such costs arises. Such restoration and closure costs are typical of mining, leaching and smelting industries and they are normally incurred at the end of the life of the mine and production facilities. The costs are estimated on the basis of mine/plant closure plans and the estimated discounted costs of dismantling and removing these facilities and the costs of restoration are capitalised when incurred reflecting the Group's obligations at that time. A corresponding provision is created on the liability side.

The capitalised asset is charged to profit or loss through depreciation over the life of the operation and the provision is increased during each reporting period via unwinding the discount on the provision. The management estimates are mainly based on the local legislation. The actual costs and cash outflows may differ from estimates because of changes in laws and regulations, changes in prices, analysis of site conditions and changes in restoration technology.

The Group provides for such costs in accordance with the statutory requirements.

Income taxes

The Group is subject to taxes in a number of jurisdictions. Significant judgement is required in determining the tax position and the estimates and assumptions in relation to the provision for taxes, the progressive tax rate applicable for deferred tax provisions and the recovery of deferred tax assets, having regard to the nature and timing of their origination and compliance with the relevant tax legislation.

As at 31 December 2022, a deferred tax asset of US$8,643,000 (31 December 2021: US$13,102,000) in relation to unused tax losses and other temporary differences has been recognised in the consolidated statement of financial position (see Note 30). Deferred tax assets are recognised only if it is probable that future taxable profits will be available to utilise those temporary differences and losses, and the tax losses continue to be available having regard to the nature and timing of their origination and compliance with the relevant tax legislation associated with their recoupment. In addition, the applicable tax rate used in recognising deferred tax assets is determined by the forecast proportion of assessable income against gross sales and the timing of the usage of tax losses when the entity was granted income tax incentives.

3. SIGNIFICANT ACCOUNTING JUDGEMENTS AND ESTIMATES (continued)

Key sources of estimation uncertainty (continued)

Income taxes (continued)

In 2018, the parliament of the Domestic Republic of Congo (the "DRC") adopted a new mining code (the "2018 Mining Code") introducing wide-ranging reforms including the introduction of higher royalties, a new Super Profits Tax regime and further regulatory controls. In accordance with the 2018 Mining Code, should a single product meet the threshold condition that its average effective selling price within one accounting year rises over 25% more than its average selling price in such year as predicated in its project economic feasibility study report (the "Feasibility Report"), excess profit taxes is imposed on a tax base that is the difference between the earnings before interest, taxes, depreciation and amortisation (the "EBITDA") of the product and the predicted amount in the Feasibility Report in such accounting year with applicable tax rate at 50% with effect from 8 June 2018. The Directors have taken the view that the average selling prices in 2022 were not 25% more than those in the Feasibility Report, thus, no Super Profits Tax was recognised in the consolidated financial statements for the years ended 31 December 2022 (2021: Nil). However, there is limited guidance in relation to the implementation of certain parts of the 2018 Mining Code; and the Directors' interpretation of the 2018 Mining Code may be subject to future changes following the publication of relevant implementation guidance on those impacted areas, which are currently uncertain.

Impairment for input VAT receivables

In assessing the recoverable amount of input VAT receivables, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset for which the estimates of future cash flows have not been adjusted. The amount of the impairment loss recognised is the difference between the asset's carrying amount and the present value of estimated future cash flows.

As at 31 December 2022, in view of impairment indicators, the Group performed an impairment assessment on input VAT receivables, the carrying amount of which, after deducting the provision of US$66,427,000 (31 December 2021: US$44,876,000), was US$92,025,000 (31 December 2021: US$143,556,000). For the year ended 31 December 2022, an impairment loss of US$21,551,000 was recognised (2021: US$28,977,000) in respect of input VAT receivables. Details of the impairment assessment of input VAT receivables are disclosed in Note 19.

4. SEGMENT INFORMATION

The Group's operating segments are identified on the basis of internal reports about components of the Group that are regularly reviewed by the board of directors (the "Board"), being the chief operating decision maker (the "CODM"), in order to allocate resources to the segments and to assess their performance.

Information reported to the CODM for the purposes of resource allocation and assessment of segment performance focuses on the types of goods produced. The Group's operating and reportable segments in current year under HKFRS 8 *Operating Segments* are as follows:

- Leaching – Production and sale of copper cathodes and cobalt hydroxide (including exploration and mining of oxide copper mines) which are produced using the solvent extraction-electrowinning technology; and production and sale of sulphur-burning sulphuric acid.

- Smelting – Production and sale of blister copper and copper anodes (including exploration and mining of sulphuric copper mines), sulphuric acid and liquid sulphur dioxide which are produced using ISA smelting technology. Sulphuric acid and liquid sulphur dioxide are by-products in the production of blister copper and copper anodes. Copper products processing services are also rendered using ISA smelting technology.

No operating segments have been aggregated to be derived from the reportable segments of the Group.

Segment revenue and results

The following is an analysis of the Group's revenue and results by reportable and operating segments:

For the year ended 31 December 2022

	Leaching	Smelting	Consolidated
	US$'000	*US$'000*	*US$'000*
Revenue from external sales	1,210,910	2,883,806	4,094,716
Inter-segment sales	–	57,587	57,587
Total segment revenue	1,210,910	2,941,393	4,152,303
Elimination			(57,587)
Revenue from external customers			4,094,716
Segment profit	209,804	191,935	401,739
Unallocated income*			600
Unallocated expenses#			(20,210)
Profit for the year			382,129

4. SEGMENT INFORMATION (continued)

Segment revenue and results (continued)

The following is an analysis of the Group's revenue and results by reportable and operating segments: (continued)

For the year ended 31 December 2021

	Leaching	Smelting	Consolidated
	US$'000	*US$'000*	*US$'000*
Revenue from external sales	969,007	3,081,581	4,050,588
Inter-segment sales	–	47,123	47,123
Total segment revenue	969,007	3,128,704	4,097,711
Elimination			(47,123)
Revenue from external customers			4,050,588
Segment profit	286,291	246,012	532,303
Unallocated income*			192
Unallocated expenses#			(17,100)
Profit for the year			515,395

* The unallocated income mainly represents the interest income arising from the bank deposits and bank balances of (i) the Company, (ii) China Nonferrous Mining Holdings Limited ("CNMH"), a directly wholly-owned subsidiary of the Company which directly holds the Group's shareholdings in the subsidiaries in Zambia, (iii) China Nonferrous Mining Hong Kong Holdings Limited ("CNMHK"), a directly non-wholly-owned subsidiary of the Company which directly holds the Group's shareholdings in three subsidiaries in DRC, and (iv) China Nonferrous Mining Hong Kong Investment Limited ("CNMHKI"), a directly wholly-owned subsidiary of the Company which directly holds the Group's shareholdings in the other three subsidiaries in DRC (collectively referred to as the "Holding Companies").

The unallocated expenses mainly represent the administrative expenses, interest expenses and income tax expenses of the Holding Companies.

The accounting policies of the operating and reportable segments are the same as the Group's accounting policies described in Note 2.4. Segment profit represents the profit earned by each segment. This is the information reported to the CODM for the purposes of resource allocation and performance assessment.

Inter-segment sales are charged at prevailing market rates.

4. SEGMENT INFORMATION (continued)

Segment assets and liabilities

The following is an analysis of the Group's assets and liabilities by reportable and operating segments:

	2022	2021
	US$'000	*US$'000*
Segment assets		
Leaching	**1,301,195**	1,348,698
Smelting	**2,625,217**	2,746,800
Total segment assets	**3,926,412**	4,095,498
Unallocated assets*	**97,180**	73,319
Elimination	**(2,576)**	(4,833)
Consolidated assets	**4,021,016**	4,163,984
Segment liabilities		
Leaching	**498,161**	517,953
Smelting	**1,112,255**	1,432,463
Total segment liabilities	**1,610,416**	1,950,416
Unallocated liabilities*	**80,240**	46,517
Elimination	**(2,576)**	(4,833)
Consolidated liabilities	**1,688,080**	1,992,100

* The unallocated assets and liabilities mainly represent those of the Holding Companies.

For the purposes of monitoring segment performance and allocating resources between segments, all assets and liabilities, other than certain assets and liabilities of the Holding Companies, are allocated to reportable and operating segments.

4. SEGMENT INFORMATION (continued)

Other segment information

Amounts included in the information of segment profit and segment assets:

For the year ended 31 December 2022

	Leaching *US$'000*	Smelting *US$'000*	Unallocated *US$'000*	Consolidated *US$'000*
Addition to non-current assets*	40,922	85,097	460	126,479
Depreciation of property, plant and equipment	121,245	113,254	–	234,499
Depreciation of right-of-use assets	–	5,103	152	5,255
Amortisation of mining rights	15,154	–	–	15,154
Write-down of inventories	–	4,491	–	4,491
Impairment of property, plant and equipment	1,046	4,630	–	5,676
Interest income#	760	4,122	600	5,482
Finance costs	1,008	32,894	18	33,920
(Losses)/gains arising on change in fair value of				
– financial liabilities designated at FVTPL	7,710	13,624	–	21,334
– trade receivables at FVTPL	(51,156)	(61,048)	–	(112,204)
– trade payables designated at FVTPL	2,738	108,717	–	111,455
Income tax expense	99,250	57,965	13,162	170,377

4. SEGMENT INFORMATION (continued)

Other segment information (continued)

Amounts included in the information of segment profit and segment assets: (continued)

For the year ended 31 December 2021

	Leaching *US$'000*	Smelting *US$'000*	Unallocated *US$'000*	Consolidated *US$'000*
Addition to non-current assets*	168,421	20,708	38	189,167
Depreciation of property, plant and equipment	91,728	110,725	–	202,453
Depreciation of right-of-use assets	–	4,965	–	4,965
Amortisation of mining rights	5,971	–	–	5,971
Write-down of inventories	2,120	–	–	2,120
Interest income#	60	10	192	262
Finance costs	2,179	35,132	5	37,316
(Losses)/gains arising on change in fair value of				
– financial liabilities designated at FVTPL	(14,052)	(34,194)	–	(48,246)
– trade receivables at FVTPL	38,669	130,084	–	168,753
– trade payables designated at FVTPL	–	(124,488)	–	(124,488)
Income tax expense	142,333	137,947	11,361	291,641

* Non-current assets exclude financial instruments, input VAT receivables and deferred tax assets.

\# Unallocated interest income represents interest income earned from bank balances of the Holding Companies.

4. SEGMENT INFORMATION (continued)

Geographical information

The Group's operations are mainly in Zambia and DRC. As at 31 December 2022, the Group's non-current assets of US$1,014,252,000 (31 December 2021: US$1,098,261,000) and US$715,521,000 (31 December 2021: US$756,950,000) (other than financial instruments, input VAT receivables and deferred tax assets) are in Zambia and DRC, respectively, the locations of the assets.

The Group's revenue from external customers by geographical locations which is based on the destination of shipment, is detailed below:

	2022	2021
	US$'000	*US$'000*
Mainland China	**2,661,616**	2,280,423
Switzerland	**588,952**	472,144
Singapore	**198,664**	360,624
Hong Kong	**210,675**	492,163
Africa	**432,759**	199,063
Luxemburg	**2,050**	246,171
	4,094,716	4,050,588

Information about major customers

Revenue from customers individually amounting to over 10% of the total revenue of the Group is as follows:

	2022	2021
	US$'000	*US$'000*
Customer A		
– Leaching	**807,578**	641,672
– Smelting	**1,143,686**	1,217,569
	1,951,264	1,859,241
Customer B		
– Smelting	**800,796**	630,580

5. REVENUE FROM CONTRACTS WITH CUSTOMERS

Disaggregation of revenue from contracts with customers

	2022	
	Leaching ***US$'000***	**Smelting** ***US$'000***
Types of goods or services		
Sales of goods to external customers		
Copper cathodes	**1,155,328**	**–**
Blister copper and copper anodes	**–**	**2,622,744**
Sulphuric acid	**7,337**	**204,784**
Liquid sulphur dioxide	**–**	**22,979**
Cobalt contained in cobalt hydroxide	**44,687**	**–**
Copper products processing services	**3,558**	**33,299**
Total	**1,210,910**	**2,883,806**
Timing of revenue recognition		
A point in time	**1,210,910**	**2,883,806**

	2021	
	Leaching *US$'000*	Smelting *US$'000*
Types of goods or services		
Sales of goods to external customers		
Copper cathodes	954,423	–
Blister copper and copper anodes	–	2,890,597
Sulphuric acid	–	132,023
Liquid sulphur dioxide	–	22,498
Cobalt contained in cobalt hydroxide	14,584	–
Copper products processing services	–	36,463
Total	969,007	3,081,581
Timing of revenue recognition		
A point in time	969,007	3,081,581

5. REVENUE FROM CONTRACTS WITH CUSTOMERS (continued)

Performance obligations for contracts with customers

The Group sells copper product, sulphuric acid, liquid sulphur dioxide and cobalt hydroxide and renders copper product processing services to customers, and revenue is recognised when control of the goods or services has transferred based on the terms of relevant contracts. In most cases, the control of goods has transferred upon delivery when the goods have been shipped at the Group's premises. In some other cases, the control of goods has transferred upon delivery at specific destination ports. Revenue from the rendering of copper product processing service is recognised when control of the completed processing copper product has transferred based on the terms of the service contracts. The Group normally requires prepayments from certain customers before the dispatch of goods with the remainder to be settled not exceeding one month upon issuance of sales invoice.

All sales are for periods of one year or less. As permitted under HKFRS 15, the transaction price allocated to the unsatisfied contracts is not disclosed.

6. OTHER INCOME

	2022	2021
	US$'000	*US$'000*
Interest income	**5,482**	262
Government grants	**1,164**	2,405
Net income from sale of spare parts and other materials	**3,577**	3,437
Net income from service of custom clearance	**–**	234
Others	**1,689**	3,318
	11,912	9,656

7. OTHER GAINS AND LOSSES

	2022 US$'000	2021 US$'000
Losses on disposal of property, plant and equipment, net	**(241)**	(6,745)
Impairment losses (recognised)/reversed in respect of		
– input VAT receivables *(Note 19)*	**(21,551)**	(28,977)
– financial assets under ECL	**124**	(2,473)
– property, plant and equipment *(Note 14)*	**(5,676)**	–
Foreign exchange (losses)/gains, net	**(11,938)**	6,433
(Losses)/gains from changes in fair value of financial liabilities/ assets at FVTPL		
– financial liabilities designated at FVTPL	**21,334**	(48,246)
– trade receivables at FVTPL	**(112,204)**	168,753
– trade payables designated at FVTPL	**111,455**	(124,488)
	(18,697)	(35,743)

8. FINANCE COSTS

	2022 US$'000	2021 US$'000
Interest on bank and other borrowings	**32,400**	34,365
Interest on lease liabilities	**363**	637
Unwinding of the discount *(Note 29)*	**1,157**	2,314
	33,920	37,316

9. INCOME TAX EXPENSE

Income tax expense recognised in profit or loss:

	2022 ***US$'000***	2021 *US$'000*
Current tax:		
– Income tax in The Republic of Ireland ("Ireland")	**2,880**	1,338
– Income tax in DRC	**56,055**	65,802
– Income tax in Zambia	**101,783**	138,875
	160,718	206,015
Deferred tax *(Note 30)*		
– Current year	**9,659**	83,676
– Attribute to a change in tax rate	**–**	1,950
	9,659	85,626
Total income tax expense	**170,377**	291,641

Income tax in Ireland is calculated at 12.5% (2021: 12.5%) on the estimated taxable income.

Income tax in DRC is calculated at 30% (2021: 30%) on the estimated taxable income when 30% of the taxable income exceeds 1% of gross sales, and calculated at 1% (2021: 1%) of gross sales when 30% of the taxable income does not exceeds 1% of gross sales.

In accordance with the 2018 Mining Code of DRC with effect from 8 June 2018, should a single product meet the threshold condition that its average effective selling price within one accounting year rises over 25% more than its average selling price in such year as predicated in the Feasibility Report, excess profit taxes is imposed on a tax base being the difference between the EBITDA of the product and the predicted amount in the Feasibility Report in that accounting year with applicable tax rate of 50%.

9. INCOME TAX EXPENSE (continued)

Pursuant to "An Act to amend the Income Tax Act, 2021" enacted by the parliament of Zambia on 29 December 2021, the income tax rate of Zambia changes from 35% to 30% and non-deductible mineral royalty expense under the Mines and Minerals Development Act, 2015 becomes deductible.

For both periods, the applicable tax rate on income from mining operation in Zambia is 30%. Accordingly, the applicable tax rate on the taxable income of Chambishi Copper Smelter Limited ("CCS") is 30% (2021: 35%), and the applicable tax rate on the taxable income of NFCA, CNMC Luanshya Copper Mines PLC ("Luanshya") and Sino-metals Leach Zambia Limited ("SML") is 30% (2021: 30%).

The Group enjoyed the following income tax incentives:

- Certain phase of production facilities of CCS (the "Phase") is eligible for the tax exemption for the first five profitable years; 50% income tax relief for the next three years thereafter; and 25% of income tax relief for the next two years thereafter. For the year ended 31 December 2022, it was the third year of the 50% income tax relief that the Group enjoyed regarding the phase (2021: 50%).

- Lualaba Copper Smelter SAS ("Lualaba Copper Smelter"), a non-wholly-owned subsidiary of the Company located in DRC, is eligible for a 68.29% income tax relief for the five years starting from July 2021. The calculation of income tax relief rate is based on the current production volume proportion of sulphuric acid, which also depends on the remaining investments in blister copper and sulphuric acid.

The actual applicable tax rate of CCS was 23.3% during the current year (2021: 27.1%).

According to the *Convention between the Republic of Zambia and Ireland for the Avoidance of Double Taxation and the Prevention of Fiscal Evasion with respect to Tax on*, which is effective on 1 January 2016, certain dividend paid by a company which is a resident of Zambia to a resident of Ireland may be taxed in Zambia according to tax law of Zambia, but for a beneficial owner of the dividends which is a resident of Ireland, the tax so charged shall not exceed 7.5% of the gross amount of the dividends in Zambia. Therefore, certain dividend income of CNMH from CCS was subject to withholding tax in Zambia at tax rate of 7.5% (2021: 7.5%) and certain dividend income of CNMH from Luanshya, NFCA and SML which are mining operations was under withholding tax relief for both years.

Certain dividend income of CNMHK and CNMHKI from subsidiaries in DRC is subject to withholding tax at tax rate of 10% (2021: 10%).

At the end of the reporting period, a deferred tax liability of US$ 46,784,000 (2021: US$ 42,816,000) has been provided for temporary differences associated with undistributed earnings of these subsidiaries (see Note 30).

9. INCOME TAX EXPENSE (continued)

A reconciliation of the tax expense applicable to profit before tax at the statutory rates for the countries in which the Company and the majority of its subsidiaries are domiciled to the tax expense at the effective tax rates, and a reconciliation of the applicable rates to the effective tax rates, are as follows:

	2022 US$'000	2021 US$'000
Profit before tax	**552,506**	807,036
Tax at income tax rate in Ireland		
– for operations at 12.5%	**2,880**	1,338
Tax at income tax rate in DRC		
– for operations at 30%	**45,508**	47,281
Tax at income tax rates in Zambia		
– for operations at 30%	**116,483**	144,907
– for operations at 35%	**–**	52,645
	164,871	246,171
Tax effect of expenses not deductible for tax purpose	**6,546**	41,790
Deferred and withholding tax on undistributed earnings	**3,968**	9,952
Effect of tax incentives granted to the Group	**(14,371)**	(16,148)
Tax effect of deductible temporary differences not recognised	**6,465**	5,905
Decrease in opening deferred tax assets resulting from a decrease in applicable tax rate	**–**	1,950
Adjustments in respect of income tax of previous periods	**(529)**	–
Tax effect of income tax rate at 1% of gross sales	**3,427**	2,021
Income tax expense for the year	**170,377**	291,641

9. INCOME TAX EXPENSE (continued)

Other taxes

The Group is also subject to other non-income taxes as below:

The Group is subject to VAT at 16% (2021: 16%) on purchases and sales in Zambia and DRC whereas VAT is exempted on export, and relevant input VAT paid for purchases supported by valid VAT invoices could be refunded by the Zambia Revenue Authority and DRC to the extent where total input VAT paid on purchases exceeds total output VAT payable on domestic sales.

For both reporting periods, the mineral royalty rates are applicable for both open cast mining operations and underground mining operations in Zambia and DRC.

In Zambia, the mineral royalty is charged at 5.5% when the norm price of copper is less than US$4,500 per tonne, 6.5% when the norm price of copper is US$4,500 per tonne or greater but less than US$6,000 per tonne, 7.5% when the norm price of copper is US$6,000 per tonne or greater but less than US$7,500 per tonne, 8.5% when the norm price of copper is US$7,500 per tonne or greater but less than US$9,000 per tonne and 10% when the norm price of copper is US$9,000 per tonne or greater.

In DRC, the mineral royalty is charged at 3.5% (2021: 3.5%) for copper products.

10. PROFIT FOR THE YEAR

Profit for the year has been arrived at after charging/(crediting):

	2022	2021
	US$'000	*US$'000*
Depreciation of property, plant and equipment	**234,499**	202,453
Depreciation of right-of-use assets	**5,255**	4,965
Amortisation of mining rights	**15,154**	5,971
Total amortisation and depreciation	**254,908**	213,389
Auditor's remuneration	**984**	1,174
Staff costs (excluding Directors' remuneration as disclosed in Note 11):		
Salaries, wages and welfare	**111,513**	120,866
Retirement benefit schemes contributions	**8,830**	9,201
Total staff costs	**120,343**	130,067
Impairment of inventories	**4,491**	2,120
Impairment of property, plant and equipment	**5,676**	–
Impairment losses, net of reversal		
– input VAT receivables	**21,551**	28,977
– financial assets under ECL	**(124)**	2,473
Fair value (gains)/losses, net	**(20,585)**	3,981
Foreign exchange differences, net	**11,938**	(6,433)
Interest income	**(5,482)**	(262)
Losses on disposal of items of property, plant and equipment	**241**	6,745
Lease payments not included in the measurement of lease liabilities	**63**	247
Cost of inventories recognised as an expense	**3,259,716**	2,935,801
Cost of service recognised as an expense	**27,779**	29,752

11. DIRECTORS', CHIEF EXECUTIVE'S AND EMPLOYEES' EMOLUMENTS

Directors

Details of the emoluments paid or payable to the Directors are as follows:

	2022				
		Other emoluments			
Name of director	Fees	Salaries and other allowances	Discretionary performance bonus*	Retirement benefit scheme contributions	Total emoluments
	US$'000	*US$'000*	*US$'000*	*US$'000*	*US$'000*
Executive Directors					
Mr. He Yang (i)	–	–	–	–	–
Mr. Jinjun Zhang (ii)	–	–	–	–	–
Mr. Chunlai Wang (iii)	–	–	103	–	103
	–	–	103	–	103
Non-executive Director					
Mr. Yaoyu Tan (v)	–	–	–	–	–
Independent Non-executive Directors					
Mr. Dingfan Qiu	36	–	–	–	36
Mr. Jingwei Liu	36	–	–	–	36
Mr. Huanfei Guan	36	–	–	–	36
	108	–	–	–	108
Total	108	–	103	–	211

11. DIRECTORS', CHIEF EXECUTIVE'S AND EMPLOYEES' EMOLUMENTS (continued)

Directors (continued)

Details of the emoluments paid or payable to the Directors are as follows: (continued)

	2021				
		Other emoluments			
Name of director	Fees *US$'000*	Salaries and other allowances *US$'000*	Discretionary performance bonus* *US$'000*	Retirement benefit scheme contributions *US$'000*	Total emoluments *US$'000*
Executive Directors					
Mr. Jinjun Zhang (ii)	–	–	–	–	–
Mr. Xiaowei Wang (iv)	–	–	–	–	–
Mr. Chunlai Wang	–	97	111	6	214
	–	97	111	6	214
Non-executive Director					
Mr. Yaoyu Tan (v)	–	–	–	–	–
Independent Non-executive Directors					
Mr. Dingfan Qiu (vi)	15	–	–	–	15
Mr. Chuanyao Sun (vii)	22	–	–	–	22
Mr. Jingwei Liu	37	–	–	–	37
Mr. Huanfei Guan	37	–	–	–	37
	111	–	–	–	111
Total	111	97	111	6	325

11. DIRECTORS', CHIEF EXECUTIVE'S AND EMPLOYEES' EMOLUMENTS (continued)

Directors (continued)

(i) Mr. He Yang was appointed as an executive director of the Company, the chairman of the Board, and the chairman of the Compliance Committee with effect from 13 October 2022.

Mr. He Yang assumes the role as the head of the enterprise development department of CNMC and his emoluments for services rendered by him to the Group commencing from the date of appointment have been borne by CNMC.

(ii) Mr. Jinjun Zhang was appointed as the chairman of the Board with effect from 8 January 2021, and resigned as executive director of the Company, the chairman of the Board, and the chairman of the Compliance Committee with effect from 13 October 2022.

Mr. Jinjun Zhang assumes the role as a vice president in CNMC and his emoluments for services rendered by him to the Group commencing from the date of appointment have been borne by CNMC.

(iii) Mr. Chunlai Wang resigned as an executive director of the Company with effect from 11 April 2022.

(iv) Mr. Xiaowei Wang resigned as an executive director of the Company with effect from 27 May 2021.

Mr. Xiaowei Wang assumes a role in CNMC and his emoluments for services rendered by him to the Group commencing from the date of his appointment have been borne by CNMC.

(v) Mr. Yaoyu Tan was appointed as a non-executive director of the Company with effect from 27 May 2021.

Mr. Yaoyu Tan assumes a role in CNMC and his emoluments for services rendered by him to the Group commencing from the date of his appointment have been borne by CNMC.

(vi) Mr. Dingfan Qiu was appointed as an independent non-executive director of the Company with effect from 30 July 2021.

(vii) Mr. Chuanyao Sun resigned as an independent non-executive director of the Company with effect from 30 July 2021.

* Certain executive directors of the Company are entitled to bonus payments which are determined as a percentage of the profit after tax of the Group.

11. DIRECTORS', CHIEF EXECUTIVE'S AND EMPLOYEES' EMOLUMENTS (continued)

Directors (continued)

The executive directors' emoluments shown above were mainly for their services in connection with the management of the affairs of the Company and the Group.

The independent non-executive directors' emoluments shown above were mainly for their services as directors of the Company.

No Directors waived any emoluments in the year ended 31 December 2022 (2021: Nil).

Employees

There was no director who was the five highest paid employees of the Group during the year (2021: one director, details of whose remuneration are set out in the disclosure above). Details of the remuneration for the year of the five (2021: four) highest paid employees who are neither a director nor chief executive of the Company are as follows:

	2022 ***US$'000***	2021 *US$'000*
Salaries, other allowances and bonus	**653**	564
Discretionary performance bonus	**584**	298
Retirement benefit schemes contributions	**112**	47
	1,349	909

The number of the highest paid employees who are neither directors nor chief executive of the Company whose remuneration fell within the following bands is as follows:

	2022 ***Number of employees***	2021 *Number of employees*
HK$1,500,001 to HK$2,000,000	**2**	3
HK$2,000,001 to HK$2,500,000	**3**	1
	5	4

12. DIVIDENDS

	2022 **US$'000**	2021 *US$'000*
Dividends recognised as distribution during the year:		
2022 Final, paid – US¢ 3.8205 per share	**142,850**	–
2021 Final, paid – US¢ 1.4327 per share	**–**	53,569

Subsequent to the end of the reporting period, a final dividend in respect of the year ended 31 December 2022 of US¢ 2.8209 (2021: US¢3.8205) per share, in an aggregate amount of US$105,474,466 (2021: US$142,848,400) has been proposed by the Directors and is subject to the approval of the shareholders of the Company in the forthcoming annual general meeting.

13. EARNINGS PER SHARE

The calculation of the basic earnings per share attributable to the owners of the Company is based on the following data:

	2022	2021
Profit for the year attributable to owners of the Company for the purpose of basic earnings per share calculation *(in US$'000)*	**263,694**	357,121
Weighted average number of ordinary shares for the purpose of basic earnings per share calculation *(in '000)*	**3,739,036**	3,649,995
Earnings per share		
– Basic and diluted *(US cents per share)*	**7.05**	9.78
– Basic and diluted *(equivalent to approximately HK$ per share)*	**0.55**	0.76

In 2021, the weighted average number of ordinary shares for the purpose of basic earnings per share calculation has been adjusted for subscription of new shares which took place on 14 May 2021 (see Note 27).

The Group had no potentially dilutive ordinary shares in issue during the years ended 31 December 2022 and 2021.

14. PROPERTY, PLANT AND EQUIPMENT

	Mining properties US'000	Land and buildings US$'000	Machinery and equipment US$'000	Motor vehicles US$'000	Construction in progress US$'000	Total US$'000
Cost						
At 1 January 2021	969,202	758,039	1,169,462	119,140	229,483	3,245,326
Additions	2,520	1,144	20,608	2,951	159,885	187,108
Transfer from construction in progress	66,279	75,235	155,361	–	(296,875)	–
Disposals	(138,366)	(901)	(66,067)	(4,146)	–	(209,480)
At 31 December 2021	899,635	833,517	1,279,364	117,945	92,493	3,222,954
Additions	11,515	10,940	4,852	1,422	95,202	123,931
Transfer from construction in progress	34,490	65,352	17,474	–	(117,316)	–
Disposals	–	(92)	(1,745)	(878)	–	(2,715)
Other adjustments:						
– Provision for restoration, rehabilitation and environmental costs	15,970	–	–	–	–	15,970
– Others	–	–	–	–	(5,290)	(5,290)
At 31 December 2022	**961,610**	**909,717**	**1,299,945**	**118,489**	**65,089**	**3,354,850**
Depreciation and impairment						
At 1 January 2021	(472,777)	(269,690)	(695,369)	(74,108)	(13,385)	(1,525,329)
Depreciation	(56,883)	(38,101)	(92,210)	(15,259)	–	(202,453)
Transfer of impairment	(3,487)	(3,152)	(6,746)	–	13,385	–
Disposals	132,572	512	64,903	3,945	–	201,932
At 31 December 2021	(400,575)	(310,431)	(729,422)	(85,422)	–	(1,525,850)
Depreciation	(78,222)	(52,208)	(90,160)	(13,909)	–	(234,499)
Impairment recognised *(Note a)*	(2,687)	(1,484)	(1,182)	(323)	–	(5,676)
Disposals	–	76	1,521	877	–	2,474
At 31 December 2022	**(481,484)**	**(364,047)**	**(819,243)**	**(98,777)**	**–**	**(1,763,551)**
Carrying amounts						
At 31 December 2022	**480,126**	**545,670**	**480,702**	**19,712**	**65,089**	**1,591,299**
At 31 December 2021	499,060	523,086	549,942	32,523	92,493	1,697,104

14. PROPERTY, PLANT AND EQUIPMENT (continued)

Notes:

a. On 29 January 2023, the Board of the Company informed the shareholders and potential investors of the Company that the mining of Baluba Underground Mine of Luanshya has been completed in a safe and practicable manner and the mine no longer meets the conditions for further mining. In accordance with the relevant provisions of the Mines and Minerals Development Act and the Mines and Minerals (Environmental) Regulations of Zambia, Luanshya has engaged a third party to carry out the environmental audit and environmental impact assessment before closing the Baluba Underground Mine, and formulated a plan for the mine's closure and reclamation. Luanshya has recently obtained the written approval from the Ministry of Mines and Minerals Development of Zambia regarding the closure of Baluba Underground Mine. The closure of Baluba Underground Mine will not have a significant impact on the Group's overall copper output. The Group will accelerate the exploration, evaluation and development of other resources projects. For that, the management recognised the impairment of mining properties amounting to US$2,687,000 (2021: Nil).

   Besides, in 2009 Luanshya took over Baluba Underground Mine, the downhole assets of which have been running for many years, and most equipment has no use value, or resale value except for some of scrapers and equipment which can be used after repairing. The management recognised the impairment of US$1,943,000 (2021: Nil) for the equipment without use value. Except for the effect of Baluba Underground Mine above, some equipment of other mines has been seriously aged, for which the management recognised the impairment of US$1,046,000 (2021: Nil).

b. As at 31 December 2022, NFCA pledged to secure a self-guarantee of environmental protection fund amounting to US$10,329,000 (31 December 2021: Nil) with property, plant and equipment with a net carrying amount of US$10,078,000 (31 December 2021: Nil).

c. As at 31 December 2022, owing to the increasing copper price above management's expectation set out in the prior years, management identified the indicator of reversal of impairment loss recognised in prior years for NFCA's property, plant and equipment with a carrying amount of US$753,281,000. The Group performed an impairment assessment on NFCA's property, plant and equipment by determining the recoverable amount of the CGU to which NFCA's PPE were allocated ("NFCA CGU").

   The recoverable amount of NFCA CGU has been determined based on the value in use of such CGU. The cash flows were determined based on cash flow projections which incorporate management's best estimates of mining plan, future copper prices, production cost and discount rates.

   After the impairment assessment, the Directors determined no impairment loss reversal for NFCA CGU was needed as at 31 December 2022.

   The significant estimation and inputs used in calculating the NFCA CGU's cash flows included future copper price as summarised below, a pre-tax discount rate of 22.07% (2021: 20.56%) per annum and mine reserves based on the most recent reserve report.

   For the year ended 2022:

	2023-2027		
	2023 ***US$***	**Average** ***US$***	**Long-term average** ***US$***
Copper price *(per tonne)*	**8,000**	**8,200**	**7,875**

   For the year ended 2021:

	2022–2026		
	2022 *US$*	Average *US$*	Long-term average *US$*
Copper price *(per tonne)*	9,000	8,300	7,800

   Future copper price has referred to the market estimation and the historical fluctuation of the copper price.

15. RIGHT-OF-USE ASSETS

	Leased properties *US$'000*
Carrying amount	
At 1 January 2021	14,895
Depreciation charge	(4,965)
At 31 December 2021	9,930
Additions	868
Depreciation charge	(5,255)
At 31 December 2022	**5,543**

	2022 **US$'000**	2021 *US$'000*
Expense relating to short-term leases	**63**	247
Total cash outflow for leases	**7,282**	7,195

For both years, the Group leased properties for its operations. One lease contract is entered into for a fixed term of 4 years, and the other contracts are entered into for a fixed term of 3 years. In determining the lease terms and assessing the length of the non-cancellable period, the Group applies the definition of a contract and determines the period for which the contract is enforceable.

16. MINING RIGHTS

	Mining rights *US$'000*
Cost	
At 1 January 2021	154,108
Addition	–
At 31 December 2021 and 2022	**154,108**
Amortisation and impairment	
At 1 January 2021	(17,921)
Amortisation	(5,971)
At 31 December 2021	(23,892)
Amortisation	(15,154)
At 31 December 2022	**(39,046)**
Carrying amount	
At 31 December 2022	**115,062**
At 31 December 2021	130,216

17. INVENTORIES

	2022 ***US$'000***	2021 *US$'000*
Raw materials	**514,890**	490,952
Spare parts and consumables	**91,314**	90,829
Work in progress	**159,277**	150,286
Finished goods	**54,588**	116,234
	820,069	848,301

18. TRADE RECEIVABLES AT AMORTISED COST/TRADE RECEIVABLES AT FVTPL

	2022 US$'000	2021 US$'000
Trade receivables at amortised cost - contracts with customers	**42,153**	28,438
Less: Allowance for credit losses	**(2,256)**	(2,575)
	39,897	25,863
Trade receivables at FVTPL - contracts with customers	**368,669**	529,904

The following is an ageing analysis of trade receivables at amortised cost, net of allowance for credit losses, presented based on the invoice dates:

	2022 US$'000	2021 US$'000
0 to 30 days	**25,451**	22,245
31 to 90 days	**11,386**	3,618
91 to 180 days	**2,877**	–
181 to 365 days	**183**	–
	39,897	25,863

The following is an ageing analysis of trade receivables at FVTPL, presented based on the invoice dates:

	2022 US$'000	2021 US$'000
0 to 30 days	**311,027**	370,242
31 to 90 days	**43,968**	139,626
91 to 180 days	**11,829**	15,338
181 to 365 days	**1,845**	4,698
	368,669	529,904

18. TRADE RECEIVABLES AT AMORTISED COST/TRADE RECEIVABLES AT FVTPL (continued)

Details of impairment assessment of trade receivables at amortised cost are set out in Note 33.

Included in the Group's trade receivables at amortised cost/trade receivables at FVTPL are balances with the following related parties:

	2022 ***US$'000***	2021 *US$'000*
Trade receivables at amortised cost:		
Fellow subsidiaries	**3,719**	8,565
A non-controlling shareholder of a subsidiary	**1,832**	–
	5,551	8,565
Trade receivables at FVTPL:		
Fellow subsidiaries	**141,831**	294,027
Subsidiaries of a non-controlling shareholder of subsidiaries	**152,200**	131,544
	294,031	425,571

The above balances with related parties are unsecured, interest-free and are receivable according to the relevant sales contracts.

19. PREPAYMENTS AND OTHER RECEIVABLES

	2022 **US$'000**	2021 *US$'000*
Non-current:		
Prepayments for property, plant and equipment	**3,358**	2,491
Deposits in connection with the restoration and rehabilitation obligations *(Note 29)*	**3,429**	2,616
Long-term receivables *(Note a)*	**29,300**	28,426
Input VAT receivables, net *(Note b)*	**5,717**	21,896
Others *(Note c)*	**11,082**	12,854
	52,886	68,283
Current:		
Prepayments for inventories and others	**23,629**	23,644
Input VAT receivables, net *(Note b)*	**86,308**	121,660
Deposits in futures margin accounts	**121,362**	77,456
Other receivables	**33,096**	21,291
Less: allowance for credit losses	**(14,166)**	(14,267)
	250,229	229,784

Notes:

a. Pursuant to a financing agreement (the "LCS Project Agreement") entered into between LCS and Societe Nationale D'electricite ("SND"), a state-owned power supplier in DRC, in July 2018, LCS should provide finance to construct certain power supply network assets (the "LCS Network Assets"). SND should repay the amount of financing agreed to construction cost by instalments at an interest rate of 6% per annum.

   The construction of LCS Network Assets was completed on 2 February 2021. The amount of financing agreed to construction cost was US$29,300,000. The finance amount together with the interest will be received from SND starting from 1 March 2021.

b. The gross carrying amount of input VAT receivables is US$158,452,000 (31 December 2021: US$188,432,000). Impairment provision is estimated based on the present value of the estimated future cash flows, discounted using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the input VAT receivables for which the estimates of future cash flows have not been adjusted. As at 31 December 2022, an impairment provision amounting to US$66,427,000 (31 December 2021: US$44,876,000) in aggregate has been made on input VAT receivables.

c. Pursuant to a connection agreement entered into between NFCA and Copperbelt Energy (the "NFCA Connection Agreement"), NFCA constructs certain power supply network assets (the "NFCA Network Assets") to enable Copperbelt Energy to supply electricity to the Chambishi Southeast Mine Project of NFCA at Chambishi, Copperbelt Province of Zambia. According to the NFCA Connection Agreement, NFCA shall transfer the NFCA Network Assets to Copperbelt Energy on the date which Copperbelt Energy issues a Taking-Over Certificate.

   As at 31 December 2022, the balance of NFCA Network Assets was US$9,983,000 (31 December 2021: US$11,314,000).

19. PREPAYMENTS AND OTHER RECEIVABLES (continued)

The movements in the allowance for input VAT receivables during the year are as follows:

	2022	2021
	US$'000	*US$'000*
1 January	**44,876**	15,899
Impairment losses recognised	**21,551**	28,977
31 December	**66,427**	44,876

Included in the Group's prepayments and other receivables are balances with the following related parties:

	2022	2021
	US$'000	*US$'000*
Fellow subsidiaries	**3,217**	485
Non-controlling shareholders of subsidiaries	**2,686**	69
	5,903	554

The above balances with related parties are unsecured, interest-free and are repayable on demand.

20. RESTRICTED BANK BALANCES/TIME DEPOSIT/BANK BALANCES AND CASH

The Group's restricted bank balances, time deposit and bank balances and cash are analysed as follows:

	2022	2021
	US$'000	*US$'000*
Restricted bank balances		
Non-current restricted bank balances for the banks' letters of guarantee to secure future restoration costs as required by the government of Zambia *(Note 29)*	**1,505**	1,505
Current restricted bank balances for:		
Issuing letters of credit	**4,291**	3,246
Time deposit	**30,000**	–
Bank balances and cash	**732,923**	606,746
	768,719	611,497

The time deposit and restricted bank deposits carry interest at rates ranging from 0% to 4% (2021: from 0% to 0.1%) per annum.

Bank balances carry interest at market rates ranging from 0% to 3% (2021: 0.01% to 0.3%) per annum.

21. TRADE PAYABLES AT AMORTISED COST/TRADE PAYABLES DESIGNATED AT FVTPL

	2022	2021
	US$'000	*US$'000*
Trade payables at amortised cost	**265,172**	359,327
Trade payables designated at FVTPL	**289,691**	231,803

The following is an ageing analysis of trade payables at amortised cost presented based on the invoice dates:

	2022	2021
	US$'000	*US$'000*
0 to 30 days	**102,882**	160,051
31 to 90 days	**103,766**	96,299
91 to 180 days	**5,992**	44,208
181 to 365 days	**46,186**	13,385
1 to 2 years	**6,346**	1,055
Over 2 years	**–**	44,329
	265,172	359,327

The following is an ageing analysis of trade payables designated at FVTPL presented based on the invoice dates:

	2022	2021
	US$'000	*US$'000*
0 to 30 days	**219,524**	209,919
31 to 90 days	**66,726**	9,166
91 to 180 days	**3,441**	12,718
	289,691	231,803

The average credit period on purchases of certain goods is within three months.

21. TRADE PAYABLES AT AMORTISED COST/TRADE PAYABLES DESIGNATED AT FVTPL (continued)

Included in the Group's trade payables at amortised cost/trade payables designated at FVTPL are balances with the following related parties:

	2022 ***US$'000***	2021 *US$'000*
Trade payables at amortised cost:		
Fellow subsidiaries	**98,775**	62,989
CNMC	**–**	154
A non-controlling shareholder of subsidiaries	**3,436**	–
Subsidiaries of a non-controlling shareholder of subsidiaries	**29,518**	92,507
	131,729	155,650
Trade payables designated at FVTPL:		
Fellow subsidiaries	**25,770**	9,216

The above balances with related parties are unsecured, interest-free and are repayable within three months.

22. OTHER PAYABLES AND ACCRUED EXPENSES

	2022 ***US$'000***	2021 *US$'000*
Payables for properties, plant and equipment	**108,146**	37,372
Dividend payable to non-controlling shareholders of subsidiaries	**49,742**	24,796
Dividend payable to shareholders of the Company	**22**	22
Other tax payables	**17,748**	17,819
Payroll payables	**21,298**	13,151
Accrued expenses	**27,782**	19,347
	224,738	112,507

22. OTHER PAYABLES AND ACCRUED EXPENSES (continued)

Included in the Group's other payables and accrued expenses are balances with the following related parties:

	2022 ***US$'000***	2021 *US$'000*
CNMC	**–**	1,170
Fellow subsidiaries	**386**	37,710
Shareholders of the Company	**22**	22
Non-controlling shareholders of subsidiaries	**56,068**	29,774
	56,476	68,676

The above balances with related parties are unsecured, interest-free and are repayable on demand.

23. CONTRACT LIABILITIES

	2022 ***US$'000***	2021 *US$'000*
Advance from customers	**1,742**	9,069

During the year ended 31 December 2022, revenue of US$9,069,000 (2021: US$11,141,000) recognised was related to contract liabilities carried forward .

As at 31 December 2022, contract liabilities amounted to US$1,742,000, which is expected to be recognised as revenue within one year.

24. BANK AND OTHER BORROWINGS

	2022 US$'000	2021 US$'000
Bank loans, unsecured *(Note a)*	**396,500**	870,633
Loan from a fellow subsidiary, unsecured *(Note b)*	**130,000**	–
Interest payable	**2,609**	1,725
	529,109	872,358
The carrying amounts of the above borrowings are repayable*:		
Within one year	**177,609**	24,225
More than one year but not exceeding two years	**90,000**	45,000
More than two years but not exceeding five years	**209,500**	696,633
More than five years	**52,000**	106,500
	529,109	872,358
Less: Amounts due within one year shown under current liabilities	**(177,609)**	(24,225)
Amounts shown under non-current liabilities	**351,500**	848,133

* The amounts due are based on scheduled repayment dates set out in the loan agreements.

Notes:

a. As at 31 December 2022, the unsecured bank loans of US$128,600,000 (2021: US$169,600,000) were supported by corporate guarantees issued by a non-controlling shareholder of a subsidiary in favour of the relevant banks.

   The unsecured bank loans as at 31 December 2022 bore interest at rates varied based on London Interbank Offered Rate ("LIBOR") ranging from 1.5% to 6.9% per annum (2021: from 2.1% to 2.5% per annum).

b. The loan from a fellow subsidiary bore interest at rates varied based on LIBOR ranging from 5.72% to 5.74% per annum (2021: from 3.8% to 3.9% per annum).

25. LEASE LIABILITIES

	2022 **US$'000**	2021 *US$'000*
Lease liabilities payable:		
Within one year	**7,596**	7,472
Within a period of more than one year but not more than two years	**299**	6,411
	7,895	13,883
Less: Amount due for settlement within 12 months shown under current liabilities	**(7,596)**	(7,472)
Amount due for settlement after 12 months shown under non-current liabilities	**299**	6,411

The weighted average incremental borrowing rate applied to lease liabilities is 5.28% per annum (2021: 4.33% per annum).

Included in the Group's lease liabilities are balances with the following related parties:

	2022 **US$'000**	2021 *US$'000*
Fellow subsidiaries	**7,895**	13,883

26. FINANCIAL LIABILITIES DESIGNATED AT FVTPL

	2022	2021
	US$'000	*US$'000*
Copper futures contracts	**11,344**	3,771

Details of the above futures contracts are analysed as follows:

	2022	2021
Number of contracts		
– Sale	**1,398**	1,024
Notional amount *(in US$'000)*	**185,487**	245,325
Exercise price *(in US$)*	**8,369-8,380**	9,480-9,923
Maturity date	**12 January 2023 – 30 March 2023**	7 January 2022 – 31 March 2022

During the year, the Group entered into certain copper futures contracts to mitigate its risk associated with the prices of its blister copper and copper anodes and copper cathodes sold. Hedge accounting is not applied by the Group and a gain of US$21,334,000 (2021: a loss of US$48,246,000) arising on changes in fair value of derivatives was recognised in profit or loss (see Note 7).

27. SHARE CAPITAL

	Number of shares	**Share capital**	**Share capital**
	'000	***HK$'000***	***US$'000***
Issued and fully paid			
At 1 January 2021	3,489,036	4,775,319	613,233
Issue of shares at 14 May 2021 *(Note)*	250,000	990,000	127,482
Transaction costs attributable to issue of shares	–	(4,630)	(596)
At 1 January 2022	3,739,036	5,760,689	740,119
At 31 December 2022	**3,739,036**	**5,760,689**	**740,119**

Note:

Upon the completion of all conditions as stated in a placing and subscription agreement dated at 6 May 2021 entered into by the Company, China Nonferrous Mining Development Limited ("CNMD"), the Company's immediate holding company, and a placing agent, (1) a total of 250,000,000 shares of the Company held by CNMD were placed at HK$3.96 per share on 11 May 2021; and (2) a total of 250,000,000 new shares of the Company were subscribed by CNMD at HK$3.96 per share on 14 May 2021. Net proceeds of approximately HK$985,370,000 (equivalent to approximately US$126,886,000) were received by the Company. Details of the placing and subscription are set out in the announcements published by the Company dated 6 May 2021 and 14 May 2021.

28. DEFERRED INCOME

	2022 **US$'000**	2021 *US$'000*
At beginning of year	**13,940**	16,345
Recognised in profit or loss during the year	**(1,164)**	(2,405)
At end of year	**12,776**	13,940

The above balances represented grants from Ministry of Finance of the PRC to subsidise the Group's capital expenditure and interest incurred in its copper mine development activities in Zambia which were capitalised under mining properties. These grants are recognised in profit or loss on a systematic and rational basis over the available outputs of the related assets.

29. PROVISION FOR RESTORATION, REHABILITATION AND ENVIRONMENTAL COSTS

	2022 **US$'000**	2021 *US$'000*
Balance at beginning of year	**37,400**	28,272
Provisions revision	**15,970**	6,814
Unwinding of discount *(Note 8)*	**1,157**	2,314
Amount utilised during the year	**(1,408)**	–
	53,119	37,400

The Group's provision for restoration, rehabilitation and environmental costs is related to the Group's subsidiaries in Zambia and DRC which are involved in mining, leaching and smelting operations. The provision represents the accrued cost required to provide adequate restoration and rehabilitation measured by qualified professionals in Zambia and DRC, as discounted at rates ranging from 4.6% to 10.5% (2021: 1.5% to 4.1%) per annum, upon the completion of their operations. These amounts will be settled when rehabilitation is undertaken, generally at the end of a project life, which ranges from 1 to 27 years.

The Group is required, under the prevailing regulations, to make an annual contribution over a period of five years beginning from the year of prospecting, exploration or mining operations being commissioned, at 5% to 20% of the estimated restoration costs into an Environmental Protection Fund which is administrated by the Government of Zambia, amounting to US$3,429,000 (31 December 2021: US$2,616,000) (Note 19) as at 31 December 2022. The regulations also require that the balance of the estimated restoration costs to be secured using letters of guarantee. Companies in Zambia of the Group have provided the relevant letters of guarantee as at 31 December 2022 amounting to US$1,505,000 (31 December 2021: US$1,505,000) (Note 20). In addition, as at 31 December 2022, NFCA applied for a self-guarantee amounting to US$10,329,000 (31 December 2021: Nil) by way of property, plant and equipment and received the related approval; while SML has not received a demand notice at the date of issuance of these consolidated financial statements.

The Directors opined that adequate provision has been made at the end of each reporting period.

30. DEFERRED TAX ASSETS/LIABILITIES

For the purpose of presentation in the consolidated statement of financial position, certain deferred tax assets and liabilities have been offset. The following is the analysis of the deferred tax balances for financial reporting purposes:

	2022	2021
	US$'000	*US$'000*
Deferred tax assets	**8,643**	13,102
Deferred tax liabilities	**(146,573)**	(141,373)
	(137,930)	(128,271)

The following is the major deferred tax liabilities and assets recognised and movements thereon during the current and prior years:

	Property, plant and equipment	**Undistributed profits of subsidiaries**	**Tax losses**	**Total**
	US$'000	*US$'000*	*US$'000*	*US$'000*
At 1 January 2021	(70,860)	(39,466)	67,681	(42,645)
Charge to profit or loss	(28,391)	(3,350)	(53,885)	(85,626)
At 31 December 2021	(99,251)	(42,816)	13,796	(128,271)
(Charge)/credit to profit or loss	8,105	(3,968)	(13,796)	(9,659)
At 31 December 2022	**(91,146)**	**(46,784)**	**–**	**(137,930)**

As at 31 December 2022, the Group has no unused tax losses (31 December 2021: US$45,987,000) in respect of the subsidiaries in Zambia available for offset against future profits. Deferred tax assets have been recognised in respect of all the losses of these subsidiaries in Zambia in 2021. Subject to regulations in Zambia, the above tax losses of these subsidiaries are available to be carried forward up to a maximum of ten years from the year in which they are incurred for set off against future taxable profits from the same source of those subsidiaries.

As at 31 December 2022, the Group has deductible temporary differences of US$69,875,000 (31 December 2021: US$48,436,000). No deferred tax asset has been recognised in relation to such deductible temporary difference as it is not probable that taxable profit will be available against which the deductible temporary differences can be utilised.

31. CAPITAL COMMITMENTS

	2022 **US$'000**	2021 US$'000
Capital expenditure in respect of the acquisition of property, plant and equipment contracted for but not provided in the consolidated financial statements	**19,707**	36,135

32. CAPITAL MANAGEMENT

The Group manages its capital to ensure that entities in the Group will be able to continue as a going concern while maximising the return to stakeholders through the optimisation of the debt and equity balance. The Group's overall strategy remains unchanged from the prior year.

The capital structure of the Group consists of net debt, which includes bank and other borrowings disclosed in Note 24, net of restricted bank balances, a time deposit, bank balances and cash and equity attributable to owners of the Company comprising share capital and retained profits.

The Group is not subject to any externally imposed capital requirements.

Gearing ratio

The Group's management committee reviews the capital structure on a regular basis. As part of this review, the committee considers the cost of capital and the risks associated with each class of capital.

The gearing ratio of the Group at the end of the reporting period was as follows:

	Notes	**2022** **US$'000**	2021 US$'000
Debts	(a)	**529,109**	872,358
Less: Restricted bank balances, a time deposit and bank balances and cash		**(768,719)**	(611,497)
Net debt		**(239,610)**	260,861
Equity	(b)	**1,663,046**	1,542,202
Net debt to equity ratio		**N/A**	16.9%

Notes:

(a) Debts comprise non-current and current bank and other borrowings as detailed in Note 24.

(b) Equity includes share capital and retained profits attributable to owners of the Company.

33. FINANCIAL INSTRUMENTS

Categories of financial instruments

	2022 US$'000	2021 US$'000
Financial assets		
Trade receivables at FVTPL	**368,669**	529,904
Financial assets at amortised cost	**978,208**	750,266
Financial liabilities		
Trade payables designated at FVTPL	**289,691**	231,803
Financial liabilities designated at FVTPL	**11,344**	3,771
Amortised costs	**979,973**	1,313,222

Financial risk management objectives and policies

The Group's major financial instruments include trade receivables at amortised cost, trade receivables at FVTPL, other receivables, restricted bank balances, a time deposit, bank balances and cash, trade payables, trade payables designated at FVTPL, other payables, bank and other borrowings, and financial liabilities designated at FVTPL. Details of the financial instruments are disclosed in respective notes. The risks associated with these financial instruments include market risk (currency risk, interest rate risk and commodity price risk), credit risk and liquidity risk. The policies on how to mitigate these risks are set out below. The Directors manage and monitor these exposures to ensure appropriate measures are implemented on a timely and effective manner.

Market risk

(i) Currency risk

The Group's significant operations are in Zambia and DRC and most of its sales and purchases were denominated in US$, which is the functional currency of the companies comprising the Group. However certain sales and purchases were mainly settled in Zambian Kwacha ("ZMK"), Congolese Franc ("CDF") and Renminbi ("RMB") other than the functional currency of these group entities, which expose the Group to foreign currency risk.

The carrying amounts of the Group's ZMK, CDF and RMB denominated monetary assets (including financial assets and input VAT receivables) and liabilities (including financial liabilities and tax payables) which expose the Group to foreign currency risk are as follows:

	2022 US$'000	2021 US$'000
ZMK denominated monetary assets	**80,738**	108,672
ZMK denominated monetary liabilities	**(48,081)**	(83,190)
CDF denominated monetary assets	**67,082**	86,940
CDF denominated monetary liabilities	**(113,116)**	(123,909)
RMB denominated monetary assets	**27,716**	26,870
RMB denominated monetary liabilities	**(9,181)**	(5,606)

33. FINANCIAL INSTRUMENTS (continued)

Financial risk management objectives and policies (continued)

Market risk (continued)

(i) Currency risk (continued)

The Group currently does not have a foreign exchange hedging policy. However, the management of the Group monitors foreign exchange exposure and will consider hedging significant foreign exchange exposure should the need arise.

The sensitivity analysis below has been determined based on the exposure to exchange rates of ZMK, CDF and RMB against US$. For a 5%, a 10%, and a 15% weakening of ZMK, CDF and RMB against US$ and all other variables being held constant, there would have no material impact on the Group's total equity apart from the retained profits and the effect on the Group's profit after tax are as follows:

	(Decrease)/Increase	
	2022	2021
	US$'000	*US$'000*
ZMK against US$		
Weakening		
– 5%	**(1,143)**	(1,051)
– 10%	**(2,286)**	(2,102)
– 15%	**(3,429)**	(3,153)
CDF against US$		
Weakening		
– 5%	**1,611**	637
– 10%	**3,222**	1,274
– 15%	**4,833**	1,911
RMB against US$		
Weakening		
– 5%	**(648)**	(732)
– 10%	**(1,296)**	(1,464)
– 15%	**(1,944)**	(2,196)

For a 5%, a 10%, and a 15% strengthening of ZMK, CDF and RMB against US$, there would be an equal and opposite impact on the profit after tax.

33. FINANCIAL INSTRUMENTS (continued)

Financial risk management objectives and policies (continued)

Market risk (continued)

(ii) Interest rate risk

Apart from the fixed rate loan from a fellow subsidiary and lease liabilities that expose the Group to fair value interest rate risk, the Group is also exposed to cash flow interest rate risk through the impact of rate changes on interest-bearing financial assets and liabilities, mainly interest-bearing restricted bank balances, a time deposit and bank balances, and bank and other borrowings at variable interest rates. The Group currently does not have an interest rate hedging policy. However, the Directors will consider hedging significant interest rate risk should the need arise.

The sensitivity analysis below has been determined based on the exposure to variable rate bank and other borrowings at the end of each reporting period, with the assumption that the amount of liabilities outstanding at the end of each reporting period was outstanding for the whole year. The effect on restricted bank balances, a time deposit and bank balances, however, had been ignored as most of them bore interest at minimal rate at the end of each reporting period.

If interest rates on bank and other borrowings had been 100 basis points ("BPs") change and all other variables were held constant, there would have been no material impact on the Group's total equity apart from retained profits and the potential effect on profit after tax is as follows:

	2022 ***US$'000***	2021 *US$'000*
(Decrease)/increase in profit for the year		
– as the result of increase in interest rate	**(5,130)**	(5,523)
– as the result of decrease in interest rate	**5,130**	5,523

(iii) Commodity price risk

The Group's commodity price risk is mainly the exposure to fluctuations in the prevailing market price of copper which are the major commodities purchased, produced and sold by the Group. To minimise this risk, the Group enters into copper futures contracts and provisional price arrangement to manage the Group's exposure in relation to forecasted sales of copper products, forecasted purchases of copper concentrates, inventories and firm commitments to sell the Group's copper products.

33. FINANCIAL INSTRUMENTS (continued)

Financial risk management objectives and policies (continued)

Market risk (continued)

(iii) Commodity price risk (continued)

Financial assets and liabilities of the Group whose fair value change in line with the fluctuations in the prevailing market price of copper mainly comprise copper futures contracts and provisional price arrangements. If all prices of copper futures had been increased by 10% and all other variables were held constant, there would have no material impact on the Group's total equity apart from retained profits and the potential effect on profit after tax is as follows:

	2022	2021
	US$'000	*US$'000*
Increase in profit after tax for the year	**8,046**	15,776

There would be an equal and opposite impact on the profit after tax for the year if there had been 10% decrease in all prices of copper futures.

Credit risk and impairment assessment

Credit risk refers to the risk that the Group's counterparties default on their contractual obligations resulting in financial losses to the Group. The Group's credit risk exposures are primarily attributable to trade receivables at amortised cost, trade receivables at FVTPL, other receivables, deposits in futures margin accounts, restricted bank balances, a time deposit and bank balances. In order to minimise the credit risk, the Group's management continuously monitors the level of exposure to ensure that follow-up action is taken to recover overdue debts.

Except for trade receivables at FVTPL, the Group performed impairment assessment for financial assets and other items under ECL model individually. The Directors consider that the Group's credit risk is insignificant.

(i) Trade receivables at FVTPL

As at 31 December 2022, the Group's trade receivables at FVTPL were debtors with an aggregate amount of US$368,669,000 (31 December 2021: US$529,904,000).

The Group has concentration of credit risk as 79% (2021: 80%) of the total trade receivables at FVTPL was due from the Group's two (2021: two) largest customers. Sales to these two largest customers accounted for 72% (2021: 65%) of the Group's sales of copper products and these customers are large and reputable in the market. They have been trading with the Group with good settlement history.

Other than the above, the Group does not have other significant concentration of credit risk.

33. FINANCIAL INSTRUMENTS (continued)

Financial risk management objectives and policies (continued)

Credit risk and impairment assessment (continued)

(ii) Trade receivables at amortised cost

As at 31 December 2022, included in the Group's trade receivables at amortised cost balance were debtors with an aggregate amount of US$42,153,000 (31 December 2021: US$28,438,000) and were assessed for impairment individually. As at 31 December 2022, impairment allowance of US$2,256,000 (31 December 2021: US$2,575,000) were made on these debtors.

The Group has concentration of credit risk as 55% (2021: 53%) of the total trade receivables at amortised cost was due from the Group's four (2021: four) largest customers. Sales to the four largest customers accounted for 39% (2021: 60%) of the Group's sales of goods other than copper products and these customers are large and reputable in the market. They have been trading with the Group with good settlement history.

Other than the above, the Group does not have other significant concentration of credit risk.

For trade receivables at amortised cost, the Group has applied the simplified approach in HKFRS 9 to measure the loss allowance at lifetime. The Group determines the expected credit losses on these items individually.

(iii) Bank balances, the time deposit and restricted bank balances

Credit risk on bank balances, the time deposit and restricted bank balances is limited because the counterparty banks are with good reputation and external public credit ratings. Thus, the Directors considered that the probability of default is negligible for the bank balances, the time deposit and restricted bank balances of the Group and no expected credit loss was recognised as at 31 December 2022 and 2021.

For all other financial assets including other receivables, long-term receivables and deposits in futures margin account, the Group measures the loss allowance equal to 12-month ECL, unless when there has been a significant increase in credit risk since initial recognition where the Group recognises lifetime ECL. The Group has assessed and concluded that the risk of default rate for the aforementioned other financial assets is steady based on the Group's assessment of the financial health of the counterparties, except for the receivable from a third party amounting to US$12,787,000 as at 31 December 2022 (31 December 2021: US$12,787,000), which was credit impaired and assessed individually, and the impairment allowance of US$12,787,000 (31 December 2021: US$12,787,000) was recognised in the consolidated financial statements.

33. FINANCIAL INSTRUMENTS (continued)

Financial risk management objectives and policies (continued)

Credit risk and impairment assessment (continued)

(iv) Movements in the loss allowance all of which are relating to trade receivables at amortised cost and other receivables are as follows:

	2022 **US$'000**	2021 US$'000
1 January	**16,842**	14,369
Impairment recognised	**(124)**	2,473
Amount written off as uncollectible	**(296)**	–
31 December	**16,422**	16,842

The tables below detail the credit risk exposures of the Group's financial assets, which are subject to ECL assessment:

	Notes	**12-month or lifetime ECL**	**Gross carrying amount** **2022** **US$'000**	2021 US$'000
Financial assets at amortised cost				
Trade receivables at amortised cost	18	Lifetime ECL	**39,897**	25,863
		Credit impaired	**2,256**	2,575
			42,153	28,438
Other receivables	19	12-month ECL	**18,930**	7,024
		Credit impaired	**14,166**	14,267
			33,096	21,291
Long-term receivables	19	12-month ECL	**29,300**	28,426
Deposits in futures margin accounts	19	12-month ECL	**121,362**	77,456
Bank balances	20	12-month ECL	**732,923**	606,746
Time deposit	20	12-month ECL	**30,000**	–
Restricted bank balances	20	12-month ECL	**5,796**	4,751

33. FINANCIAL INSTRUMENTS (continued)

Financial risk management objectives and policies (continued)

Liquidity risk

The Directors have built an appropriate liquidity risk management framework for the management of the Group's short, medium, and long-term funding and liquidity management requirements. The Group manages liquidity risk by maintaining banking facilities and by continuously monitoring forecast and actual cash flows and matching the maturity profiles of its financial assets and liabilities.

The following table details the Group's remaining contractual maturity for its financial liabilities. The table has been drawn up based on the undiscounted cash flows of financial liabilities based on the earliest date on which the Group can be required to pay. The maturity dates are based on the agreed repayment dates.

The table includes both interest and principal cash flows. The interest payments are computed using contractual rates or if variable, based on the prevailing market rate at the end of each reporting period. For derivatives settled on a net basis, the table has been drawn up based on undiscounted contractual net cash flows.

	Weighted average interest rate	On demand or less than 6 months	Over 6 months but not more than 1 year	1 to 5 years	More than 5 years	Total undiscounted cash flows	Carrying amounts
	%	*US$'000*	*US$'000*	*US$'000*	*US$'000*	*US$'000*	*US$'000*
31 December 2022							
Non-derivative financial liabilities							
Trade and other payables		450,864	–	–	–	450,864	450,864
Bank borrowings at variable rate	5.3	50,337	179,147	344,493	54,749	628,726	529,109
Trade payables designated at FVTPL		289,691	–	–	–	289,691	289,691
		790,892	179,147	344,493	54,749	1,369,281	1,269,664
Lease liabilities	5.3	3,891	3,894	314	–	8,099	7,895
Financial liabilities designated at FVTPL							
Copper futures contracts		11,344	–	–	–	11,344	11,344

33. FINANCIAL INSTRUMENTS (continued)

Financial risk management objectives and policies (continued)

Liquidity risk (continued)

	Weighted average interest rate %	On demand or less than 6 months *US$'000*	Over 6 months but not more than 1 year *US$'000*	1 to 5 years *US$'000*	More than 5 years *US$'000*	Total undiscounted cash flows *US$'000*	Carrying amounts *US$'000*
31 December 2021							
Non-derivative financial liabilities							
Trade and other payables		440,864	–	–	–	440,864	440,864
Bank borrowings at variable rate	2.3	11,785	32,386	780,524	110,936	935,631	872,358
Trade payables designated at FVTPL		231,803	–	–	–	231,803	231,803
		684,452	32,386	780,524	110,936	1,608,298	1,545,025
Lease liabilities	4.3	3,736	3,736	6,467	–	13,939	13,883
Financial liabilities designated at FVTPL							
Copper futures contracts		3,771	–	–	–	3,771	3,771

33. FINANCIAL INSTRUMENTS (continued)

Fair value measurement of financial instruments

The following table provides an analysis of financial instruments that are measured subsequent to initial recognition at fair value, grouped into Levels 1 to 3 based on the level to which the fair value is observable:

	Level 1 *US$'000*	**Level 2** *US$'000*	**Level 3** *US$'000*	**Total** *US$'000*
31 December 2022				
Financial liabilities designated at FVTPL – Copper future contracts *(Note a)*	**(11,344)**	**–**	**–**	**(11,344)**
Trade receivables at FVTPL *(Note b)*	**–**	**368,669**	**–**	**368,669**
Trade payables designated at FVTPL *(Note b)*	**–**	**(289,691)**	**–**	**(289,691)**
31 December 2021				
Financial liabilities designated at FVTPL – Copper future contracts *(Note a)*	(3,771)	–	–	(3,771)
Trade receivables at FVTPL *(Note b)*	–	529,904	–	529,904
Trade payables designated at FVTPL *(Note b)*	–	(231,803)	–	(231,803)

Notes:

a. Calculated based on the initial transaction prices and quoted prices in an active market.

b. Calculated based on the quoted prices in an active market and the estimated grades of copper, gold and silver in Group's copper products.

There were no transfers between Level 1 and 2 in the year.

Except as detailed above, the Directors consider that the carrying amounts of financial assets and financial liabilities recorded at amortised cost recognised in the consolidated financial statements approximate their fair values.

34. RECONCILIATION OF LIABILITIES ARISING FROM FINANCING ACTIVITIES

The table below details changes in the Group's liabilities arising from financing activities, including both cash and non-cash changes. Liabilities arising from financing activities are those for which cash flows were and for future cash flows will be, classified in the Group's consolidated statement of cash flows as cash flows from financing activities.

	Bank and other borrowings	**Dividends payable**	**Lease liabilities**	**Total**
	US$'000	*US$'000*	*US$'000*	*US$'000*
At 1 January 2021	1,061,442	17,018	20,194	1,098,654
Financing cash flows	(223,449)	(121,539)	(6,948)	(351,936)
Interest expenses	34,365	–	637	35,002
Dividends declared	–	129,339	–	129,339
At 31 December 2021	**872,358**	**24,818**	**13,883**	**911,059**
Financing cash flows	**(375,649)**	**(196,131)**	**(7,219)**	**(578,999)**
New leases	**–**	**–**	**868**	**868**
Interest expenses	**32,400**	**–**	**363**	**32,763**
Dividends declared	**–**	**221,077**	**–**	**221,077**
At 31 December 2022	**529,109**	**49,764**	**7,895**	**586,768**

35. RELATED PARTY TRANSACTIONS

The Company is controlled by CNMC through China Nonferrous Mining Development Limited, which is a subsidiary of CNMC. The Directors consider the ultimate holding company is CNMC, a stated-owned company established in the PRC.

Other than as disclosed elsewhere in these consolidated financial statements, the Group has following transactions with related parties:

Transactions with CNMC and its subsidiaries

Relationships	*Notes*	**Nature of transactions**	**2022** ***US$'000***	2021 *US$'000*
Fellow subsidiaries	(i)(ii)	Sales of blister copper and copper anodes	**1,141,603**	1,271,215
	(i) (ii)	Sales of copper cathodes	**784,811**	670,794
	(i)	Sales of sulphuric acid	**47,367**	53,538
	(i)	Sales of other materials	**47,348**	14,335
	(i)	Services income	**–**	34
	(i)	Purchases of plant and equipment	**(36,514)**	(85,397)
	(i)	Purchases of assets	**(2,241)**	–
	(i) (iii)	Purchases of copper concentrate	**(129,667)**	(86,602)
	(i)	Purchases of materials	**(77,441)**	(67,241)
	(i)	Purchases of electricity	**(39,685)**	(35,868)
	(i)	Purchases of services	**(151,938)**	(89,799)
	(i)	Interest expenses on borrowings	**(457)**	(6,700)
	(i)	Interest expenses on lease liabilities	**(363)**	(637)
	(i)	Purchase of freight and transportation	**(24,003)**	(14,670)
	(i)	Expense relating to leases	**(5,797)**	(4,965)
Ultimate holding company	(i)	Expenses relating to short-term leases	**–**	(247)

Notes:

(i) These transactions were conducted in accordance with terms of the relevant agreements.

(ii) Included in the sales amount of blister copper and copper anodes are losses of US$43,665,000 (2021: gains of US$53,645,000) arising from a provisional pricing arrangement.

Included in the sales amount of copper cathodes are losses of US$12,917,000 (2021: gains of US$29,121,000) arising from a provisional pricing arrangement.

(iii) Included in the purchase amount of copper concentrate are gains of US$8,263,000 (2021: losses of US$2,552,000) arising from a provisional pricing arrangement.

35. RELATED PARTY TRANSACTIONS (continued)

Transactions with CNMC and its subsidiaries (continued)

Notes: (continued)

In addition to the above, the Group also had the following transactions with CNMC and its subsidiaries:

- On 1 July 2009, a subsidiary of the Company, CCS entered into an agreement with Fifteen MCC Africa Construction & Trade Ltd. ("Fifteen MCC Africa"), a fellow subsidiary, (the "Fifteen MCC Africa Agreement"). According to Fifteen MCC Africa Agreement, Fifteen MCC Africa provides construction as well as equipment repair and maintenance services to CCS on an ongoing basis which were included in the purchase of services as stated in Note (i). In addition, pursuant to Fifteen MCC Africa Agreement, it requires accommodation for staff of Fifteen MCC Africa based in Zambia, and that subsidiary agreed to provide certain living quarters to Fifteen MCC Africa on a free-of-charge basis. Fifteen MCC Africa shall pay for the use of water and electricity and other expenses such as repair expense and any applicable tax in Zambia.

- On 1 July 2017, CCS entered into a rental agreement with ZCCZ, a fellow subsidiary, (the "ZCCZ Agreement"), pursuant to which ZCCZ rented related properties to CCS. On 31 December 2019, the Group entered into a lease modification agreement for the use of properties with ZCCZ for 4 years. As at 31 December 2022, the related right-of-use assets and lease liabilities were US$4,965,000 (31 December 2021: US$9,930,000) and US$7,317,000 (31 December 2021: US$13,883,000), respectively.

Transactions with other state-owned enterprises

Relationships	*Notes*	**Nature of transactions**	**2022** ***US$'000***	2021 *US$'000*
Subsidiaries of a non-controlling shareholder of subsidiaries	(i) (ii)	Sales of blister copper and copper anodes	**794,026**	670,180
	(i)	Purchases of services	**–**	(1,684)

Notes:

(i) These transactions were conducted in accordance with terms of the relevant agreements.

(ii) Included in the sales amount of blister copper and copper anodes are losses of US$7,975,000 (2021: gains of US$39,601,000) arising from a provisional pricing arrangement.

In addition to the above, the Group has entered into various transactions, including amongst others, deposit placements, borrowings and other bank facilities, with certain banks and financial institutions which are state-owned entities in its ordinary course of business. In view of the nature of these transactions, the Directors are of the opinion that separate disclosures would not be meaningful.

35. RELATED PARTY TRANSACTIONS (continued)

Transactions with certain subsidiaries of a non-controlling shareholder of subsidiaries

Relationships	*Notes*	Nature of transactions	**2022** **US$'000**	2021 *US$'000*
Subsidiaries of a non-controlling shareholder of subsidiaries	(i) (ii)	Sales of copper cathodes	**38,365**	72,471
	(i) (iii)	Services income	**3,558**	–
	(i)	Purchases of materials	**(102,272)**	(157,222)
	(i)	Purchases of services	**(3,000)**	–

Notes:

As at 31 December 2022 and for the year then ended, La Generale des Carrieres et des Mines SA ("GCM") is a non-controlling shareholder of Kambove Mining. GCM has become a connected person of the Company at the subsidiary level under the Listing Rules, and the continuing transaction contemplated under certain transaction agreements have been constituted the continuing connected transactions under Chapter 14A of the Listing Rules.

(i) These transactions were conducted in accordance with terms of the relevant agreements.

(ii) Included in the sales amount of copper cathodes are losses of US$1,010,000 (2021: gains of US$4,190,000) arising from a provisional pricing arrangement.

(iii) On 29 April 2022, Huachin Leach entered into the Huachin Leach Ore Processing Agreement with GCM. The proposed annual cap for the transactions contemplated under the Huachin Leach Ore Processing Agreement for the period from 29 April 2022 to 28 April 2023 is US$75,600,000.

Compensation of key management personnel

The remuneration of directors and other members of key management during the year was as follows:

	2022 **US$'000**	2021 *US$'000*
Short-term benefits	**1,412**	1,231
Post-employment benefits	**156**	82
	1,568	1,313

The remuneration of directors and key executives is determined by the remuneration committee having regard to the performance of individuals and market trends.

36. RETIREMENT BENEFIT SCHEMES

The employees of the Group's subsidiaries in Zambia and DRC are members of the state-managed retirement benefit schemes operated by the Zambia government and DRC government, respectively. The subsidiaries are required to contribute a certain percentage of their payroll to the retirement benefit schemes to fund the benefits. Certain employees of the Group are members of the state-managed retirement benefit scheme operated by the PRC government and the Group contributes a certain percentage of their payroll to the retirement benefit scheme to fund the benefit.

There were no forfeited contributions (by employers on behalf of employees who leave the schemes prior to vesting fully in such contributions) in the Group. Hence, there is no forfeited contribution available for the Group to reduce its existing level of contributions to the pension schemes in future years.

The only obligation of the Group with respect to the aforesaid retirement benefit schemes is to make the required contributions under the schemes.

37. PARTICULARS OF SUBSIDIARIES OF THE COMPANY

Details of the subsidiaries directly and indirectly held by the Company at the end of the reporting period are set out below.

Name of company	Place/country of incorporation and/ operation action	Issued and fully paid-up ordinary share capital	Percentage of equity attributable to the Company as at 31 December				Principal activities
			2022 %		2021 %		
			Direct	**Indirect***	Direct	Indirect*	
CNMH *(Note (a))*	Ireland	Euro171,152,002	**100**	**-**	100	–	Investment holding
CNMHK *(Note (a))*	Hong Kong	US$48,000,000	**70**	**-**	70	–	Investment holding
CNMHKI *(Note (a))*	Hong Kong	US$20,000	**100**	**-**	100	–	Investment holding
NFCA	Zambia	US$9,000,001	**-**	**85**	–	85	Exploration and mining of copper and production of copper concentrates
CCS	Zambia	US$2,000	**-**	**60**	–	60	Production and sale of blister copper and copper anodes, copper-cobalt alloy and sulphuric acid
SML	Zambia	US$1,000	**-**	**67.75**	–	67.75	Production and sale of copper cathodes
Luanshya	Zambia	US$10,000,001	**-**	**80**	–	80	Exploration and mining of copper and production of copper concentrates and copper cathodes
Huachin Metal Leach SA *(Note (c))*	DRC	US$10,000,000	**-**	**43.75**	–	43.75	Production and sale of copper cathodes
CNMC Huachin Mabende Mining SA ("CHM") *(Note (c))*	DRC	US$10,000,000	**-**	**42**	–	42	Production and sale of copper cathodes
CCS Chinda Trade & Investment SARL	DRC	US$2,000	**-**	**60**	–	60	Sale of sulphuric acid
Sylver Back Resources SARL ("SBR") *(Note (b))*	DRC	CDF717,005,314	**-**	**39.9**	–	39.9	Exploration and mining of copper
Lualaba Copper Smelter SAS ("LCS") *(Note (d))*	DRC	US$20,000	**-**	**57**	–	57	Production and sale of blister copper and sulphuric acid
Kambove Mining SAS ("KM") *(Note (d))*	DRC	CDF14,000,000	**-**	**55**	–	55	Exploration and mining of copper and production of copper concentrates
Kingsail Limited ("KL") *(Note (d))*	Hong Kong and Zambia	HK$10,000	**-**	**60**	–	60	Sale of copper cathodes and copper concentrates
CNMC Congo Luano Mining SASU ("LUANO") *(Note (c))*	DRC	US$10,000	**-**	**70**	–	70	Production and sale of copper cathodes

* The indirect percentage of equity attributable to the Company is the sum product of direct holding by the Company and indirect holding by a multiplication of the proportion of shares held in each holding layer.

37. PARTICULARS OF SUBSIDIARIES OF THE COMPANY (continued)

Notes:

(a) The ordinary share capital of these companies is directly held by the Company.

(b) CHM acquired SBR on 20 November 2015 and 95% of the issued and paid-up ordinary share capital of SBR is directly held and controlled by CHM.

(c) 62.5%, 60% and 100% of the issued and paid-up ordinary share capital of Huachin Metal Leach SA, CHM and LUANO, respectively, is directly held and controlled by CNMHK.

(d) 57%, 55% and 60% of the issued and paid-up ordinary share capital of LCS, KM and KL, respectively, is directly held and controlled by CNMHKI.

Details of non-wholly owned subsidiaries that have material non-controlling interests

The table below shows details of non-wholly owned subsidiaries of the Group that have material non-controlling interests:

Name of company	Place/country of operations and principal place of activities	Percentage of equity interest held by non-controlling interests		Profit allocated to non-controlling interests		Accumulated non-controlling interests	
		2022	2021	**2022**	2021	**2022**	2021
		%	%	***US$'000***	*US$'000*	***US$'000***	*US$'000*
CCS	Zambia	**40**	40	**38,390**	41,227	**293,305**	272,542
CHM	DRC	**58**	58	**23,844**	35,057	**101,472**	100,828
Subsidiaries with individually immaterial non-controlling interests						**275,113**	256,312
						669,890	629,682

Summarised financial information in respect of each of the Group's subsidiaries that has material non-controlling interests is set out below. The summarised financial information below represents amounts before intragroup eliminations.

37. PARTICULARS OF SUBSIDIARIES OF THE COMPANY (continued)

Details of non-wholly owned subsidiaries that have material non-controlling interests (continued)

CCS	**2022** **US$'000**	2021 US$'000
Current assets	**822,725**	900,476
Non-current assets	**162,907**	171,941
Current liabilities	**(258,548)**	(309,952)
Non-current liabilities	**(4,104)**	(92,245)
Equity attributable to owners of the Company	**429,675**	397,678
Non-controlling interests	**293,305**	272,542
Revenue	**1,561,633**	1,580,758
Expenses	**(1,465,658)**	(1,477,689)
Profit and total comprehensive income for the year	**95,975**	103,069
Profit and total comprehensive income to owners of the Company	**57,585**	61,842
Profit and total comprehensive income attributable to the non-controlling interests of the Company	**38,390**	41,227
Dividends paid to the non-controlling interests	**17,627**	22,714
Net cash inflow/(outflow) from operating activities	**180,376**	(3,877)
Net cash outflow from investing activities	**(8,930)**	(2,573)
Net cash outflow from financing activities	**(106,015)**	(13,734)
Effect of foreign exchange rate changes	**(418)**	164
Net cash inflow/(outflow)	**65,013**	(20,020)

37. PARTICULARS OF SUBSIDIARIES OF THE COMPANY (continued)

Details of non-wholly owned subsidiaries that have material non-controlling interests (continued)

CHM	2022 *US$'000*	2021 *US$'000*
Current assets	**282,874**	308,661
Non-current assets	**40,094**	57,802
Current liabilities	**(146,365)**	(190,672)
Non-current liabilities	**(2,086)**	(2,385)
Equity attributable to owners of the Company	**73,045**	72,578
Non-controlling interests	**101,472**	100,828
Revenue	**313,625**	296,030
Expenses	**(272,514)**	(235,587)
Profit and total comprehensive income for the year	**41,111**	60,443
Profit and total comprehensive income to owners of the Company	**17,267**	25,386
Profit and total comprehensive income attributable to the non-controlling interests	**23,844**	35,057
Dividends paid to the non-controlling interests	**23,200**	16,240
Net cash inflow from operating activities	**47,465**	60,241
Net cash (outflow)/inflow from investing activities	**(261)**	4,839
Net cash outflow from financing activities	**(40,000)**	(26,929)
Effect of foreign exchange rate changes	**(94)**	11
Net cash inflow	**7,110**	38,162

None of the subsidiaries had issued any debt securities at the end of the year.

38. STATEMENT OF FINANCIAL POSITION AND RESERVES OF THE COMPANY

	2022	2021
	US$'000	*US$'000*
ASSETS		
Non-current assets		
Equipment	**45**	59
Investment in subsidiaries	**515,663**	515,663
Loans to subsidiaries	**632,216**	518,116
Right-of-use assets	**304**	–
	1,148,228	1,033,838
Current assets		
Other receivables	**57,899**	39,215
Loans to a subsidiary	**72,000**	90,000
Bank balances and cash	**55,498**	44,560
	185,397	173,775
Total assets	**1,333,625**	1,207,613

38. STATEMENT OF FINANCIAL POSITION AND RESERVES OF THE COMPANY (continued)

	2022 US$'000	2021 US$'000
EQUITY AND LIABILITIES		
Equity		
Share capital	**740,119**	740,119
Retained profits	**157,131**	245,887
Total equity	**897,250**	986,006
Non-current liabilities		
Bank and other borrowings - due after one year	**30,000**	80,000
Amount due to a subsidiary	**192,000**	132,000
Lease liabilities	**157**	–
	222,157	212,000
Current liabilities		
Accrued expenses	**13,241**	3,693
Dividends payable	**22**	22
Bank and other borrowings - due within one year	**140,808**	5,892
Amount due to a subsidiary	**60,000**	–
Lease liabilities	**147**	–
	214,218	9,607
Total liabilities	**436,375**	221,607
Total equity and liabilities	**1,333,625**	1,207,613

The Company's statement of financial position was approved and authorised for issue by the board of directors on 30 March 2023 and is signed on its behalf by:

He Yang
DIRECTOR

Yaoyu Tan
DIRECTOR

38. STATEMENT OF FINANCIAL POSITION AND RESERVES OF THE COMPANY (continued)

Movements in reserve of the Company

	Retained profits *US$'000*
At 31 December 2020	59,329
Profit and total comprehensive income for the year	240,127
Dividend	(53,569)
At 31 December 2021	245,887
Profit and total comprehensive income for the year	54,094
Dividend	(142,850)
At 31 December 2022	**157,131**

39. EVENTS AFTER THE REPORTING PERIOD

As at 30 March 2023, the Directors recommended to distribute the dividend for the year ended 31 December 2022 of US$105,474,466 (US¢2.8209 per share), which is subject to the approval of the Company's shareholders at the forthcoming annual general meeting.

Apart from above, as of the report date, the Group had no other significant events after the reporting period that need to be disclosed.

FIVE YEARS FINANCIAL SUMMARY

A summary of selected items of the results and of the assets, liabilities and non-controlling interests of the Group for the last five financial years, as extracted from the published audited financial statements is set out below.

RESULTS

	Year ended 31 December				
	2022	2021	2020	2019	2018
	US$'000	*US$'000*	*US$'000*	*US$'000*	*US$'000*
Revenue	**4,094,716**	4,050,588	2,597,213	2,008,719	2,053,320
Gross profit	**807,221**	1,085,035	629,442	468,473	500,532
Profit before tax	**552,506**	807,036	309,855	324,035	323,861
Net profit	**382,129**	515,395	196,940	224,514	243,978
Profit attributable to owners of the Company	**263,694**	357,121	124,965	134,874	146,260

ASSETS, LIABILITIES, NON-CONTROLLING INTERESTS AND EQUITY ATTRIBUTABLE TO OWNERS OF THE COMPANY

	At 31 December				
	2022	2021	2020	2019	2018
	US$'000	*US$'000*	*US$'000*	*US$'000*	*US$'000*
Non-current assets	**1,774,938**	1,920,140	1,927,680	1,911,091	1,435,165
Current assets	**2,246,078**	2,243,844	1,605,679	1,404,440	1,397,840
Total assets	**4,021,016**	4,163,984	3,533,359	3,315,531	2,833,005
Current liabilities	**1,123,813**	944,843	1,289,143	781,902	922,332
Net current assets	**1,122,265**	1,299,001	316,536	622,538	475,508
Non-current liabilities	**564,267**	1,047,257	585,274	997,553	614,118
Equity attributable to owners of the Company	**1,663,046**	1,542,202	1,111,764	1,013,804	908,182
Non-controlling interests	**669,890**	629,682	547,178	522,272	388,373

DEFINITIONS

In this annual report, unless the context otherwise requires, the following words and expressions shall have the following meanings.

"AGM"	the annual general meeting of the Company
"Articles of Association" or "Articles"	the articles of association of the Company that were adopted on 27 April 2012
"associate(s)"	has the meaning ascribed thereto under the Listing Rules
"Audit Committee"	the audit committee of the Board
"Board of Directors" or "Board"	the board of directors of the Company
"BVI"	the British Virgin Islands
"CCS"	Chambishi Copper Smelter Limited (謙比希銅冶煉有限公司*), a company incorporated in Zambia on 19 July 2006 and a subsidiary of the Company
"CG Code" or "Corporate Governance Code"	code provisions set out in the Corporate Governance Code contained in Appendix 14 of the Listing Rules
"Chambishi Leach Plant"	the copper leaching plant located in the Copperbelt province in Zambia held by SML and where SML undertakes its leaching operations
"China" or "PRC"	the People's Republic of China. For the purpose of this report and for geographical reference only and except where the context requires, references to "China" and the "PRC" do not include Taiwan, the Macau Special Administrative Region and Hong Kong Special Administrative Region
"CNMC"	China Nonferrous Metal Mining (Group) Co., Ltd* (中國有色礦業集團有限公司), a state-owned enterprise incorporated under the laws of the PRC in 1997 with operating history dating back to 1983, directly administered by SASAC, and the ultimate controlling shareholder of the Company
"CNMC Guarantee Fees Framework Agreement"	the framework agreement dated 18 November 2014 entered into between the Company and CNMC in relation to the reimbursement of guarantee fees paid by CNMC to third party financial institutions
"CNMC Huachin Mabende"	CNMC Huachin Mabende Mining SA (中色華鑫馬本德礦業股份有限公司*) (formerly known as "CNMC Mabende SPRL" (中色馬本德礦業有限公司*), a joint venture established in the DRC on 9 November 2012 by SML and Huachin SPRL, an associate of the Group
"CNMD"	China Nonferrous Mining Development Limited (中色礦業發展有限公司), an investment holding company incorporated under the laws of the BVI on 12 July 2011, a wholly-owned subsidiary of CNMC and the controlling shareholder of the Company

"CNMH"	China Nonferrous Mining Holdings Limited (中色礦業控股有限公司*), an investment holding company incorporated under the laws of the Republic of Ireland on 23 September 2011 and a wholly-owned subsidiary of the Company
"CNMHK"	China Nonferrous Mining Hong Kong Holdings Limited (中色礦業香港控股有限公司), an investment holding company incorporated in Hong Kong on 6 October 2015 with limited liability under the Companies Ordinance, a directly controlling subsidiary of the Company
"CNMHKI"	China Nonferrous Mining Hong Kong Investment Limited (中色礦業香港投資有限公司), an investment holding company incorporated in Hong Kong on 2 December 2016 with limited liability under the Companies Ordinance, a directly controlling subsidiary of the Company
"Companies Ordinance"	the Companies Ordinance of Hong Kong (Chapter 622 of the laws of Hong Kong), as amended, supplemented or otherwise modified from time to time
"Company", "we", "us" or "our"	China Nonferrous Mining Corporation Limited (中國有色礦業有限公司), a company incorporated in Hong Kong on 18 July 2011 with limited liability under the Companies Ordinance and, except where the context otherwise requires, all of its subsidiaries or where the context refers to any time prior to its incorporation, the business which its predecessors or the predecessors of its present subsidiaries were engaged in and which were subsequently assumed by it
"Compliance Committee"	the compliance committee of the Board
"connected person(s)"	has the meaning ascribed thereto in the Listing Rules
"connected transaction(s)"	has the meaning ascribed thereto in the Listing Rules
"controlling shareholder"	has the meaning ascribed thereto under the Listing Rules
"COVID-19 pandemic"	Corona Virus Disease 2019
"Deed of Non-Competition Undertaking"	a deed of non-competition undertaking dated 14 May 2012 entered into between CNMC and the Company under which CNMC has given us certain undertakings in respect of the conduct of certain of its activities outside the PRC
"Director(s)"	director(s) of the Company
"DRC"	the Democratic Republic of the Congo
"EGM"	the extraordinary general meeting of the Company
"Fifteen MCC Africa"	Fifteen MCC Africa Construction & Trade Ltd (中國十五冶非洲建築貿易公司*), a company incorporated under the laws of Zambia on 24 May 2007 and a fellow subsidiary of CNMC

"Global Offering"	the offering of the Shares of the Company for subscription by the public in Hong Kong and purchase by institutional and professional investors as described in the Prospectus
"Group", "we" or "us"	the Company and its subsidiaries or any of them, or where the context so requires, in respect of the period before the Company became the holding company of its present subsidiaries, the present subsidiaries of the Company
"HK$"or "Hong Kong dollar(s)"	Hong Kong dollars, the lawful currency for the time being of Hong Kong
"HKFRS"	Hong Kong Financial Reporting Standard, as issued by the Hong Kong Institute of Certified Public Accountants
"Hong Kong" or "HK"	the Hong Kong Special Administrative Region of the People's Republic of China
"Hong Kong Stock Exchange"	The Stock Exchange of Hong Kong Limited
"Hong Kong Zhongfei"	Hong Kong Zhongfei Mining Investment Limited(香港中非礦業投資有限公司), a company incorporated under the Companies Ordinance in Hong Kong in January 2014 holding 30% of SML and 30% of CNMHK
"Huachin"	Huachin International Trading Limited(國際華鑫貿易有限公司), a company incorporated in Hong Kong with limited liability
"Huachin Leach"	Huachin Metal Leach SA(中色華鑫濕法冶煉股份有限公司*), a company incorporated under the laws of the DRC on 17 December 2010 and a subsidiary of SML
"Independent Shareholders"	Shareholders other than CNMD and its associates
"JORC"	the Australasian Joint Ore Reserves Committee
"JORC Code"	the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves
"Kambove Mining"	Kambove Mining SAS(剛波夫礦業簡易股份有限公司*) , a company established in DRC and a subsidiary of the Company
"Kingsail"	Kingsail Limited(香港鑫晟有限公司), a company incorporated in Hong Kong on 9 October 2018 with limited liability under the Companies Ordinance, a subsidiary of the Company
"Latest Practicable Date"	20 April 2023, being the latest practicable date prior to the printing of this annual report for ascertaining certain information herein
"LIBOR"	London Interbank Offer Rate
"Listing"	the listing of the Shares on the Main Board of the Hong Kong Stock Exchange on 29 June 2012

"Listing Rules"	The Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited, as amended from time to time
"Lualaba Copper Smelter"	Lualaba Copper Smelter SAS(盧阿拉巴銅冶煉股份有限公司*), a company established in DRC and a subsidiary of the Company
"Luanshya"	CNMC Luanshya Copper Mines PLC(中色盧安夏銅業有限公司*), formerly Luanshya Copper Mines PLC, a company incorporated in Zambia on 10 July 2003 and a subsidiary of the Company
"Mabende Mining"	Mabende Mining SARL(馬本德礦業有限責任公司*) (formerly known as Mabende Mining SPRL(馬本德礦業有限公司*)), a company incorporated under the laws of the DRC
"Mabende Project"	the project undertaken by CNMHK through CNMC Huachin Mabende to construct and operate a leaching plant in the DRC
"Main Board"	the Main Board of the Hong Kong Stock Exchange
"Model Code"	the Model Code for Securities Transactions by Directors of Listed Issuers set out in Appendix 10 of the Listing Rules
"Muliashi Project"	an integrated project involving the mining and leaching of copper oxide ores undertaken by Luanshya, including the Muliashi North Mine, the Muliashi Leach Plant and the planned Baluba East Mine
"NFCA"	NFC Africa Mining PLC(中色非洲礦業有限公司*) , a company incorporated in Zambia on 5 March 1998, and a subsidiary of the Company
"Nomination Committee"	the nomination committee of the Board
"Non-Competition Undertaking"	the non-competition undertaking set out in the Deed of Non-Competition Undertaking
"Octagon Commodities"	Octagon Commodities SA, a Société Anonyme (equivalent to a public company limited by shares) incorporated in Swiss Confederation
"PRC government" or "State"	the government of the PRC, including all governmental subdivisions (including provincial, municipal and other regional or local government entities)
"Properties Leasing Framework Agreement"	the properties leasing framework agreement dated 18 November 2014 entered into between the Company and CNMC
"Prospectus"	the prospectus dated 20 June 2012 issued by the Company in connection with the Global Offering and the Listing
"Remuneration Committee"	the remuneration committee of the Board
"Renminbi" or "RMB"	Renminbi yuan, the lawful currency for the time being of the PRC
"Retained Group"	CNMC and its subsidiaries (excluding the Group)

"SFO"	the Securities and Futures Ordinance of Hong Kong (Chapter 571 of the Laws of Hong Kong), as amended, supplemented or otherwise modified from time to time
"Share(s)"	ordinary share(s) in the share capital of the Company
"Shareholder(s)"	holder(s) of the Shares of the Company
"SML"	Sino-Metals Leach Zambia Limited (贊比亞謙比希濕法冶煉有限公司*), a company incorporated under the laws of Zambia on 3 December 2004 and a subsidiary of the Company
"subsidiary" or "subsidiaries"	has the meaning ascribed thereto in section 2 of the Companies Ordinance
"substantial shareholder"	has the meaning ascribed thereto in the Listing Rules
"United States"	the United States of America, its territories, its possessions and all areas subject to its jurisdiction
"US￠" or "US cent(s)"	United States cents, the lawful currency for the time being of the United States
"US$", "USD" or "US dollar(s)"	United States dollars, the lawful currency for the time being of the United States
"VAT"	value-added tax；all amounts are exclusive of VAT in this report except indicated otherwise
"Year"	year ended 31 December 2022
"YH Metal"	Yunnan & Hongkong Metal Company Limited (雲港金屬有限公司), a company established in Hong Kong with limited liability and a wholly-owned subsidiary of Yunnan Copper Group
"Yunnan Copper"	Yunnan Copper Industry Co., Ltd* (雲南銅業股份有限公司), a company incorporated under the laws of the PRC on 15 May 1998 and a subsidiary of Yunnan Copper Group
"Yunnan Copper Group"	Yunnan Copper Industry (Group) Co., Ltd.* (雲南銅業(集團)有限公司), a company incorporated under the laws of the PRC in April 1996 holding 40% of the issued share capital of CCS
"Zambia"	the Republic of Zambia
"ZCCM"	Zambia Consolidated Copper Mines Limited, a company incorporated in Zambia in 1982 and succeeded by ZCCM-IH
"ZCCM-IH"	Zambia Consolidated Copper Mines Investments Holdings Plc, the successor company to ZCCM, majority owned by the Government of Zambia
"ZMK"	Zambian Kwacha, the lawful currency for the time being of Zambia

* *Translation of English or Chinese terms for reference purposes only.*

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