

# SUSTAINABILITY REPORT

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Providing the materials that improve standards of living in a low carbon future

www.zijinmining.com 🔘

Zijin Mining Group Co., Ltd.\*

# Foreword

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# A Message from the Chairman



Chen Jinghe

Chairman, Chief Officer of the Strategic and Sustainable Development (ESG) Committee of Zijin Mining Group Co., Ltd.\*

Mining is an ancient industry that has propelled human civilisation forward and serves as a cornerstone for the sustainable development of the global economy. With a profound sense of responsibility and mission, Zijin Mining Group closely aligns its own development with the destiny of humanity, deeply integrating international ESG governance principles with its modern operational management system. The Company is committed to becoming a "Green, High-Tech, Leading Global Mining Company", contributing the "Zijin Power" to global sustainable development.

#### We provide the materials that improve standards of living in a low carbon future.

Among our world-class portfolio of copper, gold, lithium, and other diversified assets, copper and lithium are critical metals for the clean energy transition, while gold serves as a stabilise stone for financial security. The Group's total resources include over 110 million tonnes of copper, 4,000 tonnes of gold, 18 million tonnes of lithium carbonate equivalent, 32,000 tonnes of silver, 13 million tonnes of zinc (lead), and 5 million tonnes of molybdenum. In 2024, we contributed 1.07 million tonnes of mined copper, 73 tonnes of mined gold, 450,000 tonnes of mined zinc (lead), and 436 tonnes of mined silver to the global market, with year-on-year growth of 6% in copper production and 8% in gold production. Zijin Mining is a vital force in the sustainable development of global mining, striving to become a leading producer of green mineral materials worldwide.

#### We adhere to the core value of "Delivering Long-term Value for Common Development."

The Group's primary mineral products have seen both volume and price increases, continuously generating new value for markets, investors, and stakeholders. During the reporting year, the annual total profit reached RMB48.1 billion, with RMB10.1 billion distributed to shareholders and investors as dividends, and a total social contribution of RMB75 billion.

We are accelerating the efforts to attract top-tier global mining talent, encouraging diversity across gender, race, culture, and nationality, with women playing an indispensable role in our development. Our 100,000 employees and collaborators from 70 countries and regions work together in an environment of strong human rights protection, dignified career development, and compassionate welfare care.

#### We uphold the principle that "the right to life is the most fundamental human right."

Workplace safety is our foremost responsibility to employees and contractors, and respect for life is our most fundamental bottom line. While there remains a gap in achieving intrinsic safety, we are fully implementing the "Three-Year Action Plan for Safety System Enhancement", building an integrated occupational health and safety management system with contractors, and establishing a holistic safety development ecosystem, consolidating the foundation of intrinsic safety development.

Through our partnership with International SOS, we have established global medical and emergency rescue capabilities across all projects. We remain steadfast in our commitment to improving workplace safety performance and striving for the ultimate goal of "zero fatalities".

#### We maintain harmony between mining development and ecological conservation.

"Carbon peak and carbon neutrality" have been incorporated into our strategic roadmap. We have released the first-ever "Zijin Biodiversity Conservation Guidelines" in the China's mining industry that aligns with international standards, and the "Carbon Neutral" demonstration mine at Zijinshan Gold-Copper Mine is under construction. The Group enforces to the highest emission standards in the world, with most mines implementing "zero discharge" projects and comprehensive online real-time monitoring. Ecological restoration starts from the project construction phase, rather than waiting for post-closure "reclamation". Currently, the Group operates 12 national-level green mines and 9 national-level green factories, with 43 projects certified under the ISO 14001 Environmental Management System. Our green development framework is rapidly expanding.

#### We practise the principle of "Mining for a Better Society."

We strive to benefit more people through Zijin's presence. In 2024, we crafted one heartwarming "Zijin Story" after another in the communities hosting our projects, earning high recognition from governments, communities, and people in the countries where our projects are located. Initiatives such as Serbia Zijin Mining's and Serbia Zijin Copper's "Industry Support", "For the Future", and "Healthy Childhood" have benefited countless families. In Colombia, the Buriticá Gold Mine's beekeeping and coffee farming programmes empower communities through "teaching them how to fish." In the DR Congo, the Musonoi community football tournaments and summer camps have fostered deep bonds between locals and the company.

We actively participated in major disaster relief effortsfrom the devastating landslide in Enga Province, Papua New Guinea, to catastrophic flooding in Shanghang and Wuping, and the earthquake in Tingri County, Tibet—with Zijin personnel stepping forward in each crisis. The Group contributed a total of RMB287 million in disaster relief and charitable donations for the year.

History of Zijin Mining

#### We are making significant strides in building a globalised operational management system.

We are accelerating reforms centred on "simplicity, standardisation, and efficiency", addressing the main challenge of "the major tension between the increasing globalisation and restrictive domestic mindset and management style," thereby vigorously bolstering the global governance capabilities of a major multinational mining group. The establishment of the International Business Management Committee and the relocation of the Overseas Operations Department to Belgrade, Serbia, have significantly improved overseas decision-making and operational management. Moving forward, the Company will further strengthen professional oversight in key areas, comprehensively enhance supervision of overseas projects, and maintain a zero-tolerance stance against corruption-ensuring that "wrongdoers are held fully accountable---no matter how remote or difficult the pursuit may be"

Zijin Mining has embedded ESG into its key agenda-from the top down-recognising it a critical metric for sustainable development. As we accelerate the achievement of our new "Five-Year Development Plan", we remain committed to the guiding principle of "Improving Quality, Reducing Costs, Boosting Profitability " and the overarching tenets of "Proactivity, Reform and Innovation, High Adaptability, and Risk Control". At the same time, we firmly uphold our responsibilities as a global corporate citizen, fully implement the "Common Development" philosophy, and continuously improve our environmental, social, and governance (ESG) performance. We are fast-tracking the development of an ESG system that not only meets international standards but also features Zijin's distinctive characteristics, holistically building a more resilient ESG soft power!



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# A Message from the Director of the **ESG** Management Committee



#### Zou Laichang

President, Director of the ESG Management Committee of Zijin Mining Group Co., Ltd.\*

In 2024, the unprecedented global changes have accelerated, and the role of mining in economic recovery and energy transition has become increasingly prominent. Under the leadership of our Board of Directors, we have proactively navigated challenges by emphasising responsible governance, driving technological innovation, and achieving growth in operational efficiency. These efforts have further elevated our corporate reputation and contributed the "Zijin Power" to the sustainable development of the global mining industry.

ESG as the "Core Driver" of New Quality Productive Forces, Continuously Enhancing Governance Performance. The Company has fully embraced sustainable development principles, strengthening ESG

governance structures and refining strategic execution, key objectives, and initiatives. We have reinforced ESG risk management by deploying digital systems for risk identification and improved supply chain evaluation and supervision mechanisms. Compliance with corporate and supplier codes of conduct serves as the primary criterion for partnerships, fortifying a responsible supply chain ecosystem. Through diverse approaches and channels, we thoroughly engage with stakeholders, integrating labour rights, anti-discrimination policies, and other systems into daily operations to foster a respectful workplace. Our innovative ESG practices have been widely recognised by rating agencies, earning our inclusion in S&P Global's Sustainability Yearbook (China Edition) 2024 and Forbes China ESG 50 List 2024.

#### Safety Development as a "Collective Belief", Ensuring

Steady and Sustained Growth. We uphold a holistic safety philosophy, treating safety as an absolute priority. Adhering to legal compliance and international standards, we have established a globalised management system to enhance supply chain resilience and collaborate with partners to mitigate risks. Recognising the right to life as the most fundamental human right, we partnered with International SOS to provide medical, safety, and psychological support services. Our Three-year Safety System Enhancement Initiative progresses methodically. With unwavering perseverance, we are strengthening our frontline operations and foundational work, focusing on comprehensive safety training for all employees to instil safety awareness and behavioural discipline. Advanced equipment, innovative mining technologies, and smart mine construction have elevated intrinsic safety standards. As a key contributor to China's National Mine Safety Technology Innovation Centre, our self-developed compact underground mining equipment has been promoted nationwide for narrow-vein deposits, driving continuous improvements in safety performance.

Carbon Reduction as a "Corporate Citizen Duty", Advancing Low-Carbon Transition in Mining. Energy conservation and decarbonisation are transforming our production methods. Automated and intelligent systems enable precise control in mineral processing and smelting processes, significantly improving energy efficiency. Electrification of mining and transport equipment has gained momentum, with 865 electric vehicles now in operation. We are strategically expanding clean energy projects globally, where the use of green energy sources like wind, solar, and hydro power now accounts for 27.09% of our energy mix. By extending partnerships in the new energy sector, our copper and lithium products support electrification and energy storage, while our comprehensive ammonia-based-hydrogen solutions gain traction, optimising our global energy transition strategy. Comprehensive carbon footprint assessments show a 34.92% reduction in our emission intensity against 2020 baseline, achieving our 2025 targets ahead of schedule. The Zijinshan Gold-Copper Mine's carbon neutrality pilot and FZU Zijin Hydrogen Power Technology's zero-carbon ammonia-hydrogen power project in Zhoushan's Phoenix Island have received high acclaim.

Innovation for a "Green Footprint", Harmonising Industry and Nature. Technological innovation lies at the heart of Zijin's competitiveness. We deepen industry-academia collaboration to consolidate our advantages. We are advancing precise exploration research in deep and high-altitude areas, significantly improving our green exploration capabilities. Breakthroughs in large-scale green mining in open-pit mines located in cold and ecologically fragile zones, block caving methods, and intelligent, safe, and efficient underground mining techniques, as well as green processing technologies for low-grade ores have greatly enhanced overall resource utilisation. Remaining committed to respecting and protecting nature, we continue to reduce, repurpose, and mitigate the impact of industrial wastewater, exhaust, and wastemaintaining a leading water re-use rate within the industry. We are also exploring new approaches to ecological restoration in ecologically vulnerable areas. Our pioneering restoration of the over-4,000-metre-high Deerni Copper Mine earned it a spot among China's first-batch of ecological restoration models in operational mining sites. Through our efforts, the Tres Quebradas Salar in Argentina is transforming into an oasis, and in Bor, Serbia, our mining operations have revitalised this century-old mining town with greenery. The "Zijin Model" of eco-friendly mining is gaining global traction.

#### Shared Growth as a "Win-Win Force", Elevating

Livelihoods. As our global footprint expands, we are honoured to collaborate with partners in building a mining community of shared destiny. Over 95.98% of our

55,000+ employees are locally hired, and we will continue to expand local hiring, staying open and inclusive as we welcome talented individuals from across the globe to join Zijin, co-create value, and share in the rewards. Through procurement and community programmes—from Colombia's regional coffee industry development to youth initiatives in Serbia, from agricultural aid in Central Asia to clean water projects in African communities—our "teaching-to-fish" approach exemplifies Zijin's philosophy and practice of shared prosperity, demonstrating our vibrant momentum. In 2024, our total economic contribution reached RMB318.6 billion. As a responsible global miner, we will continue championing sustainability to benefit communities and future generations.

Looking ahead, Zijin Mining is advancing with its ambitious new "Five-Year Development Plan", aiming to become a "Green, High-tech, Leading Global Mining Company" by 2028. Staying true to our purpose of "Mining for a Better Society," we will steadfastly implement our distinctive ESG model of "common development". Together with global partners, we will forge ahead on the path of sustainability, contributing to a shared future for humanity and a brighter tomorrow for our planet.

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# 2024 Highlights

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RMB100 million



RMB100 million







- 82.31%



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# About Us

# Business at a glance

As a large multinational mining group, Zijin Mining is engaged in the global exploration and development of metal mineral resources, including copper, gold, zinc, silver, lithium, and molybdenum, and also involves in engineering design, technology application research, smelting and processing, trade, and finance, encompassing a relatively complete industrial chain and an environmental, social, and governance (ESG) system that meets international standards. The Company's key economic indicators, primary metal resources and mineral product outputs are leading in China and rank among the top ten globally. The Company has a portfolio of world-class mining projects involving copper, gold, zinc (lead), lithium, and other minerals. The Company firmly believes in innovation, particularly technological innovation, as a core strength, and has extensive practical experience in geological exploration, hydrometallurgy, comprehensive recycling and utilisation of low-grade refractory resources, and large-scale development projects. The Company has innovatively created the "Five-stage Life-of-Mine Project Management Procedure by in-House Capabilities" mining engineering management model, and established the "State Key Laboratory of Comprehensive Utilisation of Lowgrade Refractory Gold Ores", forming independent technical and engineering capabilities across all links, and building global competitive strength for green and sustainable development in the mining industry. Adhering to the common development philosophy of "Mining for a Better Society", Zijin Mining is dedicated to "Providing the Materials that Improve Standards of Living in a Low Carbon Future". The Company is accelerating its overarching strategic goal of building a "Green, High-Tech, Leading Global Mining Company", fully advancing the development of best-in-class sustainable mines, and striving to bring greater benefits to more people through Zijin Mining.

## Forbes Global 2000 NO.267 No. 1 of Gold Companies **Forbes** No. 5 of Global Metal & Mining Companies Forbes China 2024 ESG Top 50 NO.364 FORTUNE Fortune Global 500 NO.91 Fortune China 500 **Membership** WORLD 中国矿县联合合 GOLD CHINA MINING ASSOCIATION 中国在非企业社会责任联盟 COUNCIL 中国首色金属工業协会 中国黄金协会 中国职业安全健康协会 **China Gold Association** CAURE SAFETY AND HEALTH ASSOCIATED 321



**Economic Performance** 









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# Zijin in the world

Zijin Mining has over 30 large and ultra-large mineral resource development bases in 17 countries around the world.

As of the end of the reporting period, the Company's measured, indicated, and inferred total resources were 110.3741 million tonnes of copper, 3,972.53 tonnes of gold, 12.9823 million tonnes of zinc (lead), 31,836.01 tonnes of silver, 17.8815 million tonnes of lithium (LCE), and 4.9406 million tonnes of molybdenum. During the reporting period, the Company produced 1.07 million tonnes of mined copper, 73 tonnes of mined gold, 450,000 tonnes of mined zinc (lead), and 436 tonnes of mined silver.

The Company owns three world-class copper assets including the Kamoa Copper Mine in the DR Congo, the Čukaru Peki Copper and Gold Mine and the Bor Copper Mine in Serbia, and the Julong Copper Mine in Tibet, as well as mainstay copper mines such as the Kolwezi Copper Mine in the DR Congo, the Duobaoshan Copper in Heilongjiang, the Zijinshan Gold and Copper Mine in Fujian, and the Ashele Copper in Xinjiang. During the reporting period, the Company acquired the La Arena Copper-Gold Mine in Peru, which was previously owned by Pan American Silver. The Company owns world-class gold assets such as the Buriticá Gold Mine in Colombia and the Rosebel Gold Mine in Suriname. It also owns major gold mines like the Zeravshan Gold Mine in Tajikistan, the Altynken Gold Mine in Kyrgyzstan, Shanxi Zijin, Guizhou Zijin, Longnan Zijin. During the reporting period, the Company is also working on the completion of the acquisition of the Akyem Gold Mine in Ghana. The Company owns lithium assets, including the Tres Quebradas Salar Mine in Argentina, the Lakkor Tso Salar Mine in Tibet, and the Xiangyuan Hard Rock Lithium Polymetallic Mine in Daoxian, Hunan. Zijin Mining has also been invited to lead the development of Manono Northeast Lithium Project in the DR Congo. By 2025, the total lithium carbonate equivalent production capacity is expected to reach 40,000 tonnes, making Zijin one of the world's most important lithium producers in the next five years.





Materiality Assessment

# Strategy

## FUNDAMENTAL BUSINESSES

#### Sustainable Resources

Insist on giving equal weight to prospecting, exploration and merger and acquisition of resources, and cultivate mineral resource advantage with low costs and high efficiency in a global context.

#### **Geological Exploration**

Rely on the industry-leading technologies and capabilities in geological exploration, strategically position itself in crucial metallogenic belts to achieve breakthrough in geological exploration.

#### Merger and Acquisition of Resources

Leverage system engineering, concept of economic mining and professional analysis and decision-making capabilities, implement mergers and acquisitions of high-quality medium and large mining assets in a timely manner.

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## Strategy

## Mine Development

Providing the materials that improve standards of living in a low carbon future.

#### Cu Li Au

Comprehensively enhance the construction and operational capacities of key metal mineral resources.

#### Zn Ag Fe Mo

A balance of high-growth metals and energy minerals Mining engineering management model of "Five-Stage Life-of-Mine Project Management Procedure by in-House Capabilities"

Strong capability of self-initiated system on mining engineering research, design and implementation

## AUXILIARY BUSINESSES

# Extension along the industry chains

Rely on the main business of mine development, extend optimally into the auxiliary industries in smelting, refining and processing, generating synergies between the upstream and downstream in industry chains to obtain value-added income

## Clean Energy and Ecological Environmental Protection

Install and construct clean energy generating facilities such as solar energy, wind energy and hydropower at mining and refining enterprises; invest in the material industries related to clean energy storage such as "hydrogen energy"; strengthen the ecological and environmental protection business capabilities of mining and refining enterprises; attach importance to the construction of ecological projects such as closure of mines and tailings storage facilities in order to comprehensively improve the sustainable development capabilities.

## SUPPORTING BUSINESSES

## Soft Power of Zijin Culture

Form the core Zijin culture and philosophy system and the "Gold Mine Culture" brand, strive to gain high international recognition of the Company's overall strength, professional ability, brand reputation and sustainable development capabilities, and to become a respectable globalised enterprise.

#### Mining-related Trading and Finance

Support trading and logistics businesses which are related to mine development, build a responsible global supply chain and sales team; form a financial platform for capital investment and capital pooling; form a "Zijin series" listing platform through investment in subsidiaries and associates.

### Mine Construction and Information Technology

Establish a self-operated automated and intelligent construction team for mine design, construction and supervision, form a fast-responding and highly integrated mine development team to build mining projects with high quality and speed.

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# **ESG Awards and Ratings**

# ESG Awards

# Win.d

Top 100 Best ESG Practices among Chinese Listed Companies



Best Practice Case for Sustainable Development



同花子

Internal Control Award

Xinhua Credit Jinlan Cup - Outstanding Low-Carbon Practice Case

"Evergreen Award" - Sustainable Development



**Forbes** 

China ESG 50

# ⊖ ESG Ratings

LSEG ESG 89

S&P Global

The Sustainability Yearbook 2024 (China Edition)



Dual Carbon Action Pioneer Enterprise

2023 Outstanding Responsible Enterprise

Country	Awarded Subsidiaries	Awarding Institution	Award Received
	Zijinshan Gold-Copper Mine	UNESCO	Global Geopark
China	Zijin Copper	State Council of China	National Science and Technology Progress Award (Next-generation Green and Efficient Rare and Precious Metal Refining Technology and Application)
	West Copper	Ministry of Natural Resources of China	National Ecological Restoration Model Case for Production Mines
	FZU Zijin Hydrogen Power Technology	Investment Association of China	"Excellent Zero Carbon China Project Case"
Serbia	Serbia Zijin Copper	Bor City Government	Community Relations Contribution Award
Colombia	Continental Gold	Environmental Management Bureau of Antioquia	2024 Sustainable Development Certification
Argentina	LIEX	Catamarca Provincial Government	2024 ESG Continuous Contribution Award
Tajikistan	Zeravshan	Environmental Protection Department of Sughd Province	Outstanding Contribution to Environmental Protection Award

2024 Subsidiaries' Awards



- Hang Seng Corporate Sustainability Index Series Member 2024-2025
  - Hang Seng A-

Included in the Hang Seng (China A) Corporate Sustainability Index ("HSCASUS") and other tradable and benchmark indexes



中证指数 

CSI ESG RATING BBB



SynTao Green Finance

Win.d



А

MioTech



А

商道融绿

SynTao Green Finance

Rated

M妙盈



llGF A+

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# Sustainable Development Goals and Progress

Strategy	Long-term Goals/Indicators		2024 Progress and Commentary	2025 Plan	
Enhancing Corporate Governance Capabilities	Ratio of female directors exceeds that of female employees	<b>S</b>	Female directors account for 15.4%, currently our female employee ratio is 14.37%, meeting the target	The current term of the Board of Director will continue to serve in 2025. Should any changes occur, this ratio target will be treated as a key	
	Ratio of non-executive directors exceeds 50%	<b>S</b>	Independent and non-executive directors account for 53.8%, the composition of the current Board of Directors aligns with the target	consideration factor	
	Proportion of ESG-related proposals reviewed by the Board of Directors	•	ESG-related proposals reviewed by the Board of Directors is 25.93%. All material ESG matters underwent consideration and authorisation by the Board of Directors, enhancing departmental management efficacy on ESG issues	Further identification of material ESG matters for board consideration	
Integrity and Compliance Culture	Business ethics training coverage	•	Directors, supervisors, senior management: 100%; Employees: 75.25%; Suppliers and contractors: 76.81% (3.04% increase) All personnel in high-risk and critical positions received additional enhanced training and policy communication	Business ethics training and dissemination for suppliers and contractors; and increase the training coverage for employees to beyond 80%	
Supporting Global Warming Mitigation Target			GHG emissions intensity by industrial added value was 1.64t $CO_2e$ /RMB10,000, a decrease of 34.9% from the baseline value of 2020, achieving the target for 2025 ahead of schedule	Based on the status of current projects, we have see the target for GHG emissions intensity per RMB te thousand of industrial added value for the new reporting period to decrease by 2% compared wit	
	2029: Carbon peak 2050: Carbon neutrality	•	Total GHG emissions were 6.99 million tCO <sub>2</sub> e. Despite production growth and ongoing M&A, our absolute emissions achieved a year-on-year decrease during the reporting period	2024. If we further acquire projects, this target may be adjusted upwards	
	2030: The proportion of renewable energy consumed will exceed 30%	•	The proportion of renewable energy usage reached 27.09%, and some externally purchased renewable energy also obtained relevant green certificates during the reporting period		
	Disclose Scope 3 emissions data	<b></b>	This report discloses 5 categories of Scope 3 emissions, totalling 441.84 tCO <sub>2</sub> e		
Promoting New Energy Technology R&D and Application	Expand clean power installations	<b>•</b>	Total installed capacity of clean power: 767.36MW	In line with the project's plan to construct new clean power facilities, currently a total of 240 MW of new installed capacity has been planned	
7 воловит на	Increase adoption of electric vehicles (EVs)	•	Currently the Company operates 865 EVs with positive performance and energy-saving feedback	Based on the emission reduction efficacy of EVs and frontline feedback, EVs have a promising application- prospect. The promotion and use of electric vehicles are expected to expand	

Achieved 😑 Ongoing 🧿 Unachieved

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Strategy	Long-term Goals/Indicators		2024 Progress and Commentary	2025 Plan	
	Advance hydrogen energy research and applications	•	FZU Zijin achieved breakthroughs in high-power ammonia-hydro- gen fuel cells, ammonia-hydrogen combustion engines, and industrial ammonia-to-hydrogen technology in 2024	Continue ammonia-hydrogen technology research and expand applications	
Improving Sustainable	Zero major environmental pollution incidents		No major pollution incidents occurred		
Environmental Management Systems	Newly controlled production sites obtain ISO14001:2015 within 3 years	<b></b>	All operational sites under actual control for more than three years have achieved 100% certification under ISO 14001:2015	Continuously carry out environmental management system certification for newly commissioned enterpris- es and maintain the certification renewals of existing enterprises	
	2030: All mines meet green mine standards	•	12 national-level green mines, 8 provincial-level green mines	Review existing operations against green mines and	
	2030: All smelting/processing plants meet green factory standards	•	9 national-level green factories, 3 provincial-level green factories	factory standards for continuous improvement	
Enhancing Resource Circularity	Maintain ≥90% water re-use rate	٢	The water re-use rate reached 93.46% with several subsidiaries reaching 100% wastewater reuse	Based on water risk identification, prioritise reducing fresh water withdrawal in projects located in high-water-risk areas	
6 ARE ARKING TO COMPARE TO COMPAR	2030: Water intensity shall be reduced by 10% compared to 2020	⊘	Fresh water intensity by revenue was 238.84 tonnes / RMB million, a decrease of 19.32% compared to 2020		
	2030: Non-hazardous waste comprehensive utilisation rate will be increased by 5% compared with 2020	•	The non-hazardous waste comprehensive utilisation rate reached 15.29%, an increase of 2.38 percentage points compared to 2020	Strengthen sorting, recycling and technological innovation to continuously optimise	
Reducing Ecological Impact	100% restoration of reclaimable land	<b>©</b>	100% of reclaimable land was restored	Continue to adopt the model of simultaneous development and reclamation to reduce the area of unrestored lands	
15 the same	2025: Complete biodiversity surveys at all production sites under actual control for more than three years 2030: All mines implement Biodiversity Management Plans (BMP)	•	Biodiversity surveys have been completed at 31 mines. Combined with previous biodiversity risk screenings from the previous reporting period, we have gained comprehensive understanding of biodiversity risks at all mines	Complete biodiversity surveys at all production mines under actual control for more than three years, continue to advance biodiversity monitoring and to improve the conservation system	
	2030: The emission intensity of SOz and NOx by revenue will be reduced by 5% compared with 2020	⊘	The SO <sub>2</sub> emission intensity is 0.46 tonne/RMB100 million, and the NOx emission intensity is 0.22 tonne/RMB100 million, representing decreases of 41.34% and 50.88% respectively compared to the year 2020	Continue to reduce the intensity of emissions to ensure the achievement of the 2030 targets	
Respecting Human Rights	2025: Third-party human rights impact assessments are conducted for high-risk projects	•	Completed various types of internal and external audits in Serbia, DR Congo, Eritrea and China	Complete third-party human rights impact assessments for all projects in high-risk areas	
	Human rights training for security personnel is conducted annually	⊘	The coverage rate of human rights training for security personnel is 95.10%	Maintain a human rights training coverage rate for security personnel of no less than 95%, with a focus on the human rights training for newly hired employ- ees during onboarding	

Achieved 😑 Ongoing 🧿 Unachieved

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Strategy	Long-term Goals/Indicators		2024 Progress and Commentary	2025 Plan
	Human rights training for employees is conducted annually	۲	Provided annual labour and human rights training to employees	Related courses remain available on the internal open course platform, iLearning. More series of courses will be developed based on subsequent feedback
	No major human rights violations	⊘	No major human rights violations identified	Respect human rights in all business activities, ensuring no major human rights violations occur
Safeguarding Life and Health	Zero fatalities	۲	1 employee fatality, 6 contractor fatalities	Continue advancing the Three-Year Safety Enhance- ment Action Plan, aiming to reduce two of the
	Accident reduction	•	Lost time injury rate per million hours worked (LTIR): 0.34 Total recordable incident rate per million hours worked (TRIR): 1.50	following three metrics: fatalities, LTIR, TRIR
	Newly controlled production sites obtain ISO45001:2018 within 3 years	•	During the reporting period, all operational sites under actual control for more than three years have achieved 100% certifica- tion under ISO 45001:2018 or other equivalent certification	Continue to obtain the occupational health and safety management system certification for newly operational enterprises and the renewal of certifica- tions for existing enterprises
	100% safety training coverage for employees and contrac- tors	<b>Ø</b>	Achieved safety training coverage of 100% for employees and contractors	Focus on contractor training effectiveness and expand integrated training pilots
Promoting Community Prosperity	Local procurement rate maintains above 70%	⊘	Local procurement rate achieved 82.31%	Assess local supply chains to maintain local procure- ment rate above 80%
1 Hearn    <b>†: * † †: †</b>	2030: Achieve a 95% local employment rate at all projects 2030: Comprehensively enhance ratios of local manage- ment personnel at all projects	⊘	Local employment rate was 95.98%	Continue to maintain and enhance the existing local employment rate at no less than 95%, increase the local employment rate of senior management to 25% within 3 years and 30% within 5 years, and raise the local employment rate of mid-level management to over 65% within 3 years
Respect and Communication	Improve the community complaint resolution rate, with a community complaint response rate of no less than 99%, and a community complaint resolution rate of no less than 80%	<b>©</b>	Response rate: 100% Resolution rate: 88.80%	Maintain a 100% community complaint response rate and achieve a resolution rate of 80%, while also attempting to incorporate response timeliness into our target metrics
	Community investment of no less than 1% of the Company's fiscal-year net profit	<b></b>	Community investment reached RMB 812 million, accounting for 2.53% of the Company's fiscal-year net profit	

Achieved 😑 Ongoing 🧿 Unachieved



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History of Zijin Mining

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# Sustainable Development History of Zijin Mining

2024 marked the beginning of a new chapter for Zijin Mining as we embarked on the journey beyond our 30th anniversary. Achieving shared sustainable development remains our enduring mission:

# 1993

Reorganised from Shanghang County Mining Company to Shanghang County Zijin Mining Company, and developed the Zijinshan Gold Mine

# **1998**

Proposed the concept of sustainable development: "We need gold and copper mountains, but more importantly, lucid waters and lush mountains"

# 2003

Put forward the sustainable development concept of "creating wealth harmoniously, balancing development of the corporation, the employees and the society"

# 2009

Released the first Corporate Social Responsibility (CSR) report

2010

Established social responsibility work system based on ISO 26000

2012

Established the Zijin Mining Charity Foundation with an investment of RMB200 million

# 2019

Revamped and released the first Environmental, Social, and Governance (ESG) Report

# 2020

Joined the World Gold Council, committed to follow the "Responsible Gold Mining Principles" (RGMPs), and established the Board's Strategic and Sustainable Development (ESG) Committee, fully building an ESG governance structure

# 2022

Proposed the strategic goal of becoming a "Green, High-Tech, Leading Global Mining Company"

# 2023

Announced the Outline of Three-Year (2023-2025) Plan and Development Goals for 2030. Released "Climate Change Action Plan", committing to reaching carbon peak by 2029 and carbon neutrality by 2050. Defined the corporate mission as "Providing the Materials that Improve Standards of Living in a Low Carbon Future". Upgraded and renamed the former Social Responsibility Department to ESG Office

# 2024

Released the first "Environmental, Social, and Governance (ESG) Report" according to IFRS S1 standards





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Foreword Governance Environment

# **Materiality Assessment**

# Stakeholder Engagement

We highly value the demands of stakeholders, adhering to principles of integrity, interaction, equality, and transparency. We continuously improve the mechanisms for stakeholder participation and communication methods, enhancing mutual understanding and trust. We listen to the expectations and demands of stakeholders, which allows us to clarify our Company's ESG strategies and topics, ensuring that stakeholders can effectively participate in our ESG governance efforts.

During the reporting period, based on international standards and guidelines such as IFRS S1 and AA1000 Stakeholder Engagement Standard (AA1000SES), we regularly recorded, assessed, and reviewed our communications with stakeholders. We made timely improvements to our communication mechanisms based on stakeholder feedback, continuously enhancing the effectiveness and efficiency of our communication with stakeholders.

Social

Appendices

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Stakeholder Group	Employees	Shareholders and Investors	Business Partners	Government and Regulatory Authorities	Local Surrounding Communities and Environment	Non-governmental Organisations: (NGOs), Media, and Research and Education Institutions
Areas of focus	<ul> <li>Labour rights</li> <li>Remuneration and benefits</li> <li>Occupational health &amp; safety (OHS)</li> <li>Equal rights and development</li> </ul>	<ul> <li>Steady operation</li> <li>Production safety</li> <li>Financial performance</li> <li>Sustainability</li> <li>Good governance</li> <li>Information transparency</li> </ul>	<ul> <li>OHS</li> <li>Business ethics</li> <li>Transparency</li> </ul>	<ul> <li>Legal compliance</li> <li>Paying tax according to law</li> <li>Boosting regional economic development</li> <li>Local employment</li> </ul>	<ul> <li>Human rights protection</li> <li>Community development</li> <li>Climate change</li> <li>Water management</li> <li>Biodiversity</li> <li>Emissions management</li> </ul>	<ul> <li>Addressing climate change</li> <li>Business ethics</li> <li>Openness and transparency</li> <li>Water stewardship</li> <li>Human rights protection</li> <li>Biodiversity</li> </ul>
Way of engage- ment	<ul> <li>Meeting of Representatives of workers and staff</li> <li>Meetings and training</li> <li>Bulletin board, the Company's intranet</li> </ul>	<ul> <li>Annual general meetings</li> <li>Result briefing</li> <li>Information disclosure</li> <li>Investor's communication platform</li> </ul>	<ul> <li>Contractor training</li> <li>Supplier conferences</li> </ul>	<ul> <li>Stock exchange meetings</li> <li>Government meetings</li> <li>Information disclosure platforms</li> <li>Government visits</li> </ul>	<ul> <li>Community engagement</li> <li>Site open days</li> <li>Community service centres</li> <li>Mining project briefings</li> <li>Project community announcement</li> <li>Media interviews</li> </ul>	<ul> <li>ESG reports</li> <li>The Company's official website</li> <li>Industry conferences</li> </ul>
Response and performance	Held meeting of Representatives of workers and staff and negotiated with union representatives	Held 1 shareholders general meeting, over 300 institutional roadshows and communication events, including 68 ESG seminars, and organised 10 mine visits	1,822 new suppliers selected via ESG criteria	Participated in stock exchange consultation meetings	Each project promoted community meetings, community open days, government and media visits, and other activities, holding a total of 1,642 community meetings	Responded to NGOs' inquiries multiple times and supported scientific and educational institutions in conducting research and surveys on multiple occasions
Why it matters	Employees are the core drivers of sustainable development. Their involvement effectively enables the practice of ESG principles in everyday work, creating long-term value for the Company and facilitating sustainable development.	Shareholders and investors steer corporate strategy towards ESG-aligned growth through decision-making influence.	Partners enable collaborative sustainability, ensuring green supply chains from sourcing to logistics, thereby contributing to environmental sustainability.	Governments provide regulatory direction, anchoring corporate sustainability efforts.	Communities and environments serve as surrounding feedback mechanisms, validating ESG performance and guiding strategy refinement.	NGOs, media, and academic and research institutions are key drivers in enhancing our ESG management. NGOs serve dual functions as both oversight bodies and think tanks, using independent observation to promote compliant operations while providing sustainable development solutions. Media amplifies progress by showcasing best practices that inspire improvement and highlighting issues that drive change. Academic and research institutions focus on providing knowledge, building a foundation for sustainable development through cutting-edge theories, technological solutions, and talent support.



A Message from the A Message from the Director of the

ESG Management Committee

2024 About Highlights Us

Probability of risk

Sustainable Development Sustainable Development Goals and Progress History of Zijin Mining

# **Materiality Analysis**

During the reporting period, we followed the guidelines for dual materiality analysis of material issues outlined in the GRI Standards and applicable disclosure frameworks such as the "Guidelines No. 14 of Shanghai Stock Exchange for Self-Regulation of Listed Companies— Sustainability Report (Trial)" and the Hong Kong Stock Exchange's "Main Board Listing Rules". Our approach to material issues analysis followed a "comprehensive convergence" strategy with IFRS S1's requirements.

Considering the nature of our industry and business operations, as well as the concerns of stakeholders and the need for continuity and readability of this report, we decided to integrate a quantitative financial materiality assessment into our existing processes during this reporting period. This integration is based on previous years' results and methodologies. Through dual assessment of external (economic, social, and environmental) and internal (financial) impacts, we have more accurately identified inherent risks and opportunities in our operations, helping us identify material issues. Based on the aforementioned methodological adjustments, our analysis approach consists of the following six steps:

Topic Screening:	Summarised 23 highly relevant topics for inclusion in the analysis, drawing from international initiatives, standards, recommendations by investors and rating agencies, the Company's actual operations, and internal and external expert opinions.
Stakeholder Identification:	Identified 10 core stakeholder groups based on business characteristics and operational conditions.
Questionnaire Survey:	To comprehensively gather insights from different stakeholders, we adopted a dual-track survey approach, designing anonymous online questionnaires for all stakeholders and paper-based questionnaires for our management team and key personnel at each operating site. This ensured the thorough incorporation of external stakeholders' perspectives on topic impacts and internal management's views on topic risks. Approximately 2,000 questionnaires were distributed online, with 1,762 valid responses received, covering five continents and 17 countries and regions worldwide. Additionally, we collected 145 risk assessment questionnaires completed by directors, supervisors, and senior management of subsidiaries.
Dual Materiality Assessment and Analysis:	For the identified high-relevance topics, the Company conducted an analysis based on dual materiality: Financial Materiality: We first evaluated the potential financial impact of these topics using risk questionnaire results, employing a matrix-based analysis method, and incorporated coefficient adjustments through modular arithmetic to refine the materiality matrix outcomes. Impact Materiality: Based on external impact questionnaire results, we analysed the actual and potential impacts of each topic on Zijin Mining, as well as the Company's impacts on these topics.
Topic Prioritisation:	Using the results of the impact analysis, we created a materiality scatter plot to identify high materiality topics, which also serve as focal points for the Company's risk management efforts.
Defining Reporting Boundaries:	Based on the identified high-materiality topics, we determined the content to be included in this report.

## ○ Financial Materiality Analysis

During the reporting period, we conducted an internal questionnaire survey on high-relevance topics, extensively gathering input from senior management and internal experts. Based on the probability of risks and potential impacts associated with these topics, we performed a financial materiality analysis and developed the following assessment matrix. The results indicate that production safety was identified as having extremely high financial materiality. Accordingly, this report includes a dedicated quantitative financial analysis on production safety, the specifics of which can be found in the "Occupational Health and Safety" chapter. Additionally, we observed heightened attention from internal experts on information security. Following interviews with internal cybersecurity specialists, we upwardly adjusted the materiality level of this topic.



Results of Financial Materiality Assessment

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# O Analysis Results

During the reporting period, our material topics remained largely consistent with the previous year. Compared to the prior year, both we and our stakeholders placed greater emphasis on the "tailings storage facilities management" topic, which constitutes a critical component of our overall risk management framework. Effective tailings management ensures operational continuity and mitigates potential external impacts. Additionally, based on the financial materiality assessment, we reclassified the "information security" topic as a medium-materiality issue. Regarding the "community health and safety" topic, both we and our stakeholders agreed that it falls under the broader "community relations" topic, leading to the consolidation of these two issues. The results of the materiality analysis indicate that the high-materiality topics prioritised by our stakeholders and ourselves remained largely unchanged from the previous year. However, we observed a growing focus on biodiversity and compliance and risk management among stakeholders during the reporting period, with these two topics being elevated to high-materiality status for the first time.

To ensure the continuity and readability of this report, we incorporated historical materiality analysis results from previous years, applying a weighting coefficient to this year's assessment.

Ultimately, we identified 12 high-materiality topics, which defined the scope of this report and were subsequently reviewed and approved by the Board of Directors.

Impacts on/for Zijin



Double Materiality Topic	Degree of Double Materiality	Primary Affected Stakeholders		Opportunity	Change vs. Previous Year	
Production safety	Very High	•••	High	Very Low		_
Tailings Storage Facilities Management	High	•••	High	Very Low		
Human Rights Protection and Security Practices	High	••	High	Low		
Occupational Health	High	••	High	Low		_
Compliance & Risk Management	High		High	Medium		
Community Relations	High	•	High	High		_
Water Resource Management	High	••	High	Medium		
Waste Management	High	••	High	High	▼	▼
Business Ethics	High	•••	High	Medium	-	—
Climate Change and Energy Management	High	•	High	Medium	▼	▼
Responsible Supply Chain	High	•	High	Low		
Biodiversity	High	••	High	Low		_

High Double Materiality Issues List



# Governance

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0	Business Ethics	2
Q	Human Rights	2





Corporate Governance ESG Risk Management

Business Ethics Human Rights



The Board of Directors has a well-established decision-making mechanism and is responsible for making strategic decisions. A Strategic and Sustainable Development (ESG) Committee has been established under the Board to deeply integrate ESG governance principles with the Company's operations, forming a governance model that aligns with international standards while embodying Zijin's characteristics.

At the end of each year, the Board reviews the Company's environmental, social, and governance goals and progress. The progress is then reported to all employees at the annual work conference held at the beginning of the following year, and the priorities and objectives for the forthcoming year's ESG work are set based on the progress. During the reporting period, the Board reviewed and approved 270 proposals or issues, 70 of which were related to ESG, accounting for 25.93% of the total agenda.



# Board of Directors



	Exeutive Director	Non-executive Director	Independent Director	Strategic and Sustainable Development (ESG) Committee	Execution and Investment Committee	Audit and Internal Control Committee	Nomination and Remuneration Committee
Chen Jinghe	•			$\oslash$	$\oslash$		•
Zou Laichang	•			٠	•		
Lin Hongfu	•			٠	•		
Lin Hongying	•				•		
Xie Xionghui	•			•	•		
Wu Jianhui	•			•	•		
Li Jian		•		•			•
He Fulong			٠	•		٠	${}^{\oslash}$
Mao Jingwen			٠	•			
Li Changqing			٠			${ \oslash }$	
Suen Man Tak			٠			٠	•
Bo Shao Chuan			٠	٠		•	•
Wu Xiaomin			٠			٠	•

Corporate Governance Structure

Roles and Responsibilities of the Board Members



## Introduction to the Committees Under the Board of Directors

#### Strategic and Sustainable Development (ESG) Committee

The Committee consists of 5 executive directors, 1 non-executive director, and 3 independent directors. Its primary responsibilities include analysing global economic and industrial trends, evaluating the Company's development strategy, and advising on the Company's medium- to long-term development strategy, public policies, sustainable development, and environmental, social, and governance (ESG) policies. Under the Committee sits a dedicated "Dual-Carbon" Management Leadership Team, which coordinates the Company's "Dual Carbon" initiatives, reviews the "Dual Carbon" management practices of upstream suppliers, and regularly assesses the Company's climate-related risks and opportunities, in order to address climate change and advance the energy transition.

During the reporting period, amid unprecedented changes unfolding at an accelerating pace and profound shifts in the global political, economic, and social landscape, the Committee convened strategic seminars to examine strategic directions and initiatives for building global competitiveness. It recognised ESG risk prevention as a critical element in strategy formulation and committed to developing a Zijin-style ESG governance system that merges international standards with our culture of "common development."

#### Audit and Internal Control Committee

The Committee is responsible for the communication, supervision, and verification of the Company's internal and external auditing, as well as its internal control and risk management systems. During the reporting period, the Audit and Internal Control Committee diligently audited the Company's annual report, interim report, and quarterly report, provided auditing opinions, and further submitted them to the Board of Directors for review.

# **Compensation and Appraisal**



#### **Execution and Investment Committee**

The Execution and Investment Committee is a standing executive and investment organ under the authorisation of the Board. It carries out the duties authorised by the Board of Directors while remaining accountable to the Board. During the reporting period, within the Board of Directors' authorisation, the Committee enhanced the research and investment in areas like new energy and advanced material mineral resources, environmental protection, production safety, and employee welfare. It reviewed and approved the "Proposal on Zijin Longking's Investment and Construction of Lakkor Resources' "Zero Carbon Lithium Extraction" Source-Grid-Load-Storage Project", revised several ESG-related policies, continued to drive the energy transition, and support the Company's achievement of its "Dual Carbon" goals.

#### Nomination and Remuneration Committee

The Committee is responsible for reviewing and making recommendations on the candidates for directors and management, selection criteria and procedures. It formulates and reviews remuneration policies and plans for the directors and management, and formulates assessment criteria for directors and management and conduct assessments. During the reporting period, it reviewed and approved the 2023 remuneration plan for the Executive Directors and the Chairman of the Supervisory Committee, ratified the 2023 compensation for the Vice Presidents, the Chief Financial Officer, and the Secretary to the Board, and adjusted the plan governing immediate incentive payouts for the Eighth term of the Board of Directors, Supervisors, and Senior Management.

The Company places an emphasis on the principles that remuneration is commensurate with the Company's international standing in the industry, performance and shareholder returns, personal responsibilities, contributions and performance, the Company's market value and market performance, and the sustainable development and ESG indicators. In doing so, the Company adjusted the remuneration scheme for executive directors and senior management as needed. In the assessment scheme, ESG indicators account for no less than 20% of the annual salary incentive review, including key indicator settings and corresponding weights for environment, safety, social, governance, major ESG incidents, and ESG ratings. Addressing climate change, mitigating environmental pollution, and ensuring production safety are pivotal aspects within the Company's ESG strategy and are given relatively higher weights. The indicators fluctuate during collective and individual evaluations.

# Sustainable Development Governance System

Under the Board's guidance, the ESG Management Committee is responsible for driving and implementing the Company's ESG strategy set by the Board, aiming to improve overall ESG performance. Chaired by the Company's President, the Committee comprises heads of departments responsible for safety, environmental protection, business ethics, community relations, supply chain, and labour development. With its high level of expertise and diversity, this multifaceted background enables a more comprehensive approach to addressing sustainability challenges.

Our senior executives responsible for sustainability also receive direct reports from departments managing ESG, safety, environmental protection, and community engagement, ensuring coordination in addressing key issues. Subsidiaries are tasked with carrying out ESG management responsibilities and implementing the Company's sustainable development strategies. Additionally, cross-functional ESG working groups, formed across headquarters and subsidiaries, further enhance the consistent execution of the sustainability strategy.

Through this comprehensive governance structure and ESG network, Zijin not only promotes effective ESG practices but also remains agile and adaptive in a dynamic global environment, effectively managing sustainability risks.



Zijin Mining Risk Governance Framework



ESG Risk Management Corporate Governance Business Ethics Human Rights

# ESG Risk Management

We recognise that managing ESG risks is vital for the long-term sustainable development of Zijin Mining and its stakeholders. As globalisation deepens, expectations from communities, supply chains, and employees for responsible sustainability practices are rising-this not only adds pressure but also presents opportunities.

# Governance

We have established a multi-tiered ESG risk management system. The Board of Directors, together with its Strategic and Sustainable Development (ESG) Committee and the Audit and Internal Control Committee, is responsible for decision-making on major matters and risks. The management is tasked with establishing the risk management framework, while the Supervisory Committee oversees its adequacy and effectiveness, thereby forming an independent and robust risk management system. Risk identification across the entire project lifecycle is assigned to various departments, forming specialised risk management teams for investment and mergers and acquisition, operational management, supply chain, and other business functions. Internal and external experts and consultants across disciplines are dynamically deployed based on preliminary risk assessments to ensure comprehensive and effective ESG risk management.



Zijin Mining Risk Governance Framework



# ESG Risk Management System

During the reporting period, we elevated ESG risk management to a core component of our sustainable development strategy. Our "Risk Management Policy" and "Risk Management Operational Guidelines" are based on COSO-ERM and ISO 31000 standards, tailored to mining industry characteristics. The Company establishes a comprehensive ESG risk management system consisting of four stages: risk identification, impact analysis, quantitative assessment, and risk mitigation. Through in-depth analysis, we identified key risk areas and response strategies, allocating appropriate capital and human resources to control risks, ensuring the safety of the Company and stakeholders, and achieving shared sustainable development.

Our ESG risk identification spans the entire lifecycle of a project, starting from due diligence phase prior to project investment. At this stage, we incorporate ESG risk considerations to screen out projects with significant, unmitigable risks. For projects with potential for improvement, we manage and mitigate risks through subsequent investments and management, aiming to lessen any adverse impacts on stakeholders. Throughout the project's operation, our sector/business risk management teams continuously identify and manage emerging risks. We leverage our ESG management system to oversee subsidiaries' risk identification processes, and keep a close watch on negative pressing issues, stakeholder grievances, and geopolitical trends to enhance our risk identification efforts. Throughout the reporting period, all new and existing assets had controllable ESG risk.

Building on our existing risk assessment methodology, we have incorporated insights from the International Sustainability Standards Board (ISSB), attempting to integrate a two-step approach of potential impact analysis and quantitative assessment as outlined in the "Materiality Analysis" section of this report. While our efforts are currently limited by data availability and variable configurations, and we have yet to achieve a fully stable and robust analytical capability, the insights from our existing quantitative analyses have already proven highly useful in refining our ESG risk management planning.

We acknowledge that ESG risks, if not properly managed, can result in substantial losses. To address this, we manage these risks through our ESG management system and drive the implementation of mitigation plans across our subsidiaries. During the reporting period, the Company held strategic seminars focusing on critical risks related to geopolitics, security, governance, and corruption. The resolutions concerning ESG issues—from risk identification and assessment to mitigation approaches—are summarised in the "Risk Management" sections throughout this report.



# Key ESG Risk Management

Based on our progressively refined ESG risk management mechanisms and capabilities, we have come to realise that many ESG risks become more acute due to geopolitical factors, which have been our primary concerns during this reporting period. Driven by certain political agendas and stereotypes about the mining industry among those unfamiliar with the industry, some ESG issues have been subjected to selective and biased reporting or even factual distortions, gaining widespread circulation and accusations. In different public opinion environments, we have observed that international stakeholders often tend to pay more attention to the voices and issues from politically contentious regions, although these areas may not necessarily have higher inherent ESG risks. Conversely, certain places that do have inherently high ESG risks and their vulnerable groups might be overlooked.

As a responsible mining company, we adhere to the principle of "common development", giving due attention to the issues faced by regions at different stages of growth, treating all concerns impartially, and focusing on mitigating inherent ESG risks across various locales. Globally, we strictly comply with international norms as well as the applicable laws and regulations of the countries in which we operate.

For issues exaggerated or distorted due to geopolitics, we rely on our ESG management system to closely monitor international regulatory trends and current affairs. We have established a risk early-warning system to ensure timely and effective responses to geopolitical risks. On the other hand, under the organisation of the Risk Management Committee, we rapidly form crisis response teams according to different risk types, combining both internal and external resources to mitigate risks. Additionally, we continuously improve the Company's transparency, actively disclose information, and strengthen stakeholder communication, striving to foster multi-stakeholder cooperation mechanisms that help mitigate the additional impacts brought by geopolitical factors.

Furthermore, during the reporting period, we established the International Business Management Committee to address complex international situations, resolve various risks encountered in operations, systematically carry out strategic planning and deployment, scientifically assess the significance level of risks, and concentrate efforts on solving core issues.



# **Business Ethics**

Zijin Mining is committed to conducting all commercial transactions and business relationships with professionalism, honesty, and integrity, adhering to all applicable laws and the highest ethical standards in business. We aim to create a fair, transparent, and trustworthy working and operational environment, continuously fostering a corporate culture of integrity and ethical conduct, strictly resisting any actions that may negatively impact the Company's integrity and reputation.

# Governance

Under the Board of Directors, the Strategic and Sustainable Development (ESG) Committee comprehensively coordinates business ethics and anti-corruption work, defining the strategic direction and objectives for business ethics management. Internally, a dual management system combines business supervision with dedicated oversight, ensuring that business departments bear the primary responsibility for business ethics management, while the supervisory departments provide additional supervision.

The internal supervisory departments have built a "five-in-one" business ethics management system, comprising the Supervisory Committee, Commission for Discipline Inspection, supervision, audit, and internal control. The Company has established a dedicated Supervision and Audit Office, which reports to the Supervisory Committee, ensuring the independence of the internal supervision system. We have set up internal supervision and audit departments at all major production and operation sites, with dedicated personnel responsible for compliance supervision, managed vertically by the headquarters' Supervision and Audit Office, ensuring full coverage of supervision.

# **Risk Management**

In our international operations, laws across different jurisdictions impose varying compliance requirements on our business. Actions suspected of violating ethics or law could pose significant risks to our business, leading to penalties or reputational damage.

# 🔘 Risk Identification



Within the Company's operations, violations such as commercial bribery, misappropriation of company assets, inflating engineering quantities, procurement fraud, and falsifying travel reimbursements occasionally occur. These fraudulent acts increase operational management costs, erode the Company's integrity culture, and cause disorder and chaos in management activities. We adhere to the "United Nations Convention against Corruption" and the Company's "Risk Management System", identifying anti-corruption as one of the core risk categories. We regularly update our risk inventory to prevent identified integrity risks such as inflated engineering quantities, procurement fraud, misappropriation of company assets, and falsified travel reimbursements. During the reporting period, significant fraudulent cases occurred in procurement and trade sectors severely impacted the Company's reputation and brand image. These cases highlight the existing risk management gaps in our procurement and trade sectors and have prompted us to continuously improve our business ethics risk management practices.

# 💮 Risk Monitoring and Assessment

We conduct anti-corruption reviews at least annually for new and key projects and at least every two years for other projects, adjusting plans according to the risk level and operational situation. Each year, based on the contents of our business ethics and anti-corruption policies, we conduct inspections, audits, internal controls, and special checks at subsidiaries and continuously optimise based on the issues found in these reviews. During the reporting period, we launched a special anti-corruption campaign in the procurement and trade sector. We focused on strengthening governance from the ground up by enhancing twelve key areas: organisational structure, business processes, performance evaluations, job rotation policies, big data monitoring, and specialised oversight. This effort was aimed at elevating the level of standardised management across the entire procurement and trade system.

# 🔅 Risk Response



We reduce risks such as corruption, unfair competition, and other ethical breaches by enhancing management systems, strengthening process controls, providing training and education, and improving whistleblower protection. For misappropriation of company assets, we enforce strict procedures for inventory in-and-out management and conduct regular or random stock checks. For procurement fraud, we have set stringent supplier entry requirements and restrict suppliers listed on the exclusion list. Additionally, we conduct regular anti-corruption assessments and propose improvement measures to continuously nurture a risk management culture.

Corporate Governance ESG Risk Management Business Ethics Human Rights

# Strategic and Management Approaches

Our "Corporate Code of Conduct", "Policy Statement on Business Ethics Management", and "Policy Statement on Whistleblowing Management" collectively articulate the Company's stance on business ethics. We require the Company's employees, suppliers, and contractors to adhere to our business ethics policies. Additionally, documents such as the "Rules on Internal Supervision", "Several Provisions on Integrity in Practice", "Measures for the Management of Whistleblowing", and "Regulations on Internal Audit Management" are crucial institutional supports for our business ethics management. During the reporting period, we revised the "Measures for Administrative Disciplinary" to strengthen penalties for violations of business ethics, and introduced the "Rules on Employee Credit Management" as an internal policy, promoting the principle of "honour for the trustworthy, shame for the untrustworthy, and abandonment for those without credibility".

Our business ethics management follows a decision-making and execution process of prevention, ongoing review, and post-event improvement to minimise business ethics risks.



Serbia Zijin Mining Conducts Training on Integrity in Employment





# Integrity Culture

Zijin Mining requires all projects, directors, employees, suppliers, and contractors to follow our business ethics policies and standards. We create a clean and incorruptible corporate culture through various training and publicity efforts, ensuring that all stakeholders understand and largely support our integrity culture. Together, we build a harmonious and corruption-free business environment:

#### Integrity Training:

We regularly assess high-corruption-risk positions and provide focused training for directors, supervisors, senior executives, as well as new employees, newly promoted employees, and those in key or sensitive positions. During the reporting period, we organised specialised integrity education for new hires and arranged for staff in logistics, finance, and engineering to observe court proceedings as a way to underscore the serious consequences of unethical behaviour.

<b>Reminders:</b> Entail to over 100 newly provided department neads and night-level material encouraging them to sign the "Commitment to Integrity in Employment." We put analysis of 12 typical cases of internal and external corruption on our intranet's "Cas Month" column as preventive warnings. To nip misconduct in the bud, particularly significant holidays, we circulate notices that emphasise the importance of main integrity, thereby curbing any holiday-related corrupt activities.
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Integrity

We include integrity clauses in contracts with suppliers and contractors, adding those who Cooperation: breach these clauses to a blacklist. During the reporting period, 127 suppliers engaged in commercial bribery and other improper practices were permanently banned. We regularly host collaborative "anti-bribery" symposiums with suppliers and contractors, jointly studying anti-corruption policies and guidelines such as the "Whistleblowing Management Policy Statement" and the "Policy Statement on Business Ethics Management".



During the reporting period, we issued three supervisory bulletins on major corruption cases, which garnered 42,000 views. These cases were incorporated into regular integrity training programmes as typical case studies, serving as a strong reminder of integrity for all employees.

Indicator	2024	2023	2022	2021	2020	2019
Directors, Supervisors, senior management	100	100	100	100	100	100
Employees	100	100	100	100	100	100
Suppliers, contractors	100	100	100	100	100	100

Coverage of Business Ethics and Anti-Corruption Policies and Procedures Acknowledgment(Unit:%)

Indicator	2024	2023	2022	2021	2020	2019
Directors, Supervisors, senior management	100	100	100	100	87.19	83.29
Employees	75.25	87.97	75.50	64.82	63.96	68.00
Suppliers, contractors	76.81	73.77	70.90	62.10	61.55	58.24

Coverage of Business Ethics and Anti-Corruption Policy Training(Unit:%)



Integrity Orientation for New Employees



## O Anti-Corruption and Compliance Management

Zijin Mining updates its anti-corruption review plan at least annually for new and key projects, and biennially for other projects, while making real-time adjustments based on risk levels and industry dynamics. Annually, the Company conducts inspections, audits, internal controls, and special investigations at subsidiaries in accordance with the anti-corruption review plan, covering high-risk areas such as legal compliance, financial management, procurement, sales, and construction. We continuously improve upon issues identified in the reviews.

Zijin Mining advocates for free and fair competition and opposes any form of monopoly and the improper profit-seeking. Political donations or other political expenditures intended to the purpose of securing business opportunities or benefits may constitute bribery. Zijin Mining does not sponsor political parties, candidates, affiliates, or associated organisations in any country to obtain commercial or other advantages.

During the reporting period, the Company established an information collection and analysis backend for its supervision system, enhancing the informatisation of oversight processes. Efforts were made to develop a comprehensive and extensive supervision framework covering integrity education, issue tracking, investigations, and disciplinary decisions. However, the understanding of corruption risks in mining procurement, trade, and construction remains insufficient, particularly in auditing and supervising "authorised personnel". Several corruption cases were uncovered and addressed during the reporting period, involving prolonged durations and significant sums. In certain instances, individuals wielding authority colluded both internally and externally to abuse their power for personal gain, causing significant harm and major losses to the Company, and severely undermining its reputation and culture.

Given the severe anti-corruption landscape, Zijin Mining launched a specialised anti-corruption and rectification campaign in procurement and trade. All subsidiaries were required to follow a four-step approach—"awareness-raising, concentrated scrutiny, legal rectification, and systemic restructuring"—to tackle corruption in procurement and trade systems. The campaign has achieved preliminary results.

During the reporting period, the Company expanded its channels for gathering leads by conducting exit interviews with 281 employees who resigned or were redeployed. Engaging individuals without direct conflicts of interest allowed us to determine whether their departures were linked to ethics concerns and to assess the integrity within their former workplaces.

Despite comprehensive integrity programmes for employees across all career stages, it is regrettable that, during the reporting period, 104 employees were disciplined for corruption or other business ethics violations with an additional 195 individuals subjected to corrective measures such as written self-criticisms or disciplinary talks. A total of 152 business partners had their contracts terminated due to ethics-related breaches, and two criminal cases involving job-related offences were handed over to judicial authorities (both pending resolution).



# l≞ ∩∩∩ 100 %

Under the annual work plan, 21 inspections, audits, internal control reviews, and special investigations were scheduled, all of which were completed—a 100% completion rate. Inspections primarily focused on employee integrity, while audits emphasise evaluating the scientific and effective management of operations. Internal control reviews stress the assessment of the effectiveness of internal controls.



89.98%

Additionally, supervisory bodies stationed at subsidiaries conducted anti-corruption risk assessments at all operational sites. During the reporting period, the headquarters' Supervision and Audit Office guided all subsidiaries identified as having moderate to high corruption risks to conduct self-assessment of their internal controls, producing 375 internal control test reports. A total of 2,785 internal control deficiencies were identified, with 2,506 rectified—a closure rate of 89.98%—promoting continuous improvement in the internal control mechanisms across the subsidiaries.



## Grievance and Whistleblowing Mechanism

Whistleblowing is vital for discovering and addressing issues, enabling us to improve our business practices. Zijin Mining encourages all stakeholders to speak out and report any cases that may violate our business ethics management principles. We have established a comprehensive whistleblowing and reporting mechanism and continuously broaden and evaluate its effectiveness, ensuring accessibility and prompt response to all grievances.



Zijin Mining's Grievance and Whistleblowing Process



#### Grievance and Whistleblowing System

The Company's Supervision and Audit Office is responsible for maintaining and managing the complaint and whistleblowing system. Dedicated personnel is assigned to handle and investigate reported issues and subsequently reports the findings to management. Once the relevant management bodies review and vote on the resolution plans, the implicated individuals' respective companies will implement the decisions. Measures such as cautionary talks or disciplinary actions are taken against those who violate policies, and individuals involved in illegal activities are referred to judicial authorities for further action.

Whistleblowers can report to the Company's headquarters either anonymously or with their real name. We highly value every lead and assure that anonymity will not compromise the validity of the report. We extend our sincere gratitude to all whistleblowers:

- ( Telephone:+86-0597-3833182
- Email:jcsjs@zjky.cn

( In person or by mail: Supervision and Audit Department, Zijin Mining, 1 Zijin Road, Shanghang County, Fujian Province, 364200, China.

- Online platform: Zijin Mining Integrity Reporting Platform https://rac.zjky.cn/honest/static/index.html
- ( WeChat platform: "Zijin Mining Supervision" official account.





Corporate Governance ESG Risk Management Business Ethics

#### The sources and categories of grievances and reports we received are as follows:



that connects headquarters, subsidiaries, and regional operations.

95.34 %

During the reporting period, our grievance and whistleblowing mechanism received a total of 236 cases of reports involving violations of the "Policy Statement on Business Ethics Management." Of these, 225 cases have been resolved, achieving a completion rate of 95.34%.



While carefully handling all whistleblowing leads, we also proactively seek corruption-related clues from our partners. During the reporting period, we sent contact letters to 38,008 suppliers and obtained 56 leads on issues through suppliers, employees, and other relevant parties. As of the report release date, 49 cases had been closed, with 7 cases still in progress.

#### Whistle-blower Protection



We encourage all stakeholders to report incidents they consider suspicious or improper. We adopt multiple protective measures to safeguard the privacy of whistleblowers and strictly control the dissemination scope of whistleblowing information. We have assigned dedicated personnel to handle whistleblowing complaints, strictly limit access to whistleblowing information, and implement measures such as the recusal of parties with conflicting interests.

We do not permit any form of punishment, disciplinary action, or retaliatory measures against whistleblowers. We are committed to seriously addressing any threats or acts of retaliation initiated by individuals or groups and will impose penalties or even refer such cases to judicial authorities for legal accountability based on the circumstances.

# **Future Plans**





# Human Rights

Zijin Mining firmly believes that the sustainable development of the Company is inseparable from the respect and protection of human rights for all stakeholders. We are committed to creating a fair and just human rights environment for all our employees, partners, and communities, and we strive to meet the highest standards of human rights practices at every stage along our entire value chain.

Zijin Mining strictly adheres to internationally recognised human rights standards, firmly opposing any form of discrimination, harassment, bullying, or retaliatory actions. We ensure that all employees have equal career development opportunities and work in a safe, healthy, fair, and respectful environment. Additionally, we are committed to encouraging our partners, contractors, and suppliers to also follow these human rights standards in their operations, ensuring that every link from resource extraction to product delivery does not infringe upon basic human rights.

Zijin Mining will continue to strengthen its human rights management system, uphold integrity and responsibility, promote the improvement of industry standards, and guide the entire value chain towards a more equitable, transparent, and sustainable direction. This will create long-term social value and economic benefits for global stakeholders.

# Governance

Zijin Mining always regards human rights as a core element of corporate governance. The Board of Directors holds ultimate responsibility for managing human rights risk, with specific execution and oversight carried out by the ESG Management Committee. The Company has set up dedicated working bodies in subsidiaries around the world and supervises and manages human rights risks through a vertical management model. We continuously advance the identification, assessment, and management of human rights risks, ensuring that the Company fulfills its responsibilities to employees, partners, and local communities across all its operations.



Zijin Mining Human Rights Governance Structure

Manage — Monitor —



# **Risk Management**

Under the ESG framework, we place great emphasis on the potential human rights impacts of our business operations. To this end, we are committed to building a human rights risk management system that covers all business activities, ensuring that our operations do not negatively impact the fundamental rights of individuals and communities. We pay special attention to projects in high-risk areas, requiring them to gradually establish processes for identifying and managing human rights risks, with human rights assessments as a key part of their impact or risk evaluations.

We assess the nature and severity of potential risks and/or impacts. During the reporting period, through a systematic risk assessment process, we identified five key human rights areas most relevant to our business and conducted in-depth analysis of each to determine and formulate management measures for controlling identified risks and impacts.

Key Human Rights	Connotation	Our Management Approach		
The Right to Life	The right to be free from environmental harm	The right to life is paramount. We are committed to a zero-harm goal, ensuring that the environmental impact of mining activities is minimised. In mining projects, we implement environmental impact assessments, monitoring, and remediation measures to minimise risks to the safety and health of employees and community residents. We actively promote climate justice by reducing carbon emissions, restoring ecosystems, and other measures to ensure communities affected by climate change have access to necessary resources and support. For details on our risk mitigation practices, please refer to the following sections of this report:		
	The right to climate justice			
	The right to a dignified life			
	The rights of children to survival, development, and welfare			
Economic Rights	The right to work			
	The right to rest, leisure, and holidays	Mining projects are often located in economically underdeveloped regions with limited job opportunities and social inequalities.		
	The right to fair wages and equal pay for equal work	To promote regional economic development and enhance employee well-being, we are committed to providing safe, fair working conditions and equitable remuneration. Through training and skills development, we enhance employees' professional capabilities and career opportunities, safeguarding their		
Social Rights	The right to social security	<ul> <li>Includer additional training and skills development, we eminate employees professional capabilities and carefor opportunities, saregularing their livelihoods and health. We also strive to improve infrastructure in mining areas and surrounding communities, promoting education and social welfare to ensure employees and their families enjoy equal living conditions. We focus on providing educational opportunities and skills training to help employees and community residents enhance their professional competencies and cultural literacy. We respect the cultural diversity of employees and communities, encourage cultural exchange and understanding, and reject any form of cultural exclusion or discrimination.</li> <li>For details on our risk mitigation practices, please refer to the following sections of this report:</li> <li>Employee Development</li> <li>Occupational Health and Safety</li> <li>Community</li> </ul>		
	The right to an adequate standard of living			
	The right to equal opportunities and treatment			
Cultural Rights	The right to education			
	The right to participate in cultural life			
Civil and Political Rights	The right to freedom from slavery and forced labour	Every individual is entitled to civil and political rights to safeguard their fundamental freedoms and protect them from threats such as slavery.		
	The right to free, prior, and informed consent	We firmly oppose all forms of forced labour and child labour, ensuring all employment is based on free and voluntary principles. We provide employee labour agreements that are free, informed, and voluntary, ensuring their right to express opinions and participate in decision-making at work. For employees of diverse cultural and religious backgrounds, we respect their freedom of belief and expression, guaranteeing equal treatment		
	The right to freedom of assembly and association			
	The right to freedom of thought, belief and religion	In our multinational operations, we strictly comply with local labour laws and take effective measures to prevent employment discrimination and violations of fundamental freedoms.		
	The right to freedom of speech			
	The right to privacy	Additionally, if projects are located near indigenous communities, we must fully uphold their rights to free, prior, and informed consent.		

# Strategy and Management Approach

**⊘ Zi Ji∩** 

In our global operations, we strictly adhere to international human rights standards, including the "Universal Declaration of Human Rights", the "UN Guiding Principles on Business and Human Rights" (UNGPs), the International Labour Organisation's "Declaration on Fundamental Principles and Rights at Work", and the World Gold Council's "Responsible Gold Mining Principles". We ensure that the Company's practices align with global best practices. Given the regulatory and cultural differences at each location, we are dedicated to meeting international standards while complying with local laws. Our policies are designed to ensure compliance with both local and international laws. In alignment with United Nations initiatives, we strive to promote elevated standards across all operational sites.

Articles 14 to 17 of our "Corporate Code of Conduct" outline the core human rights goals that serve as the core guiding principles for our interactions with all stakeholders and as a fundamental criterion in selecting business partners. To support our corporate development, during the reporting period, we introduced several human rights-related policies, including the "Labour Relations Policy", the" Indigenous Peoples Policy", and the "Diversity, Equality, and Inclusion Policy", all of which are aimed at better safeguarding human rights issues.

During the reporting period, we further strengthened our human rights governance system, continuously refining and enhancing our due diligence methods to identify and manage potential risks and impacts. We conducted studies to benchmark against international human rights policies, regulations, and standards, incorporating them into our routine inspections and audit standards. Additionally, across all subsidiaries, especially in high-risk areas, we continued to conduct third-party human rights audits, ensuring comprehensive coverage and high standard execution. During the reporting period, we did not identify any incidents of human rights violations.

## 🜔 Labour Rights

Guided by "Mining for a Better Society," we are committed to creating a free, fair, safe, and dignified work environment. By developing fundamental management frameworks— such as the "Human Rights Policy" and "Labour Relations Policy"—we integrate the spirit of respecting and protecting human rights into our corporate governance. We vigorously foster a healthy and supportive work atmosphere, providing employees with fair and decent working conditions and compensation. We encourage employees to express their concerns through legal means to safeguard their rights. During the reporting period, we conducted a comprehensive review of newly issued laws and regulations from the United Nations, the European Union, and other relevant authorities, with particular emphasis on employment relationships, working conditions, anti-discrimination requirements, and more. Taking into account the actual conditions of our business, we continuously optimised our management is highly compliant. Additionally, we regularly organise Meeting of Representatives of workers and staff, providing employees with open channels of communication that allow them to freely voice their opinions and suggestions regarding corporate decisions and work arrangements. By ensuring that every employee's voice is heard and valued, these measures further promote positive interactions between employees and the Company, pushing our labour and human rights management to higher levels.

## Eradication of Child Labour

We require all operating projects to strictly adhere to the legal regulations of the host countries or the provisions concerning the minimum working age as stipulated in Convention No. 138 of the International Labour Organization, whichever is higher. We have a robust recruitment screening mechanism in place to prevent any inadvertent hiring of child labour. We also demand that contractors, suppliers, and third-party recruitment agencies to strictly prohibit the use of child labour, assess the risks of accidentally hiring child labour, and take timely remedial actions: If any child labour is discovered, we immediately stop the child from working, transfer them to a safe and appropriate environment, and arrange for medical checkups. The affected children are also provided with educational support. Firstly, we ensure that any employee, community member, or relevant party can easily report suspected child labour issues. Upon receiving a complaint, we promptly conduct a thorough on-site investigation. Secondly, if the use of child labour is confirmed, we immediately cease the child's work, transfer them to a safe and suitable environment, and swiftly arrange a comprehensive health check-up. Depending on the actual work performed by the child, we will calculate their entitled remuneration and provide additional financial compensation to address any potential physical and psychological harm they may have suffered. Lastly, we ensure the affected children are safely returned to their place of residence. For children who have not yet completed compulsory education, we offer educational support.

For any internal personnel found responsible for the inadvertent hiring of child labour, we enforce strict measures in accordance with our company policies, which may include warnings, fines, demotion, or even dismissal. If the issue arises from contractors, we will require them to immediately stop the infringing actions and take necessary remedial steps according to our procedures. We will hold them accountable for any breach of contract per our agreements and decide whether to terminate our partnership based on the severity of the violation.



#### Elimination of Forced Labour



We follow a preventative process for assessing the risks of modern slavery in our operations and supply chains, continuously strengthening human rights risk management. By improving our labour compliance handbook covering the entire process from introducing basic labour systems to hiring and managing personnel, we guide our labour management and avoid risks associated with forced labour. We are aware of the potential risks of forced labour or modern slavery in our operations and supply chains and understand that prevention is key to addressing these risks. To this end, we have established ten principles for the protection of labour rights and continuously optimise our labour management processes and systems. We update and improve the labour compliance handbook, providing clear and detailed guidance throughout the entire process-from foundational institutional frameworks to specific aspects of personnel recruitment, day-to-day management, and labour relations maintenance. We conduct comprehensive due diligence on management and daily operations to identify and mitigate potential risks. We conduct thorough due diligence on our management and operations to uncover and mitigate potential risks. In addition, we regularly collaborate with leading university scholars specialising in labour relations, social responsibility audit consultants, and professional labour lawyers to deliver systematic labour risk control training for our global human resources teams and personnel. This methodical approach significantly elevates our labour compliance management, minimises the risk of forced labour, and lays a solid foundation for the healthy and sustainable development of labour relations.



#### Freedom of Association and Collective Bargaining

We support the negotiation and signing of the "Employee Wage Collective Agreement" and the "Employee Collective Labour Contract" by union representatives to safeguard employees' legal rights, with employees having the freedom to join or withdraw from unions. When significant changes to operations occur that may negatively affect employees, the Company will notify them in advance to minimise negative impacts. During the reporting period, our subsidiaries, Continental Gold and Rosebel successfully signed collective labour agreements with their unions. Among these achievements, Continental Gold successfully concluded its first labour union agreement through collective negotiations, striking a balance between the company's sustainable development and the steady improvement of employee benefits. This agreement received high praise twice from the Colombian Ministry of Labour via its official social media channels, hailing the signing of the Continental Gold union agreement as a model for regional employment and economic development. As of the end of the reporting period, our collective bargaining agreements had achieved a coverage rate of 46.98%.

#### Anti-Discrimination, Anti-Harassment and Anti-bullying in the Workplace



We follow the "Anti-Bullying and Anti-harassment Guidelines" and foster a "zero tolerance for workplace sexual harassment" mindset to prevent and reduce the risk of such incidents through training, education, disseminating legal knowledge and the establishment of preventive and punitive coordinated mechanisms. We encourage employees to promptly report relevant behaviours through established channels. Upon verification, disciplinary actions are taken according to the personnel policies of the unit involved, ranging from reprimands and warnings to termination of employment, depending on the nature and severity of the violation. Should the behaviour violate the laws of the project's host country (or region), the victim has the legal right to seek compensation in accordance with the law. Cases involving criminal acts such as physical assault or sexual assault will be referred to the police for handling. During the reporting period, we delivered training on local customs, culture, and related risk to newly hired personnel at subsidiaries, advocating the values of mutual respect and equal treatment to address potential issues at the source. We established a detailed anti-sexual harassment policy, fostering a zero-tolerance corporate culture toward such behaviour, and implemented clear reporting mechanisms for workplace bullying and harassment, encouraging employees to defend their rights.

#### **Vulnerable Groups**

We are committed to protecting the rights of vulnerable groups in local communities, promoting their equal participation and holistic development in employment. By using surveys, field visits, and interviews, we gain insight into the specific needs of these groups in areas such as employment and daily life. Multiple departments within our company collaborate to develop strategies and optimise internal systems related to recruitment and promotion, ensuring fairness and inclusiveness in the employment of local vulnerable groups. Through regular inspections of policy implementation and feedback gathered through diverse channels, we systematically assess and adapt our strategies to consistently enhance our practices. For example, in the practice of Colombia's women's mineral processing team, we ensured equal participation and inclusion of female employees in decision-making processes while further strengthening the protection of their specific interests on the basis of safeguarding their rights. Additionally, through education, skills training, economic support, and social services, we empowered vulnerable groups, helping them achieve personal development and career growth. This not only reflects our commitment to diversity and inclusion but also lays the foundation for the shared development of enterprises and communities.

# Indigenous Rights

In our international operations, we place great emphasis on safeguarding the rights of local indigenous peoples, deeply practising respect for their human rights and cultural heritage rights. We adhere to values of equality, inclusiveness, and multicultural integration within local community ecosystems. In line with the "UN Declaration on the Rights of Indigenous Peoples", the "Principle of Free, Prior, and Informed Consent (FPIC)", and international norms such as the "ILO Convention No. 169", we engage in communication with indigenous communities. Furthermore, in compliance with IFC Performance Standard 5, any land acquisition or involuntary resettlement involving indigenous peoples must follow applicable laws, regulations, and international best practices. We recognise that indigenous peoples have unique traditional cultures and dependencies on land, and we fully respect their rights, interests, aspirations, culture, and natural resource-based way of life. During the reporting period, we issued the "Guidelines on Land Acquisition and Involuntary Resettlement for Overseas Enterprises", which aim to ensure indigenous rights are respected throughout land acquisition and resettlement processes. No incidents involving violations of indigenous rights were identified during the reporting period.



# 🔘 Cultural Heritage Rights

We adhere to the principles of IFC Performance Standards 7 and 8, prioritising the avoidance of any disturbance or damage to indigenous peoples' tangible and intangible cultural heritage. Where avoidance is not feasible, we engage in transparent and rigorous consultation processes with utmost sincerity, striving for their Free, Prior, and Informed Consent (FPIC) to reach reasonable protection or relocation agreements, minimising adverse impacts.

During the reporting period, at our Rosebel operations in Suriname, we restored and maintained historical burial sites in collaboration with relevant stakeholders. This followed comprehensive research, detailed surveys, and analysis, leading to a scientifically rigorous and targeted restoration plan. The process strictly adhered to professional heritage conservation standards, using restoration materials and techniques that matched the original structure while minimising environmental impact. The restored sections seamlessly blend with the original architectural style. Additionally, we rehabilitated the surrounding environment by clearing debris, repairing damaged roads, and fixing drainage systems to ensure optimal preservation conditions. Corporate Governance ESG Risk Management Business Ethics Human Rights

## Artisanal and Small-Scale Mining (ASM)

As a responsible large-scale mining company, we remain highly attentive to the challenges faced by Artisanal and Small-Scale Mining (ASM), continuously working to minimise environmental, occupational health, and safety impacts on surrounding communities, residents, and employees (including contractors). We recognise that traditional ASM remains a vital economic pillar for local residents, yet it faces numerous challenges. According to research by the International Council on Mining and Metals (ICMM), ASM often lacks basic health and safety protections, exposing workers to risks such as insufficient training, poor ventilation, lack of safety equipment, improper chemical use, and outdated machinery. Furthermore, the widespread participation of women and children, as well as control by illegal armed groups in some regions, not only threatens worker safety but also exacerbates serious human rights issues, including child labour and forced labour. These challenges require collaborative efforts from businesses, governments, and society.

To mitigate the negative impacts of illegal armed groups on ASM workers' rights, reduce environmental and health risks from improper mining practices, and safeguard legitimate ASM livelihoods, we partnered with local governments and NGOs in multiple countries to promote ASM formalisation programmes. We established cross-functional teams to actively engage with local governments and ASM workers, listening to their needs and expectations while helping them improve the legality, scientific approach, and efficiency of their mining activities. These efforts have effectively reduced the environmental, safety, and human rights risks posed by illegal and unregulated mining to workers, communities, enterprises, and employees. Simultaneously, through community development programmes, we address the economic and social root causes of illegal ASM, improving local economic and educational conditions while providing alternative livelihood options. For example, in Continental Gold's ASM formalisation project in Colombia, we implemented detailed scheduling optimisation across all stages of mining activities, enhancing operational planning, reducing costs, and improving mineral resource management efficiency. This significantly improved operations at five small-scale underground mining enterprises, boosting their market competitiveness. By formalising and optimising mining practices, we reduced tunnel-related risks and substantially enhanced improved safety conditions for worker. Along with optimising processes and planning, the project positively impacted corporate teams and workers, extensively elevating overall efficiency.

## Tradition and Sustainability – the Innovative Path of Small-scale Mining in Rosebel

In the Moeroekreek region where Rosebel operates, the local community has long faced challenges in traditional small-scale mining (SSM) activities, including a lack of safety and environmental protection measures and insufficient compliance. To balance traditional livelihoods with sustainable development, RGM has adopted an innovative collaborative model. Respecting mining traditions while mitigating environmental risks, RGM signed cooperation agreements with SSM groups to support their transition to formalisation, clarifying mining boundaries and introducing safe operational standards to integrate traditional practices into the company's regulatory framework. Additionally, addressing the threat of mercury misuse in SSM to both ecosystems and human health, RGM partnered with the EMSAGS project to launch a youth-led participatory initiative. Young members of the local Col (Community of Interest) produced an awareness campaign on mercury hazards, using true-life stories to expose the hidden damage caused by toxic substances to rivers, soil, and human health, fostering collective reflection on greener mining practices through emotional resonance. To solidify the transition outcomes, RGM established a multi-stakeholder dialogue platform, facilitating regular and transparent consultations with government representatives, traditional leaders, miner delegates, and environmental organisations. Built on trust, this platform collaboratively developed a phased reform plan: preserving the cultural value of SSM while systematically introducing drone inspections, mercury-free gold extraction techniques, and alternative livelihood training (e.g., welding, food processing). This "modernisation of tradition" approach has yielded early results—by 2024, mercury usage dropped by 60%, and 30% of women who participated in training successfully established community-based enterprises. This case demonstrates that through culturally inclusive technological empowerment and institutionalised benefit-sharing mechanisms, a dynamic equilibrium can be achieved between safeguarding traditional livelihoods and fulfilling ESG commitments.





On-Site Interviews with Traditional Small-Scale Miners on Safety and Environmental Issues Skills Training Provided for Women

# 🔘 Human Rights Training

Our human rights training is grounded in our commitment to the respect and protection of human rights, while also incorporating a deep understanding of potential risks in global supply chains. This training is not merely a response to compliance requirements but a critical initiative to fulfil social responsibilities, enhance employee well-being, and ensure transparency and ethical practices in our supply chain. We employ a diversified approach combining online and offline training formats, utilising modular courses to improve interactivity and practicality, with tailored programmes for different regions and functions.

During the reporting period, we conducted research and training on human rights-related laws from the United Nations and the countries where we operate, and vigorously participated in academic seminars on human rights to deepen management's understanding of human rights issues.

We engaged experts in human rights law, international trade, human resources, and other relevant fields to deliver corporate training covering: The history of human rights development, international human rights protection mechanisms, key United Nations documents and national legal frameworks, criteria for identifying forced labour, cross-cultural communication in the mining industry; and common human rights risks in international trade.

For partners such as engineering contractors and suppliers, we have strengthened human rights risk identification and awareness through self-assessment questionnaires, structured communication, and on-site inspections.

For internal and external security teams, in line with our "Security and Human Rights Protection Policy Statement", we conducted ongoing training for security personnel and mine police on the "Voluntary Principles on Security and Human Rights" and "Principles on the Use of Force", as well as human rights awareness and expertise. This training covered personnel, equipment, training, procedures, and systems. During the reporting period, we acquired the Rosebel project, where approximately 300 security personnel are undergoing human rights training. As a result, the percentage of security personnel who received human rights training temporarily declined. This figure is expected to return to previous levels once the training is completed:

Category of security personnel	Number of security personnel	Number of security personnel who has received human rights training	Percentage of security personnel who has received human rights training(%)
In-house security personnel	854	762	89.23
Third-party security personnel	1,963	1,917	97.66
Total	2,817	2,679	95.10

Human Rights Training for Security Personnel

# 🔅 Human Rights Audits

As a key player in the mining industry, we focus on the broader concept of business and human rights, recognising the impact of our operations on the human rights of stakeholders. These macro-level concerns align closely with ESG, sustainable development, and corporate social responsibility (CSR) priorities. In response, Zijin Mining has been driving subsidiaries to conduct internal and external ESG audits with a human rights focus since 2022, with plans to expand these audits periodically to gradually cover critical segments of the segments. Leveraging third-party expertise and cutting-edge methodologies, we conduct quantitative assessments and qualitative analyses of human rights practices, identify potential risks, and implement precise improvements. Through periodic audits, we are progressively building a system for human rights protection and ESG implementation, empowering sustainable development for the enterprise.

#### In Serbia



Our subsidiary, Serbia Zijin Mining, has obtained third-party certification for human rights and social responsibility compliance. Additionally, our operations in Serbia have established a grievance mechanism in line with international standards, including anonymous channels for employees to submit complaints or concerns to management. If any significant violations of international human rights or social responsibility requirements occur in daily operations, employees may directly report their grievances to the certifying body.

### In the Democratic Republic of Congo (DR Congo) and Eritrea

To support multiple Chinese smelters downstream in complying with the London Metal Exchange (LME) Responsible Sourcing Policy for high-risk regions, our mines in the DR Congo COMMUS (Kamoa-Kakula) and Eritrea (Bisha) underwent third-party on-site assessments commissioned by these smelters. These audits ensure the absence of forced labour, child labour, and other human rights violations in the mineral supply chain.

#### In China



In collaboration with external experts, we carried out labour and human rights on-site assessments at our subsidiaries located in the Xinjiang region. These assessments covered provisions related to labour human rights, such as the minimum wage, working hours, leave, anti-discrimination, free movement in and out of the mining areas, the establishment of labour contract relationships on an equal and voluntary basis, decent work, and the prohibition of forced labour. No certain violations of laws, regulations, and United Nations human rights standards were found.

Among them, Ashele Copper has officially passed the third-party audit based on the "Guidelines for Social Responsibility in Outbound Mining Investment" of the China Chamber of Metals, Minerals & Chemicals Importers & Exporters and the "Corporate Code of Conduct" of Zijin Mining Group Co., Ltd., and obtained a B rating. This signifies that most of the social responsibility work of Ashele Copper has been able to meet expectations, with some aspects reaching the best industry practices. This audit covered eight topics, namely organisational governance, fair operation practices, supply chain, human rights, labour practices, occupational health and safety, the environment, and community development. Among them, in the two topics of human rights and labour practices, no obvious violations of standards were found, nor was there any indication of forced labour or other human rights infringements.



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## Internal Human Rights Audit of Four Xinjiang Subsidiaries

To assess the compliance of Zijin Mining's Xinjiang subsidiaries with the Group's "Human Rights Policy", "Labour Relations Policy", and other fundamental management systems—and to proactively address potential geopolitical challenges posed by the U.S. Uyghur Forced Labor Prevention Act (UFLPA)—the Company, in collaboration with external experts, conducted a systematic internal audit of labour practices in April 2024 covering Ashele Copper, Xinjiang Jijinag Zijin Xin, inc (hereinafter referred to as the "Xinjiang subsidiaries"). This internal audit employed transparent and rigorous procedures to comprehensively evaluate employee rights protection, production safety, and corporate social responsibility (CSR) performance. Its purpose is to enhance human rights safeguards in Xinjiang operations and bolster resilience against geopolitical risks.

Investigation Period January 2023 to April 2024 (hereinafter referred to as the "audit period").

#### 2 Methodology

#### **Document Review**

We reviewed a total of 2,510 labour employment management documents and supporting materials provided by the Xinjiang subsidiaries, including sample labour contracts, policies on wages and benefits, employee rosters, and occupational health and safety management regulations.

#### Questionnaires

The audit employed dual-dimensional surveys (company and employee questionnaires) to cross-validate findings and holistically assess labour practices.

- Company Questionnaire (50 items):
   Covered employee demographics, recruitment processes, contract management, resignation procedures, working hours and leave arrangements, compensation and benefits system, the creation of a fair work environment, and democratic governance mechanisms. Completed by management.
- Employee Questionnaire (13 items): Covered employee origins, recruitment channels, freedom of movement, experiences of fair treatment, leave entitlements, reasonableness of working hours, wage punctuality, and job satisfaction. 313 valid responses were collected (>10% sampling rate), ensuring the representativeness of the sample.

## On-Site Sampling Verification

1,747 original records across 13 categories, including related original documents, original vouchers, record forms, and archival materials, etc., were spot-checked at subsidiaries to verify authenticity, consistency, and completeness.

#### Management personnel interviews

30 face-to-face interviews were conducted with heads of labour relations, production safety, and CSR departments to gain in-depth understanding of labour employment management policies implementation, operational details, and actual outcomes—focusing on labour rights and safety management.

#### On-Site Visits and Random Employee Interviews

A comprehensive inspection of the company's production, office, and residential areas was conducted, accompanied by random interviews with employees. The assessment covered workplace safety precautions, conditions of employee accommodations, and cafeteria hygiene conditions, ensuring compliance with established benchmarks. Additionally, specific emphasis was placed on verifying whether employees' working conditions adhere to occupational health and safety legislation—for instance, assessing the adequacy of on-site protective gear and the reasonableness of work procedures.

#### 3 Findings

20

Ashele Copper

Xinjiang Jinbao

Zijin Zinc

Zijin Non-ferrous

426

On-site

Document

Verification

Volume

#### **Employee Demographics**

Ethnic composition and contract status were verified through the analysis of documents, such as employee rosters and sample labour contracts. The results show that ethnic minority employees constituted 38.3% of the workforce of the Xinjiang subsidiaries—closely proportionate to local demographics—with no evidence of discriminatory hiring.

Subsidiary	Han	Minorities (Uyghur, Kazakh, etc.)	Total
Zijin Non-ferrous	337	542	879
Zijin Zinc	324	238	562
Xinjiang Jinbao	312	52	364
Ashele Copper	722	221	943
Total	1,695	1,053	2,748

Ethnic Composition of Employees in Xinjiang Subsidiaries (Unit: persons)



#### Voluntary Employment

The recruitment process of Xinjiang subsidiaries strictly adheres to the principle of voluntary application. Employees are primarily sourced through the company's independent recruitment (via the company's official website, third-party recruitment platforms, and campus recruitment) and other channels (group assignments and internal referrals from affiliated entities). All recruitment and redeployment procedures require employee to apply actively, with no involuntary cases. Upon hiring, labour contracts are promptly signed. A survey of employees working across regions (those with household registration in Xinjiang but not in the company's immediate location) revealed the following: In northern Xinjiang, where Ashele Copper and Xinjiang Jinbao are located, only Xinjiang Jinbao has two employees registered in southern Xinjiang-one a recent graduate recruited through campus hiring, and the other a former employee of Xinjiang Zijin Non-ferrous who voluntarily requested a transfer to Xinjiang Jinbao. In southern Xinjiang, where Xinjiang Zijin Zinc and Xinjiang Zijin Non-ferrous are located, there are 34 employees registered in northern Xinjiang, all hired through open market recruitment, with no involuntary cases.

Xinjiang subsidiaries fully respect employees' resignation requests. During the review period, 355 employees submitted resignation applications. Except for seven cases where employees chose to stay following retention conversations, all other resignations were accepted. Exit procedures, including discussions, handovers, medical check-ups, and formalities, were completed in accordance with company policies.

#### Freedom of Movement

The audit reviewed the procedures for employee access to and from the mining area, monitoring equipment in the workplace, dormitory application materials, as well as employee questionnaires and on-site visits, and found no instances of restrictions on employees' personal freedom. At Ashele Copper and Xinjiang Zijin Non-ferrous, employees can freely enter and exit the mining area with their work badges or uniforms. Due to the remote locations of Xinjiang Jinbao and Zijin Zinc, the companies provide shuttle services for employees and have implemented a registration-based access system to ensure both safety and convenience. The registration is solely for record-keeping purposes and does not restrict employees' movements. Employees in the dormitory areas also enjoy full autonomy, with control over their dormitory keys and the freedom to enter and exit their living quarters as they wish. Employees' important documents, such as ID cards and passports, are kept in their personal possession, and the companies do not require property guarantees or the deposit of valuables. The mining areas are also equipped with recreational facilities and staff canteens to ensure employees have a comfortable and convenient living environment outside of work, achieving a balance between work and life.

## Policy Support and Community Investment

Xinjiang subsidiaries actively fulfil social responsibilities and legally enjoy policy support. During the audit period, they enjoyed general tax incentives (e.g., corporate income tax, R&D deductions) and government subsidies (e.g., high-tech enterprise recognition, R&D grants, energy-saving subsidies), none of which were tied to employment targets or quotas.

Their poverty alleviation initiatives align with Zijin Mining Group's global community investment policies, strategies, and procedures, and cooperation methods. Zijin Mining consistently follows the principle of mutual choice in its poverty alleviation and rural revitalisation initiatives., Xinjiang subsidiaries have donated to support the construction of local infrastructure and poverty relief in surrounding communities without inducing forced migration.

#### Fair Workplace Environment

Xinjiang subsidiaries vigorously foster equitable workplaces with nine labour regulations covering recruitment, promotions, and performance reviews. The "Outstanding Youth Talent Development Programme" and awards are equally accessible to all ethnicities. The trade union committee has 16 members, and the employee congress has 79 representatives (including 18 ethnic minorities). Halal meals are provided for minority employees. Comprehensive surveys, interviews, and site visits found no human rights violations (e.g., corporal punishment, beatings, detention, unlawful confinement, discrimination, harassment). No employee complaints were received during the audit period.

#### Wages and Benefits

<del>R</del>

Xinjiang subsidiaries provide their employees with generous compensation and comprehensive welfare benefits. Salaries include base pay, position pay, performance bonuses, and allowances (fixed wages account for ~61% of total income). Wages are paid each month punctually, with and employees express satisfaction with their overall work and compensation. In 2023, employee incomes exceeded Xinjiang's urban average wage.

#### Production Safety and Health

The Xinjiang subsidiaries place high importance on safety management, demonstrating strong safety performance. During the audit period, the Xinjiang subsidiaries did not experience any major injuries or more severe safety incidents.

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In terms of occupational disease prevention, the subsidiaries strictly enforce relevant regulations, organising pre-employment and annual occupational health examinations for employees, as well as comprehensive health checks upon their resignation. Occupational hazard factors are regularly monitored and evaluated, with notification cards posted at hazardous positions and supplementary agreements signed. Employee roles are adjusted appropriately, and a "one-person-one-file" standardised management system has been established. Regarding existing cases of occupational diseases, there are only two cases reported: one at Ashele Copper and one at Xinjiang Jinbao. Both cases have been handled with signed agreements between the company and the employees concerning work injury compensation. The companies have arranged proper medical treatment and compensation for the affected employees.

#### Labour Disputes and Penalties

No labour-related lawsuits (e.g., wage arrears or deductions, unpaid social insurance, forced labour, personal rights violations) or administrative penalties were found on China Judgments Online or "Credit China", though potential risks require ongoing monitoring.

#### 4 Conclusion and Future Outlook

Through this audit, the labour practices of the Xinjiang subsidiaries have been examined in a comprehensive and in-depth manner, with no evidence found of forced or transferred labour, or other human rights infringements of the kind addressed in the UFLPA.

Zijin Mining has engaged a U.S. law firm to liaise with the U.S. government; however, to date, the government has provided no evidence to substantiate its decision. The law firm retained by Zijin Mining will present its case to the U.S. Department of Homeland Security, demonstrating that the conclusions drawn about Zijin Mining and its Xinjiang subsidiaries are erroneous.

#### Moving forward, Zijin Mining will:

Supervise its Xinjiang subsidiaries to further enhance management system for social responsibility strategic objectives. Through review and investigation involving both internal and external stakeholders, Zijin Mining will precisely identify and define material issues, formulate corresponding strategic support policies and risk management measures, and continuously strengthen its labour and human rights management frameworks.

Continue to conduct thorough survey on local talent needs and the employment market, develop tailor recruitment and training programmes. These efforts aim to actively expand career development opportunities for minority employees, increasing their representation and influence within the organisation. In doing so, the Company seeks to prevent discriminatory practices while earnestly fulfilling its corporate social responsibilities.

By fostering mutual growth between the Company and its employees, Zijin Mining aspires to achieve significant advancements in labour and human rights management, thereby setting a benchmark for excellence within the industry.



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Corporate Governance ESG Risk Management Business Ethics Human Rights

#### Grievance Mechanism and Remedies

We firmly believe that safeguarding human rights has no finish line; rather, it is an ongoing journey of continuous improvement requiring collaboration across multiple fronts. A grievance and remediation mechanism involving multiple stakeholders is an indispensable part of this process.

In our operations, we are committed to preventing and mitigating any adverse impacts on employees, communities, and other stakeholders. Building upon our "Policy Statement on Whistleblowing Management" and grievance reporting procedures (for details, please refer to the "Business Ethics" section of this report), we have established diverse grievance channels tailored to the specific conditions of different regions.

To minimise the scope and severity of adverse impacts, we have developed comprehensive remediation measures, including the immediate cessation of any harmful actions, restoration of affected parties' property or environment, and provision of monetary compensation or rehabilitation support (e.g., psychological counselling, vocational training, or resettlement services). Simultaneously, we learn from each grievance to continuously refine our policies and processes, ensuring transparency throughout the remediation process. During the reporting period, we strengthened our responsiveness to inquiries from external stakeholders, including investors, media, and NGOs. For instance, we provided detailed responses on the Business & Human Rights Resource Centre (BHRRC) platform regarding concerns raised by human rights organisations in Serbia, the Democratic Republic of the Congo, and other regions.



# **Future Plans**



# Environment

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Tailings Management Climate Change Water Resource Management Biodiversity Conservation Waste Management Land Use

# Environmental Management System(EMS)

We are committed to building a "Green, High-tech, Leading Global Mining Company", providing high-quality mineral resources globally while minimising ecological impacts. We adhere to international standards such as ISO14001 and continuously enhance our risk-based Environmental Management System(EMS). Climate-related governance systems are fully integrated into the EMS.

## Governance

We recognise the importance of Environmental Management System (EMS) to sustainable development. To ensure the achievement of our sustainability goals, the Board of Directors is responsible for formulating environmental strategies while also appointing the Executive Directors and Vice Presidents to provide specific guidance on environmental matters. The Company's ESG Management Committee clearly defines senior leadership commitments and establishes a Dual Carbon Management Work Leading Group to specifically manage climate-related issues. The Environmental Protection & Ecology Department, led by the Environmental Protection Director, coordinates enterprise-wide environmental plans, regularly monitors environmental performance and carbon emissions data, and adjusts strategies accordingly. Additionally, each subsidiary has established environmental department, integrating environmental performance into employee assessments to incentivise participation in environmental initiatives, thereby embedding eco-consciousness into corporate culture and daily operations. This governance framework applies to climate change, water resource management, land use, biodiversity, waste management, and tailings management governance framework as discussed in this chapter.

We maintain a robust environmental audit mechanism. Annually, we conduct comprehensive environmental management reviews and develop three-year plans for all operational units to ensure that we can achieve our long-term environmental goals. Furthermore, we engaged third-party consultants to perform thorough environmental and ecological audits for 36 subsidiaries in China, issue review reports, and follow up rectification of problems or hidden dangers identified in the previous year's review.





Land Use

Appendices

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Climate Change Water Resource Management Biodiversity Conservation Waste Management Tailings Management

Governance Environment

# Environmental Management Philosophy

We uphold a life-cycle mining management philosophy and the PDCA (Plan-Do-Check-Act) closed-loop system. Across all operational sites, we continuously implement ISO 14001 Environmental Management System certification. As of the end of the reporting period, 43 subsidiaries had passed the ISO 14001 certification, achieving a coverage rate of 100%. During the reporting period, environmental compliance reviews were conducted for 36 production enterprises, and issued "Environmental and Ecological Audit Service Recommendations" based on the environment and ecological situation of each company.



As of the end of the reporting period, 43 subsidiaries had passed ISO 14001 certification, with a coverage rate of 100%.



#### RMB100 million

# Investment in Environmental Protection

Adequate investment in environmental protection is the foundation for our various environmental protection efforts. As of the end of the reporting period, we have continued to provide sufficient financial support for various environmental protection efforts. With the completion of multiple key environmental protection projects, environmental protection investment will gradually stabilise and maintain an adequate operating level.

		Climate change	Ecological restoration
Investment (RMB100 million)		3.74	1.70
	Investm	ent of Specialised Environmental	Funds
$\sqrt{2}$	national-level green mines	provincial-level green mines	
<u> </u>	12	8	
	national-level green factories	provincial-level green factories	
	9	3	

# **Environmental Emergency Management**

Environmental emergency management system is integral to our comprehensive emergency response framework. During each reporting period, each subsidiary conducts at least one emergency drill to enhance employee's crisis response capabilities, identify potential risks, and optimise contingency plans. We encourage subsidiaries to take out Environmental Pollution Liability Insurance, which covers areas prone to pollution such as industrial production, resource extraction, and chemical manufacturing. This insurance helps reduce pollution risks through risk assessments and preventive measures and ensures stakeholders' rights are protected by clearly defining liabilities and reasonably determining compensation scopes and amounts. As of the end of the reporting period, 17 enterprises have enrolled. For detailed emergency response management, refer to the "Emergency Management" section.



Environmental Investment (RMB100 million)



# **Climate** Change

Global climate change, driven by human activities, has brought about a host of complex and far-reaching impacts. We continuously track climate-related risks and opportunities, steadily advancing towards our carbon peak and carbon neutrality goals, and doing our part to help meet the global target of limiting warming to 2°C.

# **Climate Goals**

According to the Intergovernmental Panel on Climate Change (IPCC) Sixth Assessment Report, since industrialisation, human activities have led to a 48% increase in atmospheric CO<sub>2</sub> concentrations and a 160% increase in methane concentrations. CO<sub>2</sub> is the main greenhouse gas (GHG), accounting for more than 75% of global emissions, primarily from the burning of fossil fuels such as coal and oil, which has led to rising global temperatures, causing more extreme weather events, melting glaciers, rising sea levels, and ecosystem destruction. While climate change poses risks, it also opens up opportunities for sustainable development, so we need to actively respond and strengthen resilience.

To provide the materials that improve standards of living in a low carbon future, supporting the global goal of limiting warming to 2°C and addressing the environmental impact of global climate change. Following our publicly released "Zijin Mining Climate Change Action Plan", we have worked towards our carbon peaking and carbon neutrality goals and strategies and we have already achieved our interim goals for 2025 ahead of schedule:

Short-term (2025–2029): Reduce GHG emission per industrial added value by 20% by 2025 from a 2020 baseline; By 2029, further reduction of GHG emissions by 38%, achieving peak carbon emissions across the Company; Establishment of a Scope 3 emissions data monitoring and management system; Enhancement of global risk governance mechanisms.

Medium-term (2030–2045): Advance emission reduction technologies such as hydrogen energy, electrification, and new energy sources, leading to a peak in total carbon emissions followed by a yearly decline.

Long-term (2046–2050): Achieve carbon neutrality through carbon sinks, carbon capture, storage (CCS), carbon trading, etc.

#### 1. For the complete analysis results, please refer to our "Climate Change Action Plan".

# Climate Risk and Opportunity Management<sup>1</sup>

We refer to IFRS S2 to manage both physical and transition risks that may materially impact our assets.

Execution level: According to the climate risk profiles and the results of climate scenario simulation, the physical and transition climate risks and opportunities faced by each asset in the short, medium and long term are counted and ranked by risk, which are reviewed by the "Dual Carbon" Management Work Leading Group and the ESG Management Committee. The ESG Management Committee and the "Dual Carbon" Management Work Leading Group conduct short, medium and long-term climate risk and opportunity assessments at least once a year, and the results are reviewed by the Strategic and Sustainable Development (ESG) Committee. The Board formulates relevant strategies, policies and mechanisms for addressing climate change based on the evaluation results, and the ESG Management Committee along with the "Dual Carbon" Management Work Leading Group supervise the implementation to ensure that ESG initiatives and climate risk responses are carried out at the operational level.

### O Physical Climate Risks & Opportunities

In recent years, extreme weather has occurred frequently, and the difficulties of predicting physical climate risks such as extreme precipitation and drought has continued to increase. We have improved our response capabilities in extreme scenarios, such as designing water treatment systems by considering possible increased rainfall to increase water treatment capacity accordingly; identifying possible climate disasters, such as strong winds, freezing, heavy rainfall, geological landslides, etc., and taking corresponding protection and emergency measures in advance.

During the reporting period, in alignment with IFRS S2 recommendations and leveraging the latest global climate data, we conducted a climate disaster risk identification test for the locations of our projects, updating our physical climate risks under the SSP5-8.5 scenario for the 2050s period. Our risk tests cover extreme heat, rainstorms, water stress, droughts, typhoons, wildfires, etc. The results show that water stress and heat are the main physical climate risks currently faced by the Company. At present, the physical risks we face, categorised as very high or high risk, are within the reasonable range of our estimates, and we have developed a complete set of management and safeguard measures, giving us full confidence in our ability to keep these risks under control.



By Region		Scenario of SSP5-8.5 in 2050					
		High-tem- perature risk	Rain- storm risk	Water pressure risk			lmpact of drought
	Fujian	•	•	•	•	•	
	Hunan	•	•	•			
	Henan	•		+		•	
	Shanxi		•	+			
China	Yunnan					•	
	Xinjiang			+		•	
	Inner Mongolia			+			
	Jilin		•				
	Anhui	•		•			
Serbia	Bor			•		•	
Suriname	Sipaliwini	•					٠
Democratic Republic of the Congo (DRC)	Tanganyika Province						
Guyana	Cuyuni- Mazaruni Region	•					
Colombia	Buriticá	•					
Eritrea	Gash-Barka Region	•		•			
Tajikistan	Sughd Region			+		•	
Kyrgyzstan	Kemin District			•		•	
Tuva Republic						•	
Australia	Western Australia	•		•			
Argentina	Catamarca Province			•			
South Africa	Limpopo Province			•			

#### Climate Transition Risks & Opportunities

In addressing climate change and navigating the transition towards a low-carbon economy, companies will face a series of transition risks due to policy shifts, technological innovation, changes in market sentiment and preferences, and transformations in business models. We choose the International Energy Agency's (IEA) low-emission scenario (the Sustainable Development Scenario, SDS) and high-emission scenario (the Stated Policy Scenario, STEPS) to evaluate the potential transition risks and opportunities brought about by climate change and to develop corresponding response measures.

In addition, regional conflicts and changes in regulations and policies also pose significant challenges to business operations, especially for energy-intensive mining and smelting sectors. Therefore, we closely monitor fluctuations in energy prices and seek diversified energy solutions to mitigate the impact.

	Transition Risk Assessment					
Category	Risk/opportunity	2030s	2040s	2050s		
Risk	GHG emission reduction policy pressure	-0.15	-0.42			
Risk	Carbon pricing	-0.46	-0.75			
Risk	Increasing customer demand for low-carbon products and services	-0.10	-0.29			
Risk	Insufficient supply of fossil fuels	-0.10		-0.42		
Risk	Uncertainty in electricity prices	-0.06	0.00	0.00		
Risk	R&D and investment in low-carbon transition technologies	-0.10				
Opportunity	Increased customer demand for low-carbon products and services	0.14		0.26		
Opportunity	Use of renewable energy	0.08				
High risk	Medium Low Neutral risk risk	High opportunity	Medium opportunity	Low opportun		



# Strategy and Management Approach

We regularly track the latest research from authoritative bodies including the Intergovernmental Panel on Climate Change (IPCC), World Meteorological Organization (WMO), and China Meteorological Administration, with a particular focus on regulatory updates, industry standard revisions, and market trends. Through internal climate risk assessment meetings, we systematically identify emerging risks, implement early warning mechanisms, and evaluate the effectiveness of major mitigation measures, enabling proactive risk prevention, control and mitigation through targeted measures.

Our global operational footprint serves as a strategic hedge against concentrated physical risks in any single region, while we simultaneously strengthen our emergency response capabilities for extreme weather events - detailed measures are outlined in the "Emergency Management" section of this report.

Our comprehensive approach to managing transition risks and opportunities encompasses both operational and value chain dimensions. We have incorporated Scope 3 GHG accounting into our work plan to drive decarbonisation across the entire value chain. We conduct financial forecasting under different climate scenarios to identify risks and opportunities, continuously optimising cash flow to enhance resilience against unforeseen shocks. We actively diversify funding sources to mitigate rising capital costs and leverage carbon market mechanisms including allowance trading and Chinese Certified Emission Reduction (CCER) schemes to reduce operational costs. Technologically, we are investing in renewable energy, hydrogen applications, and advanced material development to position ourselves as an enabler of global clean energy transitions. These initiatives are underpinned by continuous R&D investment and strategic partnerships across the innovation ecosystem.



AGM's solar power array

#### 💮 Carbon Footprint Management

3,557 kgCO<sub>2</sub>e/t

The carbon footprint of pyrometallurgical copper smelting

During the reporting period, we used the Life Cycle Assessment method (LCA) to evaluate the potential environmental impact of the entire life cycle of copper concentrate and copper cathode produced by pyrometallurgical and hydrometallurgical copper smelting. The purpose is to establish an up-to-date carbon footprint list from mining to copper cathode production, and to obtain recommendations for optimisation. Through the study of two representative enterprises of Zijinshan Gold-Copper Mine and Zijin Copper, the carbon footprint of copper concentrate was found to be 1,178kgCO2e/t. The carbon footprint of pyrometallurgical copper smelting was 3,557kgCO2e/t. The carbon footprint of hydrometallurgical copper smelting was 3,897kgCO2e/t.

Based on the research results of LCA, we have fully examined the production process and energy flow, and will robustly take the following four main measures to reduce the carbon footprint of our products:



Select lower-carbon blister copper and copper concentrates as raw materials for production.



Strengthen energy management, focusing on major energy-consuming processes such as mining, electrolysis, and electrowinning, and optimise power consumption planning and control systems.



Increase the share of renewable energy used, actively utilise renewable energy from the power grid, and continuously expand the installed capacity of renewable energy.



Actively promote green and intelligent transportation, and promote the electrification of transport equipment such as mining trucks and loaders, a particular focus on the wet mining stages where transport distances are relatively long.

At the same time, we pay closer attention to the development of clean energy technologies in the industry, by introducing upgraded equipment and technologies, and continuously updating the life cycle list of copper cathode, so as to improve our carbon footprint management level.



#### Energy Efficiency Improvement

Through continuous technological innovation, process optimisation, and equipment modernisation, we have systematically improved production efficiency while reducing carbon emissions per unit of output. During the reporting period, our mining enterprises continued to optimise their production processes, promoted technological transformations such as "more crushing and less grinding", optimised transportation routes, and effectively reduced the carbon emission intensity of ore processing; while smelting enterprises used heat pump technology to carry out low-temperature waste heat recovery and utilisation projects for power generation, furnace material steam drying, etc. On this basis, we applied intelligent control systems to achieve automatic adjustment and optimisation of the system: Duobaoshan Copper's TBM conveyor inclined shaft project, Urad Rear Banner Zijin's groundwater treatment project, and the transformation of high-energy-consuming electrical and mechanical equipment in multiple subsidiaries. While improving efficiency, these approaches also reduced resource waste and lowered operating costs.

#### Heilongjiang Zijin Copper Distributed Photovoltaic Power Generation Project

Heilongjiang Zijin Copper's distributed photovoltaic project makes full use of the existing building roofs of the plant to install photovoltaic panels, and realises block power generation and local grid connection by adopting the BIPV (Building Integrated Photovoltaic) process. As our green and clean energy integration pilot project for smelters, this project explores the cooperation of new energy projects such as photovoltaic power generation, wind power generation, energy storage, geothermal utilisation, and diesel-to-electric conversion for trucks to gradually replace fossil energy, and then achieve the goal of energy supply diversification and clean energy substitution.

Electricity is the main energy source of the company, accounting for about 65% of the total energy consumption. During the reporting period, the photovoltaic power generation of the whole plant amounted to 10.1535 million kWh, which reduced carbon emissions by 7,888 tonnes. The construction of this photovoltaic power generation project not only gradually realised the replacement of traditional energy with clean energy, optimised the company's energy structure, promoted the company's development in a green direction, but also reduced the power purchased by the whole plant, which brought significant energy saving, environmental protection and economic benefits to the company.



#### Zijin Waste Heat Recovery And Comprehensive Utilisation Project is being Rolled Out Globally

The inherent characteristics of the smelting industry make it rich in waste heat resources in many processes, making the waste heat recovery project a core breakthrough and a highlight in achieving the Company's carbon reduction goals.

At present, the waste heat recovery and comprehensive utilisation project has been widely implemented at different production stages in COMMUS, Heilongjiang Zijin Copper, Urad Rear Banner Zijin and Zijin Copper, and other projects. With the help of waste heat recovery technology, we have realised the efficient use of heat energy that would otherwise be wasted. For example, COMMUS uses the waste heat from circulating water for drying cobalt slag, while Heilongjiang Zijin Copper converts the low-temperature waste heat from sulphuric acid plants into electrical energy and heat for heating purposes. These measures have greatly reduced enterprises' reliance on traditional energy sources and external heating, optimised the overall energy structure, made energy utilisation more rational and efficient, and effectively supported a substantial reduction in the comprehensive energy consumption per unit of product. This has given the enterprises an edge in controlling energy costs and enhanced market competitiveness.

In addition, the comprehensive utilisation project received extensive recognition and multiple awards during the reporting period, which served as an example and inspiration for our energy conservation practices and those of various stakeholders.





### Widespread Adoption of Clean Energy

The transition to renewable energy sources constitutes an essential pathway towards achieving carbon neutrality and clean energy substitution measures play a significant and positive role in the sustainable development of mining and smelting enterprises. Taking into account factors such as market, technology and economic benefits, formulating an appropriate clean energy transition strategy is an inevitable choice for us to achieve net-zero emissions. We make full use of the existing idle land of mining and smelting enterprises, plant roofs, and surrounding rivers to develop and construct renewable energy projects such as photovoltaics, hydropower, and wind power, and actively seek external cooperation to increase the proportion of green power. During the reporting period, we added 523.31MW of clean energy installed capacity, and 564.54GWh of attributable clean power generation, saving about RMB72.37 million in purchased power costs.

On the other hand, we continue to promote the electrification of mining vehicles by introducing and using electric mining trucks, electric dump trucks, and new energy heavy-duty trucks to replace existing diesel transporters. As of the end of the reporting period, there were 865 electric vehicles of various types. These vehicles have been widely praised by our employees for their excellent safety and handling performance, while also effectively reducing the use of fossil energy.

865

2024





Climate Change Water Resource Management Biodiversity Conservation Land Use

Tailings Management Waste Management

## Xinjiang Zijin Zinc Replaces Diesel With Electricity to Unlock Green Productivity

Environmental Management

The Xinjiang region of China, where Xinjiang Zijin Zinc is located, has preferential power policies and abundant wind and light new energy power generation resources, so it allows Xinjiang Zijin Zinc for multi-directional attempts in the field of green mining power. Today, Xinjiang Zijin Zinc has become one of global standalone mines with the largest number of pure electric mining trucks, with 250 electric mining trucks undertaking 80% of the transportation tasks in the mining area.

In response to the high cost challenge in mine transportation, during the reporting period, Xinjiang Zijin Zinc discovered the significant advantages of electric mining trucks through comparative trials. The energy consumption cost per tonne-kilometre for electric mining trucks is only about RMB0.177, compared to as high as RMB0.68 when using fossil energy. In addition, the safety and operating efficiency of electric mining trucks have notable advantages over diesel trucks. With fewer complex transmission components such as engines and transmissions, these trucks have a much lower failure rate than that of fossil fuel vehicles. Moreover, the simpler operation of electric vehicles reduces the risk of accidents due to operational errors. For the problem of slow recharging speed of electric vehicles, Longking tailored a battery box and side battery swap system plan for Xinjiang Zijin Zinc. The capacity of each battery box is as high as 770kWh, representing currently the largest capacity of side battery swap technology globally, with a swap time of only four minutes. Leveraging these advantages, Xinjiang Zijin Zinc restructured the roles of electric and fossil fuel trucks to optimise their use within the remaining lifespan of fossil fuel vehicles, assigning electric mining trucks to steeper sections at the bottom of the mine and fossil fuel trucks to gentler slopes at the upper areas. This adjustment gives full play to the best performance of different power vehicles, reducing diesel consumption in mining site from 42,000 tonnes in the previous reporting period to 34,000 tonnes.

In the future, Xinjiang Zijin Zinc will continue to create a green and smart mine model with refined management, and implement the Zijin characteristic green development concept.



Zijin Zinc's Electric Vehicle Fleet

### Climate-related Technological **Advancements**

During the reporting period, our climate-related technologies were mainly developed, manufactured and applied by our subsidiaries, Longking<sup>1</sup> and FZU Zijin Hydrogen Power. We focused on four core areas: clean energy solutions, energy conservation and emission reduction, carbon capture systems, and ammonia-hydrogen energy applications, all of which achieved considerable progress.

In the area of clean energy, Longking<sup>1</sup> has completed the research and development of wide-temperature-range self-healing 314Ah battery cell products suitable for high-altitude mines, which can effectively solve the energy storage problem of microgrids in mines located in extreme climate regions.

In the area of carbon capture, Longking has completed the technological research and development of core materials, capture equipment and dry ice manufacturing based on the organic amine absorption method, and has successfully carried out applications on the pilot platform.

In the area of ammonia-hydrogen energy, FZU Zijin Hydrogen Power has successfully achieved technological breakthroughs in high-power ammonia-hydrogen fuel cells, ammonia-hydrogen fusion internal combustion engines, and industrial ammonia-hydrogen production, while realising the application of "ammonia-hydrogen" fuel cell technology in maritime applications.

1. For details on the technological progress of Longking, please refer to the Longking 2024 Annual Report. Should there be any discrepancy between this report and the Longking 2024 Annual Report, the latter shall prevail.





# Indicators and Performance

During the reporting period, we made continued progress in executing our established climate strategy, successfully achieving our short-term goal of reducing GHG emissions by 20% per unit of industrial added value in 2025, one year ahead of schedule. Additionally, GHG emissions also decreased for the first year. To assist our subsidiaries measure, monitor, report and manage energy consumption and carbon emissions, we engaged professional institutions to carry out carbon footprint verification during the reporting period, and further established a data-based management platform for energy consumption and carbon emissions, and improved the data and monitoring management system to provide data-driven tools for guiding energy conservation and emission reduction targets, and work together to achieve the goal of addressing global climate change mitigation objectives.



The Zijinshan No. 3 Sub-dam Photovoltaic Power Generation Project

#### Energy Usage Performance

With the continued ramp-up of our production capacity and the acquisition of new projects, our comprehensive energy consumption continued to show an upward trend during the reporting period, reaching 19,602.54GWh. From a structural point of view, the new energy consumption was mainly from sources with low carbon emission factors, such as electricity and natural gas. At the same time, we have continued to reduce the proportion of coal in our energy structure through technological transformation. Superimposing with adjustments to the national power grid's carbon emission factors in our operating regions, the GHG emissions generated per unit energy consumed further decreased by 19.29% during the reporting period, reaching 356.84tCO<sub>2</sub>e/GWh.

During the reporting period, several large-scale clean energy installations were completed and put into use. As of the end of the reporting period, the total installed capacity was 767.36MW, an increase of 214.43% compared with 2023. Clean energy generation reached 564.54GWh, and 5.44% of the total electricity consumption realised the use of self-generated renewable energy. At the same time, we continued to cooperate with the regional power grids across various projects to increase the uptake of grid-supplied renewable energy, and began to participate in the grid green electricity consumption. This represented 27.09% of total energy consumption, an increase of 5.61 percentage points compared to the previous year.



Energy type		Unit	2024	2023	2022	2021
Total energy consumption		GWh	19,602.54	19,022.46	16,294.54	15,236.89
	Paraffin	Tonne	0	379	592	1,481
	Diesel	Tonne	532,980	529,236	392,930	345,894
Direct energy	Gasoline	Tonne	1,420	614	1,061	1,502
	Natural gas	Million cubic metres	32	25	18	23
	Coal	Tonne	461,163	528,850	560,249	636,682
	Other direct energy	TJ	274.11	17.93	57.16	230.61
Indirect energy	Electricity	GWh	10,372	9,300	8,127	6,681
indirect effelgy	Steam	TJ	-2,868	-1,496	-936	-803



#### GHG Emission Performance

During the reporting period, we optimised the GHG emission accounting and reporting guidelines in accordance with the "2006 IPCC Guidelines for National Greenhouse Gas Inventories", " the Guidelines for Accounting Methods and Reporting of Greenhouse Gas Emissions for Mining Enterprises (Trial)" and other authoritative GHG emission accounting guidelines, and calculated the GHG emission of operating units using the GHG emission factor method. A professional organisation was engaged to conduct a verification of our GHG emission data from 2020 to 2023. As part of this process, on-site inspections were carried out for selected subsidiaries using a sampling method, with the inspected data samples accounting for more than 10% of the Group's total GHG emissions. Based on the verification results and opinions, we adjusted and optimised the statistics and accounting methods of GHG emissions, and the data were fully adjusted:



The organisational boundaries of our statistics focus primarily on subsidiaries with operational control in the core production sectors such as mining, smelting, and chemical industry. According to statistics, our GHG emissions from business activities such as trade, logistics, investment, and services are very low, accounting for only 0.8% of all GHG emissions, and have little impact on the overall GHG performance. To this end, we have aligned the scope of industrial added value statistics with the scope of GHG accounting, and revised and updated the GHG emissions of per RMB 10,000 of industrial added value for the years 2020–2023.

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GHG's accounting boundary has been expanded to include ancillary living systems, such as staff canteens, bathrooms, dormitories, and so on.

During the reporting period, based on the "2022 Electricity Carbon Dioxide Emission Factor" released by China and the relevant reports of various host countries, we adjusted the electricity  $CO_2$  emission factor for 2024 accordingly.

The above adjustments help to more accurately and effectively demonstrate our true GHG emissions metrics and assist the progress of global climate action initiatives.

Based on the consideration of data continuity and report readability, we analysed the data before adjusting the emission factor and retrospective data: in the case of maintaining the original electricity carbon dioxide emission factor, the total GHG emissions were still reduced during the reporting period, the total GHG emissions were 7.89 million tonnes, and the GHG emissions per RMB10,000 of industrial added value were 1.85tCO<sub>2</sub>e (the industrial added value was calculated in 2020 metal prices), which was 26.6% lower than the 2020 baseline value.

# 6.99 million tCO<sub>2</sub>e

During the reporting period, the total Scope 1 and Scope 2 GHG emissions within the Company's operational boundaries were 6.99 million tCO<sub>2</sub>e, a year-on-year decrease of 17.96%.

1.64 tCO<sub>2</sub>e per RMB10,000 of industrial added value

At the same time, the GHG emissions per RMB10,000 of industrial added value fell to 1.64tCO<sub>2</sub>e (industrial added value was calculated on 2020 metal prices), which has decreased by 34.9% compared with the 2020 baseline value, reaching our 2025 annual climate target ahead of schedule.





**∢** 47 ► Governance Environment Appendices Biodiversity Conservation

Environmental Management Climate Change Water Resource Management Land Use Waste Management

Tailings Management

# **2.97**tCO,e/tCu

During the reporting period, our two key initiatives-clean power popularisation and energy efficiency improvement-delivered strong results. Despite the Company's rapid development, with increasing output of major products and a growing number of project sites, both total amount and intensity of GHG emissions have achieved a certain decline. In terms of GHG emission intensity per tonne of output, the equivalent GHG emission intensity of our main products has consistently decreased. During the reporting period, the GHG emission intensity of mined copper was 2.97tCO<sub>2</sub>e/tCu, a decrease of 11% year-on-year, and the GHG emission intensity of mined gold was 443 kgCO<sub>2</sub>e/ozAu, a decrease of 11% year-on-year.

In order to fully identify the climate impact of the value chain, we followed the Greenhouse Gas Protocol (GHG Protocol) during the reporting period and further refined the GHG Scope 3 accounting framework, focusing on building capacity for the management of five key emissions and sources:

Supply chain carbon transparency improvement: for "Category 1 (Purchased Goods and Services) ", through the supplier collaboration mechanism and industry benchmark data, the GHG emissions measurement model of the procurement category was initially developed. We calculated 113 kinds of goods and services with a purchase amount greater than RMB10 million, accounting for about 92.6% of the total purchase amount.

Low-carbon logistics system optimisation: for "Category 4 (Upstream Transportation and Distribution)" and "Category 9 (Downstream Transportation and Distribution)", carriers are promoted to adopt route planning systems and energy consumption monitoring tools to systematically reduce the GHG emission intensity in transportation.

Innovation in employee engagement mechanisms: in "Category 6 (Business Travel)" and "Category 7 (Employee Commuting)" management, integrate digital platforms to track travel behaviour and guide the transition toward low-carbon behaviour.

During the reporting period, the total calculated Scope 3 carbon emissions amounted to 4.4184 million tonnes. We have gradually incorporated Scope 3 accounting into our routine working mechanism, and applied the results to suppliers' low-carbon transition initiatives and internal emission reduction pathway design. We have actively collaborated with industry partners to explore standardised approaches for collecting carbon emission factors across the value chain, and gradually transitioned from passive accounting to active management, laying the foundation for building a climate-resilient value chain.

Category	GHG emissions Scope 3 (10 thousand tCO <sub>2</sub> e)
cutegory	
Category 1 (Purchased Goods and Services)	286.71
Category 4 (Upstream Transportation and Distribution)	37.64
Category 6 (Business Travel)	1.60
Category 7 (Employee Commuting)	2.03
Category 9 (Downstream Transportation and Distribution)	113.86
Total calculated Scope 3 carbon emissions	441.84

## **Future Plans**







# Water Resource Management

Mining and smelting enterprises are heavily dependent on water resources, with processes such as mining, mineral processing, and smelting being closely linked to water usage. The high demand for water makes the sustainable supply of water a critical factor for the stable operation of these businesses. Therefore, effective water resource risk management is vital to our stable operations and has driven us to prioritise and continuously improve water resource management. This is essential to ensure that we achieve excellence in water resource utilisation, conservation, and management.

## **Risk Management**

We have major mining investments in 17 countries around the world, and implementing locally appropriate water management measures is key to ensuring water security for ourselves and our surrounding communities. We assess the current state of water development and utilisation in the basin or region where the project is located, evaluate the impact of water abstraction on the water body and surrounding stakeholders, and then implement appropriate measures and continuously evaluate their rationality and effectiveness. In recent years, with climate change triggering frequent extreme weather, our operations have faced increasingly frequent environmental emergencies.

During the reporting period, using the Aqueduct Water Risk Atlas, a tool developed by the World Resources Institute (WRI), we assessed, mapped, and scored the annual water risks of our 49 subsidiaries, including the number of physical risks (e.g., baseline water stress, inter-annual variability, seasonal variability, drought risk, flood risk, etc.), quality of physical risk (water quality impact), and regulatory and reputational risks (e.g., drinking water issues, sanitation issues, etc.).

Indicator	Unit	2024	2023	2022	2021	2020	2019
Water withdrawal in high-risk areas	Million tonnes	21.42	12.42	10.06	8.81	6.48	7.10
Percentage of water withdrawal in high-risk areas	%	29.53	18.77	13.83	14.55	12.77	15.69

#### Water Withdrawal in High-Risk Areas

At the same time, we updated our water risk assessment results by incorporating insights from interviews with environmental experts and engineers from our subsidiaries, as well as the findings from our previous reporting period's research.

Risk	Risk Description	Importance Level	Response Measures
口 山 Water supply shortage	Insufficient total water resources or uneven spatial and temporal distribution leading to an inability to meet water demand.	3.5	<ol> <li>Implement water resource surveys and assessments to develop rational water use plans.</li> <li>Adopt water recycling technologies to reduce reliance on natural water sources.</li> <li>Establish cooperative relationships with local governments and communities for equitable sharing of water resource.</li> </ol>
Water pollution	Improper wastewater management may lead to adverse changes in water bodies, affecting their normal functions and utility.		<ol> <li>Promote internal wastewater treatment and reuse to reduce external discharges.</li> <li>Equip advanced water treatment facilities to reduce total pollutants and concentrations.</li> <li>Implement regular water quality monitoring, assessments, and online monitoring of discharge outlet.</li> <li>Adopt environmentally friendly production processes and raw materials.</li> </ol>

Water Risk Assessment Results



Environmental Management Climate Change System (EMS)

ge Water Resource Management

Land Use Biodiversity Conservation

Tailings Management

Risk	Risk Description	Importance Level	Response Measures
	Improper operations and water abstraction may lead to changes in the structure and function of aquatic ecosystems.	4.2	<ol> <li>Formulate ecological protection plans to mitigate negative impacts on surrounding aquatic ecosystems.</li> <li>Establish collaborative mechanisms with stakeholders to jointly monitor and assess impacts on aquatic ecosystems.</li> </ol>
Declining groundwater levels	Operational activities may require groundwater abstraction, potentially leading to declining groundwater levels.	4.8	<ol> <li>Conduct groundwater resource reserve assessments to ensure operations do not cause significant declines.</li> <li>Promote water-saving technologies to reduce groundwater consumption.</li> <li>Implement groundwater monitoring.</li> </ol>
Community water conflicts	The limited availability of water resources may lead to disputes between operational activities and communities over water abstraction.	5.0	<ol> <li>Establish regular communication mechanisms with surrounding communities to understand their water needs and concerns.</li> <li>Implement social responsibility projects to improve water access conditions in local community and enhance water resource utilisation efficiency.</li> <li>Participate in local water resource management to ensure all interests are fully considered and coordinated.</li> </ol>
Vulnerability of water infrastructure	Operational activities rely on local water infrastruc- ture, which may be affected by extreme weather events.	4.5	<ol> <li>Assess the robustness of water infrastructure and consider additional construction or optimisation of safeguard facilities to enhance disaster resilience.</li> <li>Formulate emergency response plans to address sudden events such as natural disasters.</li> <li>Strengthen communication with stakeholders and adopt advanced technologies and processes to improve the reliability and stability of surrounding water infrastructure.</li> </ol>

Water Risk Assessment Results

# Strategy and Management Approach

We strictly abide by the relevant laws and regulations on water management in the project locations, and follow the standards of international initiatives. We integrate water management into the Company's business planning, and establish a communication mechanism with affected stakeholders. We are committed to maintaining a water reuse rate at a level of no less than 90% and ensuring a 10% reduction in water intensity by 2030 compared to 2020.

Waste Management

To identify and mitigate water management risks, we take measures from both internal and external perspectives. Internally, we require all subsidiaries to conduct water use analyses. In particular, companies that directly access natural water sources must prepare a "Water Resource Assessment Report" to evaluate their impact on the environment and local communities. At the same time, we enhance the reuse rate of water resources and reduce the external water withdrawal and discharge through technological innovation and process optimisation. Externally, we work with various stakeholders to manage and share water resources, taking into account ecosystem conditions to minimise environmental impact. Our water management system is overseen by the ESG Management Committee, which continuously improves the effectiveness of conservation measures while ensuring compliance.

To ensure the effectiveness of these improvement measures, we set up groundwater monitoring wells, and surface water monitoring points in and around the mining area on a quarterly basis. All water outlets are equipped with online monitoring systems connected to environmental protection authorities, enabling real-time monitoring of water quality. We also regularly collect and analyse data to monitor progress of sustainable development and pollutant reduction.

>90 %

We are committed to maintaining a water reuse rate at a level of no less than 90% and ensuring a 10% reduction in water intensity by 2030 compared to 2020.



### Water Withdrawal and Consumption Management

We have clearly demonstrated our commitment to responsible water use through the "Policy Statement on Water Resources Management", which defines the responsibility of the Company's Board of Directors and management in water resource stewardship. We have integrated water resource management into our business planning and established engagement mechanisms with various stakeholders to collaboratively manage and share water resources effectively and maintain the water balance within the watershed.

Based on the "Water Resources Assessment Report", each mining site formulates a water management plan. We use the "water balance model" of each mining site to predict the annual water withdrawal, use, consumption and discharge volumes, enabling us to manage water-related risks in a timely manner and to scientifically adjust our water use plans. In regions where water resources are relatively scarce or vulnerable to water stress, such as Xinjiang, Inner Mongolia and other places in China, we pay attention to the ecosystem freshwater supply of local communities. To alleviate local water pressures, the Company's production systems strive to maximise internal recycling, and minimise the use of fresh water. At the same time, we recognise that in the context of climate change and frequent extreme weather events, excessive precipitation also poses challenges, therefore, our flood control projects are designed and constructed to withstand events that occur once in a hundred years or once in a thousand years.

To fulfil our commitment to responsible water use, ensure sustainable development, mitigate adverse impacts on local water resources and ecosystems, and enhance resilience to climate change, we have implemented a series of measures to optimise our water abstraction and use management while protecting local water resources:



Advanced flow monitoring equipment and water quality sensors have been installed at water intake and discharge points, and are connected to the monitoring network of local environmental protection departments. This helps us to accurately grasp water withdrawal volumes and the quality of discharged water. Through the analysis and evaluation of long-term data, we can accurately identify the potential risks in the process of water access and use, such as the impact of seasonal water fluctuations on water withdrawal, and the changing trend of production activities on the quality of surrounding water bodies.



Regular water resource audits are carried out to review all aspects of the Company's water use, including production plants, office areas, and living facilities. This approach allows us to quantify water consumption, water efficiency, and wastewater generation at each stage, thus providing a basis for formulating targeted optimisation measures.

### کې د کې (ater-saving

A series of water-saving technological transformations are carried out in the production process. In non-production areas, the use of water-saving appliances is promoted; in office areas and staff dormitories, sensor faucets and water-saving toilets are installed.



To address the impact of uneven seasonal rainfall on production water use, we adopt a "seasonal water storage-regional linkage" model. In the rainy season, relying on sedimentation tanks and water storage reservoirs and other facilities, rainwater is purified and stored in storage tanks as a supplementary water source for dry season production and green irrigation. At the same time, an inter-regional water network system is established to distribute reclaimed water and reused water resources between plant areas based on the water use needs of each production unit and their specific water quality requirements, forming a closed-loop water use system of "decentralised collection-centralised treatment-complementary sharing".

# Recycling water

We have established a wastewater reuse system which repurposes treated wastewater that meets environmental standards for use in production stages with lower water quality requirements, as well as auxiliary operations such as vehicle washing, green irrigation and road flushing. Through wastewater reuse, we reduced our dependence on fresh water resources. During the reporting period, the water reuse rate reached 93.46%, a slight decrease from the previous year. This decline was primarily due to the low precipitation at many of our operational sites and a significant increase in evaporation during the reporting period, which led to a certain increase in our water withdrawal compared to the previous period, consequently lowering our water reuse rate.



Water re-use rate

Environmental Management Climate Change Water Resource Management Land Use Biodiversity Conservation Waste Management Tailings Management System (EMS)

Total water withdrawal



#### A Small-Scale Independent Water Circulation System for the Continental Gold Core Library

Our water conservation measures are applied not only to the main production facilities, but also to a wide range of auxiliary and independent facilities to fully exploit the water recycling potential in the operation process. Our Geological Prospecting Core Library at Continental Gold in Colombia is located on the top of Pinguro mountain in the city of Buriticá, where the Geological Prospecting Department completes about 30,000 to 50,000 metres of core cutting, sampling and preservation every year. To effectively solve the problem of daily domestic and industrial water use in the core library, our team has created a rainwater recovery and water recycling system, which effectively controls the external water intake pressure and reduces the environmental impact through the recycling of water resources.

The area where the core library is located has two wet seasons every year, from April to June and from September to November. Taking advantage of this natural condition, the Continental Gold team has modified the water circulation system so that the system can efficiently collect and store rainwater from the roof of the core library, and collect the rainwater into the water storage tank. During dry seasons, the stored rainwater becomes an important source of clean water for cutting rooms and domestic use, greatly reducing external water intake. At the same time, for the industrial wastewater generated by core cutting, Continental Gold adopts a collection-precipitation-treatment-reuse recycling strategy, which not only reduces the risk of rock powder spilling to the environment and affecting employees' health, but also greatly reduces the consumption of industrial water. This advanced self-circulating water resource management system effectively controls the water risk of the core library and provides important inspiration for our comprehensive water resource management.



# 72.52 Million tonnes 238.84 Tonnes/RMB million 93.46 %

Freshwater intensity by revenue

Combined with the above measures, during the reporting period, our total water withdrawal was 72.52 million tonnes, an increase of 9.7% over the previous reporting period, and the water reuse rate decreased slightly to 93.46%. The intensity of fresh water withdrawal in 2024 was 238.84 tonnes/RMB million revenue, a decrease of 19.32% over 2020. There were no legal violations of water withdrawal and drainage during the reporting period.





Water Withdrawal and Discharge



# Water Pollution Management

In order to better control water pollutants, we implement targeted risk mitigation measures in different situations. In areas with abundant rainfall, based on the dispersion patterns of initial rainwater and pollutants, we adopt the strategy of "separation of clean and contaminated water-grading and intercepting-dynamic reuse": the initial rainwater flowing through mining and metallurgical facilities is intercepted and directed to the water treatment system. Once treated to meet water quality standards, it is prioritised to reuse in activities such as dust suppression, irrigation. Any remaining water, after meeting the host country's discharge standards, is then released.

For wastewater containing heavy metal ions and chemical agents generated during the production process, treatment processes such as neutralisation, flocculation, high-density sludge, controlled sulphidisation, and filtration are adopted. After ensuring the treated water meets required standards, it is returned to our production system and auxiliary systems for reuse.

For projects with reservoirs, tailings storage facilities, heap leaching sites, etc., we set up diversion facilities to collect rainwater in compliance with host country regulations and industry best practices, and use other physical procedures or measures such as seepage cut-off walls to ensure that rivers and groundwater resources where the project is located are not affected by water pollutants. All our subsidiaries with external discharge have achieved full coverage with online water quality monitoring. In addition, subsidiaries such as Serbia Zijin Mining and Zeravshan that do not discharge wastewater have also set up water quality monitoring points downstream to monitor water environment risks.



Discharge of COD



Discharge of Ammonia Nitrogen







Water Resource Management Land Use Biodiversity Conservation Waste Management Tailings Management

#### Serbia Zijin Mining Timok River Restoration Project

66

"Since 1942, I was born and have lived in the village of Metovnica. In this part of the village, I have more than three hectares of arable land, which we cannot cultivate because of the flooding of the Timok River. This is our biggest problem for many years."

82-year-old villager, Miloslava

In the Bor District of Serbia, the Crni Timok River has long been a lifeline for the villagers of Metovnica, carrying their hopes and sustaining their way of life. However, in 2017, natural weather events altered the river's course, rendering over 40 hectares of fertile land instantly non-arable and causing the villagers to suffer substantial economic losses of up to 16 million Serbian dinars annually. Yet, financial constraints and disputes over responsibility have stalled any meaningful resolution, severely impacting local ecology and economic development.

After understanding the situation, Serbia Zijin Mining undertook a detailed planning process and began construction in August 2024 during the dry season when the river water level was at its lowest throughout the year. The timing was chosen to ensure the smooth progression of the construction and to minimise environmental impact. The construction approach combined dam building with dredging, which not only involved adding a sturdy river dam to the river diversion section to ensure the stable flow of the river, but also involved completely dredging the old riverbed. By the end of the reporting period, the project had dredged up to 1,000 metres of sediment, restoring the original river course. The project achieved a scientifically managed effect of "prioritising dredging while using damming as a supplementary measure", meeting ecological and hydraulic objectives as anticipated.

Under the joint witness of the Governor of Bor District, the Mayor of Metovnica and local villagers, the restoration project successfully passed inspection and the long-standing ecological problems that had plagued the villagers were finally resolved, bringing renewed vitality and hope to the local area.





For acid rock drainage, we continuously monitor and manage mine areas that may be susceptible to acid rock drainage, and evaluate and develop methods to reduce acid rock drainage generation in accordance with the "Global Acid Rock Drainage Guide". During the exploration phase of the project, we analyse the acid-producing potential of ores and identify possible sources of acid rock deposits in the mine areas. During the operational phase, we integrate acid rock drainage into our overall water pollutant management system. While slowing down and reducing acid rock drainage, we improve resource recovery. We recover valuable metals from high-concentration acid rock drainage and treat low-concentration acid rock drainage through neutralisation, prioritising its reuse in production. There were no water pollution incidents caused by acid rock drainage during the reporting period.

Acid Rock Drainage (ARD) Status		
Indicators		Percentage
Total number of mining areas with acid rock drainage risk	6	9.84%
<ul> <li>Mines where acid rock drainage is predicted to occur</li> </ul>	0	0.00%
- Mines where acid rock drainage is actively mitigated	0	0.00%
- Mines where acid rock drainage is under treatment or remediation	6	9.84%

# **Future Plans**

use.



reduce the intake of fresh water.







# Risk Management

Mining and smelting enterprises may encounter a series of complex and potentially high-risk issues in the operation process, especially in terms of land use. These issues not only affect the direct economic interests of the enterprise, but also have profound impacts on the safety and health of surrounding communities, as well as the balance of the entire ecosystem. Each year, as part of our environmental compliance audits of operational units, we conduct on-site assessments of their land management practices, analyse and rank their land use risks and potential risks, such as heavy metal pollution risk, ecosystem degradation risk, and mine closure risk management. In response to the analysed land risks, we take the following measures to minimise land management risks.

Risk	Land degradation	Ecosystem destruction	Land use conflict	Habitat fragmentation	Heavy metal pollution	Mine closure risk
Risk Description	Operational activities may lead to physical, chemical, and biological changes in the soil, resulting in degradation of land quality and a decline in productivity.	Operational activities may cause changes in the structure and function of ecosystems, thereby compromising their original stability and sustainability.	Operational activities may create conflicts with local communities and agricultural land use, leading to disagreements and misalignment among different stakeholders regarding land use methods, allocation, and structures.	Operational activities may lead to the fragmentation of habitats, reducing the total habitat area, increasing isolation between habitat patches, and enhancing edge effects.	Heavy metal pollutants generated by operational activities may enter the soil due to poor management, leading to soil contamination.	Improperly managed abandoned mining areas may cause long-term pollution and ecological damage to the surrounding environment.
	3.9	3.7	4.6	4.8	3.0	5.0
Importance Level	<ol> <li>Develop a sustainable land management plan to ensure the long-term usability and health of the land.</li> <li>Implement regular land monitoring and assessment to promptly identify signs of land degradation and take targeted remediation measures.</li> </ol>	<ol> <li>Formulate an ecological protection plan to ensure that mining activities do not cause permanent damage to surrounding ecosystems.</li> <li>Implement ecological restoration projects in affected areas, including land reclamation and afforestation.</li> <li>Adopt environmentally friendly mining technologies to minimise the impact on ecosystems.</li> </ol>	<ol> <li>Clearly define land use plans and adhere to relevant regulations and standards to prevent illegal occupation and use of land.</li> <li>Engage in communication and negotiation with local communities to establish clear land use boundaries and reduce the potential for land disputes.</li> <li>Conduct regular land audits to ensure the legality and rationality of land use.</li> </ol>	<ol> <li>Adopt a concentrated development model to reduce the likelihood of habitat fragmentation.</li> <li>Develop land planning and management plans to limit the impact of non-mining activities.</li> <li>Promote multifunctional land use within mining areas to mitigate the effects of fragmentation on ecosystems.</li> </ol>	<ol> <li>Strictly comply with laws, regulations, and standards regarding heavy metal emissions.</li> <li>Conduct environmental impact assessments, fully considering the effects of heavy metal emissions, and formulate pollution prevention plans.</li> <li>Equip advanced pollution prevention facilities to reduce heavy metal emissions from mining activities.</li> <li>Implement regular soil and water quality monitoring to promptly identify potential heavy metal pollution issues.</li> <li>Reduce the use of harmful chemicals and adopt environmentally friendly production processes.</li> </ol>	<ol> <li>Formulate a mine closure plan, clearly outlining land restoration and regeneration plans after mine closure.</li> <li>Establish dedicated accounts for funds and resources to be used for land management and restoration during the mine closure phase.</li> <li>Consult with local governments and communities to ensure the mine closure plan complies with local regulations and societal expectations.</li> <li>Conduct regular assessments of mine closure effectiveness and make timely adjustments and improvements to the plan.</li> </ol>



# Strategy and Management Approach

#### $\bigcirc$ Land use and ecological restoration

Scientific land use strategies can effectively reduce impacts on the natural environment, promote efficient resource utilisation, and facilitate ecosystem recovery. Our current disturbed lands, which have not yet been restored to their original state, primarily include operational waste dumps, mining sites, stockpile areas, and landfills. We are systematically reclaiming stable areas of these sites and will promptly carry out restoration work after their use concludes in the future. During the reporting period, approximately 8.7758 million square metres of land were newly disturbed due to production activities. For lands that have stabilised and meet restoration conditions, we will undertake ecological restoration efforts tailored to local climate and ecological conditions.

# RMB170 Million 8.03 Million m<sup>2</sup> 1.66 Million trees

During the reporting period, we invested a total of RMB170 million in ecological restoration special project funds, with a cumulative restored vegetation area of about 8.03 million square metres, planting about 1.66 million trees, and achieving full restoration as much as possible



### O Mine Closure and Post-Closure Management

In full lifecycle mine management, we emphasise the integration and coordination from exploration, design, construction, development, operation to post-closure ecological restoration. Post-closure ecological restoration and tailings management are critical components for ensuring the sustainable development of mines. Drawing on the accumulated experience learnt from Qinghai West Copper's mine closure project, we continuously optimise our mine closure management system. Throughout the mine closure management process, we place greater focus on:

#### **Ecological Restoration and Monitoring**



After mine closure, our focus is on the restoration and reconstruction of ecosystems. Combining local climate and ecological conditions, we formulate detailed restoration plans to ensure the recovery of biodiversity and ecological balance. We utilise remote sensing technology to monitor changes in vegetation cover and land use in mine restoration areas, and evaluate restoration effects through time series analysis.

#### Tailings Storage Facilities Closure Managemer



Through covering layers and vegetation restoration, we reduce pollution to the surrounding environment, regularly collect soil and water samples from nearby areas, establish a detailed environmental database, and implement long-term monitoring plans to scientifically assess the effectiveness of restoration measures. At the same time, we employ sensors and remote sensing technology to monitor the stability of tailings storage facilities in real time, and explore the potential for subsequent development and utilisation of tailings storage areas under the premise of ensuring safety.



We adhere to the principle of sustainable development, combining local economic development needs and ecological protection requirements, to explore feasible development models. For example, we consider transforming some sites into ecological parks or tourist attractions, and for areas with suitable conditions, we attempt to develop ecological agriculture or renewable energy projects to achieve sustainable economic growth.

#### Community Engagement

We diligently cooperate with local communities and stakeholders to ensure transparency and responsibility in the mine closure process. Through regular communication and feedback mechanisms, we understand the needs and expectations of the community and consider them in the closure plan.



Environmental Management Climate Change Water Resource Management Land Use Biodiversity Conservation

Waste Management Tailings Management



#### West Copper Plateau Mine Ecological Restoration Project

As of the end of the reporting period, only Qinghai West Copper has officially entered the mine closure phase. To ensure the effectiveness of mine closure management, we have adopted a comprehensive and integrated management approach. Since commencing production in 2006, the company has steadfastly adhered to the principle of "development alongside protection and restoration". During the infrastructure and production phases, ecological restoration work was carried out promptly in stabilised areas. By the end of the reporting period, the company had invested a total of RMB196 million, completing reclamation of 201.55 hectares.

Through a series of proactive and effective measures, the ecological environment of the Deerni Copper Mine has been revitalised, with vegetation coverage significantly increased, especially in restored areas where it has reached 75%. Soil and water conservation capacities have been markedly enhanced, and habitats for wildlife have been effectively protected. Research and assessments show evident positive succession in the ecological restoration areas of the mine. Moreover, the company has successfully established a long-term mechanism for mine ecological restoration, achieving a win-win situation for ecological restoration of plateau mines, providing highly valuable, replicable, and scalable experience for green mining and ecological restoration of metal mines on the Qinghai-Tibet Plateau, and was successfully selected as one of the first 15 exemplary cases of ecological restoration for operation- al mines nationwide by the Ministry of Natural Resources.

# Future Plans





The Environmental Rehabilitation and Greening Achievements of West Copper



Tailings Management Environmental Management Climate Change Waste Management Water Resource Management Land Use Biodiversity Conservation

# **Biodiversity Conservation**

mining companies and a cornerstone for creating long-term value. It not only sustains the functionality of ecosystems but also provides resilience and adaptability for ecosystem recovery. By reconstructing

## **Risk Management**

To scientifically formulate our biodiversity conservation plan, during the reporting period, we collaborated with external organisations to conduct biodiversity risk screening and improvement plans for 38 projects in 9 countries within our business scope, to fully understand biodiversity risks and arrange their priorities.

Operational risks are determined based on the interaction between mining activities and biodiversity components in the environment (and their potential impacts), mainly associated with the mining technology used and the existence of mining sites and tailings storage facilities. Here, we focus on three risk factors: mining methods, operational scope, and tailings storage facilities.

Location risks pertain to inherent risks to regional biodiversity. These risks are primarily related to biological communities, landforms, habitats, and species characteristics. We focus on five risk factors: the proximity of project sites to areas of high biodiversity value, the proportion of legally protected areas or key biodiversity areas within the project's impact zone, biodiversity hotspots and major tropical wilderness areas, ecosystem connectivity and fragmentation, and freshwater-specific species.

Based on the comprehensive performance of the above eight biodiversity risk factors, we identified a total of 8 high-risk operational sites, mainly located in Argentina, Colombia, Guyana, Tajikistan, and China's Xinjiang and Yunnan regions, accounting for approximately 28.7% of the total area assessed under the biodiversity risk evaluation. All of them have conducted biodiversity impact assessments or baseline surveys and formulated corresponding conservation plans and measures.

153.77 km<sup>2</sup> 28.7 %

The area of regions of high biodiversity risk



#### The proportion of the area in the total risk assessment region

# Strategy and Management Approach

We respect and maintain legally designated protected areas, understand and identify the distribution of high-value conservation areas within and around projects, and commit to avoiding business activities in areas where we believe environmental risks exceed acceptable levels. We pledge to:

THURSDAY

- · Comply with the "Convention on Biological Diversity" as well as national and local laws and regulations related to biodiversity conservation, respecting and protecting biodiversity.
- Avoid ecologically sensitive areas such as ecological conservation redlines, rare animal protection zones, and nature reserves when selecting project sites.
- By 2030, all mines will formulate and implement targets, plans, and measures for biodiversity conservation to reduce the impact of mining project construction activities on biodiversity.
- Restore the regional ecological environment affected by mineral resource development activities, formulate the "Mine Geological Environment Protection and Land Reclamation Plan", implement the "developing while governing" model, and minimise land disturbance. Achieve 100% restoration of recoverable land.
- Establish an efficient information-sharing and communication mechanism between mining enterprises and internal and external stakeholders, proactively disclose our biodiversity conservation performance for oversight.
- Proactively communicate and cooperate extensively with external stakeholders such as universities, research institutions, industry organisations, and government authorities on biodiversity issues.



#### O Biodiversity Investigation and Monitoring

To prevent biodiversity loss, we consider the potential impacts on biodiversity and ecosystems in the surrounding areas of the project at the early stages of project development. By engaging with local biodiversity conservation authorities, communities, and ecosystem-focused NGOs, we gain insights into the distribution of high-value protected areas. These include, but not limited to various nature reserves, important wetlands, key habitats, water sources, and ecological red line areas, which we make reasonable efforts to avoid. We also conduct biodiversity baseline data surveys, including the distribution of flora and fauna populations, animal migration routes, and natural environments in and around the project, providing raw data for subsequent construction and production, compiling biodiversity monitoring plans, reclamation, and restoration activities throughout the project's lifecycle. Based on the survey results, we conduct data analysis and assessment, prepare biodiversity impact assessments during the exploration phase.

We require each subsidiary to assess the impacts and expected impact on biodiversity and ecosystems within and around the project during the project design phase to ensure minimisation of impacts on biodiversity during the construction and operation phases. At the same time, we take necessary ecological protection and restoration measures to mitigate negative impacts on ecosystems and promote sustainable management of ecosystems. During the reporting period, no biodiversity-related incidents occurred. We have conducted biodiversity surveys in 31 subsidiaries, identifying 4 critically endangered species, 11 endangered species, 15 vulnerable species, and 43 near-threatened species. We will continue to monitor and update species information and promote the completion of biodiversity background investigations for new projects before construction.



### Shanxi Zijin Biodiversity Survey and Protection Action

Shanxi Zijin's mining area is located in Fanshi County, Xinzhou City, Shanxi Province. Due to its unique surrounding ecological environment, Shanxi Zijin has partnered with a professional team from Taiyuan University to conduct targeted environmental baseline surveys and biodiversity monitoring.

In this survey, a total of 59 species of wild vertebrates, spanning 3 classes, 16 orders, and 34 families, were recorded. Among them, several species on the IUCN Red List and the Redlist of China's Biodiversity were found. The survey revealed that the populations of these species are in relatively good condition, with evidence of recovery and reproduction.

The biodiversity around the mining area is notably vibrant. The ecological restoration efforts at the Jinjiling tailings storage facilities have achieved remarkable results, with a notable increase in plant species over time. Not only has the population of Ephedra sinica, a key protected plant in Shanxi Province, been observed, but Polygala tenuifolia and Glycyrrhiza uralensis, which have medicinal value, are becoming more abundant. The increase in animal species, especially the appearance of multiple nationally protected animals, also demonstrates the outstanding achievements of ecological governance in Shanxi Zijin's mining area, indicating a significant improvement in the ecological environment within the mining area, providing better habitats and feeding grounds for various animals.

Looking ahead, Shanxi Zijin remains committed to ecological governance in the mining area, striving to further achieve a green, healthy, and friendly environment where the mining area and biodiversity coexist in harmony.





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#### Specialised Monitoring Initiative on Microbial Communities in Liex

The Tres Quebradas Salar operated by Liex is a salar on the 4,100-meter-high plateau of the Andes Mountains in Argentina, South America. Recognising the uniqueness of the salt lake ecosystem, Liex cooperated with regulatory agencies and research institutions, finally decided to monitor the surrounding aquatic ecosystem through microbial community monitoring. Liex has set up 16 monitoring points in Laguna Verde, Laguna Negra, and Laguna 3Q of the salar, conducting microbial monitoring twice a year. At each monitoring point, samples of sediment, water, and microbial mats are collected and tested. Based on the microbial baseline survey results and historical test results, the diversity of diatoms and aquatic invertebrates is compared and analysed to further analyse the stability and evolutionary trends of the aquatic ecosystem.

During the winter monitoring period of the reporting year, a total of 20 diatom genera and 38 subgenera taxa were recorded, each exhibiting unique seasonal variation cycles and community structures. Meanwhile, the changes in microbialites in the area during seasonal cycles also demonstrated unique biodiversity research value. The current monitoring results indicate that the aquatic ecosystem around the Tres Quebradas Salar still maintains its unique microbial community, with no significant or identifiable changes attributable to our production activities.

In the future, Liex will continue to closely monitor changes in biodiversity, regularly conduct biodiversity monitoring and outreach. At the same time, we warmly welcome more research institutions and organisations to join us in our ongoing efforts to study and protect this unique ecosystem.



### Cological Conservation

During the reporting period, we drew upon key frameworks such as the "Convention on Biological Diversity" (CBD), the "Kunming-Montreal Global Biodiversity Framework" (GBF), the ICMM's "Good Practice Guidance for Mining and Biodiversity", "GRI 101: Biodiversity Disclosure Standard 2024", as well as other relevant laws, regulations, guidelines, and case studies from mining companies, and, combined with insights from external biodiversity experts, and released the Company's first "Guidelines for Biodiversity risk management across the entire lifecycle of mining operations, covering exploration, construction, operation, and mine closure stages, clarifying the four-tier conservation strategy of "avoidance - mitigation - restoration - offsetting" for each stage.

	Review laws and regulations	Review and strictly adhere to the laws of the country and locality where the project is located, and identify the requirements of laws and regulations related to mining activities for biodiversity conservation based on the natural geographical conditions of the project location.
	Communicate with stakeholders	Understand and reasonably avoid high-value protected areas within and around the project.
	Conduct biodiversity baseline surveys	Invite third-party teams to conduct biodiversity baseline data surveys to grasp the local biodiversity situation.
	Conduct biodiversity impact assessments	Analyse, predict, and assess the direct and indirect impacts on biodiversity that may be caused by the implementation of construction projects, and propose countermeasures and measures for biodiversity conservation.
Avoidance Measures	Set up no-entry zones	Construct temporary enclosures in construction areas to prevent animals from entering the construction area.
	Implement biodiversity monitoring	Regularly observe species diversity, species quantity and distribution, community composition, etc., in the ecosystem.
	Avoid introducing invasive species	Make every effort to avoid the invasion of alien species caused by the project.
	Formulate mine closure/exit plans	Prepare the overall mine closure/exit plan in advance and invite stakeholders to participate in the formulation of the plan.



(H) Mitigation Measures	Adopt advanced technology and equipment	Use advanced technological means, advanced environmental protection equipment, processes and materials to mitigate the impact of production operations on the surrounding ecological environment.
	Formulate reasonable mineral resource development and utilisation plans	Make production plans and proposals for mineral resource development to fully realise comprehensive resource utilisation.
	Establish biodiversity management plans	Formulate corresponding biodiversity management plans based on biodiversity surveys and monitoring.
	Comprehensive resource utilisation	Improve resource utilisation rates and the recovery rates of main elements, associated and intergrowth elements in ores, reduce solid waste generation, and for solid waste already generated, adopt reasonable and feasible methods for recycling and utilisation to minimise land occupation.
	Clean up	Dismantle on-site construction equipment and temporary facilities, and transport pollutants that cannot be disposed of on-site to professional treatment facilities.
Restoration Measures	Restore	Implement the strategy of development while restoration, and for stable areas, restore them to a state consistent with the surrounding natural environment as much as possible according to the original topography and landform.
Offsetting Measures	Compensate	Following the principle that physical compensation is better than non-physical compensation, and in-situ compensation is better than off-site compensation, for habitats and species directly affected that cannot be avoided, mitigated, or restored, propose targeted compensation measures according to the requirements of restoring the same ecological functions and habitat suitability.

During the production and operation processes, we strive to minimise ecological degradation, reduce or avoid adverse impacts on biodiversity within and around the area. We closely monitor activities that could potentially impact biodiversity, as identified in our biodiversity impact assessments, and engage in biodiversity conservation and monitoring initiatives. Simultaneously, we adhere to the principle of "mining concurrently with management and restoration". For the lands that have concluded mining operations, we strive to restore these areas as closely as possible to their original topography and landform, using the stripped soil and rock to achieve a natural integration with the surrounding environment. Where possible, we lay the humus-rick soil removed during land clearing over the top soil layer, and gradually restore the soil ecosystem through replanting grass, trees, and other vegetation, thereby creating favourable conditions for the sustainable recovery of the local ecosystem.

# **Future Plans**

# **91** %

During the reporting period, 91% of the mines completed a round of biodiversity survey and developed corresponding biodiversity management plans. 100% restoration of restorable land was achieved





A group of Siberian Tigers Spotted by Duobaoshan Copper Employees During Their Commute



# Waste Management

Waste is simply a resource misplaced. Adopting an approach of reduction, resource utilisation, and harmless disposal is not only our environmental responsibility but also a crucial means of fully leveraging resources and enhancing operational efficiency.

# Risk Management

In the process of waste management, the primary risks include the inherent hazards of waste, safety risks during handling and disposal, and legal and regulatory risks associated with waste management. These risks span the entire lifecycle of waste, from generation and transportation to final disposal. Should these risks become unmanageable, they could severely impact environmental quality, public health and safety, as well as the company's economic performance and reputation.

Risk		Accidental loss of control over waste	Non-compliant waste treatment methods
Risk Description	Improper treatment methods or poor management during waste processing can exert environmental impacts beyond the environment's carrying capacity	During collection, transportation, storage, utilisation, or disposal, waste may not be managed according to established plans and procedures due to various factors.	Failure to adhere to national and local laws, regulations, standards, and norms during waste collection, transportation, storage, utilisation, or disposal.
Importance	3.4	3.1	2.5
Response Measures	<ol> <li>Preferentially select low-toxicity, low-hazard raw materials that generate less waste.</li> <li>Optimise production processes and innovate technologies to improve conversion and output rates, thereby reducing waste generation.</li> <li>Select the most advanced treatment technologies based on project-specific conditions to minimise harmful emissions.</li> <li>Adhere to best management practices, including equipment maintenance, operational standards, and staff training, to ensure efficient and safe treatment processes.</li> </ol>	<ol> <li>Establish a detailed waste management plan with clear task assignments, covering monitor- ing, categorisation, storage, transportation, treatment, and disposal.</li> <li>Designate specific waste storage areas to ensure proper containment.</li> <li>Implement leak prevention and seepage control measures to avoid environmental contami- nation.</li> <li>Install air pollution prevention systems and monitor air quality in real-time to safeguard atmospheric conditions.</li> <li>Develop emergency response plans and conduct emergency drills.</li> <li>Conduct periodic waste risk assessments to identify potential environmental risks and ensure closed-loop risk management.</li> </ol>	<ol> <li>Implement tiered waste management based on national standards and testing data, applying differentiated controls and management according to waste character- istics.</li> <li>Maintain comprehensive records to track the full lifecycle of various types of waste.</li> <li>Enforce strict entry requirements for waste treatment suppliers, ensuring external disposal companies comply with relevant regulations.</li> </ol>



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Environmental Management Climate Change Water Resource Management Land Use Biodiversity Conservation Waste Management Tailings Management System (EMS)

# Strategy and Management Approach

We strictly comply with the relevant national environmental protection laws and regulations of the host countries, as well as international initiatives and standards. Waste management is integrated into our environmental objectives management system, following the fundamental principles of "reduction, resource utilisation, and harmless disposal". We strengthen environmental risk control of waste through four key aspects: source reduction, categorised management, scientific treatment, and continuous monitoring. We prioritise the adoption of clean production technologies, optimise production processes, and enhance resource utilisation to reduce waste generation at the source. Risk-based waste collection is implemented, separating toxic and hazardous waste from non-hazardous waste to reduce treatment costs and environmental risks. For non-hazardous waste that can be repurposed, we adopt scientific cally sound treatment technologies. Through recycling, reuse, and resource recovery, we aim to realise the resource value of waste. For waste that cannot be avoided or repurposed, we ensure safe handling and disposal to eliminate or minimise harm to the environment and human health. This includes methods such as secure landfilling, incineration for power generation, and chemical treatment, all while ensuring that no secondary pollution occurs during the disposal process. A robust dynamic monitoring system is established, with regular monitoring of waste storage sites, treatment facilities, and surrounding environments to promptly identify and address potential risks.

### 🔘 Non-hazardous Management

For non-hazardous, our goal is to enhance the added value of waste comprehensive utilisation products by extracting reusable components from the waste stream, thereby reducing the generation of harmful substances and minimising environmental impact.

Tailings and waste rock are the primary wastes generated during our mining operations, accounting for over 99% of total waste. Their generation and management have direct impact on environmental, social, and economic sustainability. To manage these wastes effectively, safe storage and resource utilisation are our management priorities. Firstly, we optimise the selection and planning of waste storage sites, establishing tailings storage facilities and waste rock dumps that meet national standards in the project's host country. Anti-seepage facilities are constructed, and both groundwater and soil contamination are monitored to ensure the safety of downstream water quality. Additionally, we actively work to increase the reuse rate of waste, exploring and implementing its applications in underground backfill, valuable metal recovery, construction materials, and landscape restoration to promote a circular economy.



During the reporting period, we generated approximately 958.84 million tonnes of non-hazardous waste, with a comprehensive utilisation rate of 15.29%. The non-hazardous waste generation intensity by revenue was 31.58 tonnes/RMB10,000.







%



20 15.29 14.88 14.71 13.62 15 12.91 10 7.69 5 0 2019 2020 2021 2022 2023 2024

Non-hazardous Waste Comprehensive Utilisation Rate



West Copper Tailings Comprehensive Utilisation Project

In mining production, tailings often contain resources with recovery value. If utilised properly, this not only reduces resource waste but also lessens reliance on raw mineral resources, aligning with sustainable development strategies. Against this backdrop, West Copper has robustly pursued tailings recovery and reuse.

West Copper, primarily engaged in copper extraction, has demonstrated exceptional technological innovation in managing the Deerni Copper Mine, a large-scale polymetallic sulphide deposit. The company has independently developed, designed, and installed sulphur and iron beneficiation equipment suitable for high-altitude regions. Multiple technical upgrades have been implemented for sulphur separation from tailings, enabling comprehensive recovery of sulphur and iron from waste slag after the copper extraction process.

The tailings recovery and reuse practices at West Copper have yielded significant environmental benefits. Through efficient recovery and a circular economy model, the company processes 5,000 tonnes of tailings daily and 1.2 million tonnes of tailings annually. This not only reduces the release of heavy metals from tailings into the environment but also significantly alleviates ecological pressure in the mining area, lowering pollution risks. Tailings recovery also eliminates safety risks associated with tailings storage facilities at the source, allowing for the restoration and reuse of land previously occupied by tailings, increasing green coverage, and aiding in the rehabilitation of the mining area's ecosystem.

Tailings Data



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Environmental Management Climate Change Water Resource Management Land Use Biodiversity Conservation Waste Management Tailings Management System (FMS)

#### Hazardous Waste Management

Our hazardous waste primarily originates from smelting processes, including waste engine oil, cyanide slag from gold refining, lead filter cakes and white flue dust from copper smelting, lead-silver slag from lead smelting, iron alum slag as well as high-concentration waste liquids generated in laboratories or testing facilities, and waste engine oil and spent lead-acid batteries from equipment maintenance.

Full lifecycle management of hazardous waste is a core component to our sustainable development. Guided by the principles of "reduction at source, strict control throughout the process, and closed-loop disposal", we have established a management system covering the entire hazardous waste chain. At the source, we employ green chemicals substitution strategies, prioritising non-toxic or low-toxicity raw materials, and rely on process innovation to achieve industry-leading metal resource utilisation rates. For midstream control, we have fully implemented a digital dynamic ledger system, using IoT technology to track hazardous waste types, quantities, and flows in real-time. In terms of end disposal, we have constructed high-standard temporary hazardous waste storage facilities equipped with automatic temperature control, leakage monitoring, and gas purification devices. For hazardous waste that must be outsourced for treatment, we enforce a strict three-tier control mechanism of "qualification review – technical assessment – process audit", ensuring a 100% harmless disposal rate. Concurrently, we are advancing the technological breakthroughs in hazardous waste resource utilisation, building a modern management system driven by technology, digital empowerment, and collaborative management to provide a practical model for the global mining industry's green transformation.

During the reporting period, we conducted experiments and applications for the harmless treatment and comprehensive recovery of hazardous waste, continuously reducing the environmental pressure from hazardous waste generation. At Guizhou Zijin, we attempted to harmlessly treat cyanide slag with comprehensively-treat-ed polluted-acid to achieve "waste treating waste", turning two types of hazardous waste (polluted acid and cyanide slag) into non-hazardous waste. At Bayannur Zijin, we continuously explored the recovery of copper, silver, and indium, enhancing the recovery rates of valuable metals through production process innovation and technological optimisation, thereby reducing generation of hazardous waste.



During the reporting period, our total hazardous waste generation was 284.86 thousand tonnes, with a comprehensive utilisation rate of 74.57%, an increase of 25.59 percentage points.





Hazardous Waste Comprehensive Utilisation Rate



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Environmental Management Climate Change Water Resource Management Land Use Biodiversity Conservation Waste Management Tailings Management System (EMS)

#### C Exhaust Gas Emissions Management

The exhaust gases generated during mining operations primarily arise from dust generated during open-pit mining, blasting, excavation, transportation, ore crushing, and grinding. We have implemented a series of measures to control and manage dust, ensuring the health and safety of on-site workers. For example, by optimising process flows or equipment design, such as underground ventilation for dust removal, enclosed dust sources in crushing and conveyor belt operations, and dust capture with dust collectors, we control dust dispersion. Furthermore, water mist spraying systems are installed in key operational areas to suppress dust dispersion, and roads are kept smooth and well-maintained to reduce vehicle bumps, thereby reducing vehicle-induced dust.

Exhaust gases from smelting processes mainly originate from the combustion of fuels, the carrying effect of air on materials, and the volatilisation and oxidation of metals at high temperatures, resulting in flue gases and dust. Among these, the significant amounts of SO<sub>2</sub> and SO<sub>3</sub> in flue gases serve as primary raw materials for our sulphuric acid by-product. Smoke dust containing metals such as copper, zinc and their compounds, as well as precious metals like gold and silver, is typically captured using electrostatic precipitators for comprehensive utilisation of valuable metals before harmless disposal. This approach not only achieves resource recovery but also reduces heavy metal impacts on surrounding soils. Additionally, we have installed online exhaust gas monitoring equipment at major emission outlets, connected to local environmental authorities' networks for real-time dynamic monitoring of emitted gas concentrations. Independent third-party monitoring agencies are regularly engaged to monitor emissions and air quality at general discharge outlets and environmental monitoring locations, aiming to control our environmental impact.



Major Exhaust Gas Emissions

**Tonnes per RMB** 100 million revenue 50.88 % 0 **Tonnes per RMB** 100 million revenue 70.51 %

During the reporting period, under sustained increases in the outputs of key products such as copper and gold, we continuously improved our exhaust gas treatment processes. Our nitrogen oxides emission intensity was 0.22 tonnes per RMB100 million revenue, a 50.88% decrease from 2020. Particulate matter emission intensity was 0.11 tonnes per RMB100 million revenue, a 70.51% decrease from 2020. Emissions of other major exhaust gases remained stable at reasonable levels.



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Environmental Management

Climate Change

Water Resource Management

Land Use

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### Noise Management

We place great importance on prevention and control of noise pollution, strictly adhering to relevant laws and regulations in host countries to ensure legal compliance in noise management. During the project construction preparation phase, we proactively conduct acoustic environment impact assessments in the project area to provide a scientific basis for subsequent noise control measures.

To minimise the negative impact of noise on the external environment and the health of employees, we prioritise the selection of low-noise equipment during the procurement process and establish comprehensive equipment maintenance plans, regularly inspecting and maintaining equipment to ensure optimal operational conditions, thereby reducing noise at the source.

For major noise sources such as crushers and ball mills, we implement multiple noise reduction measures, including installing enclosures around or within the equipment and fitting suitable acoustic barriers and noise containment shells to effectively block noise transmission. Additionally, we strategically plant noise-reducing vegetation around the plant area to create a natural green noise barrier, further lowering noise levels.

For noise generated by on-site transportation vehicles, we control traffic noise effectively by strictly regulating vehicle speeds and discouraging unnecessary honking.

Through these holistic and meticulous noise reduction measures, we have successfully controlled noise levels to comply with China's "Emission Standard for industrial enterprise at boundary" and the noise standards specified in the International Finance Corporation's (IFC) "Environmental, Health, and Safety Guidelines".

## **Future Plans**

Explore intra-group, inter-regional, point-to-point targeted utilisation to achieve complementary resource use by breaking down regional barriers.

Continue to advance technological breakthroughs in the comprehensive utilisation of mining solid waste and vigorously promote the industrialisation of solid waste utilisation within the Group by leverage the outcomes of these technological advancements. Encourage capable enterprises to take the lead in fully utilising all newly generated industrial solid waste and gradually reducing stockpiled industrial solid waste.





# **Tailings Management**

Tailings storage facilities are core infrastructure for mining operations, and we acutely recognise the potential risks associated with them. Through systematic engineering measures and management innovations, we are building a comprehensive defence line based on "source prevention – hierarchical management – intelligent monitoring". Our goal is to achieve high standards of "zero leakage, zero dam failure, and zero accidents".

# Risk Management

Our tailings storage facilities (TSFs) risk management can be divided into addressing safety and environmental concerns, implemented respectively by our occupational health and safety management system and environmental management system. The operational management of these areas is overseen by our Safety Director and Environmental Director, who report to the Executive Director responsible for both safety and environmental affairs.

Risk	Natural disasters	Pollutant leakage	Human sabotage and operational violations	Facility defects and equipment ageing
Risk Description	Heavy rain and flooding can cause rapid rises in water levels in TSFs, potentially leading to overtopping or dam failure. Earthquakes may damage tailings facilities and cause landslides or collapses in surrounding areas.	Tailings often contain heavy metals such as lead, cadmium, and mercury, as well as organic compounds like phenols, ketones, and aromatic compounds. Leakage or dam failure can result in long-term pollution.	Unauthorised activities such as excavation or blasting near TSFs can destabilise the structure. Non-compliant tailings operations, such as excessive discharge or unauthorised changes to discharge methods, can also affect stability.	Damage or blockage of flood discharge structures, ageing of flood channels, drainage systems, and monitoring systems can lead to functional failures, rendering them ineffective in emergencies.
Response Measures	During the design phase, fully consider geological conditions, hydrological character- istics, and tailings properties to determine appropriate TSFs parametres. During operations, ensure adequate emergency response resources and skills are in place.	Improve tailings water treatment systems, upgrade backwater facilities, standardise leachate collection and treatment, implement rainwater and sewage separation, and enhance anti-seepage and monitoring facilities.	Monitor activities around TSFs to prevent any unauthorised operations or non-compliant practices.	Encourage enterprises to increase their technical and financial investment in TSFs, upgrading and replacing them with advanced processes and equipment.



# Strategy and Management Approach

To comprehensively strengthen and standardise the construction and management of tailings storage facilities, we have formulated the Company's "Tailings Storage Facilities Safety Management Standards" based on relevant laws and regulations in China and host countries, as well as the "Global Industry Standard on Tailings Management" (GISTM)". These standards are tailored to our operational realities and frontline experience, covering the entire lifecycle of tailings storage facilities management.

We adhere to industry standards and best practices in the planning, design, construction, operation, maintenance, monitoring, closure, and post-closure management of tailings storage facilities. To reduce land use and enhance safety, we conduct research and planning for dry stacking and comprehensive utilisation of tailings tailored to local conditions. Our Zijinshan Gold-Copper Mine, drawing on global engineering practices, has proposed a novel integrated solid waste disposal technology. This technology involves joint storage and coordinated treatment of waste rock and tailings, which is implemented through the construction of a resource utilisation plant (solid waste utilisation demonstration base).

During the reporting period, we managed a total of 61 tailings storage facilities, of which 37 are active and 24 are decommissioned or closed. Currently, we are designing and constructing six new tailings storage facilities.

### 🔘 Risk Classification Management

During the reporting period, we conducted risk screening for all managed tailings storage facilities, classifying them (A-D Levels) according to China's "Safety Regulation for Tailings Ponds" and referencing the "Global Industry Standard on Tailings Management". Closed and stabilised TSFs are all classified as Level A. Decommissioned TSFs, along with those in categories four and three, are classified as Level B. Upstream TSFs, TSFs with actual dam heights approaching their design heights, and those in category two are classified as Level C, while TSFs in category one are classified as Level D. Based on the risk screening results and classifications, we implement targeted risk management measures.

For Level D and C TSFs, risk management focuses on preventing loss of control, strictly implementing control measures according to established standards. Level B TSFs are regularly tracked to monitor the potential for risks to escalate to Level C, ensuring proactive risk prevention. For Level A TSFs, routine inspections are conducted as required to maintain stable management while also collaborating with environmental protection department on subsequent greening and restoration efforts.

Each management level conducts risk identification and control according to the prescribed frequency and can flexibly allocate resources for implementing management within available means. When necessary, any level can request an immediate escalation in management, with the highest escalation leading to a group-level comprehensive response, enabling efficient resource allocation and effective risk management.







#### C Tailings Storage Facilities Risk Monitoring

Tailored to the technical characteristics and physical conditions of different TSFs, we implemented a multifaceted monitoring approach, including displacement, water level, phreatic line, rainfall, dry beach, seepage water, structural deformations, and video surveillance, to continuously measure the safety performance of TSFs and promptly address any potential risks in the dam structure. All projects use a combination of automatic monitoring and manual measurement to carry out these monitoring activities, with all observations recorded in ledgers. Should any anomalies be detected, immediate action is taken according to our emergency response plans to mitigate risks. Currently, we maintain 10 operational management record forms, covering inspection frequencies and mandatory items for each level of TSFs, a master checklist for tailings management, daily monitoring reports, phreatic line monitoring forms, etc. Through real-time logging, we establish clear standards and control requirements for each key element, ensuring clarifying responsibilities at every stage and traceability throughout the entire operation of the tailings storage facilities to guarantee safety.

Monitoring item	Automatic monitoring frequency	Manual measurement frequency
Dam displacement	Once daily	Once monthly
Phreatic line depth	Once daily	Once weekly
Dry beach length	Once daily	Once weekly
Reservoir water level	Once daily	Once per shift
Dry beach slope	/	Once monthly

Tailings Storage Facilities Risk Monitoring Frequency

For critical tailings facilities such as main drainage tunnels and culvert pipes, we use operational diagrams to mark hazard points identified in each risk assessment, implementing continuous dynamic and closed-loop management to ensure hazards are properly addressed.

### Emergency Safety Management

Our emergency management focuses on prevention, combining emergency preparedness with emergency response. We divided the tailings facilities into grids, with designated responsible personnel for each area. Tailored emergency plans are developed for different areas based on their risk characteristics, to determine staffing, response levels, and to ensure the availability of necessary emergency supplies and equipment. Each area regularly organises drills based on specialised plans and conducts at least one company-level drill before each flood season to test the entire system's emergency response capability. For detailed emergency safety management, please refer to the "Emergency Management" section of this report.

# **Future Plans**

Introduce intelligent control technologies to achieve real-time monitoring and precise regulation of tailings storage facilities, including key indicators such as reservoir water levels and dam stability, enhancing operational safety and management efficiency. Promote the application of advanced technologies such as online monitoring, tailings backfill, and dry stacking, gradually establishing an "integrated" monitoring system.

Introduce third-party auditing mechanisms, strengthen supervision of third-party operators and implement dynamic management of tailings storage facility risks.





# Social

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- Product Responsibility
- Q Information Security
- Q Technological Innovation


# Employee Development

Adhering to the talent philosophy of "putting value creators first", Zijin Mining is committed to establishing a recruitment, employment, and incentive system driven by value creation, alongside a framework that enables value creators to share in the Company's success. The Company aims to build a global human resources ecosystem that attracts top-tier professionals from around the world, safeguards employee welfare, and fosters mutually beneficial growth and success for both the Company and its employees.

#### Governance

At Zijin Mining, every employee is regarded as a vital partner. The Board of Directors holds strategic decision-making authority over workforce-related matters, while the ESG Management Committee oversees the execution and monitoring of employee development initiatives. The Human Resources Department at the headquarters serves as the primary responsible entity for the Company's human resources functions, structured into six specialised divisions— Compensation & Evaluation, Personnel Management, Recruitment, Talent Deployment, Skilled Talent, and Training—leads operational implementation. All of our subsidiaries have established human resources departments or HR specialists to carry out related tasks and to safeguard employee rights.



Zijin Mining Employee Development Governance Structure

Manage — Monitor —



## **Risk Management**

As our business expands and the processes of globalisation and industrial upgrading accelerate, the Company's demand for talent with international business experience, multilingual proficiency, and cross-cultural communication skills has significantly surged. However, due to the industry-specific traits of the mining sector, like challenging working conditions, the Company faces difficulties in attracting talent, leading to increased pressure on talent retention and inadequate reserves of talent needed for long-term development.

Risk	Risk Description
High talent recruitment pressure and high turnover rates	The mining industry's high safety risks and challenging working conditions reduce appeal to young talent, increasing recruitment difficulty and turnover, which may affect sustainable operations.
Inadequate internation- al and diversified talent reserves	The globalisation strategy requires exceptional talent with global vision, but current reserves of international management and core technical personnel are insufficient, potentially impacting operational efficiency and strategic goals.
င်္လြား လျှံ Shortage of local technical and managerial talent	Limited economic and educational resources in project regions lead to shortag- es of skilled technical and mid- to senior-level managerial local talent. Techno- logical advancements and industrial restructuring have further driven up the demand for highly skilled talent, widening the gap in the local talent pool.
Cross-cultural team management challenges	Effective management of cross-cultural teams is crucial in the internationalisa- tion process to ensure efficient collaboration. Poor handling of management and cultural integration challenges could undermine team performance.
Inadequate compensation competitiveness and incentive mechanisms	Mining companies face salary competition from other industries, and incentive systems may not fully unleash employee potential. In a globalised framework, disparities in compensation policies could result in the loss of key talent, impacting long-term development.

In light of the risks arising from our internationalisation and diversification efforts, we have embedded human resources strategy at the core of corporate development. Through diversified employment models, talent attraction and retention initiatives, optimised compensation and benefits packages, and career development and training programmes, we proactively address these challenges to bolster the Company's sustainable growth.

# Strategy and Management Approach

Respect for human rights underpins all our HR strategies and management practices, as detailed in the "Human Rights" chapter of this report. During the reporting period, we formulated and issued two key HR policies: the "Administrative Measures for Appointment, Probation and Assessment" and the "Detailed Rules on the Foreign Language Requirements for Certain HR Processes". These initiatives strengthen institutional frameworks to advance the two critical dimensions of employee development, including equal opportunities & career advancement, and continuous education.

#### O Diversified Employment Policies

To address the challenges of internationalisation and the scarcity of talents in the mining industry, we have integrated our diverse employment policies with the Company's long-term planning, striving to build a globally-minded, internationally competitive, and host-country-aligned diverse talent system and workforce structure. We also prioritise increasing female participation and influence in the mining industry, believing that gender diversity not only brings different perspectives and innovative thinking but also enhances the overall effectiveness of the team and our competitive edge.







We implement a global talent development strategy to continuously optimise our talent structure and accelerate the Company's international transformation. We are committed to enhancing global workforce diversity by attracting and pooling professionals from different countries and regions with varied backgrounds and expertise, fostering a dynamic, inclusive team. During the reporting period, we continued to recruit exceptional talent globally, launching specialised recruitment programmes for foreign professionals. To date, our employees come from 70 countries and regions worldwide, providing an ongoing stream of creativity for Zijin Mining's growth.

As of the end of the reporting period, the Company's total number of employees reached 55,690, with female employee ratio of 14.37%; the total number of contractor workers was 37,458. Detailed employee information is as follows<sup>1</sup>.

# 55,690



1. The workforce statistics were calculated after aggregating the numbers submitted by each subsidiary. Due to local laws or practices on anti-discrimination, protection of personal privacy, etc., certain subsidiaries are not allowed to collect certain information on their employees, such as age and gender. As a result, there are certain discrepancies between the total number of employees in the calculation of the employee ratio in each category and the actual total number of employees. In adherence to principles of diligence and accuracy, 2,155 individuals were excluded from gender and age ratio calculations in 2024.





Following the pattern of talent development cycles, we adopt forward-looking strategies to advance localisation and diversify talent development, addressing shortages of skilled local professionals.



Governance Environment

#### O Attracting and Retaining Talent

As Zijin Mining's globalisation and internationalisation efforts accelerate, the pressure on talent recruitment has increased. Building on our ongoing annual campus recruitment initiatives, we introduced innovative programmes such as the "Mid-Career Talent Recruitment Programme", the "Talent Scout Award Programme", and the "Global Key Talent Reserves Development Programme". These initiatives aim to redefine global talent standards, establish tiered evaluation criteria, and identify high-quality candidates across multiple dimensions—ultimately strengthening our ability to attract and retain top talent. During the Reporting Period, we hired 7,373 new employees, with a turnover rate of 8.49%.

Change Type	Total	By Gender		By Age			By Region	
Change Type	TOLAI	Male	Female	<30	30 ≤ N <50	≥50	China	Outside China
New hires (persons)	7,373	6,376	997	3,239	3,772	362	3,691	3,682
Turnover rate (%)	8.49	8.38	9.18	10.88	7.69	7.72	9.33	8.26
Turnover count (persons)	4,969	4,191	778	1,588	2,740	641	2,776	2,193

Employee Turnover

We recognise that young talents face significant uncertainties in employment and future career choices, leading to higher turnover rates, posing a considerable challenge for our talent retention efforts. To address this issue, we have taken a series of measures to help young employees quickly adapt to the workplace, clarify their future career paths, improve their working and living conditions, and enhance their sense of identification and belonging to the Company, thereby increasing staff retention rate. During the reporting period, we continued our "Graduates' Headstart Programme" and "Mentor-Apprentice Programme", providing personalised career support. Each new employee is assigned career, technical and operational mentors to help them quickly integrate and grow.

During the reporting period, our employee performance evaluation system covered all staff, incorporating KPIs/economic responsibility metrics, 360-degree assessments, duty reports, and specialised appraisals. Performance grades were determined based on comprehensive scores, with the results applied to performance-based salaries and recognition programmes in January of the following year. Our subsidiaries held regular "Young Talent Symposiums", where the management directly engaged with employees to address concerns about living conditions, work environment, and career growth, ensuring prompt resolution and improved satisfaction. In addition, we further leverage our overseas operation centres to establish structured standards and processes for internal personnel mobility. This enables us to swiftly allocate management and technical talent to key global projects. We continuously implement a two-way talent development model of "Global-China" and "Headquarters-Subsidiaries" to nurture outstanding young talent through practical experience on global projects, enhancing organisational vitality. Proactively identifying, evaluating, and supporting high-potential talent, we promote the appointment and growth of exceptional individuals while refining a "right person for the right role" talent management mechanism.

#### Comprehensive Remuneration and Benefits

Social

Appendices

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Based on the "Remuneration Policy", we have established a fair, employee-centric incentive structure centred on base salaries, guided by the principle of equal pay for equal work, complemented by performance bonuses, allowances, and benefits. This includes a point-based salary adjustment mechanism covering all employees, integrated with restricted share incentive scheme, employee stock ownership schemes, and special bonuses to create a comprehensive short-, medium-, and long-term incentive and retention framework.For recruitment, we offer competitive salaries exceeding industry standards to attract top talent resources to the Company. For current employees, we provide extensive benefits beyond statutory requirements, including housing, rental subsidies, continuing education sponsorships, family visit reimbursements, and festival bonuses. Additionally, facilities like libraries, medical rooms, gyms, and recreational amenities are also provided in all of our subsidiaries, enhancing employees' quality of life, thereby improving talent retention rates.







#### International Talent Development

Against the backdrop of deepening globalisation, Zijin Mining regards talent development and management as one of its core strategic priorities. During the reporting period, we progressively established talent management databases at all levels, completing assessments for "Gold Elites" (graduates), "Eaglet Plan Programme" participants, outstanding young talent, and other young professionals—tracking the development and growth of key talent.

With an international orientation, we continuously enhanced our education and training systems. Collaborating with external universities, we delivered two intensive off-the-job training programmes for mining electromechanical management personnel, comprehensively upgrading the capabilities of technical professionals in core mining disciplines. Additionally, we successfully obtained the independent qualification for accreditation of designated trades, further broadening career development channels for technical staff.

During the reporting period, we fully upgraded our online learning platform, iLearning, launching 32 new series and over 600 courses covering mining specialties, trade and logistics, safety, and environmental protection. 18,000 users accessed the platform, averaging 18.26 training hours—an increase of 12,000 users and 1.4 training hours compared to the previous year, demonstrating significant improvements in coverage and engagement.

Offline initiatives included specialised training in geology, construction, anti-corruption, branding, and ESG, alongside five sessions of the "International Perspectives Forum", aimed at enhancing employees' professional skills and global mindsets. Annual training sessions reached 186,300, with the average training hours for male and female employees increasing by 10.52 and 12.09 hours respectively compared to the previous year, reaching 40.50 and 42.38 hours respectively.

By position	Trainees (persons)	Training rate (%)	Average training (hours)
Senior-level employees	722	94.65	33.02
Middle-level employees	2,254	99.47	45.9
Junior-level employees	45,181	99.10	45.4

Employee Training



To enhance multicultural communication within the Company and support talent development across countries, we have adopted strategies such as global talent allocation, training, and the promotion of localised management personnel. During the reporting period, we successfully advanced specialised talent development programmes for projects such as Rosebel and Ruihai Mining, and launched the " Eaglet Overseas Project", a new programme to provide hands-on global training for outstanding young professionals. We also invited 48 exceptional employees from 12 countries to the headquarters for exchange and training, strengthening their sense of corporate identity and fostering global cohesion.

We further clarified that the promotion criteria for Chinese employees in subsidiaries are linked to the proportion of localised management personnel, aiming to further optimise the structure of international talent. As of the reporting date, non-Chinese local staff accounted for 24% of senior-level management, 54% of middle-level management, and 74% of junior-level management.

# 95.98 %

% 96.5 96.29 96.04 95.98 96 95.85 95.5 95.25 95.11 95 94.5 2019 2021 2022 2023 2024 Local Employment Rate

The localisation rate of management personnel at all levels2024Increase compared with 2023Senior-level24%2.7%Middle-level52%2.9%Junior-level74%2.0%

During the reporting period, the local employment rate at subsidiary project sites increased to 95.98%.



#### 💮 Decent Work Environment

We are committed to providing employees with a safe, healthy, comfortable and inclusive working environment to safeguard their physical and mental health, thereby enhancing both productivity and their sense of well-being. The Company strictly adheres to international labour standards and relevant laws, continuously optimising workplace facilities and management to ensure employees work in environments that are both decent and respectful of human rights.

To foster a healthy work atmosphere, we have equipped all offices and production bases with comprehensive facilities, including clinics, gyms, staff cafeterias, and rest areas. Additionally, we conduct regular occupational health checks, mental health counseling, and health workshops to support employees' physical and psychological well-being.

Through these efforts, we not only create decent work environments but also strengthen employees' sense of identity and belonging, providing a solid talent foundation for the Company's sustainable development.

#### Living Conditions for Serbia Zijin Mining's Contractors

Serbia Zijin Mining adheres to international labour standards, providing employees with comfortable and safe living environments while continuously collaborating with contractors to progressively incorporate contractor employee living conditions into cooperation thresholds. During the reporting period, new living quarters for major contractors were completed and put into use, featuring dormitories, canteens, activity centres, gyms, and other facilities to offer contractors' staff comfortable living and resting spaces.



#### **Future Plans**



| ↓ | ≣ |



# Occupational Health and Safety (OHS)

Safety is the cornerstone of Zijin Mining's sustainable development, and we uphold the right to life as the most fundamental human right. We are clearly aware of the significant opportunities to enhance our occupational health and safety (OHS) management capabilities and are determined to achieve "zero workplace fatalities" through the "Three-Year Action Plan for Safety System Enhancement".

#### Governance

Our OHS governance framework features a combination of a top-down management structure with a bottom-up continuous improvement approach. The Board's Strategic and Sustainable Development (ESG) Committee defines corporate safety strategic objectives and management directions. At the operational level, the Production Safety Committee, chaired by the President, serves as the highest decision-making body for OHS, production safety, and emergency management. An executive director and vice president is designated to oversee safety production and occupational health, supported by a dedicated safety director. The Emergency and Safety Operation Department manages daily safety operations. Business divisions appoint dedicated safety personnel to directly supervise safety compliance at subsidiary enterprises. All production units have established a safety management organisation and is staffed with full-time safety personnel. Contractors assume independent safety production responsibilities under project contracts and safety production management agreements.

Quarterly safety meetings convened by the Chairman and President review progress and issue directives. Monthly executive office meetings include safety performance briefings by the Emergency and Safety Operation Department. Business divisions hold monthly safety and environmental protection meetings, while mines and smelters conduct monthly safety meeting with contractors to jointly review achievements, identify issues and shortcomings in safety production, and discuss plans for the next steps.



Zijin Mining Occupational Health and Safety (OHS) Governance Structure

Manage — Monitor —



## **Risk Management**

#### 🔆 Risk

Identification

The main safety risks are concentrated in our main mining operations: mine exploitation, smelting and processing, and engineering construction. We emphasise a "risk prevention and dynamic management" approach through a risk tiered management mechanism, focusing on high-risk systems such as hoisting systems, ventilation systems, slopes, and tailings storage facilities. During the reporting period, we compiled 11 volumes of high-risk system ledgers. The identified major risks remained consistent with the previous reporting period.

Business Category	Risk hotspots	Risks	Risk management measures
Ocean ait mines	Open-pit slopes	Collapse	Regularly conduct slope stability assessments and establish slope displacement early warning and emergency response systems
Open-pit mines	Dumping ground	Collapse, striking by objects, falls from height, vehicle injury	Implement scientific dumping management strategies, strengthen protective systems, and enhance safety training
	Mine surrounding rock	Roof-falling and rib-spalling	Scientific excavation design and stress management, and implementation of standardised tunnel support and maintenance
Underground mines	Mine ventilation	Poisoning and suffocation, heat stroke	Install air monitoring equipment and keep ventilation systems in good operation and maintenance
	Lifting transportation system	Lifting accidents, vehicle injuries	Regularly inspect, maintain and upgrade equipment, and strengthen operator training and management
Other high-risk	Civil explosives	Blasting, gunpowder explosion	Standardise and enforce strictly management of the storage and use of civil explosives, and the construction of storage facilities that are safe and compliant with regulations
processes and systems	Tailings storage facilities (TSFs)	Dam failure, flood over-topping, blockage or damage to flood discharge facilities	Please refer to "Tailings Management" section for details

Main Safety Risks for Mining Operations

#### 🔅 Risk Control

As part of the "Three-Year Action Plan for Safety System Enhancement" launched in the previous reporting period, we collaborated with an expert team from the China Occupational Safety and Health Association to conduct on-site inspections at our 19 mining subsidiaries in China. By the end of the reporting period, 2,205 potential safety hazards had been identified, of which 2,070 have been rectified, achieving a rectification rate of 94%. This has reduced various safety risks to a large extent. For high-risk systems in underground mines, including hoisting systems and ventilation systems, we carried out targeted inspections. In partnership with professional research institutes, we completed diagnostic inspections of 49 hoisting systems at 10 subsidiaries, uncovering 994 issues addressed through corrective actions. Concurrently, we initiated hazard assessments and safety management support for other projects.





#### Quantitative Risk and Opportunity Analysis

Following the results of our topic financial materiality analysis, we initiated statistical tracking of the financial impact exposure of production safety risks and began modeling analysis from this reporting period. During the reporting period, we completed quantitative statistics on the immediate financial impact of safety incidents, and used these data alongside scenario simulations and internal interviews to estimate potential risk exposure ranges.

Our quantitative risk analysis considers three financial impact factors of production safety incidents: direct economic losses, indirect economic losses, and potential reputational/intangibles risks. Using the iceberg model of incident economic losses, we refined the model based on current-period data to conduct preliminary exposure assessments.

During the reporting period, all recordable incidents resulted in RMB16.83 million in direct economic losses and RMB89.07 million in indirect losses. These incidents also posed potential negative impacts on financing costs, corporate reputation, employee confidence, and securities prices. Applying a comprehensive impact coefficient for fatalities as a parameter, we derived the following curve.<sup>1</sup>During the reporting period, potential negative impacts were estimated at approximately RMB900 million based on modeling. Ongoing monitoring related risks and refining our models will be conducted to enhance accuracy.<sup>2</sup>

Additionally, based on safety investment-returns analysis, we further evaluated the returns on our production safety investments. Most historical safety investments have reached Phase III, while investments in the past three reporting periods remain in Phases I and II, with total inputs still below the optimal input point on the marginal input-output curve. According to comprehensive safety investment-benefit assessments, we will increase annual production safety investments to continuously control major accident risks and strive toward the zero fatality target. This will directly increase short-term capital expenditure but is expected to achieve cumulative 2-3 times safety risk exposure control benefits over the full lifecycle of the investments (5-10 reporting periods).

Potential negative impact (Y)



Fatality Severity-Potential Negative Impact Curve



Safety Investment-Returns Curve

1. In the design of this curve, we defined a comprehensive fatality severity index, A, based on the number and severity of fatalities. Taking into account the general understanding of A's association with negative impacts, we determined the factor B for each point using a Sigmoid function.

2. In the design of this curve, recognising that the potential negative impact of fatalities has an upper limit, we set the maximum Y value for each point at 10% of our operating revenue during the reporting period, which totalled RMB30.36 billion

Within the model, certain parameters were adjusted to shift the central point, ensuring a value of zero in the absence of fatalities. However, there may be discrepancies between the attenuation curve and the marginal effect theory of accident consequences, necessitating ongoing data monitoring for further optimisation. Qualitative factors such as media sentiment indices, emergency response capabilities, and capital market reactions have not yet been successfully integrated into the model.



# Strategy and Management Approach

During the reporting period, we fully advanced the "Three-Year Action Plan for Safety System Enhancement" as planned, integrating action objectives and plans into our safety management practices.



#### 💮 OHS Management System

Our Occupational Health and Safety (OHS) management system strictly adheres to ISO 45001 standards, incorporating host-country laws, regulations, and industry best practices. Recognising gaps in integrated OHS management for contractors, we focus on improving their reporting and analysis of minor incidents while optimising operational processes to prevent major accidents. To support these efforts, Zijin Construction Company has been established to explore self-operated mining engineering and general contracting models. This approach enhances contractor stability, ensures consistent training, and reduces safety risks for contractors.

During the reporting period, we optimised the safety management system by shifting focus to accident prevention. This included refining safety process control indicators and the mine safety responsibility system with new metrics for personnel, equipment, operations, and contractor compliance. The "Safety Supervision and Assessment Management Policies" was revised to implement safety points system for key roles and phase in a company-wide safety scoring mechanism. Drawing lessons from industry leaders, we increased the proportion of safety performance-based pay in total salaries to incentivise employee engagement. Performance management was strengthened through updates to the "Management Policies on Work Safety Accident Accountability". Specialised guidelines for high-risk systems were issued, including the "Mine Ventilation Safety Management Guide", "Hot Work Safety Regulations", and the "Shaft Construction and Hoisting Electromechanical System Standards Compilation".

To evaluate the safety performance capabilities of leadership personnel, we evaluated management effectiveness using questionnaires, interviews, and observation forms across four key dimensions—"responsibility, capability, diligence, performance"—and ten aspects such as risk control, full employee engagement, and compliance screening. Based on the results, we provided recommendations for improvement. A total of 4,257 valid surveys and 12,355 360-degree evaluation questionnaires were collected, 51 interviews were conducted, and the behaviour of 166 frontline workers was observed. These efforts aim to guide management personnel at all levels in comprehensively enhancing their safety management skills and performance capabilities.



# 100 %

Our OHS system successfully passed the annual supervision audit of ISO 45001 conducted by a third-party certification body in June 2024. During the reporting period, 100% of our operational sites under control for over three years achieved ISO 45001 certification.



#### Occupational Health and Safety (OHS) Training

Our OHS training primarily relies on the Zijin Safety Skills Training Centre, which conducts monthly specialised safety programmes. During the reporting period, over 60,000 person-times participated in training sessions. For core safety management personnel, we organised safety leadership workshops, five sessions of in-house safety trainer training, four sessions of safety training for mine mid-level managers under 35, and specialised hoisting system management training, totaling approximately 1,000 participants. Additionally, 513 frontline full-time safety staff underwent training for registered safety engineers, with 670 participants trained.

Beyond continuous training for safety managers, we used the centre's equipment to enhance frontline operators' skills. Through two drill jumbo operator safety skill workshops integrating theory, simulation, and hands-on practice, we rapidly build a talent pool of skilled workers with a background in mechanisation.

To address limited coverage of a single training centre, we established the Safety Skills Training Centre in Serbia Zijin Mining during the reporting period, offering comprehensive training in safety, professional skills, management, and certifications in OHS, environmental protection, and other critical areas. We will continue expanding global professional safety training centres to form a worldwide network of mining safety training facilities.

To enrich our safety training knowledge base, we developed 17 high-risk job safety management manuals and 109 safety manuals for other roles, providing standardised guidance for operations and training. To address limited training resources at some projects, we expanded the Zijin Safety Academy online platform with additional 4 hours of safety policy videos, 46 animated accident case studies, and daily safety knowledge updates, totaling over 600 course materials.

During new employee training, we identified gaps in contractor safety training instructors, training materials, facilities, and scheduling. Using Zijinshan Gold-Copper Mine as a pilot, we implemented an integrated safety training model to directly include contractors in our system, comprehensively enhancing the safety training standards for contractors and reducing the risk of training gaps. We will continue to monitor the effectiveness and applicability of the integrated safety training model and make ongoing improvements based on the pilot results, with plans to expand its implementation in the future.

Type of training	Participants	Training hours (10,000 hours)	Pass rate (%)
Three-level safety training for new employees	12,525	52.87	100
Three-level safety training for new contractors	57,631	197.04	98.60
Continuing training for current employees	291,931	106.07	99.77
Continuing training for current contractors	193,431	76.27	99.41

# Employee Health

#### 🔘 Occupational Health Management

We adhere to the core occupational health management policy of "prevention first, combined with treatment and control", committed to preventing and minimising work-related health impairments and ensuring the safety and health of the working environment for employees and contractors.

Our OHS system starts with the "three simultaneities" of occupational disease prevention (simultaneous design, construction, and operation of OHS facilities and main projects), creating a work environment and conditions that meet national occupational health standards and requirements from the source. For existing risk factors, we leverage continuous innovation in technology and processes to reduce exposure to risks, ensuring risk control through ongoing risk identification and analysis.

Our operations prioritise dust, toxin, and noise prevention, while also addressing emerging occupational hazards such as unhealthy work habits and job-related stress in daily management. At the same time, we provide all employees exposed to occupational health risks with periodic occupational health checkups and comprehensive health support services, including health monitoring, emergency medicines, medical insurance, chronic disease health support, on-site first aid, and psychological health counseling. During the reporting period, 7 additional enterprises were certified as "Healthy Enterprise1", bringing our total to 14, committed to building a solid foundation for the health of all employees.



Periodic Health Examination

1. During the reporting period, the "Healthy Enterprise" titles of our two subsidiaries were upgraded from municipal-level to provincial-level, so there are differences in the changes between the number of awarded titles and the total count.



Due to the construction of some of our projects in high-altitude regions, during the reporting period, we have identified altitude sickness as a new employee health risk that requires attention. At all high-altitude projects, we have equipped with sufficient oxygen supply equipment to reduce discomfort caused by hypoxia. Management and treatment mechanisms for altitude sickness and high-altitude illness have also been established to minimise the risk as much as possible.



#### Julong Copper's High-Altitude Sickness Prevention System

Situated on the Qinghai-Tibet Plateau, Julong Copper operates in an environment characterised by extreme cold, low oxygen levels, and harsh natural conditions. Prior to implementing enhanced health protocols, employees faced relatively high risks of altitude sickness and acute illnesses, with long-term exposure leading to health issues such as polycythemia and ventricular hypertrophy.

To effectively address these challenges, Julong Copper has actively sought solutions, establishing a close collaboration with the team of Academician Wu Tianyi. Leveraging the team's high-altitude medical research achievements, the company has developed a comprehensive high-altitude illness prevention and treatment system. In daily operations, the company strategically adjusts employees' work and rest schedules to prevent fatigue, optimises the working environment, and improves oxygen supply conditions as much as possible. Utilising advanced technological equipment, the company conducts real-time monitoring and early warning of health conditions and environmental risk factors for employees, ensuring that any anomalies are detected promptly and appropriate measures are taken.

The company has also scientifically allocated sufficient medical equipment and medicines based on the actual needs of the mining area, ensuring that preliminary treatment and emergency handling can be promptly provided when employees experience health issues. For potential high-altitude illness, the company has developed detailed emergency response and rescue plans, clearly defined the responsibilities and workflows of various departments and personnel, and regularly organises drills to enhance emergency response capabilities.

Additionally, the company places a strong emphasis on employee wellness and has precisely formulated a wellness plan. This includes providing nutritionally rich meals to meet the nutritional needs of employees in the high-altitude environment; arranging comfortable accommodation to ensure good rest conditions; and setting up dedicated wellness and relaxation areas for employees to recover and relax outside of work hours.



During the reporting period, we detected occupational hazard factors at 58 operational sites. For all identified hazards, we formulated specialised risk control measures item by item to achieve the goal of zero exceedance of occupational hazard exposure limits across all enterprises. Additionally, we maintained 100% coverage of occupational health checkups for employees exposed to these hazards. As a result, we achieved the target of zero new occupational disease cases during the reporting period.

#### 🔘 Mental Health Support

In mining operations, our employees frequently face high levels of work-related pressure and challenging tasks, which can result in increased psychological stress. To ensure the mental and physical well-being of our workforce, we have implemented a range of psychological health support initiatives. These include regular counselling sessions, various mental health training programmes and workshops, as well as access to professional psychologists. These measures are designed to foster and maintain employees' psychological resilience and adaptability. Our mental health strategy aims to prevent and alleviate work-related stress, minimising the impact of mental health issues on employees and their families. By enhancing the overall psychological well-being of our employees, we also reduce the risk of errors in the workplace and drive improved business performance.





#### Infectious Disease Management

The safeguarding of our employees' and communities' health and well-being serves as the central objective of our infectious disease management. The Company adheres to the "International Health Regulations", pertinent legislations of the host country, and various recommendations set forth by the World Health Organization (WHO), having established an infectious disease management system grounded on health information reporting and emergency management. This system is tailored to address the principal infectious disease risks faced by each project.

For the infectious disease malaria, which we have long focused on preventing and controlling, we continue to implement measures in malaria-endemic regions. These include Indoor Residual Spraying (IRS), Reactive Case Detection and Treatment (RACDT), and other initiatives aimed at further reducing the risk of malaria for our employees and surrounding communities. During the reporting period, the medical facilities at our mining sites maintained an adequate stock of malaria treatments. Additionally, we enhanced our emergency referral capabilities beyond our internal systems by partnering with SOS to ensure that all employees and local communities can access timely medical assistance in the event of malaria infection. We also recognise the additional health protection provided by the malaria vaccine recommended by the WHO, along with the progress being made by more countries in gradually eliminating malaria. We believe that, over time, the risk of malaria for our employees and communities will continue to decline.

We remain vigilant against infectious diseases such as monkeypox, HIV, and cholera, maintaining readiness to respond to future pandemics. Our commitment is to safeguard the health and well-being of our employees and surrounding communities to the fullest extent possible.

#### Emergency Management

Despite the comprehensive Occupational Health and Safety (OHS) management system in place to minimise the probability of accidental incidents, we still maintain a high standard of response capability for any emergencies. We require all mines to form top-tier mine emergency rescue teams endowed with a wealth of professional knowledge. These teams are equipped with multiple emergency rescue professionals and apparatus, and they routinely receive capacity training and conduct drills to address various sudden situations.

We have established emergency response systems across all production enterprises, with 1,099 incident-specific contingency plans and 17,108 fulland part-time rescuers supported by technical experts in infrastructure, machinery, electricity, and chemistry. Leveraging mine heavy vehicles and a tiered duty system, we ensure 24/7 global emergency response for internal incidents (e.g., mine accidents, tailings dam failures) and external crises (e.g., earthquakes, floods, community emergencies).

Julong Copper's emergency rescue team successfully passed Tibet Autonomous Region's standardised assessments during the reporting period, becoming the region's first non-coal mine emergency unit to achieve this certification.

While maintaining advanced equipment, we prioritised enhancing rescue teams' professional skills through 4,332 real-world emergency drills covering all operational projects. These drills involved 70,447 employee participations and simulated various types of emergency scenarios such as firefighting, tailings accidents, and first aid for workplace injuries.

During the reporting period, our emergency teams undertook 49 external rescue operations. Subsidiaries such as Construction Company, Wuping Zijin, and Zijin Engineering Technology collaborated with the National Emergency Rescue Fujian Team to respond to the severe flooding in Fujian on 16 June. Their efforts included clearing 17 blocked roads and rescuing trapped individuals. Xinjiang Jinbao and Liex each successfully rescued a person in distress during search-and-rescue missions. Meanwhile, Ashele Copper used mining vehicles to clear snow-blocked roads and ensure the safe escort of personnel. In another instance, Zeravshan deployed mining fire engines to extinguish a community fire.

Participating in competitions serves as a key method for us to identify areas for improvement through further exchange and learning. Our emergency rescue teams actively engaged in various emergency skill competitions, with subsidiaries like Norton and Continental Gold winning multiple awards in national emergency rescue skill competitions.

While we have established strong emergency response capabilities, we recognise that some gaps remain. During the reporting period, and prior to the publication of this report, we formalised a partnership with International SOS. This collaboration harnesses their expertise in medical and rescue response, as well as their global network of medical resources, to ensure swift and effective assistance for our employees and surrounding communities in times of emergency.



June 16 Rescue Operation by Zijinshan Gold-Copper Mine



#### Hazardous Chemicals Management

We strictly adhere to international and local hazardous chemicals regulations, implementing safety protocols to ensure the secure handling of chemicals such as cyanide:



During the reporting period, we recorded no major incidents or fines related to hazardous chemicals and maintained compliance with the "Minamata Convention on Mercury," committing to gold extraction processes free of mercury and refusing third-party mercury-produced gold. For naturally occurring mercury in ores, we implement dust collection and monitoring during mineral processing and smelting to ensure compliant emissions.

#### Enhancing Safety Through Technology

Technological advancement is central to reducing human risk. During the reporting period, we focused on addressing safety risks in narrow vein underground mining and open-pit vehicle operations, prioritising R&D in mechanised intelligent mining and smart vehicle dispatch systems to mitigate hazards for employees and contractors.

To address the technical challenges posed by narrow vein mines—such as small tunnel cross-sections, low mining heights, and narrow mining widths—which hinder mechanised and intelligent mining, we have advanced the development and application of small, lightweight equipment. We successfully developed six types of compact equipment tailored to four key scenarios: drilling, hauling, support, and hazard mitigation. To date, 31 units have been deployed, significantly reducing safety risks and the physical strain on workers. This initiative has been recognised and promoted by the China National Mine Safety Administration (NMSA).

During the reporting period, Xinjiang Zijin Zinc and Duobaoshan Copper focused on addressing vehicle transportation risks by developing and implementing an intelligent vehicle safety management system. This system provides safety control features such as alerts for unsafe driver behaviour, collision warnings, overspeed alarms, retaining wall proximity warnings, and real-time vehicle tracking. Additionally, it includes management support functions such as statistical analysis and the dissemination of real-time dispatch information, effectively reducing safety risks caused by both human and non-human factors during vehicle operations. During the reporting period, Xinjiang Zijin Zinc successfully deployed the intelligent management system on 354 mining trucks, 44 excavators, and 15 support vehicles. At the same time, as a national pilot unit for intelligent mine construction standardisation, Julong Copper in Tibet has actively advanced the research and application of "5G + autonomous driving" technology in high-altitude environments. This has enabled multiple autonomous transport vehicles to operate effectively under complex road conditions.





# Metrics and Performance

During the reporting period, there were 6 workplace fatalities across mining operations, resulting in a toll of seven lives, which underscored a considerable gap from our "zero fatalities" goal. We profoundly acknowledge the shortcomings and deficiencies in our OHS management system and recognise that safety management remains a long and arduous journey. After each incident, the Company immediately issued warnings to all subsidiaries and convened dedicated safety meetings. Using the 5-Why analysis method, we conducted thorough analysis into each accident to extensively identify safety management system gaps and deficiencies in safety culture highlighted by the accident. Corrective actions were promptly implemented, and the cases were compiled and shared across the Group to foster learning and reflection, aiming to prevent reoccurrence. During the reporting period, to encourage accident reporting and analysis, we adopted a "countermeasure-focused, lenient-penalty" approach to minor accidents, improving data collection accuracy. Consequently, our TRIR (Total Recordable Injury Rate) and LTIR (Lost Time Injury Rate) experienced a moderate increase due to more comprehensive reporting.

Indicator	Unit	2024	2023	2022	2021	2020
Number of employee fatalities	Person	1	1	1	4	0
Number of contractor workers fatalities	Person	6	10	2	4	2
Days lost due to work-related injuries	Day	4,887.50	9,503.00	12,940.00	2,540.75	5,909.50
Lost time injury frequency rate (LTIFR) per million work hours	/	170.89	311.33	494.38	105.62	328.35
Lost time injury rate (LTIR) per million work hours	/	0.34	0.25	0.29	0.30	0.33
Total recordable injury rate (TRIR) per million work hours	/	1.50	0.91	0.64	0.68	0.69
Near-miss incident rate per million work hours	/	0.75	0.88	0.14	0.18	0.07
Total number of hours worked	Million hours work	ed 228.80	244.18	209.39	192.44	143.98



Production Safety Data

# **Future Plans**

	र्द्धः 		<u>ප</u> 	
With a focus on responsibility implementation, policy enforcement, and system effectiveness, continue to strengthen efforts to	Undertake specialised risk governance of core hazards, including underground hoisting/ven- tilation/drainage systems, roof/cavern stability, open-pit slopes, dump sites, construction machin- ery/vehicles, high-risk projects, tailings dams, and large-scale	Advance "mechanisation, automation, and intelligentisation" alongside safety informatisation. Deploy production safety visual networking, expand research and application of customised mining equipment, and replicate vehicle safety manage- ment systems. Establish standards for major risk control and leadership accountability, while implementing automated informatisation	Enhance the effectiveness of safety education and training, develop tiered training programmes for different employee levels, optimise safety resources, refine job-specific safety manuals, compile professional training materials, create visual training aids, and build a question	Provide subsidiaries with headquarters-led capacity-building initiatives to elevate safety management capabilities.
comprehensively enhance intrinsic safety standards.	mechanical and electrical equipment.	supervision mechanisms.	database.	





Mining and communities share an interdependent and mutually influential relationship. We align with the UN Sustainable Development Goals (SDGs), integrating our philosophy of "Value Creation and Common Development" into every facet of its operations. While driving economic growth in host countries and regions, we ensure local communities share the fruits of our development. Our ambition is to deliver sustained positive impacts through respectful, transparent engagement and collaboration with all stakeholders to advance sustainable progress.

### Governance

Zijin Mining's community strategy is centrally planned and coordinated by the Strategic and Sustainable Development (ESG) Committee under the Company's Board, with the ESG Management Committee being responsible for establishing a comprehensive community management framework and accountability mechanisms. At the operational level, the ESG Office at the headquarters collaborates with business departments to develop subsidiary-specific community policies, systems, and procedures, coordinating community project investments and planning across operations while assessing and managing enterprise-wide community risks. Subsidiaries maintain dedicated community affairs work departments to handle day-to-day activities such as local community engagement, philanthropic donations, and implementing community development initiatives.



Zijin Mining Community Governance Structure

Manage — Monitor —





#### **Risk Management**

Our operations are distributed across diverse regions, with most mining projects located in developing countries or areas that may face challenges such as historical conflicts, inadequate infrastructure, or immature legal systems. While committed to delivering positive impacts through mining activities and operational measures, we acknowledge the risks inherent in these environments. We therefore continuously identify, monitor, and address potential risks to foster partnerships with communities, co-developing solutions to societal issues and building harmonious, stable, and sustainable neighbourhoods.

We employ the "Social Impact and Opportunity Assessment" (SIOA) framework to systematically categorise risks into high, medium, and low levels based on their scope, severity, and duration of impact on communities. This process culminates in a community risk map for proactive management.

Through this assessment, our identified risk primarily stems from artisanal and small-scale mining (ASM). In project regions such as Colombia, Suriname, and the Democratic Republic of the Congo, many communities rely on traditional artisanal mining, which may give rise to multifaceted challenges (please refer to the Human Rights chapter for details).

# Strategy and Management Approach

Zijin Mining's community initiatives strictly adhere to international norms and standards, including the "Ten Principles of the United Nations Global Compact", the "Responsible Gold Mining Principles" (RGMPs), and IFC Performance Standard 4, integrating the UN Sustainable Development Goals into community performance management. Our policies including the "Social Responsibility Policy" and "External Donation Policy" standardise community relationship management for various operational projects. During the reporting period, to support the implementation of community initiatives across mining operations and align with the practical needs of international projects, the Company developed several policies and guidelines, including the "Indigenous Peoples Policy", "Guidelines for Land Acquisition and Involuntary Resettlement for Overseas Operations", "NGOS Engagement and Collaboration Guidelines", and "Guideline on Community Engagement and Investment for Overseas Affiliates". These policies and guidelines set out the fundamental principles and detailed procedures for community management, enabling subsidiaries to carry out community management activities in a more standardised and responsible manner.

#### Community Communication and Engagement

In mining operations, establishing community communication and engagement mechanisms is critical to maintaining "social licence" and mitigating social risks. Through a systematic stakeholder engagement framework, we ensure precise dissemination of operational philosophies while effectively addressing community concerns, fostering alignment between mining activities and regional development. This approach not only strengthens positive community relations but also serves as a key safeguard to minimise adverse social impacts.

#### "Transparent Community" Development

Guided by the "Transparent Community" concept, the company has established a multi-stakeholder collaboration mechanism centred on "two-way transparent communication + grassroots community development". Operational units build long-term, trusting relationships through regular community visits by management and stakeholder dialogue platforms, while subsidiaries implement innovative engagement approaches including: Liex's "Community Dialogue Bridge" Monthly Joint Conference Mechanism, Serbia Zijin Mining and Serbia Zijin Copper's multi-level communication matrix (combining Community Service Centres, press conferences, and mine open days), and Manono Lithium's specialised social responsibility report addressing stakeholder visits, achieving 100% transparency in operational information through town hall meetings, media briefings, and other interactive formats.

#### Liex's "Community Dialogue Bridge" Monthly Joint Conference

During Liex's project implementation, the company recognised that community engagement and trust are critical to ensuring smooth project progress. However, information asymmetry often led to misunderstandings or communication gaps between the community and the company. To address this, Liex established a regular communication mechanism, hosting monthly meetings with community representatives from sectors such as education, healthcare, sports, and agriculture. This platform enables Liex to stay informed about community needs and feedback, and to share updates on project developments, future plans, and a shared vision for sustainable growth.





#### Manono Lithium Social Responsibility Report Launch

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"Manono Lithium's social responsibility initiatives are a shared source of pride—a testament to achievements beyond my wildest dreams. I extend gratitude to the regional government and security council for their unwavering support. Now, all of Manono stands to benefit, which is why I urge our youth to set aside differences, unite, and back this company as we drive regional progress together."

— Chief Luba Mwilambwe WaNsenga Sebastian

On 11 October 2024, Manono Lithium hosted the Social Responsibility Report Launch & FOCAC Spirit Implementation Seminar at the Old MONUSCO Base, attended by representatives from local government, tribes, financial institutions, and civil organisations. The event marked the official release of Manono Lithium's first social responsibility report, detailing its environmental governance, community development, and employee welfare initiatives. Manono Lithium also announced securing the mining license, symbolising a new era of sustainable resource development and economic momentum for the area. Attendees engaged in in-depth discussions on topics including sustainable mining practices, community benefit-sharing mechanisms, ecological conservation collaboration, and healthcare improvements, reaching consensus on mutually beneficial growth.



The Company's community grievance response mechanism serves as a vital institutional safeguard for maintaining social licence to operate. Built on the UN Guiding Principles on Business and Human Rights (UNGP), this end-to-end management system addresses core issues including ecological protection, indigenous rights, involuntary resettlement, cultural heritage preservation, and livelihood sustainability. Through multilingual grievance channels and a stakeholder feedback loop, we ensure transparent end-to-end management from grievance collection to solution implementation. During the reporting period, we handled 357 community grievances (including historical unresolved issues), achieving an 88.80% resolution rate. New grievances in 2024 primarily focused on community development.



#### Social Contributions and Community Development

The Company injects economic momentum into local communities through payroll disbursements, procurement of local goods and services, and payment of taxes and royalties, fostering employment, industrial growth, and improved livelihoods. The Company's community investment decisions and goals align with community priorities and actual on-site needs. After understanding residents' needs and considering social issues, the Company carries out multi-sectoral community development projects tailored to local conditions, ensuring sustainable livelihoods for community members. During the reporting period, total community development investment reached RMB812 million, including RMB287 million in philanthropic donations.







#### Economic Development and Livelihoods

We actively promote local economic diversification and value chain collaboration, exploring the potential for local characteristics and traditional industry development, offering training in business operations and cultivation to local farmers, aiming to elevate commercialisation and establish distinctive industry brands. In terms of local products, we prioritise local procurement to support local enterprises and help them integrate into our supply chain.

In South America, Continental Gold merged environmental protection with community economic revitalisation through a beekeeping initiative, establishing habitats for bees while creating income-generating opportunities for residents, while Liex collaborated with governments to build abattoirs for pastoralists, supporting livestock value addition, job creation, and industrial chain expansion.

In Africa, COMMUS and Carrilu implemented a maise support programme offering full-cycle expert guidance (sowing, fertilisation, pest control) to improve crop yields, quality, and food security.

In Asia, Zeravshan launched a "Local Entrepreneurship" initiative, organising women's vegetable and fruit cultivation with guaranteed pre-purchase agreements to promote community development. Bayannur Zijin addressed production oversupply by purchasing over 10 tonnes of watermelons from neighbouring villages and distributing them to frontline workers, effectively combining charitable support with economic stimulus.

# Community Capacity Building and Education Improvement

Capacity building, training, skills development, and education are critical to community success throughout a mine's lifecycle. We regularly invite industry and cross-sector partners to share best practices. Our commitment to localisation employment strategies provides skill training and internship opportunities for residents and graduates, equipping them to meet hiring standards while retaining job opportunities within host communities. Additionally, our localisation policies foster employee career growth through continuous education and development programmes, strengthening community ties and driving sustainable local economic progress.

In Europe, Serbia Zijin Copper signed a memorandum of understanding with the Confucius Institute at Niš University and Bor City High School for the Zijin Talent Excellence Programme. This initiative promotes cultural exchange, cultivates globally minded professionals, and will potentially inject vitality into Serbia's future development.

In South America, Continental Gold offers specialised skill training for individuals aged 14 years and older, particularly rural and township residents. Participants enhance technical and soft skills through three training courses, laying groundwork for employment and entrepreneurship. This programme advances equitable access to education, boosts employability and innovation, and builds foundations for long-term community prosperity.

#### Community Health

Prioritising resident well-being, we actively engage in medical assistance programmes, demonstrating a steadfast commitment to improving community healthcare conditions and enhancing health standards while contributing to sustainable development. Collaborating with local medical institutions and philanthropic organisation, we continuously optimise allocation of medical resources and expand healthcare service coverage to deliver better medical services and healthier living environments. These efforts strengthen our corporate social image, deepen community bonds, and foster a harmonious and prosperous social environment.



#### Serbia Zijin Mining' s "Healthy Childhood" Programme

In Serbia, some rare diseases are not covered by standard health insurance, requiring patients to seek treatment in countries like Italy, Germany, or the United States—a cumbersome and costly process often exceeding many families' financial capacity. As Serbia's first enterprise to launch a programme aiding children with rare diseases, Serbia Zijin Mining initiated the "Healthy Childhood" programme, signing a collaboration agreement with the Podrži Život (Support Life Charity Foundation) to donate approximately USD500,000 for treatment. Katarina Danojlić, the foundation's Project Manager, praised Serbia Zijin Mining's initiative as a "a godsend" that has galvanised public attention and participation in rare disease care, reinvigorating hope among foundation staff and families.



Our corn support programme yields a bountiful harvest



Continental Gold-sponsored college students have successfully completed their education





#### Manono Lithium's "Sweet Spring" Healthy Water Supply Project

Located in Kanteba Settlement and surrounding villages in the Democratic Republic of the Congo, chronic water shortages forced residents to walk over two hours for water or rely on contaminated rivers, endangering children's health. On 10 November 2024, Manono Lithium's "Sweet Spring" Healthy Water Project delivered its first water tower, constructing a supply system featuring three large water storage tanks and multiple centralised distribution points in Kanteba and Luba Village. The initiative provides clean drinking water to approximately 50,000 villagers, significantly improving living conditions and resolving longstanding challenges of water accessibility.



#### Cultural Exchange

Zijin Mining is committed to fostering deep interactive relationships with local residents through community cultural initiatives, actively promoting the integration and exchange of diverse cultures. The company organises vibrant community activities, participates in local traditional festivals, and supports cross-cultural programmes, demonstrating respect and inclusivity for diverse cultural heritages.

#### From Music to Art: Zijin's Cultural Bridges Between Mining and Communities in Serbia

#### (1) Easter Workshop Activities

On 5 May (Orthodox Easter), Serbia Zijin Copper organised an Easter performance workshop for employees and their families, fostering family time through egg decorating competitions, face painting, and puppet shows. The event encouraged children's creativity while demonstrating the company's care for employees and respect for multicultural traditions.

#### (2) China-Serbia Friendship Concert

In collaboration with Niš University, Serbia Zijin Copper hosted the "Bor Serenade" China-Serbia Friendship Folk Concert, attended by over 150 Bor government officials, community representatives, and staff. The event featured Chinese erhu musicians, Bor Music School performers, and folk dance troupes, delivering a cultural spectacle that strengthened Sino-Serbian artistic exchanges.

#### (3) Zijin Art 2024 Painting Competition

The competition, themed around Zijin's green mining practices as well as the natural scenery and cultural landscapes of Bor and Majdanpek, invited artists to depict green mining practices on canvas using either realistic or abstract styles. The event attracted 50 artists from Belgrade, Niš, Pančevo, Bor, and other regions. As the second iteration of this competition, it quickly gained high recognition from Serbian artists and has become a marquee event.



Indicator	Unit	2024	2023	2022	2021	2020
Direct economic contribution	RMB100 Million	3,186.10	3,247.48	2,853.94	2,359.11	1,800.15
- Employee salaries & benefits paid	RMB100 Million	119.29	98.35	91.08	71.51	39.59
– Payments to suppliers	RMB100 Million	2,724.76	2,854.44	2,511.41	2,106.53	1,635.57
- Community donations	RMB100 Million	2.87	2.97	2.51	2.68	1.66
– Dividends paid to shareholders	RMB100 Million	105.66	96.60	81.15	53.75	35.07
- Interest paid to creditors	RMB100 Million	57.53	57.46	39.53	24.04	23.09
- Payments to government (tax paid)	RMB100 Million	175.99	137.66	128.26	100.60	65.17
Social contribution value	RMB100 Million	749.60	561.83	509.04	394.83	214.09
Social contribution value per share	RMB	2.82	2.13	1.94	1.53	0.84

Economic Contribution Data



To facilitate mining operations (including extraction, processing, and management), land acquisition is occasionally unavoidable. Throughout this process, we strictly adhere to established mining policies and procedures, ensuring full compliance with local laws and regulations while striving to meet industry best practice standards. Land acquisition across our global mining sites is conducted in strict accordance with internationally recognised principles of good practice, which include: transparent consultation with landowners, local communities, and government authorities to ensure all parties' opinions are respected; providing fair compensation to landowners based on fair market value, taking into account both the current state and future potential of the land; conducting comprehensive environmental and social impact assessments prior to land acquisition to minimise negative effects; encouraging community participation in decision-making through mechanisms such as community consultation committees; respecting and protecting human rights, particularly those of indigenous peoples and vulnerable groups; and maintaining a high level of transparency and accountability in all decisions and actions, with independent oversight. Guided by these principles, our approach integrates planning, implementation, and ongoing livelihood restoration.





Helping the vulnerable

Community Investment Data

#### Resettlement Action Plan (RAP)

A Resettlement Action Plan (RAP) is a detailed framework designed to ensure proper resettlement and livelihood restoration or improvement for communities displaced by mining projects. It encompasses:

Affected Group Identification: Collecting socioeconomic data to precisely identify individuals and communities potentially impacted by mining activities.

Land Acquisition and Compensation Framework: Establishing legal frameworks and processes to guarantee fair and reasonable compensation for affected residents.

Compensation Mechanism: Following transparent, equitable principles through consultations with landowners, communities, and government agencies to ensure all stakeholders understand and agree on compensation terms.

Budget Plan: A detailed budget covering land acquisition, compensation, demolition, resettlement (including temporary resettlement), grievance handling, monitoring, and evaluation to ensure efficient fund allocation.

#### Implementation of Resettlement Actions

Following RAP development, the implementation of resettlement actions translates relocation, compensation, and livelihood restoration measures into practice through a structured process spanning pre-relocation preparation to post-move support. Key components include:

Relocation and Resettlement: Provide affected residents who are dependent on the land with alternative plots of equivalent quality; offer reconstruction or replacement of commercial assets for those who have lost them; provide temporary housing facilities; enhance the construction of transport, education, and healthcare facilities; and organise skills training and employment counselling to assist residents in adapting to the new environment.

Compensation and Support: Offering temporary financial assistance for income loss, alongside vocational training and employment support. Long-term assistance mechanisms ensure sustained support for relocated communities.

Dispute Management: When significant disagreements arise with relocated residents, enhance communication and introduce a neutral third-party mediation agency. Regularly convene resident forums to understand their concerns and opinions, and respond promptly to resolve issues; establish a mechanism for resident representatives to participate in decision-making, allowing residents to be involved in the decision-making process of the resettlement plan; provide legal assistance and consultancy services to safeguard the legitimate rights and interests of residents.

Monitoring and Reporting: Establish a dedicated monitoring team, develop assessment criteria, track the implementation of the resettlement plan, and report to stakeholders to ensure transparency and fairness.

#### Livelihood Restoration

To help affected residents restore and enhance their economic conditions and quality of life sustainably, we assess the necessity of livelihood restoration plans based on critical factors including relocation methods, international standards/policies, host country legal requirements, population vulnerability, and long-term social stability. This process defines stakeholder responsibilities and develops comprehensive strategies covering:

Infrastructure and Public Services: Ensuring resettlement sites are equipped with essential public infrastructure (water, electricity, transportation, telecommunications, education, healthcare).

Skills Training and Development: Supporting entrepreneurship through vocational training and educational opportunities to help residents acquire new capabilities.

Employment Opportunities: Prioritising job placements for relocated residents within project areas according to their skills/qualifications, while collaborating with local enterprises to create additional livelihood alternatives.

Monitoring and Evaluation: Regularly tracking implementation progress, adjusting plans based on feedback/assessments, and engaging third-party evaluations of key pre/post-relocation indicators (productivity, livelihood recovery, development impact) to produce interim and final reports.

# **Future Plans**

We aim to integrate global community development projects by establishing a comprehensive investment framework and formulating short-, medium-, and long-term action plans to optimise governance and performance of social initiatives.



We will develop a unified grievance platform and performance evaluation mechanism aligned with international standards to ensure accountability. Through performance-driven community co-development practices, we will continuously enhance the capabilities of Zijin's community practitioners to foster sustainable partnerships and outcomes.



6

Employee Development Occupational Health and Safety Community Responsible Supply Chain Product Responsibility Information Security Technological Innovation

# Responsible Supply Chain

Guided by the shared vision of "Mining for a Better Society", we integrate social, ethical, and environmental considerations into all supplier collaborations. Through rigorous due diligence and risk management, we ensure every supply chain link adheres to responsible and sustainable practices—a prerequisite for engaging in business with us.

We prioritise collaboration with experts, industry alliances, partners, and clients to comprehensively understand product impacts and attributes across supply chains and lifecycles, ensuring alignment with high social and environmental standards. Through systematic management measures, we identify, prevent, and mitigate potential adverse effects, guaranteeing responsible and compliant sourcing and production of mineral resources. Zijin Mining remains committed to fostering mutually beneficial relationships with society, the environment, and supply chain stakeholders, collectively contributing to socioeconomic progress and community prosperity.

#### Governance

We maintain a top-down governance structure for responsible supply chain management. Under the strategic guidance of the Board's Strategic and Sustainable Development (ESG) Committee, the ESG Management Committee—led by the Vice President overseeing the supply chain—directs operational implementation. At headquarters, a responsible supply chain expert team collaborates across the Marketing Department and ESG Office. Divisions and subsidiaries in mining, smelting/processing, and trading sectors develop tailored management systems aligned with their specific supply chain roles and business characteristics, fostering responsible collaboration with upstream and downstream partners.



Zijin Mining Responsible Supply Chain Governance Structure

Manage — Monitor —



## **Risk Management**

We monitor risks across our global supplier network, including corruption, human rights, conflict, environmental, occupational health and safety, climate change, and product quality risks. We identify key suppliers based on factors like material volume, transaction value, and category to prioritise supply chain risk categories, then develop tailored management approaches accordingly.

Should we have justified concerns regarding specific risks associated with a supplier, we will immediately develop, adopt, and implement a risk management plan for upstream suppliers and other stakeholders, based on their specific position in the supply chain. This plan aims to mitigate or reduce such risks. For suppliers identified as posing extremely high risks, we will immediately suspend or terminate our cooperation with them.

Risk Name	Risk Description	Risk Mitigation
Corruption	Bribery, kickbacks, and opaque supplier selection in procurement may compromise fairness, compliance, increase production costs, and impact production efficiency and quality.	Strengthen anti-corruption training for key procurement positions, and establish mechanisms such as grievance reporting, internal controls, supervision, and auditing (for details, please refer to the 'Business Ethics' section of this report). Key positions and suppliers are monitored, with ongoing screening of suppliers for corruption and compliance issues.
Human rights & conflict	Mineral supply chains in high-risk regions may involve child labour, forced labour, unfair working conditions, or indirect funding of armed conflicts.	Trace the supply chains of key suppliers and refer to high-risk area lists such as the CAHRAS list and the Heidelberg Barometer. Conduct enhanced due diligence on suppliers in these regions to ensure effective control of supply chain risks.
Environmental protection&oc- cupational health and safety	Suppliers who harm the environ- ment or neglect labour health and safety are inconsistent with the Company's values. Their lax management could result in supply chain disruptions.	Integrate ESG reviews into supplier onboard- ing and daily management processes, covering aspects such as safety, environmen- tal protection, and legal compliance. Conduct on-site assessments for high-risk suppliers and provide necessary ESG training for key suppliers.

Supply Chain Risk Profile

# Strategy and Management Approach

We continuously encourage suppliers to conduct business responsibly and in alignment with ethical business practices, ensuring that their codes of conduct, as well as social and environmental performance, are consistent with Zijin Mining's standards.

To reinforce this alignment, we integrate compliance with the "Policy Statement on Supplier Management " into standard procurement agreements, emphasising shared ethical, safety, health, human rights, and sustainability commitments.

During the reporting period, we revised key documents including the "Measures for the Management of Sourcing and Procurement", "Supplier Management Measures for Material Procurement", and "Management Policy of Procurement for Smelting Raw Materials" to further strengthen our supply chain risk governance framework.

#### Supplier Qualification Assessment

We advocate for establishing long-term, stable relationships of integrity with our suppliers, setting up regular high-level communication mechanisms with them to enhance their awareness of fulfilling social responsibilities and advancing the construction of a responsible supply chain. Our supply chain spans the globe; therefore, we systematically share Zijin Mining's sustainability concepts, anti-corruption policies, environmental protection philosophies, and green procurement policies on our online procurement platform. Every supplier accessing our platform must complete and acknowledge the required materials before proceeding with registration, quoting, or other activities, ensuring compliance alongside us.

Our "Supplier Management Measures for Material Procurement" strictly regulate supplier assessment and access, assessing suppliers across Environmental, Social, and Governance (ESG) criteria. During the reporting period, we conducted qualification reviews for 3,366 suppliers, approving 1,882 material suppliers and 12 raw material suppliers with an admission rate of 56.27%. Notably, 100% of new suppliers were evaluated using ESG standards.







#### Supplier Review and Assessment

We regularly review and reassess suppliers, focusing on potential risks related to the environment, safety, business ethics, and human rights, and take appropriate actions accordingly. Suppliers who commit serious breaches of contract or legal violations may be blacklisted for 1 to 3 years; whereas those with significant quality issues, serious safety or environmental hazards, bribery, or who have been listed by government authorities in the "blacklist" for poor records in production and operational safety, will be directly removed from our list of suppliers and barred from future collaboration.

During the reporting period, we performed on-site assessments for 130 suppliers, prioritising sustainability and risk management. Through inspections, centralised evaluations, and ongoing verification, we maintained 553 critical suppliers, awarded excellent collaboration awards to 3 top performers, and recognised 3 outstanding partners with "Exceptional Collaborator" medals. A total of 215 suppliers were identified with actual/potential significant negative ESG impacts: 4 agreed to rectify issues, while 211 partnerships were terminated, including 127 suppliers with material ethical violations who were designated "permanent exclusion".

Indicator	Unit	2024	2023	2022
Total number of suppliers	\	22,065	6,712	5,444
- Number of critical suppliers	\	553	550	780
Number of new suppliers screened using environmental and social criteria	\	1,822	1,523	1,547
Number of suppliers assessed using environmental and social criteria	\	5,456	3,845	2,327
Number of suppliers identified with actual or potential material negative ESG impacts	\	215	7	3
-Suppliers which have agreed to take rectification measures	\	4	2	0
-Suppliers with terminated cooperation	١	211	5	3

Supply Management Data<sup>1</sup>

#### Colored Localised Procurement

We implement a dual approach of global and local procurement, giving priority to local sourcing whenever possible under equal conditions, with full consideration for community suppliers. This includes the following initiatives:



#### Local Procurement Strategy

Under the premise of reasonable pricing and quality of local products and services, projects will prioritise the selection of local products and services to support local economic development.



#### Local Market Assessment

Conduct research on the social and economic background of the project location, with particular focus on vulnerable groups who have not yet accessed employment or business opportunities due to unintentional or systemic reasons.



#### **Diverse Procurement Channels**

When carrying out localised procurement, projects will consider removing barriers that prevent small companies from participating in bidding, encourage various procurement channels, and develop strategies to overcome these hurdles, such as:

- Advertising tenders to enhance local awareness of bidding activities;
- Utilising concise pre-qualification processes to encourage more enterprises to participate in bidding;
- Streamlining and shortening the tendering process to adapt it to small businesses;
- Reducing the difficulty of providing documentation, acknowledging that suppliers may not have extensive performance track records and large turnovers, so requiring them to provide financial information over an extended period may be challenging.



#### **Community Cooperative Projects**

Relying on community development mechanisms, our community staff regularly engage with community representatives to understand the development and sales needs of local industries and products.

1. During the reporting period, the statistical scope of our supplier data was adjusted from "suppliers we have collaborated with" to "suppliers who have completed registration in our supplier management system", in order to more objectively demonstrate our supply chain management capabilities.



Through local procurement, we are able to support the growth of local businesses and contribute to the economic development of the community. We regularly monitor the share of local procurement, and during the reporting period, our local procurement rate reached 82.31%.



#### 💮 Responsible Supply Chain Management

In terms of raw material procurement, we have established a responsible supply chain system in accordance with the "Chinese Due Diligence Guidelines for Responsible Mineral Supply Chains". This system aligns with the requirements of the "OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas" and implements responsible management based on the six-step framework of due diligence standards. We adhere to the principle of continuous improvement, working with suppliers and stakeholders to discuss and formulate risk mitigation measures for identified risks. We guide and support suppliers in establishing and implementing their own responsible supply chain management systems and regularly follow up on the effectiveness of their risk mitigation efforts. Based on these results, we determine whether to continue or suspend cooperation with suppliers. Additionally, when market conditions change, we conduct additional risk assessments to ensure that our supply chain consistently upholds high standards of sustainability.





During the reporting period, we continued to conduct thorough due diligence on the sourcing of raw materials for cathode copper, zinc ingots, gold, and silver. To comply with the requirements of the "Chinese Due Diligence Guidelines for Responsible Mineral Supply Chains" regarding on-site assessments in high-risk areas, our smelters engaged third-party organisations to carry out on-site evaluations of copper and lead-zinc mines in the Democratic Republic of Congo (DRC) and Eritrea. These assessments identified no significant non-conformities with the guidelines. Additionally, Zijin Copper, Heilongjiang Zijin Copper, Jilin Zijin Copper, Bayannur Zijin, and Zijin Gold Smelting successfully passed their annual third-party audits for responsible sourcing. This demonstrates that the supply chain management practices for cathode copper and zinc ingots registered on the London Metal Exchange (LME), as well as gold and silver registered with the London Bullion Market Association (LBMA), are fully compliant with the responsible sourcing policies of these organisations. It also reaffirms the sustained effectiveness of our responsible procurement system.

## **Future Plans**







# **Product Responsibility**

Guided by our business philosophy of "Integrity in Commerce, Mutual Success through Collaboration", we strictly adhere to quality management systems and customer service protocols, including the "Zijin-Brand Product Quality Management Measures" and "Customer Service Management Procedures". We actively collect customer feedback on our products and services through various channels, ensuring their needs and suggestions are swiftly communicated to our production teams, driving continuous improvements in quality and service.

Given the nature of our business and customer base, we have established a more targeted, coordinated, and comprehensive product quality management system. In terms of quality management, our Technical Services and Supervision Committee oversees pre-production inspections, annual testing, and routine sampling for production units, while also ensuring quality assurance within our laboratories. Our Marketing Department handles all after-sales complaints and customer service for bulk concentrate mineral commodities. Meanwhile, for consumer-facing products such as jewellery and investment bullion under the "Zijin Gold" brand, quality-related feedback and complaints are directly collected and addressed by the relevant consumer-facing companies, brand stores, and online customer service channels.

### Bulk Commodity Quality Management

Internal control standards for gold ingot quality have been established with the "Quality Inspection Rules for Finished Gold Bullion". These rules ensure that the gold ingots leaving the factory meet 100% of the national product standards and the requirements of the Shanghai Gold Exchange SGEB1 gold ingot standard. The gold ingots, silver ingots, cathode copper, and zinc ingots produced by the Company respectively meet or exceed the technical parameters of the national standards. Zijin Gold Smelting is among the first batch of gold smelters recognised by the Shanghai Gold Exchange to provide as standard gold bullion provider and has been awarded by the Shanghai Gold Exchange for 17 consecutive years. The "Zijin" brand gold bullion and "Zijin" brand zinc bullion have passed the quality certification by the London Bullion Market Association (LBMA). The quality of the "Zijin" brand A-grade copper and "Zijin" brand zinc bullion have obtained official international recognition, and they are registered delivery brands at the London Metal Exchange (LME).

Through quality control of "Zijin" brand gold ingots at off-site refineries and annual on-site quality audits and blind sample assessments, we encourage improvement in quality management levels, ensuring 100% of gold bullion products meet standard requirements. Additionally, we evaluate the testing capabilities of subsidiary laboratories, promote standardised lab practices, and implement actionable improvements to enhance analytical accuracy. Routine random quality checks are performed on products, with immediate responses to address any issues identified. Through multidimensional quality control, we ensure the provision of high-quality products to the market.





# **Retail Product Quality Management**

Gold jewellery, as one of the most cherished forms of precious metal adornment, is often chosen to mark life's most meaningful moments. We fully recognise the expectations our products carry, which is why we embrace a "customer-first" philosophy in our quality management, making customer feedback and concerns the cornerstone of our quality assurance practices. Every retail item undergoes gold content and purity testing via a spectral gold analyser prior to distribution. Products meeting requirements receive certification from national testing institutions, which also conduct unscheduled full-category random inspections and destructive detailed testing to ensure compliance.

We have established a dedicated department responsible for managing customer service across the entire process—pre-sale, in-sale, and post-sale—as well as overseeing quality inspection. To create effective communication channels, we provide multiple avenues for customer support, including a 400 hotline, online platforms, and client managers. To ensure our customer service team upholds the "customer-first" philosophy, the Company incorporates customer service training and evaluations into the specialised development programmes for relevant employees. This ensures the delivery of the highest quality service in our daily operations.

Customer service personnel first conduct an initial assessment of request types, providing preliminary responses and documentation for issues spanning shipping, logistics, invoicing, sales interactions, product quality, accessories, and other concerns. Feedback is promptly routed to relevant departments or personnel for follow-up. Subsequent steps involve verifying the authenticity and root cause of issues, including inspections to determine if product quality is implicated. If necessary, third-party institutions are engaged for quality testing. Solutions are negotiated with customers based on investigation findings, with confirmed quality issues warranting free replacement or refund. Post-resolution, complaints are analysed to identify systemic improvements, preventing recurrence and driving continuous enhancements in product quality and customer satisfaction.



Indicator	Unit	2024	2023	2022	2021	2020
Qualified mineral product ratio	%	99.996	99.98	100	99.9	99.8
Number of products recalled for safety and health reasons	\	0	0	0	0	0
Number of complaints lodged due to safety and health reasons	\	0	0	0	0	0
Customer satisfaction rate	%	100	99.65	99.60	99.22	99.29
Wood used in bulk product packaging	Tonne	1,327	479	703	699	253
Bags for bulk product concentrates packaging	Tonne	4,586	2,887	3,818	1,841	2,370
Packaging materials for retail products	Tonne	25.34	/	/	/	/

Product Management Data

# 100%

During the reporting period, 400 after-sales complaints were resolved, achieving 100% customer satisfaction across all cases.





## Governance

We maintain an information security governance system overseen by the Chairman of the Board, with two core decision-making bodies established at the operational level: the "Information Technology Committee" and the "Information Security and Confidentiality Management Committee". These committees formulate information security policies, standards, and guidelines; approve major security initiatives; and direct information security system development across departments and subsidiaries.

The Information Technology Department serves as the primary authority for application system security, responsible for developing regulations, technical standards, and implementation plans. It also conducts regular evaluations of security effectiveness and provides oversight, guidance, and coordination for information security management.

Our subsidiary Zijin Zhixin acts as the core entity for the operation, development, and implementation of our information systems and industrial control systems, with all activities subject to management and supervision by the Company's Information Technology Department.

## **Risk Management**

In data security, we face risks of external cyberattacks or internal data misuse, with potential for tampering during transmission or processing—threats that could severely compromise data accuracy and reliability. To address these, we employ Continuous Data Protection (CDP) technology to safeguard data integrity.

As operational reliance on information systems grows, the risks to system availability have become increasingly critical. To mitigate such risks, we have developed a comprehensive business continuity plan, implemented a "dual-site, three-centre" disaster recovery system, and provided hot backup support for critical business information systems, ensuring continuity and stability in our operations.





# Strategy and Management Approach

Our informatisation strategy constitutes a vital component of our overall corporate strategy. As we advance digital transformation, information security remains a core objective. We have promulgated the "Information Security and Confidentiality Management Regulations", which establishes security management requirements covering the entire data lifecycle, including generation, use, transmission, storage, and destruction. Technical tools such as data loss prevention systems, document encryption systems, and database audit systems are deployed to mitigate data breach risks. The core business systems of our headquarters and six subsidiaries have obtained Level 2 cybersecurity protection certification, while our subsidiary Zijin Zhixin has achieved ISO/IEC 27001 information security management system certification, strengthening defensive capabilities against cyber threats.

At present, we have achieved digitalisation across multiple business areas, including human resources, finance, logistics, warehousing, legal affairs, office management, and construction. To ensure the security of our business operations, we have implemented measures such as identity authentication management, access control, and operation log monitoring within our systems, enabling effective monitoring and traceability of actions.

In data management, data generated across operational systems is integrated through our big data platform, supporting business process analysis and decision-making. Centralised data management, however, imposes stricter information security requirements. To address this, we implement data encryption, hierarchical access controls, and anomaly behavior monitoring to safeguard data integrity during storage, transmission, and usage.

To enhance employee awareness of data security and information protection, we conducted corporate-wide information security training during the reporting period, followed by assessments for all staff and IT personnel. Nearly 30,000 participants completed the evaluations. Additionally, initiatives including "Information Security Day", routine email reminders, and phishing simulation exercises were implemented across multiple channels to reinforce data protection practices and mitigate breach risks.

### **Future Plans**

Integrate artificial intelligence (AI) and big data technologies into digital transformation, development, and information security management, with a focus on advancing Al-driven customised R&D and applications in exploration, mining, processing, and smelting.

Enhance the construction and improvement of information security infrastructure across the Group and its enterprises, establishing multi-layered, comprehensive protective systems to promote joint defense and control mechanisms for information security infrastructure.





# **Technological Innovation**

Technological innovation is the "core competitiveness" of Zijin Mining's development. We have independently developed the "Five-stage Life-of-mine Project Management Procedure by in-House Capabilities" mining engineering management model and established the National Key Laboratory for Comprehensive Utilization of Low-Grade and Refractory Gold Resources, forming a complete scientific and technological system covering exploration, mining, processing, smelting, and environmental protection. Guided by systems engineering and economic mining principles, this framework has enabled us to achieve distinct competitive advantages in project construction and operations, successfully paving new pathways for green and efficient resource development.



The Company's Board of Directors' Strategic and Sustainable Development (ESG) Committee regularly plans the Company's long-term development strategies and direction. During the reporting period, we established the "Zijin Mining Central Research Institute" to oversee the Company's technological innovation efforts. The Technical Services and Supervision Committee, as the standing administrative body of the Central Research Institute, comprises an expert advisory committee with 12 specialised fields and multiple functional departments. It also manages and coordinates four professional research organisations: the Zijin Mining and Metallurgy Research Institute, Zijin Mining New Energy and Materials Research Institute, Zijin Information and Smart Control Research Institute, and Institute of Geology and Mineral Exploration, ensuring technical innovation capabilities and synergies across key business areas.

# **Risk Management**

The mining industry is a high-technology, capital-intensive sector requiring substantial financial and R&D investments. Against the backdrop of accelerated internationalisation and China's "dual carbon" goals, we balance increased technological innovation and R&D investment with proactive risk prevention. Risk management in technological innovation encompasses multiple dimensions, with key risks and mitigation strategies including:

Risk Category	Risk Description	Risk Response
۲echnical risks	Uncertainties in new technology R&D, feasibility of technical applications, and speed of technological obsolescence.	<ul> <li>Technology R&amp;D and Assessment: Conduct thorough feasibility studies and technical evaluations during early R&amp;D phases.</li> <li>Technology Collaboration and Sharing: Collaborating with research institutions and universities to share technological resources.</li> </ul>
Policy & environmental risks	Potential changes in policies/regula- tions affecting technological applicabil- ity.	<ul> <li>Policy Research and Compliance Management: Closely monitoring policy changes at the national and local government levels to ensure that research and development outcomes comply with relevant laws and regulations.</li> </ul>
Intellectual property (IP) risks	Risks of IP infringement or disclosure undermining competitive advantages.	<ul> <li>Intellectual Property Protection: Promptly applying for patents, trademarks, and other intellectual property rights, establishing mechanisms for intellectual property protection to prevent technology leakage and infringement.</li> <li>Contract Management and Confidentiality Agreements: Signing confidentiality agreements with partners and employees to clearly define the ownership and usage rights of intellectual property.</li> </ul>
Management risks	Inefficiencies from poor project management or team collaboration, increasing costs.	<ul> <li>Project Management and Team Building: Establishing a systematic project management framework, defining project objectives and responsibilities, and strengthening team building and talent development.</li> <li>Risk Assessment and Decision Support: Establishing a comprehensive risk assessment system to provide decision-making support for management and reduce the risk of decision-making errors.</li> </ul>



# Strategy and Management Approach

The Company makes long-term resource investments in developing new technologies, materials, and equipment. Addressing key risks and technical challenges in current scientific and technological innovation management, we have formulated short-, medium-, and long-term phased objectives. In advancing green, low-carbon, and high-quality development, we have established high-level scientific research and design entities and R&D platforms covering all business areas, fostering a Zijin-specific technological innovation system with independent intellectual property rights and scientific research achievements.

Phase	Objective	Strategies
	Institutional innovation & technical breakthroughs	Refine scientific research project management mechanisms and enhance value-oriented incentive systems. Pilot market-driven operations in R&D entities, explore "project leader in-charge" and "open competition for project leadership". Establish interdisciplinary coordination mechanisms across geology, mining, processing, and smelting to address critical technical challenges in production.
Medium-term	Build an internationalised innovation ecosystem	Strengthen innovation management systems and prioritise strategic R&D. Elevate technical consulting service value, maintain science and technolo- gy platform certifications, and cultivate global talent pools. Develop a globally aligned innovation framework.
Long-term	Green development, leading the industry	Drive R&D and application of energy management, resource conserva- tion, carbon reduction, and ecological governance technologies. Achieve cost efficiency through technical and managerial innovations. Engage in targeted R&D for new energy and materials industries to enhance sectoral support capabilities.

During the reporting period, we made progress on several key technological projects: we achieved positive advancements in the IM Mine efficient mining project and the national key R&D project on "Green Mining Technology for Large Mines in High-Altitude and Ecologically Fragile Areas." Additionally, our experience in the development and application of lightweight equipment for narrow vein mines was promoted by the National Mine Safety Administration. We successfully developed a new type of spodumene collectors and high-efficiency copper collectors ensuring self-reliant reagent supply for lithium and copper-molybdenum operations. Zijin Copper's "Next-generation Green and Efficient Rare and Precious Metal Refining Technology and Application Project" received the Second Prize of the National Science and Technology Progress Award. Sino-Zijin Resources' self-developed "Zhendan 3D Induced Polarization System" achieved international advanced standards, delivering successful outcomes in projects such as Serbia's Malka Golaja Greenfield and Xinjiang's Covered Area Greenfield operations. In collaboration with Fuzhou University, we conducted research and development for ammonia-hydrogen energy technology and its industrial application, achieving major breakthroughs in three key areas: the complete technology for "on-site hydrogen production from ammonia", distributed "ammonia-hydrogen" fuel cell power generation technology, and the production line for fuel cell systems, which are gradually being industrialised. Automation intelligent and unmanned technologies were systematically deployed at representative mines including Julong Copper Mine and Zijinshan Gold-Copper Mine accelerating development of advanced smart mines and lights-out factories. Al integration enhanced data accessibility and real-time operational control enabling green safe and efficient production system upgrades across multiple mining and smelting facilities. By leveraging AI, we have improved the convenience and accuracy of data acquisition, gradually achieving real-time monitoring and control of key production and operational elements. Several mines and smelters have successfully implemented intelligent production system upgrades, ensuring green, smart, safe, and efficient operations.

During the reporting period, technology projects focused on caving mining methods, green mining and beneficiation in high-cold and high-altitude regions, intelligent and informationised mine operations, and new energy and materials. A total of 162 technology projects were initiated with a total funding of RMB1.14 billion. We actively pursued government science and technology programmes, securing 2 national-level project approvals in 2024. Intellectual property and standardisation efforts were prioritised, resulting in 60 patent applications (including 41 invention patents), 17 authorised patents (6 invention patents), and 7 promulgated standards (11 national standards and 6 industry standards). Notable achievements included 3 Fujian Provincial Science and Technology Progress Awards, 4 China Gold Association Awards, and 5 China Nonferrous Metals Industry Association Awards (4 recognised as internationally leading and 1 as internationally advanced).

In the future, we will intensify R&D on key projects, advancing natural caving mining technology and promoting open-pit mine transportation road technology. Leveraging the Zijin Mining Central Research Institute's integrated R&D capabilities, we aim to enhance project management, optimise resource allocation, and strengthen talent development through improved incentive mechanisms. These efforts will drive continuous innovation and technological progress aligned with our green and sustainable development goals.







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# **About This Report**

This Sustainability Report (the "Report") of Zijin Mining Group Co., Ltd. (hereinafter referred to as "Zijin Mining", the "Company", or "we") describes the approaches and performance of Zijin Mining's sustainability practices in 2024.

#### **Reporting Entity**

The organisational boundaries of this Report are determined by the principle of the operational control method, which covers all companies whose operations are under the actual operational control of the the Company (hereafter "subsidiaries")<sup>1</sup>.

#### Reporting Cycle and Reporting Scope

This Report covers the period from 1 January to 31 December 2024 (hereafter referred to as the "Reporting Period"). In order to enhance the comparability and forward-looking nature of this Report, some of the contents may contain retrospective information or forward-looking descriptions as appropriate.

The release frequency of this Report is once a year, which aligns with the financial year.

#### Basis of the Report

The following documents are essential for the preparation of this Report, which employs three distinct approaches to utilise each document.

This Report adheres to the following three documents:

- Appendix C2 "Environmental, Social and Governance Reporting Code" of the "Main Board Listing Rules" published by the Hong Kong Stock Exchange (HKEX);
- "Guidelines No. 14 of Shanghai Stock Exchange for Self-Regulation of Listed Companies—Sustainability Report (Trial)" published by the Shanghai Stock Exchange (SSE);
- The Global Reporting Initiative (GRI) Sustainability Reporting Standards 2021;

Additionally, this Report incorporates references to the following documents to meet broader stakeholder expectations:

- Sustainability Accounting Standards Board (SASB) Metals and Mining Industry Standards;
- Recommendations of the Task Force on Nature-Related Financial Disclosures (TNFD);
- "IFRS Sustainability Disclosure Standards S1&S2" of the International Sustainability Standards Board (ISSB);
- The "Practical Guide to Sustainability Reporting of Listed Companies" of China Association for Public Companies;
- The "Guidelines for Sustainability Report of Chinese Enterprises (CASS-ESG 6.0)" of Chinese Academy of Social Sciences;
- The "Performance Standards on Environmental and Social Sustainability" of the International Finance Corporation (IFC);

Our sustainability practices align with or support the following frameworks:

- United Nations Sustainable Development Goals (SDGs);
- · The Ten Principles of the United Nations Global Compact;
- The "United Nations Guiding Principles on Business and Human Rights (UNGPs)";
- The "United Nations Convention against Corruption";
- The "Universal Declaration of Human Rights";
- The "United Nations Declaration on the Rights of Indigenous Peoples";
- The "United Nations Framework Convention on Climate Change", "Kyoto Protocol" and "Paris Agreement",
- The "Voluntary Principles on Security and Human Rights" (VPs);
- The Organisation for Economic Co-operation and Development (OECD) "Guidelines for Multinational Enterprises" and "Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas";
- The ILO "Declaration on Fundamental Principles and Rights at Work";
- The World Gold Council's "Responsible Gold Mining Principles" (RGMPs).
- The "Kunming-Montreal Global Biodiversity Framework";
- The "Global Industry Standard on Tailings Management".

#### Data Sources and Description

The data in this Report comes from Zijin Mining's internal original records, corporate documents, and audit reports, and some financial data comes from the Company's 2024 annual report, which has been audited by Ernst & Young Hua Ming LLP. Unless otherwise specified, all currencies in this Report are in Renminbi (RMB).

Abbreviations

#### Data Assurance

The data and textual information in this Report have been verified by an international independent third-party verification agency -TÜV SÜD Certification and Testing (China) Co., Ltd., in accordance with the "AA1000 Assurance Standard" (V3) and the "International Standard on Assurance Engagements 3000 (Revised)" (ISAE 3000).

#### Approval and Publication

This Report has been unanimously approved by the Board of Directors of Zijin Mining and released in both printed and electronic versions. The electronic version may be downloaded and/or browsed on the official websites of the SSE, HKEX and Zijin Mining's Sustainability Section. Print copies may be requested from Zijin Mining's ESG Office.

#### Language of the Report

This Report is prepared in both Chinese and English. In the event of any discrepancy between the two versions, the Chinese text shall prevail.

1. This Report primarily discusses the sustainability practices and performance of projects under Zijin Mining's effective operational control. However, we have noticed that various stakeholders are highly concerned about some projects, such as the Porgera Gold Mine located in Papua New Guinea and the Kamoa-Kakula Copper Mine located in the DR Congo, which are neither under our actual operating control nor included in this Report. While we are not the effective operational controllers, as co-controlling shareholders, we remain deeply concerned about the operational performance and sustainability practices of these projects and actively exercise our shareholder rights to promote responsible operations. Sustainability information for these projects is disclosed externally following joint review and approval by Zijin Mining and the co-controlling shareholders may refer to the sustainability reports or annual reports of the projects' effective operational controllers for more detailed information.
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# Sustainability Report Independent Verification Statement



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#### To the management and stakeholders of Zijin Mining Group Co., Ltd.,

TÜV SÜD Certification and Testing (China) Co., Ltd. (hereinafter referred to as "TÜV SÜD") has been engaged by Zijin Mining Group Co., Ltd. (hereinafter referred to as "Zijin Mining" or "the Company") to perform an independent third-party verification on 2024 Sustainability Report (hereinafter referred to as "the Report"). During this verification, TÜV SÜD's verification team strictly abided by the contract signed with Zijin Mining and provided verification regarding the Report in accordance with the provisions agreed by both parties and within the authorized scope stipulated in the contract.

This Independent Verification Statement is based on the data and information collected by Zijin Mining and provided to TÜV SÜD. The scope of verification is limited to the given information. Zijin Mining shall be held accountable for authenticity and completeness of the provided data and information (contains assumptions, projections, and/or historical facts).

### **Scope of Verification**

#### ① Time frame of this verification:

 The Report contains the data disclosed by Zijin Mining during the reporting period from January 1st, 2024 to December 31st, 2024, including governance, environmental and social information and data, methods for management of material issues, actions/measures and the Company's sustainability performance during the reporting period.

#### O Physical boundary of this verification:

• The on-site verification sampling took place at below listed location: Zijin Tower, Zijin Road, Shanghang, Longyan, Fujian Province, China

#### $\bigcirc$ Scope of data and information for the verification

• The scope of verification is limited to the data and information of Zijin Mining and all companies under its operational control covered by the Report.

#### $\bigcirc$ The following information and data are beyond the scope of this verification:

- Any information and contents beyond the reporting period of this Report; and
- The data and information of Zijin Mining's suppliers, partners and other third parties; and
- The financial data and information disclosed in this Report that have been audited by an independent third party are not verified again herein.

### Limitations

- The verification process is conducted in the above scope and place. Sampling and verification are adopted for the data and information in the Report by TÜV SÜD, and only the stakeholders within the Company are interviewed; and
- The Company's standpoint, opinions, forward-looking statements and predictive information as well as the historical data and information before January 1st, 2024 are beyond the scope of this verification.
- TÜV SÜD's verification conclusions are based on the analysis of the data and information collected by TÜV SÜD
  and may not identify all problems and conditions, nor constitute a guarantee of the credibility or status of the
  subject of verification.

TÜV SÜD Certification and Testing (China) Co., Ltd. No.151 Heng Tong Road, Shanghai 200070 Tel: +86 21-61410123 Fax: +86 21-61408600 Web: www.tuvsud.cn



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### Basis for the Verification

- C This verification process was conducted by TÜV SÜD's expert team with extensive experience in the economic, environmental, social and other relevant areas and drew the conclusions thereof. The verification conforms to the following standards:
- AA1000AS v3, Type 2, Moderate Assurance
- International Standard on Assurance Engagements (ISAE) 3000, Assurance Engagements Other than Audits or Reviews of Historical Financial Information, Limited Assurance
- Sustainability report verification programme operation rule (CCB\_EIV\_GR\_002E Rev02)
- In order to perform adequate verification in accordance with the contract and provide reasonable verification for the conclusions, the verification team conducted the following activities:
- Preliminary investigation of the relevant information before the verification;
- Confirmation of the presence of the topics with high level of materiality and performance in the Report;
- On-site review of all supporting documents, data and other information provided by Zijin Mining; tracing and verification of key performance information;
- Special interview with the representative of Zijin Mining's management; interviews with the employees related to collection, compilation and reporting of the disclosed information; and
- Other procedures deemed necessary by the verification team

### **Verification Conclusions**

According to the verification, we believe that the data and information presented in Zijin Mining's report are objective, factual and reliable, without systematic problems, and can be used by stakeholders. The verification team has drawn the following conclusions on this Report:

Inclusivity	Zijin Mining has identified the internal and external stakeholders such employees, shareholders and investors, business partners, the government and regulators, and surrounding communities, etc., and established a stakeholder communication mechanism to collect the demands of stakeholders on a regular basis.
Materiality	Zijin Mining has established the prioritization process of material topics determination, identified and assessed the priority of the sustainability topics which are highly related to the industry, the Company disclosed the strategy, management approach as well as sustainability performance in corporate operation, therefore the Report's adherence to materiality principle is guaranteed.
Responsiveness	Focusing on the topics of concern to stakeholders, Zijin Mining clearly disclosed its management methods and performance on high material topics such as production safety, tailings management, human rights protection and security incidents, and community relations, etc. and established a communication mechanism to fully respond to the demands and expectations of stakeholders.
Impact	Zijin Mining has established the Strategy and Sustainable Development (ESG) Committee to lead the Company's ESG strategic planning, policy and work plan formulation, review and approve the ESG annual report, regularly evaluate the implementation of the Company's ESG work, and continuously promote the work process of corporate sustainable development, so as to improve the Company's work in environment, social responsibility and corporate governance.

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### **Recommendations on Continuous Improvement**

• The verification team has passed the promotion proposal to the management of Zijin Mining during the on-site implementation process.

### Statement on Independence and Verification Capability

TÜV SÜD is a trusted partner of choice for safety, security and sustainability solutions. It specializes in testing, certification, auditing and advisory services. Since 1866, the company has remained committed to its purpose of enabling progress by protecting people, the environment and assets from technology-related risks. Today, TÜV SÜD is present in over 1,000 locations worldwide with its headquarters in Munich, Germany. Through expert teams represented by more than 26,000 employees, it adds value to customers and partners by enabling market access and managing risks. By anticipating technological developments and facilitating change, TÜV SÜD inspires trust in a physical and digital world to create a safer and more sustainable future.

TÜV SÜD Certification and Testing (China) Co., Ltd. is one of TÜV SÜD's global branches and has an expert team whose members have professional background and rich industrial experiences.

TÜV SÜD and Zijin Mining are two entities independent of each other and both TÜV SÜD and Zijin Mining and their branches or stakeholders have no conflict of interest. No member of the verification team has business relationship with the Company. The verification is completely neutral. All the data and information in the Report are provided by Zijin Mining. TÜV SÜD has not been involved in preparation and drafting of the Report, except for the verification itself and issuance of the verification statement.

Signature: On Behalf of TÜV SÜD Certification and Testing (China) Co., Ltd.





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Note: In case of any inconsistency or discrepancy, the simplified Chinese version "Independent Verification Statement CN" of this verification statement shall prevail, while the English translation is used for reference only.

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# Zijin Mining 2024 ESG Performance Data

## **Economic Performance**

Indicator	Unit	2024	2023	2022	2021	2020
Business performance						
Revenue	RMB100 million	3,036	2,934	2,703	2,251	1,715
Profit before tax	RMB100 million	481	313	300	248	108
Net profit attributable to owners of the parent	RMB100 million	321	211	200	157	65
Total assets at the end of the reporting period	RMB100 million	3,966	3,430	3,060	2,086	1,823
Production volume						
Mine-produced copper	10,000 tonnes	107	101	88	58	45
Mine-produced gold	Tonne	73	68	56	48	41
Mine-produced zinc (lead)	10,000 tonnes	45	47	44	43	38
Mine-produced silver	Tonne	436	412	387	309	299
Resources						
Copper	10,000 tonnes	11,037	7,456	7,372	6,277	6,206
Gold	Tonne	3,973	2,998	3,117	2,373	2,334
Zinc (lead)	10,000 tonnes	1,298	1,068	1,118	962	1,033
Lithium carbonate	10,000 tonnes	1,788	1,347	1,215	763	/

## **Governance** Performance

#### ○ Composition of the Board of Directors

Indicator	Total	Executive directors	Non-executive director	Independent directors	Female directors
Number of Directors	13	6	1	6	2
Percentage	100%	46.2%	7.7%	46.2%	15.4%

#### O Business ethics

Indicator	2024	2023	2022	2021	2020
Business ethics training coverage					
-Directors, supervisors and senior management	100%	100%	100%	100%	87.19%
-Employees	75.25%	87.97%	75.50%	64.82%	63.96%
-Suppliers and contractors	76.81%	73.77%	70.90%	62.10%	61.55%
Whistleblowing reports					
Total number of whistleblowing reports received	236	243	204	154	104
Total number of whistleblowing reports completed	225	227	195	145	/
Sources of whistleblowing reports	;				
-from employees	130	121	86	63	28
-from suppliers and contractors	58	57	63	54	33
-from other stakeholders	48	65	55	37	43
Category of whistleblowing report	S				
-Business ethics	115	112	104	/	/
-Remuneration	44	67	53	/	/
-Workplace environment	25	34	27	/	/
-Human rights compliance	7	26	16	/	/
-Community relations	2	4	4	/	/
-Others	43	/	/	/	/

## **Environmental Performance**

#### ○ Environmental protection

Indicator	Unit	2024	2023	2022	2021	2020
Investment in environmental protection	RMB100million	14.34	13.70	14.67	14.20	10.92
-investment in eco-restoration	RMB100million	1.70	3.69	4.89	3.35	0.96



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Indicator	Unit	2024	2023	2022	2021	2020
Area of vegetation restored	Million m <sup>2</sup>	8.03	6.22	12.75	7.76	3.33
Number of trees planted	Million	1.66	3.86	1.21	1.15	0.41

#### O Climate change data

Indicator	Unit	2024	2023	2022	2021	2020
Total GHG emissions (SCOPE 1+2)	Million tCO <sub>2</sub> e	6.99	8.52	7.87	7.13	6.11
GHG emissions intensity by industrial added value	tCO₂e per RMB10,000 of industrial added value	1.64	2.08	1.96	2.17	2.52
-Direct GHG emission (SCOPE 1)	Million tCO <sub>2</sub> e	2.89	3.65	3.14	2.81	2.54
-Indirect GHG emissions (SCOPE 2)	Million tCO <sub>2</sub> e	4.11	4.87	4.73	4.32	3.57
-Other indirect GHG emissions (SCOPE 3)	Million tCO <sub>2</sub> e	4.41	0.00	/	/	/
Investment in climate change management	RMB100 million	3.74	4.56	5.93	/	/

Notes:

1. During the calculation of direct GHG emissions, parameters such as calorific value, carbon content per unit calorific value, and carbon oxidation rate are mainly based on the data of the purchased fuel supplier and the greenhouse gas emission accounting methods of various industries in the country. 2. In the calculation of indirect GHG emissions, each enterprise uses the local grid carbon dioxide emission factor standard (location based) to multiply the total amount of purchased electricity, and does not exclude clean energy from the purchased electricity.

3. The calculation of other indirect greenhouse gas emissions (Scope 3) in 2024 includes "Purchased Goods and Services", "Upstream Transportation and Distribution", "Business Travel", "Employee Commuting" and "Downstream Transportation and Distribution". In contrast, in 2023, it only included "Business Travel".

4. Climate change special project funds include but are not limited to energy-saving technical transformation, oil to electricity, new energy construction, waste heat recovery and other projects, and there is a certain data overlap with the statistics of environmental protection investment.

5. Greenhouse gas emissions per unit of industrial added value refer to the greenhouse gas emissions generated by the added value of the enterprise in the production process. Industrial added value is calculated according to the income method (that is, industrial added value = depreciation of fixed assets +labour compensation + net production tax value + operating surplus)

6. During the reporting period, we made retrospective revisions to the climate change data of previous years. For specific adjustment plans, please refer to the "Climate Change" section of this report.

#### C Energy Consumption Data

Indicator		Unit	2024	2023	2022	2021	2020
	Paraffin	Tonne	-	379	592	1,481	1,833
	Diesel	Tonne	532,980	529,236	392,930	345,894	256,856
Gasoline Direct energy Coal Natural gas	Tonne	1,420	614	1,061	1,502	1,457	
	Coal	Tonne	461,163	528,850	560,249	636,682	859,536
	Million cubic metres	32	25	18	23	14	
	Other direct energy	TJ	274	18	57	231	425

Indicator		Unit	2024	2023	2022	2021	2020
	Electricity	GWh	10,372	9,300	8,127	6,681	5,33
	-Non-green power	GWh	5,061	5,057	5,485	6,331	5,01
Indirect	-Hydropower	GWh	5,107	4,003	2,544	347	32
energy	-Solar power	GWh	169	83	43	3	
	-Other renewable energy	GWh	35	157	53	/	
	Steam	TJ	-2,868	-1,496	-936	-803	-78
Energy co	onsumption by sour	ce (GWh	)				
Total ene	ergy consumed	GWh	19,602.54	19,022.46	16,294.54	15,236.89	14,271.2
	ect energy ewable energy) d	GWh	10,047.03	10,137.58	8,419.35	8,777.92	9,153.2
-Paraffin		GWh	-	4.42	7.09	18.41	22.
-Diesel		GWh	6,797.82	6,704.81	4,654.41	4,163.55	3,091.8
-Gasoline		GWh	17.03	7.54	12.71	18.70	18.
-Coal		GWh	2,824.36	3,151.64	3,545.46	4,265.43	5,744.3
-Natural g	as	GWh	331.68	264.19	183.81	247.77	157.9
-Other dir	ect energy sources	GWh	76.14	4.98	15.88	64.06	118.
Total ind consume	irect energy d	GWh	9,555.50	8,884.88	7,875.19	6,458.25	5,117.3
-Electricity	y	GWh	10,372.16	9,300.31	8,126.68	6,681.20	5,335.0
-Steam		GWh	-816.66	-415.43	-251.49	-222.95	-217.6
Energy co	onsumption by sour	ce (TJ)					
Total ene	ergy consumed	TJ	70,569.14	68,480.86	58,655.64	54,848.40	51,372.2
Total dire (non-ren consume	ect energy ewable energy) d	TJ	36,169.32	36,495.29	30,307.23	31,598.00	32,949.0
-Paraffin		TJ	-	15.91	25.51	66.26	82.0
-Diesel		TJ	24,472.15	24,137.32	16,754.54	14,987.58	11,129.5
-Gasoline		TJ	61.30	27.14	45.73	67.31	65.2



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#### • Water stewardship

Indicator	Unit	2024	2023	2022	2021	2020			
Total water withdrawal	Million tonnes	72.52	66.13	72.71	60.56	50.77			
Water intensity by revenue	Tonne/RMB million	238.84	225.39	269.00	269.04	296.04			
Total water discharge	Million tonnes	59.16	46.40	51.52	42.29	20.82			
Water re-use rate	%	93.46	94.80	94.29	92.02	91.86			
Water withdrawal by water categories									
-Fresh water	Million tonnes	57.40	55.47	61.96	40.47	35.59			
-Non-fresh water	Million tonnes	15.12	10.66	10.75	20.09	15.18			
Water withdrawal by water	sources								
-Surface water	Million tonnes	46.70	47.09	65.09	43.11	34.83			
-Ground water	Million tonnes	22.72	13.97	3.08	8.78	7.71			
-Externally purchased water	Million tonnes	3.10	5.08	4.54	4.58	3.71			
Water discharge by water ca	ategories								
-Freshwater	Million tonnes	57.43	36.31	46.90	/	/			
-Non-freshwater	Million tonnes	1.73	10.09	4.62	/	/			
Water discharge by sources									
-Surface	Million tonnes	54.72	46.19	51.48	/	/			
-Ground	Million tonnes	-	-	-	/	/			
-External institutions	Million tonnes	4.44	0.21	0.04	/	/			
Water withdrawal in water s	stressed (EH 4-5) area	s							
Water withdrawal in high-risk areas	Million tonnes	21.42	12.42	10.06	8.81	6.48			
Percentage of water withdraw in high-risk areas	val %	29.53	18.77	13.83	14.55	12.77			

Notes:

1. The amount of water withdrawn refers to the fresh water collected and stored from various sources. At this stage, we are systematically combing the water balance model. The reliability of rainwater statistics is low and it is not our important source of water resources. Therefore, the amount of rainwater will not be disclosed for the time being. It will be disclosed after the future combing is completed.

2. Water re-use rate = (Total water consumption - Total water withdrawal)/Total water consumption.

3. As stated in our Sustainability Report, our projects in high water risk areas and neighbouring stakeholders are generally not exposed to material water risks, and water withdrawals for growth have been justified on the basis of water resources and will not have a material impact on neighbouring communities, the natural environment and other stakeholders.

Indicator		Unit	2024	2023	2022	2021	2020
-Coal		TJ	10,167.71	11,345.90	12,762.66	15,354.34	20,678.08
-Natural gas		TJ	1,194.05	951.08	664.99	891.91	568.57
-Other direct energy	sources	TJ	274.11	17.93	57.16	230.61	425.46
Total indirect energy consumed		TJ	34,399.80	31,985.57	28,348.41	23,247.83	18,421.05
-Electricity		TJ	37,339.78	33,481.12	29,253.70	24,050.39	19,204.46
-Steam		TJ	-2,939.97	-1,495.55	-935.70	-802.56	-783.41
Energy consumption	n structu	re					
Energy consump- tion intensity by	of	MB10,00 industri ded valu	al 4.59	3.46	3.25	3.75	4.32
industrial added value	of	MB10,00 industri ded valu	al 16.52	12.45	11.69	13.50	15.53
Ratio of direct energy (fossil fuel) consumed		%	51.25	53.29	51.67	57.61	64.14
Ratio of indirect energy consumed		%	48.75	46.71	48.33	42.39	35.86
Ratio of renewable energy consumed		%	27.09	21.48	16.21	/	/
Clean energy							
Installed capacity of clean energy		MW	767.36	244.05	167.48	117.00	/
Clean energy generated		GWh	564.54	380.90	257.46	113.26	/
-Hydropower		GWh	360.03	262.01	201.43	107.10	/
-Solar power		GWh	169.23	83.05	31.49	6.16	/
-Others		GWh	35.27	35.84	24.54	/	/

Notes:

1. Other direct energy sources include liquefied petroleum gas and heavy oil.

3. The clean energy generated refers to the electricity generated by the clean energy power facilities owned by Zijin Mining, rather than the actual clean electricity consumed by Zijin Mining.

<sup>2.</sup> In the electricity usage statistics, we count the renewable energy purchased from the power supplier and the renewable energy used from our own self-generated renewable energy. This part of the energy is included in the hydropower part without further classification. For power without knowing the components, we include gray power. When calculating GHG emissions, we calculate it uniformly according to the purchased electricity consumption, and do not exclude renewable energy from it.



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#### $\bigcirc$ Water pollutants

Indicator	Unit	2024	2023	2022	2021	2020				
Discharge volume										
COD	Tonne	310.2	294.06	373.51	524.13	299.82				
Ammonia nitrogen	Tonne	44.94	28.14	45.92	27.60	3.58				
Total copper	Tonne	2.30	2.14	1.57	2.26	0.73				
Total zinc	Tonne	1.27	0.59	0.80	1.27	0.46				
Discharge intensity	by revenue									
COD	g/RMB million	1,021.62	1,002.25	1,381.83	2,328.43	1,748.21				
Ammonia nitrogen	g/RMB million	148.00	95.91	169.89	122.61	20.87				
Total copper	g/RMB million	7.57	7.29	5.81	10.04	4.26				
Total zinc	g/RMB million	4.17	2.01	2.96	5.64	2.68				

#### O Acid rock drainage

Indicator	2024	2023	2022	2021
Mines with risk of acid rock drainage	6	9	7	7
- Mines where acid rock drainage is predicted to occur	-	-	-	1
- Mines where acid rock drainage is actively mitigated	-	4	3	2
- Mines where acid rock drainage is under treatment or remediation	6	5	4	4

#### O Non-hazardous waste

Indicator	Unit	2024	2023	2022	2021	2020
Total non-hazardous waste generated	Million tonnes	958.84	959.72	708.35	640.50	554.60
- On-site diverted from disposal	Million tonnes	144.29	139.64	99.24	82.19	66.44
- Off-site diverted from disposal	Million tonnes	2.30	3.18	4.95	5.05	5.16
- On-site directed to disposal	Million tonnes	810.32	816.76	519.31	444.82	381.22
- Off-site directed to disposal	Million tonnes	1.94	0.14	84.85	108.44	101.78
Non-hazardous waste comprehensive utilisation rate	%	15.29	14.88	14.71	13.62	12.91
Non-hazardous waste generated intensity by revenue	Tonne/RMB 10,000	31.58	32.71	26.21	28.45	32.34
Tailings						
Total tailings generated	Million tonnes	208.14	177.44	159.94	114.34	97.38
Total tailings recycled	Million tonnes	50.89	42.33	36.95	25.28	20.73
Recycling rate	%	24.45	23.86	23.10	22.11	21.29

#### O Hazardous waste

Indicator	Unit	2024	2023	2022	2021	2020
Total hazardous waste	Tonne	284,861.58	160,885.78	320,813.40	357,214.01	279,286.75
- On-site diverted from disposal	Tonne	182,661.67	5,478.61	1,827.42	42,097.84	25.06
- Off-site diverted from disposal	Tonne	29,756.60	73,325.69	153,484.30	79,617.90	64,747.03
- On-site directed to disposal	Tonne	69,289.40	76,072.02	21,190.37	228,658.34	212,373.35
- Off-site directed to disposal	Tonne	3,153.90	6,009.46	144,311.31	6,839.93	2,141.31
Hazardous waste comprehensive utilisation rate	%	74.57	48.98	48.41	34.07	23.19
Hazardous waste generated intensity by revenue	Tonne/RMB million	0.94	0.55	1.19	1.59	1.63



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#### O Air emissions

Indicator	Unit	2024	2023	2022	2021	2020
Nitrogen oxides (NO <sub>x</sub> )	Tonne	668.59	687.19	802.22	888.41	768.81
Sulphur dioxide (SO <sub>2</sub> )	Tonne	1,401.88	1,348.22	1,248.70	1,483.64	1,344.86
Particulate matter (PM)	Tonne	337.56	611.51	616.23	754.30	646.60
Sulfuric acid mist	Tonne	82.47	78.55	69.44	76.91	102.12
Hydrogen chloride	Tonne	1.00	2.01	1.07	0.22	0.12
Ammonia	Tonne	5.28	0.87	0.34	1.00	0.33
Hydrogen sulphide	Tonne	0.23	1.25	0.01	0.00	0.01
Lead and its compounds	Tonne	0.87	0.80	1.11	1.28	0.97
Arsenic and its compounds	Tonne	0.71	0.85	0.77	0.83	0.76
Mercury and its compounds	Tonne	0.06	0.04	0.03	0.10	0.02
Volatile organic compounds(VOCs)	Tonne	/	0.51	0.84	0.19	0.22

#### Notes

The total amount of air pollutants is estimated based on the pollutant concentrations and exhaust gas flow in the exhaust gas inspection reports.
 For details of the emission concentrations of various air pollutants of each subsidiary, please refer to the Company's annual report.
 The emissions of volatile organic compounds (VOCs) were attributable to our former subsidiary, Fujian Zijin Mineral Processing Chemicals Co., Ltd.
 During the reporting period, this subsidiary is no longer our subsidiary pursuant to a share transfer agreement. Consequently, no relevant data has been recorded for this reporting period.

#### ○ Tailings storage facilities

Indicator	2024	2023	2022	2021
Number of tailings storage facilities	61	60	60	52
Number of active tailings storage facilities	37	37	33	37
Number of tailings storage facilities at risks	0	0	0	0

#### EMS certification and environmental audit

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Indicator	2024	2023	2022	2021
ISO14001:2015 certification coverage	100.0%	97.5%	97.5%	87.5%
Environmental audit coverage	100.0%	100.0%	95.6%	92.5%

Note:ISO14001:2015 certification coverage is the proportion of operational sites that obtained certification as of the end of the reporting period, based on the production and operational sites the Company owned in 2020.

### **Social Performance**

#### C Labour

Indicator	Unit	2024	2023	2022	2021	2020
Number of workforce						
Number of employees	Persons	55,690	55,239	48,836	43,876	36,860
Number of contractor workers	Persons	37,458	30,459	28,222	/	/
By gender						
-Male	%	85.63	85.08	85.08	84.39	83.86
-Female	%	14.37	14.92	14.92	15.61	16.14
By age						
-<30	%	24.29	23.65	25.38	23.38	17.01
-30≤Y<50	%	61.41	61.53	59.91	60.93	63.75
-≥50	%	14.31	14.83	14.71	15.69	19.24
Local employment rate	%	95.98	95.85	96.29	96.04	95.25



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#### C Employee turnover

Indicator	Unit	2024	2023	2022	2021	2020			
Number of new hires	/	7,373	7,570	4,960	7,016	255			
Total employee turnover rate	%	8.49	8.00	8.66	7.57	9.31			
By gender	By gender								
-Male	%	8.38	7.92	8.55	7.25	8.72			
-Female	%	9.18	8.47	9.33	8.84	12.39			
By age									
-<30	%	10.88	11.99	11.52	10.25	12.42			
-30≤Y<50	%	7.69	7.28	7.63	5.63	6.83			
-≥50	%	7.72	5.19	7.48	10.68	14.78			
By region									
China	%	9.33	9.96	9.75	8.24	10.51			
Other countries and regions outside China	%	8.26	6.01	6.30	6.75	7.84			

Note:The workforce statistics were calculated after aggregating the numbers submitted by each subsidiary. Due to local laws or practices on anti-discrimination, protection of personal privacy, etc., certain subsidiaries are not allowed to collect certain information on their employees, such as age and gender. As a result, there are certain discrepancies between the total number of employees in the calculation of the employee ratio in each category and the actual total number of employees. We disclose based on the actual statistics. In 2024, about 2,155 employees are not included in the Company's gender and age ratios.

#### C Employee training

Indicator	2024		2023	
By gender	Training ratio(%)	Average training hours	Training ratio(%)	Average training hours
Male	98.01	40.50	96.39	29.98
Female	97.47	42.38	95.33	30.29

Indicator	2024		2023	
By job level	Training ratio(%)	Average training hours	Training ratio(%)	Average training hours
Upper-level employees	94.65	33.02	93.74	27.86
Mid-level employees	99.47	45.90	96.39	30.40
Entry-level employees	99.10	45.40	97.46	29.15

Note:Entry-level employees do not include overseas entry-level employees, employees with no job grade, and employees below Grade 8.

#### • Collective bargaining agreement

Indicator	Unit	2024	2023	2022	2021	2020
Collective bargaining agreement coverage rate	%	46.98	74.68	82.62	/	/
By region						
Percentage of active workforce covered under collective bargaining agreements broken down by local employees	%	48.25	76.44	84.19	70.33	/
Percentage of active workforce covered under collective bargaining agreements broken down by foreign employees	%	16.59	25.76	42.00	35.33	/

#### ○ Strikes and non-technical delays

Indicator	Unit	2024	2023	2022	2021	2020
Number of non-technical delays	Number	6	3	4	0	/
Duration of non-technical delays	Day	27	112	230	0	/
Number of strikes and lockouts	Number	6	1	2	4	/
Duration of strikes and lockouts	Day	10.5	3	0	3.75	/



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#### O Production safety

Indicator	Unit	2024	2023	2022	2021	2020
Investment in production safety	RMB 100 million	32.01	28.04	21.23	14.93	8.91
ISO45001:2018 certification coverage	%	100	97.50	95.00	87.5	/
Number of work-related fatalities of our employees	Persons	1	1	1	4	0
Number of work-related fatalities of contractors' employees	Persons	6	10	2	4	2
Lost days	Days	4,888.00	9,503.00	12,940.00	2,540.75	5,909.50
Lost work hours rate (per million hours worked)	/	170.89	311.33	494.38	105.62	328.35
Lost time injury rate (LTIR) (per million hours worked)	/	0.34	0.25	0.29	0.30	0.33
Total recordable incident rate (TRIR) (per million hours worked)	/	1.50	0.91	0.64	0.68	0.69
Near miss frequency rate (NMFR) (per million hours worked)	/	0.75	0.88	0.14	0.18	0.07
Total number of hours worked	Million hours	228.80	244.18	209.39	192.44	143.98

#### Notes:

1. Unless otherwise indicated, these statistics are from the main mines, smelting and processing companies under actual operational control of the Company, and their contractors.

2. ISO45001:2018 certification coverage is the proportion of operational sites that obtained certification as of the end of the reporting period, based on the production and operational sites the Company owned in 2020.

3. Lost work hours rate = Lost work hours due to work-related injuries ÷ Total number of hours worked x 1,000,000

4. Lost time injury rate (LTIR) = Number of persons with lost time injury ÷ Total number of hours worked x 1,000,000

5. Total recordable incident rate (TRIR) = Number of persons with recordable incident injury + Total number of hours worked x 1,000,000 6.Near miss frequency rate (NMFR) = Number of near misses ÷ Total number of hours worked x 1,000,000

#### • Safety training

Indicator	Unit	Training Hours (10thousnad)	% compliance rate
Three-level safety education for new recruits	12,525	52.87	100.00
Three-level safety education for new contractors	57,631	197.04	98.60
On-duty self-employed personnel re-education	291,931	106.07	99.77
On-the-job contractor re-education	193,431	76.27	99.41

#### O Product management

Indicator	Unit	2024	2023	2022	2021	2020
Qualified mineral production ratio	%	99.996	99.98	100	99.9	99.8
Number of products recalled for safety and health reasons	/	0	0	0	0	0
Number of complaints lodged due to safety and health reasons	/	0	0	0	0	0
Customer Satisfaction	%	100.00	99.65	99.60	99.22	99.29
Wood used in bulk product packaging	Tonne	1,327	479	703	699	253
Bags for bulk product concentrates packaging	Tonne	4,586	2,887	3,818	1,841	2,370

#### O Technological innovation

Indicator	Unit	2024	2023	2022	2021	2020
R&D expenditure	RMB 100 million	11.88	9.69	12.32	7.71	5.83
New patents	/	17	36	29	32	24

#### **Suppliers**

Indicator	Unit	2024	2023	2022	2021	2020
Total number of suppliers	/	22,065	6,712	5,444	5,380	4,669
-Suppliers from China	/	14,086	4,304	4,229	4,480	4,172
-Suppliers from countries and regions outside China	/	7,979	2,408	1,215	900	497
Number of new suppliers	/	1,822	1,532	1,547	762	917
-Number of new suppliers selected by ESG standards	/	1,822	1,532	1,547	762	917
Local procurement rate	%	82.31	80.33	65.20	31.82	/



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#### Supplier Management

Indicator	Unit	2024	2023	2022	2021	2020
Number of suppliers evaluated by ESG standards	/	5,456	3,845	2,327	1,507	1,384
Suppliers confirmed as having actual and potentially significant negative ESG impacts	/	215	7	3	10	0
- Suppliers which have agreed to take rectification measures	/	4	2	0	2	0
- Suppliers with terminated cooperation	/	211	5	3	8	0
Number of blacklisted suppliers	/	211	180	177	169	/

#### Community investment

Indicator	Unit	2024	2023	2022	2021	2020
Community investment	RMB million	811.96	827.29	454.74	423.83	231.93
-Charitable donations	RMB million	286.76	297.32	250.67	268.24	178.03
-Development contributions	RMB million	525.20	529.97	204.07	155.59	53.90

#### ○ Economic contribution

Indicator	Unit	2024	2023	2022	2021	2020
Direct economic contribution	RMB 100 million	3,186.10	3,247.48	2,853.94	2,359.11	1,800.15
Salaries and benefits paid to employees	RMB 100 million	119.29	98.35	91.08	71.51	39.59
Payments to suppliers	RMB 100 million	2,724.76	2,854.44	2,511.41	2,106.53	1,635.57
Community donations	RMB 100 million	2.87	2.97	2.51	2.68	1.66
Dividend distributed	RMB 100 million	105.66	96.60	81.15	53.75	35.07
Interests paid to creditors	RMB 100 million	57.53	57.46	39.53	24.04	23.09
Payments to governments (tax paid)	RMB 100 million	175.99	137.66	128.26	100.60	65.17
Total social contribution value	RMB 100 million	749.60	561.83	509.04	394.83	214.09
Social contribution value per share	RMB	2.82	2.13	1.94	1.53	0.84

Our Sustainability Report demonstrates the main performance of Zijin Mining's sustainable development in 2024.

Our performance data (XLSX format file) and other sustainability-related public documents and information, such as various updates, policies, the "Climate Change Action Plan", etc., can be found at https://www.zijinmining.com/sustainable/Reports\_and\_Policies.htm



For more information about Zijin Mining Group, please visit our Company's website:

Chinese version: www.zjky.cn

- English version: www.zijinmining.com
- Spanish version: es.zijinmining.com
- French version: fr.zijinmining.com

For information on Zijin Mining's business operation and financial performance, please refer to the Company's "Annual Report 2024".



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## **GRI** standard

statement of use	Zijin Mining Group Co., Ltd. has reported in accordance with the GRI Standards for the period from January 1, 2024, to December 31, 2024.
GRI 1 used	GRI 1: Foundation 2021

GRI Standard Disclosure	Pages	Explanation
GRI 2: General Disclosures 2021		
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2-3 Reporting period, frequency and contact point	P106	
2-4 Restatements of information	P46	
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2-14 Role of the highest governance body in sustainability reporting	P16-20	
2-15 Conflicts of interest	P16-20	
2-16 Communication of critical concerns	P16-20	
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GRI Standard	Disclosure	Pages	Explanation
2-18 Evaluatio governar	n of the performance of the highest ice body	P16-20	
2-19 Remuneration policies		P16-20	
2-20 Process t	o determine remuneration	P16-20	
2-21 Annual total compensation ratio			Since some of our subsidiarie comply with privacy policy an their unions require to keep employees' compensation confidential, we cannot estim the median annual total compensation of the Compan
2-22 Statemer	nt on sustainable development strategy	P1-2	
2-23 Policy co	mmitments	P4、P106	
2-24 Embeddi	ng policy commitments	P87	
2-25 Processe	s to remediate negative impacts	P27-35、P93	
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GRI 3:Materia	al Topics 2021		
3-1 Process to	determine material topics	P12-14	
3-2 List of mat	erial topics	P13-14	
3-3 Managem	ent of material topics	P13-14	
Material Topi	cs		
Economic	3-3 Management of material topics	P86-93	
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Economic Impacts 2016	203-1 Infrastructure investments and services supported	P92-93	
2016	203-2 Significant indirect economic impacts	P86-93	
Procurement Practices 2016	3-3 Management of material topics	P96-98	
Fractices 2010	204-1Proportion of spending on local suppliers	P96-98	
Anti-	3-3 Management of material topics	P21-26	
corruption 2016	205-1 Operations assessed for risks related to corruption	P23-24	
	205-2 Communication and training about anti- corruption policies and procedures	P23-24	
	205-3 Confirmed incidents of corruption and actions taken	P23-24	
Anti-competitive	3-3 Management of material topics	P21-26	
Behavior 2016	206-1Legal actions for anti-competitive behavior, anti- trust, and monopoly practices	P21-26	
Tax2019	3-3 Management of material topics	/	Please refer to our Annual Report 2024 and website
	207-4 Country-by-country reporting	/	Please refer to our Annual Report 2024
Materials	3-3 Management of material topic	P99-100	
2016	301-1Materials used by weight or volume	P99-100	
Energy2016	3-3 Management of material topics	P41	
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	302-4 Reduction of energy consumption	P41-47	
	302-5 Reductions in energy requirements of products and services	P41-47	
Water and	3-3 Management of material topics	P48-53	
Effluents 2018	303-1 Interactions with water as a shared resource	P48-49	
	303-2 Management of water discharge-related impact	P52-53	

GRI Standard	Disclosure	Pages	Explanation
Water and Effluents	303-3 Water withdrawal	P50-51	
2018	303-4 Water discharge	P52-53	
Biodiversity 2016	3-3 Management of material topics	P57-60	
2016	304-2 Significant impacts of activities, products and services on biodiversity	P57	
	304-3Habitats protected or restored	P59-60	
Emissions	3-3 Management of material topics	P39-47	
2016	305-1 Direct (Scope 1) GHG emissions	P46-47	
	305-2 Energy indirect (Scope 2) GHG emissions	P46-47	
	305-4 GHG emissions intensity	P46-47	
	305-5 Reduction of GHG emissions	P46-47	
	305-6 Emissions of ozone-depleting substances (ODS)	/	Our operation process does not generate ODS.
	305-7 Nitrogen oxides (NOx), sulfur oxides(SOx), and other significant air emissions	P64-65	
Waste2020	3-3 Management of material topics	P61-66	
	306-1 Waste generation and significant waste-related impacts	P61	
	306-2 Management of significant waste-related impacts	P61-66	
	306-3 Waste generated	P62-66	
	306-4 Waste diverted from disposal	P62-66	
	306-5 Waste directed to disposal	P62-66	
Environmental	3-3 Management of material topics	P37-38	
Compliance 2016	307-1 Non-compliance with environ mental laws and regulations	P37-38	
Supplier	3-3 Management of material topics	P94-98	
Environmental Assessment 2016	308-1 New suppliers that were screened using environmental criteria	P95-96	
2010	308-2 Negative environmental impacts in the supply chain and actions taken	P95-96	



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GRI Standard	Disclosure	Pages	Explanation
Employment	3-3 Management of material topics	P71-33	
2016	401-1 New employee hires and employee turnover	P74	
	401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees	P74	
Labour/Man-	3-3 Management of material topics	P29-30	
agement Relations	402-1 Minimum notice periods regarding operational changes	P29-30	
Occupational	3-3 Management of material topics	P77-85	
Health and Safety	403-1 Occupational health and safety management system	P77	
2018	403-2 Hazard identification, risk assessment, and incident investigation	P77-79	
	403-3 Occupational health services	P80-83	
	403-5 Worker training on occupational health and safety	P81	
	403-2 403-6 Promotion of worker health	P80-83	
	403-8 Workers covered by an occupational health and safety management system	P77-85	
	403-9 Work-related injuries	P85	
	403-10 Work-related ill health	P81-83	
Training and	3-3 Management of material topics	P71-76	
Education 2016	404-1 Average hours of training per year per employee	P75-76	
	404-2 Programs for upgrading employee skills and transition assistance programs	P75-76	
	404-3 Percentage of employees receiving regular performance and career development reviews	P74-76	
Diversity and	3-3 Management of material topics	P72	
Equal Opportunity 2016	405-1 Diversity of governance bodies and employees	P72	
Non-discrimi-	3-3 Management of material topics	P30	
nation 2016	406-1 Incidents of discrimination and corrective actions taken	P30	

GRI Standard	Disclosure	Pages	Explanation
Freedom of Association and Collective Bargaining 2016	3-3 Management of material topics	P30	
Child labour 2016	3-3 Management of material topics	P29-30	
2016	408-1 Operations and suppliers at significant risk for incidents of child Labour	P29-30	
Forced or	3-3 Management of material topics	P29	
Compulsory labour 2016	409-1 Operations and suppliers at significant risk for incidents of forced or compulsory labour	P29	
Security	3-3 Management of material topics	P32	
Practices 2016	410-1 Security personnel trained in human rights policies or procedures	P32	
Rights of Indigenous Peoples 2016	3-3 Management of material topics	P30	
Human Rights	3-3 Management of material topics	P32-34	
Assessment - 2016	412-1 Operations that have been subject to human rights reviews or impact assessments	P32-34	
-	412-2 Employee training on human rights policies or procedures	P32	
Local	3-3 Management of material topics	P86-93	
Communities - 2016	413-1 Operations with local community engagement, impact assessments, and development programs	P87-88	
Supplier	3-3 Management of material topics	P95-96	
Social - Assessment	414-1 New suppliers that were screened using social criteria	P95-96	
2016	414-2 Negative social impacts in the supply chain and actions taken	P95-96	
Customer Health and Safety 2016	3-3 Management of material topics	P99-100	



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GRI Standard	Disclosure	Pages	Explanation
Customer Health and Safety	416-1 Assessment of the health and safety impacts of product and service categories	P99-100	
2016	416-2 Incidents of non-compliance concerning the health and safety impacts of products and services	P99-100	
Marketing	3-3 Management of material topics	P99-100	
and Labeling	417-1 Requirements for product and service information and labeling	P99-100	
2016	417-2 Incidents of non-compliance concerning product and service information and labeling	P99-100	
	417-3 Incidents of non-compliance concerning marketing communications	P99-100	
Customer	3-3 Management of material topics	P101-102	
Privacy 2016	418-1 Substantiated complaints concerning breaches of customer privacy and losses of customer data	P101-102	
Socioeconomic	3-3 Management of material topics	/	please refer to our Annual Report 2024
Compliance 2016	419-1 Non-compliance with laws and regulations in the social and economic area	/	Neport 2024

## HKEX ESG Appendix

Appendix	Indicator	Pages
Aspect	General Disclosure	P37-38
A1: Emissions	Information on:	P46 P63-65
	(a) the policies; and	10505
	(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.	
	Note: Air emissions include NOx, SOx, and other pollutants	
	regulated under national laws and regulations.	
	Greenhouse gases include carbon dioxide, methane, nitrous oxide, hydrofluoro- carbons,perfluorocarbons and sulphur hexafluoride.	
	Hazardous wastes are those defined by national regulations.	

Appendix	Indicator	Pages
Aspect A1: Emission	KPI A1.1 The types of emissions and respective emissions data.	P52 P62-65
LIIIISSIOII	KPI A1.2 Greenhouse gas emissions (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	P46
	KPI A1.3 Total hazardous waste produced (in tonnes) and where appropriate, intensity (e.g. per unit of production volume, per facility).	P64
	KPI A1.4 Total non-hazardous waste produced (in tonnes) and,where appropriate, intensity (e.g. per unit of production volume, per facility).	P62-63
	KPI A1.4 Description of emission target(s) set and steps taken to achieve them.	P41-47 P61-65 P67-69
	KPI A1.6 Description of how hazardous and non-hazardous wastes are handled, and a description of reduction target(s) set and steps taken to achieve them.	P62-65 P67-69
Aspect A2: Use of Resources	General Disclosure Policies on the efficient use of resources, including energy, water and other raw materials. Note: Resources maybe used in production, in storage, transportation, in buildings,	P42-45 P49-53 P61-69
	electronic equipment, etc. 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).	P45
	KPI A2.2 Water consumption in total and intensity (e.g. per unit of production volume, per facility).	P51-53
	KPI A2.3 Description of energy use efficiency target(s) set and steps taken to achieve them.	P43-47 P51-53 P61-65
	KPI A2.4 Description of whether there is any issue in sourcing water that is fit for purpose, water efficiency target(s) set and steps taken to achieve them.	P48-53
	KPI A2.5 Total packaging material used for finished products (in tonnes) and, if applicable, with reference to per unit produced.	P100
Aspect A3: The Envi- ronment	General Disclosure: Policies on minimising the issuer's significant impacts on the environment and natural resources.	P54-56
and Natural Resources	KPI A3.1 Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them.	P54-56



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Appendix	Indicator	Pages
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.	P39-40
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.	P39-44
Employment a	nd Labour Practices	
Aspect B1: Employ- ment	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.	P71-72
	KPI B1.1 Total workforce by gender, employment type (for example, full- or part-time), age group and geographical region.	P73
	KPI B1.2 Employee turnover rate by gender, age group and geographical region.	P74
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.	P77-78 P80
	KPI B2.1 Number and rate of work-related fatalities occurred in each of the past three years including the reporting year.	P85
	KPI B2.2 Lost days due to work injury.	P85
	KPI B2.3 Description of occupational health and safety measures adopted, and how they are implemented and monitored.	P80-85
Aspect B3: Development and Training	General Disclosure Policies on improving employees' knowledge and skills for discharging duties at work. Description of training activities. Note: Training refers to vocational training. It may include internal and external courses paid by the employer.	P74-75
	KPI B3.1 The percentage of employees trained by gender and employee category (e.g. senior management, middle management).	P75

Appendix	Indicator	Pages
Aspect B3: Development and Training	KPI B3.2 The average training hours completed per employee by gender and employee category.	P75
Aspect B4: Labour Standards	General Disclosure Information on: (a) the policies; and	P29
	(b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to preventing child and forced labour.	
	KPI B4.1Description of measures to review employment practices to avoid child and forced labour.	P29
	KPI B4.2Description of steps taken to eliminate such practices when discovered.	P29
Aspect B5: Supply Chain	General Disclosure Policies on managing environmental and social risks of the supply chain.	P94-95
Management	KPI B5.1 Number of suppliers by geographical region.	P96
	KPI B5.2 Description of practices relating to engaging suppliers, number of suppliers where the practices are being implemented, and how they are implemented and monitored.	P95-98
	KPI B5.3 Description of practices used to identify environmental and social risks along the supply chain, and how they are implemented and monitored.	P95-98
	KPI B5.4 Description of practices used to promote environmentally preferable products and services when selecting suppliers, and how they are implemented and monitored.	P95-98
Aspect B6: Product	General Disclosure Information on:	P99
Responsibility	(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.	
	KPI B6.1 Percentage of total products sold or shipped subject to recalls for safety and health reasons.	P100
	KPI B6.2 Number of products and service related complaints received and how they are dealt with.	P100
	KPI B6.3 Description of practices relating to observing and protecting intellectual property rights.	P100
	KPI B6.4 Description of quality assurance process and recall procedures.	P99



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Appendix	Indicator	Pages
Aspect B6: Product Responsibility	KPI B6.5 Description of consumer data protection and privacy policies, and how they are implemented and monitored.	P100
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.	P21
	KPI B7.1 Number of concluded legal cases regarding corrupt practices brought against the issuer or its employees during the reporting period and the outcomes of the cases. KPI B7.2 Description of preventive measures and whistle - blowing procedures, and how they are implemented and monitored.	P23-24 P25
	KPI B7.3 Description of anti-corruption training provided to directors and staff.	P23
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.	P86-87
	KPI B8.1 Focus areas of contribution (e.g. education, environmental concerns, labour needs, health, culture, sport).	P87-93
	KPI B8.2 Resources contributed (e.g. money or time) to the focus area.	P92

## Index of International Financial Reporting Sustainability Disclosure Standard No. 2 (IFRS S2)

Theme	Theme Description	Disclosure requirements	Pages
Governance	The governance body(s) or individual(s) responsible for oversight of climate-related risks and opportunities, and how often the body(s) or individual(s) is/are informed about climate-related risks and opportunities.	How responsibilities for climate-related risks and opportunities are reflected in the terms of responsibili- ties, board authorization, role description, and other policies of the institution or individual. How the body(s) or individual(s) determines whether appropriate skills and competencies are available or will be developed to oversee strategies designed to respond to climate-related risks and opportunities How and how often the body(s) or individual(s) is informed about climate-elated risks and opportunities.	P16-18 P37

## Index of International Financial Reporting Sustainability Disclosure Standard No. 2 (IFRS S2)

Theme	Theme Description	Disclosure requirements	Pages
Governance	The governance body(s) or individual(s) responsible for oversight of climate-related risks and opportunities, and how often the body(s) or	How the body(s) or individual(s) takes into account climate-related risks and opportunities when overseeing the entity's strategy, its decisions on major transactions and its risk management processes and related policies, including whether the body(s) or individual(s) has considered trade-offs associated with those risks and opportunities	P16-18 P37
	individual(s) is/are informed about climate-related risks and opportunities.	How the body(s) or individual(s) oversees the setting of targets related to climate-related risks and opportuni- ties, and monitors progress towards those targets, including whether and how related performance metrics are included in remuneration policies	
		The climate-related risks and opportunities that could reasonably be expected to affect the entity's prospects.	P39-40
	Entity's strategy for managing climate-related	The current and anticipated effects of those climate-re- lated risks and opportunities on the entity's business model and value chain.	P39-40
Strategy		The effects of those climate-related risks and opportu- nities on the entity's strategy and decision-making, including information about its climate-related transition plan.	P39 P41
	risks and opportunities	The effects of those climate-related risks and opportu- nities on the entity's financial position, financial performance and cash flows for the reporting period, and their anticipated effects on the entity's financial performance and cash flows over the short, medium and long term.	P40
		The climate resilience of the entity's strategy and its business model to climate-related changes, developments and uncertainties	P40
Risk management	The entity's processes to identify, assess, prioritise and monitor climate-related risks and opportunities	The processes and related policies the entity uses to identify, assess, prioritise and monitor climate-related risks, including the inputs and parameters the entity uses; whether and how the entity uses climate-related scenario analysis to inform its identification of climate-related risks; how the entity assesses the nature, likelihood and magnitude of the effects of those risks; and whether and how the entity has changed the processes it uses compared with the previous reporting period	P39-40
	opportunities .	The processes the entity uses to identify, assess, prioritise and monitor climate-related opportunities, including information about whether and how the entity uses climate-related scenario analysis to inform its identification of climate-related opportunities	



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Theme	Theme Description	Disclosure requirements	Pages
Risk management	The entity's processes to identify, assess, prioritise and monitor climate-related risks and opportunitie	The extent to which, and how, the processes for identifying, assessing, prioritising and monitor- ing climate-related risks and opportunities are integrated into and inform the entity's overall risk management process	P39-40
		Information relevant to the cross-industry metric categories	P41-47
	The entity's performance in relation to its climate-related	Industry-based metrics	P41-47
Metrics and targets	risks and opportunities, including progress towards any climate-related targets it has set	Targets set by the entity	For more details, please refer to our Climate Change Action Plan

Note: For details of "Strategy" and "Risk Management" in this index table, please refer to the Company's Climate Change Action Plan, and this report only discloses the latest progress during the reporting period

## SASB Appendix

SASB Code	Metric	Unit of measure	Data/Pages
EM-MM-110a.1	Gross global Scope 1 emissions, percentage covered under emissions-limiting regulations	tCO <sub>2</sub> e	2,989,000
	Percentage of emission limitation plans (emissions under emission limitation plans divided by total Scope I emissions)	%	0
EM-MM-110a.2	Discussion of long- and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	NA	P39-47
EM-MM-120a.1	Air emissions of the following pollutants:	NA	
	(1)CO	Metric tonnes (t)	0
	(2) NOx (excluding N2O)	Metric tonnes (t)	668.59
	(3) SOx	Metric tonnes (t)	1,429.97
	(4) Particulate matter (PM10)	Metric tonnes (t)	337.56
EM-MM-120a.1	(5) Mercury (Hg)	Metric tonnes (t)	0.06
	(6) Lead (Pb)	Metric tonnes (t)	0.87
	(7) Volatile organic compounds (VOCs)	Metric tonnes (t)	0

SASB Code	Metric	Unit of measure	Data/Page
EM-MM-130a.1	(1) Total energy consumed	G	70,569,140
	(2) Percentage grid electricity	%	94.56
	(3) Percentage renewable	%	27.09
EM-MM-140a.1	(1) Total water withdrawn	Millions of cubic meters (m <sup>3</sup> )	57.40
	(2) Total water	Millions of cubic meters (m <sup>3</sup> )	/
	consumed Percentage of each in regions with High or Extremely High Baseline Water Stress	%	/
EM-MM-140a.2	Number of incidents of non-compliance associated with water quality permits, standards and regulations	/	0
EM-MM-150a.1	Total weight of tailings waste	Metric tonnes(t)	208.14
	Recycled rate of tailings waste	%	24.45
EM-MM-150a.2	Total weight of mineral processing waste	Metric tonnes(t)	744.93
	Recycled rate of mineral processing waste	%	12.59
EM-MM-150a.3	Number of tailings impoundments, broken down by MSHA hazard potential	Number	61Low Ris
EM-MM-160a.1	Description of environmental management policies and practices for active sites	NA	P37-38
EM-MM-160a.2	Percentage of mine sites where acid rock drainage is:	NA	/
	(1) predicted to occur	%	0
	(2) actively mitigated	%	0
	(3) under treatment or remediation	%	9.84
EM-MM-160a.3	Percentage of proven reserves in or near sites with protected conservation status or endangered species habitat	%	/
EM-MM-160a.3	Percentage of probable reserves in or near sites with protected conservation status or endangered species habitat	%	/
EM-MM-210a.1	Percentage of proven reserves in or near areas of conflict	%	/
	Percentage of probable reserves in or near areas of conflict	%	/



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SASB Code	Metric	Unit of measure	Data/Pages
EM-MM-210a.2	Percentage of proven reserves in or near indigenous land	%	/
	Percentage of probable reserves in or near indigenous land	%	/
EM-MM-210a.3	Discussion of engagement processes and due diligence practices with respect to human rights, indigenous rights, and operation in areas of conflict	NA	P27-35 P86-93
EM-MM-210b.1	Discussion of process to manage risks and opportunities associated with community rights and interests		P86-93
EM-MM-210b.2	Number of non-technical delays	Number	6
	Duration of non-technical delays	Days	26.95
EM-MM-310a.1	Percentage of active workforce covered under collective bargaining agreements, broken down by CHINA employees	%	48.25
	Percentage of active workforce covered under collective bargaining agreements, broken down by foreign employees	%	16.59
EM-MM-310a.2	Number of strikes and lockouts	Number	6
	Duration of strikes and lockouts	Days	10.5
EM-MM-320a.1	(1) MSHA all incident rate	Ratio	/
	(2) fatality rate	Ratio	0.0061
	(3) near miss frequency rate (NMFR)	Ratio	0.15
	(4) a. average hours of health, safety. And emergency response training for a) full-time employees	Hours	32.59
	(4) b. average hours of health, safety. And emergency response training for contract employees	Hours	77.86
EM-MM-510a.1	Description of the management system for prevention of corruption and bribery throughout the value chain	NA	P21-26
EM-MM-510a.2	Production in countries that have the 20 lowest rankings in Transparency International's Corruption Perception Index	ankings in Transparency International's	
EM-MM-000.A	(1) Production of metal ores	Saleable metric tonnes (t)	P5
	(2) Production of finished metal products	Saleable metric tonnes (t)	
EM-MM-000.B	Total number of employees	Number	55,690
	Percentage of contractors		40.21

## Index of Self-regulatory Supervision Guidelines No. 14 of the Shanghai Stock Exchange Sustainable Development Report

Dimension	No	Торіс	Pages
Environment	1	Climate Change Response	P38-47
	2	Pollutant Emissions	P65、P52
	3	Waste Disposal	P61-64
	4	Ecosystem and Biodiversity Conservation	P57-60
	5	Environmental Compliance Management	P37-38
	6	Energy Utilisation	P42-47
	7	Water Resources Utilisation	P48-53
	8	Circular Economy	P51, P62-66
Society	9	Rural Revitalisation	P86-93
	10	Social Contribution	P86-93
	11	Innovation - Driven	P103-104
	12	Science and Technology Ethics	P103-104
	13	Supply Chain Security	P94-98
	14	Fair Treatment of Small and Medium-sized Enterprises	P96
	15	Product and Service Safety and Quality	P99-100
	16	Data Security and Customer Privacy Protection	P101-102
	17	Employees	P71-76
Governance Related to Sustainable Development	18	Due Diligence	P19-20
	19	Stakeholder Communication	P12
	20	Anti - bribery and Anti - corruption	P21-26
	21	Anti - unfair Competition	P21-26

Notes:1.It adopts SASB's calculation method: fatality rate = fatalities/total number of hours worked\*200,000

2. It adopts SASB's calculation method: near miss frequency rate = near misses/total number of hours worked\*200,000



Sustainability Report Independent Verification Statement Zijin Mining 2024 ESG Indexes Performance Data Abbreviations

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# Abbreviations

Abbreviations	Full name in Chinese	Full name in English/local language
Zijin Mining / The Company	紫金礦業集團股份有限公司	Zijin Mining Group Co., Ltd.
Julong Copper	西藏巨龍銅業有限公司	Tibet Julong Copper Co., Ltd.
Ruihai Mining	萊州市瑞海礦業有限公司	Laizhou Ruihai Mining Co. Ltd.
Duobaoshan Copper Industry	黑龍江多寶山銅業股份有限公司	Heilongjiang Duobaoshan Copper Industry Inc.
Ashele Copper	新疆哈巴河阿舍勒銅業股份有限公司	Xinjiang Habahe Ashele Copper Co., Ltd.
Xinjiang Zijin Zinc	新疆紫金鋅業有限公司	Xinjiang Zijin Zinc Co., Ltd.
Xinjiang Jinbao	新疆金寶礦業有限責任公司	Xinjiang Jinbao Mining Co., Ltd.
Longnan Zijin	隴南紫金礦業有限公司	Longnan Zijin Mining Co., Ltd.
Shanxi Zijin	山西紫金礦業有限公司	Shanxi Zijin Mining Co., Ltd.
Guizhou Zijin	貴州紫金礦業股份有限公司	Guizhou Zijin Mining Co., Ltd.
Luoyang Kunyu	洛陽坤宇礦業有限公司	Luoyang Kunyu Mining Co., Ltd.
Urad Rear Banner Zijin	烏拉特後旗紫金礦業有限公司	Urad Rear Banner Zijin Mining Co., Ltd.
Wuping Zijin	武平紫金礦業有限公司	Wuping Zijin Mining Co., Ltd.
West Copper	青海威斯特銅業有限責任公司	Qinghai West Copper Co., Ltd.
Zijin Copper	紫金銅業有限公司	Zijin Copper Co., Ltd.
Heilongjiang Zijin Copper	黑龍江紫金銅業有限公司	Heilongjiang Zijin Copper Co., Ltd.
Jilin Zijin Copper	吉林紫金銅業有限公司	Jilin Zijin Copper Co., Ltd.
Bayannur Zijin	巴彥淖爾紫金有色金屬有限公司	Bayannur Zijin Non-ferrous Metals Co., Ltd.
Xinjiang Zijin Non-ferrous	新疆紫金有色金屬有限公司	Xinjiang Zijin Non-ferrous Metals Co., Ltd.
FZU Zijin Hydrogen Power	福大紫金氫能科技股份有限公司	FZU Zijin Hydrogen Power Technology Co., Ltd.

Abbreviations	Full name in Chinese	Full name in English/local language
Longking	福建龍淨環保股份有限公司	Fujian Longking Co., Ltd.
Zijin Gold Smelting	紫金礦業集團黃金冶煉有限公司	Zijin Mining Group Gold Smelting Co., Ltd.
Construction Company	紫金礦業建設有限公司	Zijin Mining Construction Co., Ltd.
Zijin Engineering Technology	福建紫金工程技術有限公司	Fujian Zijin Engineering Technology Co., Ltd.
Sino-Zijin	中色紫金地質勘查(北京)有限責任公司	Sino-Zijin Resources Ltd.
Zeravshan	中塔澤拉夫尚有限責任公司	Joint Venture Zeravshan Limited Liability Company
Altynken	奧同克有限責任公司	Altynken Limited Liability Company
Longxing	龍興有限責任公司	Longxing Limited Liability Company
Norton	諾頓金田有限公司	Norton Gold Fields Pty Ltd
COMMUS	穆索諾伊礦業簡易股份有限公司	La Compagnie Minière de Musonoie Global Société par Actions Simplifiée
CARRILU	盧阿拉巴礦業簡易股份有限公司	La Carrière Du Lualaba Société par Actions Simplifiée
Bisha	碧沙礦業股份公司	Bisha Mining Share Company
Serbia Zijin Copper	塞爾維亞紫金銅業有限公司	Serbia Zijin Copper Doo
Serbia Zijin Mining	塞爾維亞紫金礦業有限公司	Serbia Zijin Mining Doo
Continental Gold	大陸黃金有限公司哥倫比亞分公司	Continental Gold Limited Sucursal Colombia
AGM	奧羅拉金礦有限公司	AGM Inc.
Liex	LIEX有限責任公司	Liex S.A.
RGM	羅斯貝爾金礦有限公司	Rosebel Gold Mines N.V.
Manono Lithium	馬諾諾鋰業簡易股份有限公司	Manono Lithium SAS



Sustainability Report Independent Verification Statement Zijin Mining 2024 ESG Indexes Performance Data

Indexes Abbreviations

eader's Feedback Forn

# **Reader's Feedback Form**

#### Dear Reader,

Thank you for taking the time to read this Report. To enhance our efforts in sustainability and further improve our performance and capabilities, we warmly welcome your feedback and suggestions. We sincerely invite you to share your thoughts and provide an evaluation of this Report to help us drive continuous improvement. Kindly take a moment to complete the feedback form below and return it to us. Your input is highly valued and greatly appreciated.

#### Please leave us your personal information, if it is convenient.

Name/company name/industry:

Telephone number/email address:

#### Our Contact:

ESG Office, Zijin Mining Group Co., Ltd.

Address: Room 1408, Zijin Building, No. 1 Zijin Road, Shanghang County, Longyan City, Fujian Province

Telephone number: +86 597 3893 6628

Postal Code: 364200

Email: zjky@zjky.cn or international@zijinmining.com

#### Access to this Report:

You can download the electronic version of this Report on the website of

HKEXnews (https://www.hkexnews.hk) or the website of Zijin Mining

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#### 1. What is your overall evaluation of this Report?

#### 2. What is your opinion on the quality of information disclosed in this Report?

#### 3. Which part(s) of the Report interest(s) you most?

4. What other information do you think should be included in this Report?

5. Do you have any suggestion(s) regarding our sustainable development work and publication of the ESG reports in the future?





### MINING FOR A BETTER SOCIETY

Zijin Mining Group Co., Ltd.\*

Address: Zijin Headquarters, No. 1 Zijin Road, Shanghang County, Longyan City, Fujian Province Telephone number: 0597-3998038 Postal Code: 364200 Email address: zjky@zjky.cn/international@zijinmining.com