CNMC

THE GLOBAL COMPACT
WE SUPPORT

2015
The Sustainable Development Report

Exploring Resource Value
Building A Harmonious Society Together

About the Report

This is an annual report and the fifth sustainable development report released by China Nonferrous Metal Mining (Group) Co., Ltd. (CNMC).

Report Basis

Guidelines to the State-owned Enterprises Directly under the Central Government on Fulfilling Corporate Social Responsibilities issued by the State-owned Assets Supervision and Administration Commission (SASAC) of the State Council; Implementation Program of the State-owned Enterprises Directly under the Central Government on the "Twelve-Five" Harmonious Development Strategy issued by SASAC; Sustainability Reporting Guidelines (G4) and Reporting Guidelines on Sustainable Mining and Recycling issued by Global Reporting Initiative (GRI); the Ten Principles of the UN Global Compact; ISO 26000: Guidance on Social Responsibility (2010); GB/T36000: Guidance on Social Responsibility (2015); Management Guidelines on Social Responsibility of Industrial Enterprises (2015) issued by China Federation of Industrial Economics.

Reporting Scope

This report covers content such as the sustainable development management practices and performances of CNMC and its affiliated enterprises. The time span mainly focuses on 2015, with other years of significance properly included.

Data Sources

Data quoted in this Report come from official documents, statistical reports, company website of CNMC and websites relevant to the nonferrous metal industry. The currency unit involved in this Report is RMB by default, with other currencies marked separately under special circumstances.

Names

For the convenience of presentation and reading, "China Nonferrous Metal Mining (Group) Co., Ltd." referred in the Report is also called "CNMC", "Group Company" and "us".

Composition Flow

With the composition of CNMC Sustainable Development Report 2015 as an opportunity, the composing flow of this report is optimized to promote the integrated sustainable development capabilities of CNMC.

1 Report Composition Preparation

- Set up report composition work team;
- Domestic and overseas peer benchmarking analysis;
- Study sustainable development report standards.

2 Report Composition Initiation

- Start report composition;
- Discuss report topics.

3 Report Material Collection

- Various functional departments and invested enterprises collect materials;
- Interview and survey some functional departments and invested enterprises.

4 Report Topics Determination

- Assort social responsibility topics;
- Analyze stakeholders' demands;
- Analyze social and environmental impacts;
- Analyze development strategy objectives of Group Company;
- Collect opinions from experts inside and outside the company.

5 Report Composition & Perfection

- Work group composes the report;
- Relevant departments review the report;
- Company leadership reviews and finalizes the report.

6 Report Release & Application

- Release the report;
- Apply the report in areas such as business development and construction of enterprise culture, etc.

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President Address

In 2015, the world economy underwent profound adjustment, the domestic economic growth slowed, and the development of nonferrous metal industry remained sluggish. Faced with the severe macro-economic context and industry situation, China Nonferrous Metal Mining (Group) Co., Ltd reacted positively to the new challenges and formed a general development idea with "resource-focused, internationalized, and high-ended" features to focus efforts in improving quality and efficiency of economic growth In the context of the "New Normal" , CNMC developed strategic emerging industry, facilitated platform construction and the transformation and upgrading of enterprises, boosted the ability to allocate and utilize resources, created shared value, laid solid the foundation of sustainable development, and is making great strides toward the goal of building world-class mining enterprise.

Improving quality, increasing efficiency, and promoting economic sustainability. We comprehensively deepen the reform and enhance the driving force for the development of the enterprise; we strengthen our foundation and strive to lead the international capacity cooperation; we prevent and control risks to reinforce the momentum for reform and development; we promote technological innovation and strengthen innovation-driven development; we focus on our own internal development and raise the management level; we give play to our advantages and lead the industry to develop.

In 2015, we promoted "One Belt One Road" initiative and international capacity cooperation, reinforced the copper and cobalt base in Zambia and Democratic Republic of Congo, and became a representative of international operation in the nonferrous metal industry. We carried out infrastructure development and construction projects, civil projects as well as nonferrous metal industry development and construction projects, which stimulated local economic growth. We contributed to the development in Africa; we invested more than $2.6 billion in total in Zambia and provided 15,000 jobs. We created our core competitiveness with our integrated services such as high-quality project, trade, supervision, and insurance, etc.

By the end of 2015, compared with those in the last phase of the "Eleventh Five-Year" , the Group's total assets, nonferrous metal produce and the proceeds of business increased 2.4, 2.5 and 3.8 times, respectively. Our ability to achieve sustainable development continues to be improved. At the moment, we are operating in more than 80 countries and regions and 21 provinces in China. We own 19 mines and 6 smelters, and 1 overseas economic and trade cooperation zone. We have been listed in "Fortune Global 500" for 3 consecutive years since 2013.

Green mineral industry promotes environmental sustainability. We actively develop cyclic economy, maximize the utilization of nonferrous metal resources, protect mining ecological environment, drive the ecological civilization construction, and achieve sustainable green growth.
In 2015, we consumed 0.24 Tons of standard coal in producing ten thousand yuan RMB output value, a 25% decrease compared to that of the end of the "Eleventh Five-Year" . We emitted 452.30 tons of COD, a decrease of 13%; 19453.10 tons of SO_2, a decrease of 15%, 1643.13 tons of nitric oxide, an increase of 16%, 67.14 tons of ammonia nitrogen, a decrease of 14%. Since the "Twelfth Five-Year" , the accumulated input in environmental protection amounted to 2.90 billion input in total.

We work together to promote social sustainability. We attach great importance to "Putting People First" and promote multi-culture integration. Our projects have provided more job opportunities in host countries, hiring many local administrators in our enterprises based in Zambia, Myanmar, Mongolia, Thailand and other countries and appointing local workers to visit Chinese enterprises. We attach great importance to the cooperation with local community; we invest in infrastructures such as hospitals, schools, and roads and participate in relief work in the disaster-stricken area to facilitate community development and improve the well-being of local people.
In 2015, we stuck to the strategy of strengthening our enterprise through talents. We established and improved a long-term mechanism to hire, train, motivate, and promote talents and have cultivated a bunch of talented managers and business talents who are young, energetic, ambitious and responsible. These versatile talents are familiar with international rules and have a good command of technology, language, and law. We helped the poor in China and actively participated in overseas philanthropy work. We built hospitals in Zambia, invested $300,000 in the Social Responsibility Fund in Myanmar, and built roads and provided financial support to university students in Mongolia. We aim at creating a favorable community environment to facilitate the enterprise's sustainable development.

We build together and share our achievement fruits together to promote the sustainability of responsibility. We actively fulfill our social responsibility and pay close attention to UN Sustainable Development Goals. The communication between stakeholders has been promoted and responsibilities such as paying tax, safety, environmental protection and supporting localization development have been practiced in view of the state's and government's requirements and enterprises' conditions.
In 2015, we continue to issue our sustainable development report. Bearing the social responsibility concept of "Exploring Resource Value, Building A Harmonious Society Together" in mind, we practice social responsibilities in areas such as international operation, technological innovation, quality safety, environmental protection, employee care and corporate citizenship. We spare no efforts to achieve open development, innovative development, coordinated development, green development and shareable development.

Looking into the future, we will forge ahead with confidence and determination. We will actively adapt to the severe and complex internal and external situation. Under the guidance of The Ten Principles of the UN and the requirements and advocacy of international social responsibility standards, we will, by following laws of economics and laws of enterprise development, deepen the reform, strengthen management, control risks, and vigorously carry out "Going Out" strategy and "One Belt and One Road" Initiative. We will establish in-depth international capacity cooperation and actively fulfill social responsibilities. Together with stakeholders, we will explore resource value, build a harmonious society and make more contributions to the economic and social development in countries where our projects are carried out!

President of CNMC 张克利

Special: Splendid Twelfth Five-Year

"The Twelfth Five-Year" has witnessed leapfrogging development of CNMC in its history. The Group has expanded on an unprecedented scale; the industrial distribution continues to be optimized; the basics of management have been reinforced; the quality of development has been improved; and the ability to achieve sustainable development has been greatly enhanced. During the "Twelfth Five-Year" Period, we actively adapted to the New Normal, shifted our thinking pattern, carried out strategic transformation, grasped new opportunities, and found a different way of development. We have been listed in the "Fortune Global 500" in three consecutive years.

Fruitful achievements

Business development

In 2010, the Group asset exceeded 50 billion RMB. By the end of 2015, the Group total asset has increased by 2.4 times, the product output of nonferrous metals by 2.5 times, and the proceeds of business by 3.8 times, compared with the last phase of the Eleventh Five-Year Period.

The increase of the Group total asset during the Twelfth Five-Year Period (billion RMB)

The total asset was 52.79 billion RMB in 2010 and 125.54 billion RMB in 2015, an increase by 2.4 times.

The increase of the Group product output of nonferrous metals during the Twelfth Five-Year Period (thousand tons)

The Group product output of nonferrous metals increased by 2.5 times, from 623 thousand tons in 2010 to 1563 thousand tons in 2015.

The increase of the Group proceeds of business during the Twelfth Five-Year Period (billion RMB)

From 2010 to 2015, the proceeds of business exhibited rapid growth trend. Although there was a call-back in 2015 (170.87 billion RMB), the proceeds of business increased by 3.8 times, compared with that of 2010, which was less than 50 billion RMB(45.48 billion RMB).

"Going Out" Capacity

By 2015, the Group owns more than 40 types of nonferrous metals and many resource bases, including copper-cobalt base in Zambia and Democratic republic of Congo, nickel base in Myanmar, zinc base in Mongolia, and copper-gold base in Central Asia.

In 2015, CNMC businesses are operated in

>80	Countries and regions
21	Provinces in china
19	Mines
6	Smelters
1	Overseas economic and trade cooperation zone

Special: Splendid Twelfth Five-Year

Capital operation

Ever since the beginning of the "Twelfth Five-Year" period, CNMC has vigorously carried out capital operations and propped up the Group's development by financing in the capital market. During the "Twelfth Five-Year" period, by way of listing high-quality assets, merger and acquisition, two listed companies have joined the Group, namely China Nonferrous Mining Corporation Limited (China Nonferrous Mining HK.01258) and China Daye Nonferrous Metals Mining Limited (China Daye Nonferrous Metals HK.00661). The Group now has controlling stakes in 5 listed companies both at home and abroad (previously 3 listed companies) and financed 5.1 billion RMB in the capital market in total, which helped a lot to support the Group's development. The financing capability in the capital market, the market profile as well as the market influence of the Group have also been greatly promoted.

The Group's Capital operation during the Twelfth Five-Year Period

Environmental protection

Since the "Twelfth Five-Year" Period, we have invested a total amount of **2.90** billion RMB in environmental protection.

Comprehensive energy consumption in producing per ten thousand output value during the Twelfth Five-Year Period

COD emissions during the Twelfth Five-Year Period

SO_2 emission during the Twelfth Five-Year Period

Nitrogen oxide emission during the Twelfth Five-Year Period Note

Amino oxide emission during the Twelfth Five-Year Period

Note: As the production has increased substantially, relevant statistics have also increased accordingly.

Scientific and Technological Innovation

During the "Twelfth Five-Year" Period, CNMC invested a total amount of 12.543 billion RMB into scientific and technological researches activities. It won 4 National Prizes for Progress in Science and Technology, 125 provincial and higher-level science and technology awards. The Group's scientific & technological innovation strength and level have been rapidly promoted.

- **Nominated as one of the "China's Top 100 high-end manufacturing enterprises in 2013"**
- **Won 16 China nonferrous metal industry science and technology awards in 2015**
- **Granted "Science and Technology Innovation Award" by the State Council and SASAC successively**
- **Won the second prize of "Innovation Achievements of Industry-University-Institute Cooperation in China" for the first time**

Production Safety

In 2015, we kept our record of "zero serious and major production safety accident."

Safety investment (thousand RMB) | **Safety training (person times)** | **Emergency plans (projects)** | **Hidden danger identification (projects)** | **Accident death rate in producing per ten billion RMB output value (%)**

Social Contributions

Central and South Africa are main destination for CNMC's overseas investment. By the end of 2015, we have invested and built 14 enterprises successively in Zambia, with more than $2.7 billion of assets. We have paid $360 million of taxes, made various kinds of donations worth $20 million to the local community and provided 15,000 job opportunities.

Newly increased job opportunities(person)

Overseas job opportunities(person)

The ratio of local employees to all the overseas employees (%)

Special: Splendid Twelfth Five-Year

Care from the leadership

- Chinese President Xi Jinping visited CNMC headquarters.

- Chinese President Xi Jinping and then Australia's Prime Minister Kevin Rudd jointly met with CNMC leadership team.

- On September 3, 2013 Chinese Premier Li Keqiang spoke highly of the reforms taken by CNMC in past few years, especially the successful cooperation.

- Chinese Premier Li Keqiang witnessed the signing of Memorandum on Framework Cooperation of Ozernoe Project.

- The Chairman of the Standing Committee of the National People's Congress Zhang Dejiang visits CNMC.

- On March 21 the Chairman of the Standing Committee of the National People's Congress Zhang Dejiang visits ZCCZ Lusaka MFEZ.

Touching Moments

2011

Doctors in Sino-Zambia Friendship Hospital are operating on the patients.

2013

CNMC workers in Luanshya are teaching in the Confucius Institute.

2014

CNMC rescue team in Africa has been winning the first prize in Zambia rescue competition for successive years.

2015

Experts in Daye Nonferrous Metals Group General Hospital volunteer to see patients.

2011 2012 2013 2014 2015

2012

Tug-of-war held by Zambia Chambishi Hydrometallurgy Company.

2014

CNMC Nickel Co., Ltd opens a corporate social responsibility fund account and donates money for building a well for a temple in Myanmar.

2011

Tsairt Mineral Co., Ltd sponsors local sheep-scrambling competition.

2013

CNMC (Guang Xi) PGMA Co., Ltd donates money for building Zhaijiao Village Primary School canteen.

About Us

CNMC buildings

Company Introduction

China Nonferrous Metal Mining (Group) Co., Ltd. (CNMC), founded in 1983, is a large-scale central enterprise under the management of the State-owned Assets Supervision and Administration Commission of the State Council. Its major businesses include development of nonferrous metal mineral resources, construction engineering, and the relevant trade and technological services. It is the "going out" pacesetter in China's nonferrous metal industry. By the end of 2015, the Company has carried out business operations in more than 80 countries and regions and possessed more than 40 nonferrous metal varieties including copper, aluminum, lead, zinc, nickel, tantalum, etc. It possesses 261 enterprises at various levels, of which 83 are situated outside China, and it has 5 listed companies in Shenzhen, Hong Kong and other cities. In Zambia, Mongolia, Myanmar, Thailand, Democratic Republic of Congo and some other countries and regions, the Company has built and is now operating a bunch of landmark mine development projects.

Organizational Structure

China Nonferrous Metal Mining (Group) Co., Ltd

Group Headquarters

- General Office
  (Party Committee Office, Foreign Affairs Office)
- Legal Affairs Department
- Investment Department
- Business Development Department
- Human Resources Department
  (Organization Department of the Party Committee)
- Finance Department
- Science & Technology Department
- Mine Exploration Department
- Strategic Research Department
- Auditing Department (Discipline)
- Safety Supervision & Administration Department
- Information Center
- Party and Mass Affairs Department
  (directly under the Party Committee)
- Labor Union Department

Invested enterprises

- Daye Nonferrous Metals Group Holding Co., Ltd
- China Nonferrous Metal Mining Co., Ltd
- China Nonferrous Metal Industry's Foreign Engineering and Construction Co., Ltd
- CNMC (Ningxia) Orient Group Co., Ltd
- Zambia-China Economic & Trade Cooperation Zone Development Co., Ltd
- China No. 15 Metallurgical Construction Group Co., Ltd
- CNMC Nickel Co., Ltd
- CNMC Fushun Hongtoushan Mining Co., Ltd
- CNMC International Trade Co., Ltd
- CNMC Albetter Albronze Co., Ltd
- CNMC Development Investment Co., Ltd
- CNMC (Liuzhou) Zinc Products Corporation, Ltd
- CNMC (Tianjin) Nonferrous Metals Co., Ltd
- CNMC (Tianjin) Special Materials Co., Ltd
- CNMC International Mining Co., Ltd
- Thai-China Nonferrous Metal International Co., Ltd
- CNMC (Shenyang) Mining Investment Co., Ltd
- CNMC (Guangxi) Pinggui PGMA Co., Ltd
- CNMC (Guilin) Research Institute of Geology for Mineral Resources
- Shenyang Research Institute of Nonferrous Metals
- CNMC Shenyang Nonferrous Metallurgy E&R Institute, Ltd
- Xincheng Construction Supervision & Consulting Co., Ltd
- Golden Bright Insurance Broker Co., Ltd
- CNMC Economic & Trade Co., Ltd
- CNMC Golden Broadness (Beijing) Information Technology Co., Ltd
- CNMC International Development Co., Ltd
- CNMC-Congo Mining Co., Ltd
- Beijing CNMC Construction and Engineering Co., Ltd
- Beijing Xinhai Nonferrous Metal Industrial and Trading Company

Company Governance

CNMC is led by its managers and the Party Committee, who exercise part of the authority as granted by the board of shareholders and the board of directors according to relevant provisions of the central government. The Party Committee meeting and general manger work meeting are the main top-level decision-making bodies of the Group, and the general manager work meeting is responsible for the major decision-making of business operation and management of the Group.

CNMC is a hybrid holding company, adopting the parent-subsidiary company management system. The capital ties link the Group Company and its various invested enterprises. The Group Company, as the sponsor, is entitled the rights of revenues as a shareholder, participation in significant decisions, and manager's right of selection and other rights. It is also the center for making strategic decisions and capital operations, and meanwhile it bears related responsibilities and obligations. An invested enterprise has to implement decisions made by the board (general meeting) of shareholders, accept supervision of the board of supervisors, and undertake its production and business operation independently in accordance with the bylaws as the Group Company's production and operation center, profit center and cost control center.

Anti-Corruption & Integrity Promotion

CNMC vigorously pushes forward anti-corruption and integrity promotion, carries out "the three guidelines for ethical behavior and the three basic rules of conduct" topic education, and prevents the loss of state assets.

Accountability System Implementation

Implement the accountability system of 2015 Party Conduct and Incorrupt Government Construction; inspect in the middle of the year and examine by the end of the year.

Risk Identification

Examine the Group's anti-corruption activities and organize invested enterprises to make corruption risk identification.

Check of Powers

Revise Measures for the Implementation of CNMC "Three Importance and One Greatness" policy-making system.

Platform Construction

ush forward the construction of anti-corruption & integrity promotion platform, and organize invested enterprises to try out the platform in different modules.

The "three guidelines for ethical behavior and the three basic rules of conduct" meeting of democratic life

Case

The "three guidelines for ethical behavior and the three basic rules of conduct" meeting of democratic life

In December 2015, CNMC held the "three guidelines for ethical behavior and the three basic rules of conduct" meeting of democratic life.

Social Recognition

In 2015, the Group ranked

The Group won the honorary title of "Overseas Resource Development Meritorious Enterprise" granted by CNIA in 2015.

The Group won "Scientific and Technological Innovation Enterprise Award" in the central government-controlled SOE business performance assessment. It ranked the first in the third batch of national innovative enterprises.

The Group was granted the title of "China Industry Social Responsibility Fulfillment Five-Star Enterprise (2015)" by China Federation of Industrial Economics.

In the "Internet plus Social Responsibility Management Innovation & 2015 Chinese Enterprises' Competitiveness in Sustainability Annual Meeting" co-hosted by Chinese Institute of Business Administration, China Federation of Industrial Economics and Beijing Rongzhi Corporate Social Responsibility Institute, the Group won "2015 Public Enterprise Transparency•Best Overseas Communication and Practice Award".

The Group's brand value reached 27.14 billion RMB and the brand strength scored 892.25 points, ranking the first in the metal industry and the third in "China Brand Value List".

The Group won the honorary title of "the Sixth Five-Year Legal Publicity Mid-term Advanced Unit" granted by Legal Publicity Office.

Sustainable Development Management

Exploring Resource Value, Building A Harmonious Society Together

As a company operating internationally, we always stick to responsible operation and ensure resource sustainability and environmental sustainability before exploiting resources. By pushing forward the synergetic development of three major businesses, namely resources exploitation, project construction and trade and relevant services, the Group maximizes its utilization of nonferrous metal resources to create economic value, social value as well as environmental value. We communicate and cooperate actively with stakeholders, promote economic development and protect the natural environment to jointly build a harmonious society.

◉ On-the-spot investigation of bauxite in Paxson region, Laos

The Model of Sustainable Development Concept

The model represents the international operation of CNMC; the spiral structure represents the progress of sustainable development.

Bearing the idea of "Exploring Resource Value, Building A Harmonious Society Together" in mind and focusing on sustainable development, we endeavor to integrate social responsibility into the company's strategy and management, pay close attention to major areas concerning the economy, society, and environment, push forward sustainable development practices, and maximize the comprehensive value of our company.

Model of Sustainable Development Concept

Major Issues on Sustainable Development

This report identifies social responsibility issues according to external appeals and the company's strategic focus. These major issues in 2015 are selected in accordance with "their importance to the company and the concern degree of stakeholders" and are assessed by social responsibility experts and department leaders.

External Appeals

- Domestic and international macro-policy research
- Social responsibility analysis
- Peer benchmarking analysis
- Stakeholder interview and survey

The Company's Strategic Focus

- Development strategy and plan of the Group
- Risk management assessment and analysis
- Major projects social and environment influence analysis

Promotion of Sustainable Development Management

The Group pays high attention to sustainable development management and makes efforts to promote organization, planning, communication and transmission, so as to improve the company's comprehensive sustainable development capacity.

Improving institutional framework

Establish CNMC social responsibility committee and set up staff composition and job duties. Leaders of the Group are in charge of the work concerning social responsibility. The Strategic Research Department takes the lead and other departments take coordinated action. The various invested enterprises establish social responsibility department and designate person in charge and liaisons to specify job duties and requirements.

Compiling work plan

Initiate social responsibility planning work. Preliminarily put forward the development goal, strategic positioning, strategic tasks, and 6 strategic actions in major fields and key links of the Group's social responsibility work. Advance the basic principles and routines of the company's social responsibility management as well as the priorities in the next step.

Promoting communication and participation

- Take part in "Responsible Business Conducts: the Role of OECD Multinational Enterprises Norms and National Contact Points" Seminar co-hosted by the Ministry of Commerce and Organization for International Economic Cooperation. Deliver a speech on "Going Out" experience.
- Take part in "One Belt One Road" and Mining Enterprises Social Responsibility Seminar held by the Ministry of Commerce and share our experience.
- Take part in the 10th International Forum of Chinese Enterprise's Social Responsibility whose theme is Exploring "One Belt One Road": the interests, destiny, and common responsibilities of going-out enterprises.

Pushing forward the transmission of responsibility

- Finish the research report on Deepen Social Responsibility Management and Build Enterprise Citizenship Image.
- Submit the Group's social responsibility cases to UN Global Compact; submit the report on the Group's duty fulfillment and innovation to CFIE; regularly circulate excellent social responsibility practice cases within the Group; send the sustainable development report of the Group and invested enterprises to stakeholders.
- Compile and release CNMC 2014 Sustainable Development Report.
- CNMC Actively Creates Zambia Green Cyclic Economy, a case report written by the Group, has been published in 2015 Sustainable Development Report on Chinese Overseas Enterprises compiled by SASAC, Ministry of Commerce and UNDP.

Participation of Stakeholders

Stakeholders	Listen to Voices from all sides	Communication Channels and Response
Government	• To promote sustainable and healthy development of the economy • To serve China's development objectives • Pay tax by law, and provide more jobs • Train local specialized talents	• Work report and communication • Serve the national macro strategy • Drive development of related local industries • Take part in meetings and important activities
Regulatory body	• To run businesses in compliance with laws and regulations, and follow fair competition • Stable business operation, prevent and control risks	• To strengthen management in compliance with laws and regulations, and to run businesses honestly • To improve the Company's governance and strengthen the risk management
Shareholders	• Steady profit-making and profitability raising of state-owned assets • Integrated and Internationalized operation • Work towards the goal of becoming a world-class mining company	• Steady operation • To timely and comprehensively disclose related information • To benchmark with leading enterprises to improve management capacity • Constant innovation
Client	• High-quality product and satisfactory services • Smooth communication channels • Information Security	• To visit Clients • Demand/satisfaction survey • To protect clients' privacy • Service hotline
Environment	• Sustainable development of resources • Energy saving and emission reduction • Green mines • Climate change	• Scientific and efficient mining • Pollution prevention and management • Land reclamation and protection of water resources • Biodiversity protection
Employee	• Respect and safeguard basic rights & interests • Competitive salary system • Smooth career development path • Comfortable working environment	• Workers' congress; meeting of democratic life • Incentive and restraint mechanism • Career development path • Employee's health and safety
Partners	• Honesty & reciprocity • Cooperation & win-win • Joint development	• Regular visit, exchange and interactions • Open and transparent cooperation mechanism • To carry out strategic cooperation • To innovate cooperation patterns
Peer	• Fair competition • To protect the environment for industrial development	• Transparent business operation in compliance with laws and regulations • To actively organize and take part in peer exchanges • To pay attention to and cooperate in formulation and amendment of supporting industrial policies • To continuously innovate products and services to provide reference for the industry
Community	• Have community development in mind • Promotion of employment • Participation in social service	• Joint construction with communities and public service activities • To make monetary and material donations and participate in international disaster rescue efforts
Media	• Open and transparent information	• Company website • Media interview • Information disclosure

Sustainable Developmen Practice

Open Development: Promoting International Capacity Cooperation

Open cooperation, mutual benefits and win-win results are basic requirements of sustainable development. With the prices of nonferrous metal products constantly decreasing and the industrial plight hard to be changed in the short term, we take advantage of "Going Out" strategy and actively promote international capacity cooperation. It has achieved win-win results for us, for the countries along the "One Belt One Road" region and for many African countries. The company's ability to operate internationally has been greatly improved. Some major overseas projects are carried out, providing a larger stage for us and more Chinese enterprises to go overseas together and facilitating the healthy social and economic development of those regions and countries where we are operating.

◉ Wharf owned by Tagaung Taung Nickel Mine, Myanmar

During the process of "Going Out," CNMC has shown its tenacity, its determination to explore, and its spirit.

---Xi Jinping, President of China

Explore "One Belt One Road"

The connectivity projects of the "One Belt One Road" Initiative will help align and coordinate the development strategies of the countries along the "One Belt One Road", tap market potential in this region, promote investment and consumption, create demands and job opportunities, enhance people-to-people and cultural exchanges, and mutual learning among the peoples of the relevant countries, and enable them to understand, trust and respect each other and live in harmony, peace and prosperity.

----Vision and Actions on Jointly Building Silk Road Economic Belt and 21st-Century Maritime Silk Road

As a nonferrous industry pacesetter for "going out", CNMC takes its strategy and the local economic and social characteristics into consideration, sticks to the shareable development pattern featuring mutual benefit and win-win results in its international operation, and exports advanced and mature technologies, equipments, and management experience to countries and regions along the Belt and Road. It has greatly promoted local economic and social development.

Stick To Win-win Development

When carrying out resource exploitation, project contracting and trade & service projects in countries and regions along the "One Belt One Road", we always stick to win-win development, actively mobilize upstream and downstream cooperating enterprises to invest, develop and operate the mine together, and "go out" together with enterprises in the industrial chain. Meanwhile, we attach great importance to mutually beneficial cooperation with stakeholders such as local governments and local communities. By paying taxes, supporting the development of local enterprises, providing job opportunities, and improving local infrastructures, etc., we share the value created by the Group with local stakeholders and achieve shareable development.

By the end of 2015, we have undertaken infrastructure, livelihood projects and nonferrous industrial development and construction projects in more than 20 countries and regions along "One Belt One Road". These business operations have boosted the development of local nonferrous industry.

Central Asia

- Undertook the construction of two world-class copper mines in Kazakhstan, namely Bozshakol Copper Mine and Aktogay Copper Mine.
- Pakrut Gold Mine Project in Tajikistan.

The Middle East

- Zarand Iron Ore Concentrate Plant Project, Iran
- Built the most advanced copper smelting plant, electrolytic aluminum plant and iron ore concentrator in Iran. We have paved way for the development of nonferrous industry in Iran.
- Arak Aluminum Plant, Iran.

South Asia

- SKM shaft project (the first shaft whose depth is more than one thousand meters in India).

Africa

- Zambia KCM shaft project won the "national best" and "ministry best" awards.

Case

Along "One Belt One Road"·the strength of Chinese nonferrous industry

"Dare to be the first" in Iran

Iran, which used to be called Persia, has been an important transportation hub and distributing center on the Silk Road since ancient times. The project contracted by China Nonferrous Metal Industry's Foreign Engineer and Construction Co., Ltd (NFC) produced the first piece of ferrochrome, ferromanganese, ferromolybdenum, zinc ingot metal and the first ton of aluminum oxide and electrolytic aluminum. NFC has made great contributions to Iran's metal industrial system.

Iran Jajarm Alumina Plant couldn't be put into production after more than $300 million were invested. Then we contracted the renovation project and brought it back to life with only $3.6 million. The plant produced qualified products, saved about 80 million dollars annually, provided 4500 jobs and demonstrated the technology strength of China's nonferrous metal industry.

Zambia KCM shaft project won the "national best" and "ministry best" awards.

Zambia KCM shaft project is the first nonferrous metal mine shaft project contracted by a Chinese enterprise NFC in Africa. It is an EPC project that integrates design, purchase, construction and pilot-running services undertaken by NFC. The project has won "National Quality Project (Overseas Project) Silver Award" and the first place of "China Nonferrous Metal Construction Association Excellent Project Design".

The water discharge capacity, delivery volume and the hoist single line lifting capacity of the project have all set records in China and Africa. Its design, equipment manufacture, and construction standards are in accordance with European standards and follow European project management procedures. For a long time, the project has been keeping the safety management record of Zambia's mining industry with zero serious injury or death.

Advance technology transfer

Carrying out international capacity cooperation means to connect domestic advanced capacity with overseas capacity. Advanced science and technology should lead the way and serve as the ballast.

--- Zhang Keli, President of CNMC

During the process of "Going Out", we have been attaching great importance to the scientific and technological progress as well as technological innovation, actively introducing advanced technologies to countries and regions where our projects are operated, and providing support and help for the technological advancement and industrial development in local nonferrous metal industry. CNMC Nickel Co., Ltd, which won the first prize of "2015 China Nonferrous Metal Industry Science and Technology Award", helped to make breakthroughs in Myanmar nonferrous metal industry with its advanced technologies during the process of developing Tagaung Taung nickel mine.

Case

Tagaung Taung Nickel Mine---advanced technologies leading the world

Tagaung Taung Nickel Mine receives most of CNMC's overseas technological development and application investment. The project transformed its role of technology "laggard" into technology "pacemaker".

Tagaung Taung Nickel Mine leads in many areas and has created many firsts:

- Use advanced laterite nickel deposit smelting technology---rotary kiln electric furnace technology
- Own two roasting rotary kilns designed and made independently. The diameter and length of the rotary kiln are 5.5 meters and 115 meters, respectively, the biggest in Asia.
- Own two 72 megavolt-ampere ferronickel electric furnaces designed and made independently.
- Build a 220 KV designated electric transmission line between Shweli Hydropower Station and Tagaung Taung Nickel Mine Project, with a length of 140 km.
- The first in the world to use a 4.6-km tubular draper-type laterite delivery system, featuring large altitude difference and long slope segments

In September 2015, CNIA assessed the "key technologies and large-scale equipments used to produce high grade ferronickel with laterite-nickel ore". CNIA came to the conclusion that the project conducted its production in an energy-saving, safe and environment-friendly way. It has innovations in 5 areas, such as applying tubular draper-type laterite delivery system, large-scale laterite pre-reduction and development of rotary kiln, etc. The project produced good economic and social benefits and most of its technologies led the world.

Tagaung Taung Nickel Mine, Myanmar

Case

Chinese technologies achieved green and recycling production

Pavlodar petroleum plant is one of the three largest plants in Kazakhstan. Due to the lack of technologies, the plant can only "export raw materials and import finished products". After many rounds of selection, the plant signed contract with NFC to build a petroleum coke calcinations plant. The plant was put into operation at the end of 2015, providing more than 300 jobs. Taking advantage of Chinese technologies and equipment, the plant produced calcined coke that not only supplies local electrolytic aluminum plant, but also earns foreign exchange income through export.

The most distinctive feature of Chinese technologies lies in the disposal of impurities during production, which avoids environmental pollution. After examination, the collection coefficient of exhaust gas cleaning system is higher than 99%, and the desulfurization degree is as high as 95%. The emission concentrations of sulfur dioxide and dust are in accordance with the environmental protection standards. The plant has achieved the goal of low emission, low pollution, and the recycling of raw materials.

In addition, the heat recovery boiler cools down the high-temperature steam and the steam not only serves the livelihood and production of the plant, but also generates electricity. 81 million kW·h of electricity is expected to be generated annually, which not only meets the demand of the plant, but also satisfies other enterprises' demands and the household electricity demands in cities after transported outside.

95% the desulfurization degree

99% the collection coefficient

Pavlodar Petroleum Coke Calcinations Plant contracted by NFC

Fulfill the African Dream

China-Africa cooperation will keep going and will never come to an end.

--- Xi Jinping, President of China

CNMC is "the best interpreter of China-Africa all-weather friendship".

--- Kenneth Kaunda, the first President of Zambia

CNMC has invested, built, and is operating many symbolic nonferrous metal mines and smelting plants in Africa. Through investment, CNMC brings Chinese capital, technology, equipment, environmental protection and management to Africa, which promotes the construction of nonferrous metal industry base in central and south Africa and connects "the Chinese Dream" with "the African Dream".

We are actively practitioners for making contributions to African development. By the end of 2015, we have had 19 invested enterprises in Zambia, Democratic Republic of Congo, and South Africa, etc. We have made contributions to the economic development in Africa and the friendly cooperation between China and Africa. We have invested more than $2.6 billion in Zambia, providing 14000 jobs. The local workers take up more than 90% of all employees. The total donation we have made exceeds $20 million.

CNMC in Zambia

> $2.6 billion	investment
14000	jobs
>90%	local workers
>$20 million	donation

Major investment projects of CNMC in Central and South Africa

Chambishi Leach Plant, Zambia

It is the first overseas hydrometallurgy plant invested by China, with an annual production of more than 7000 tons of cathode copper and good economic and social benefits.

Zambia-China Economic and Trade Cooperation Zone

A new pattern featuring Chinese enterprises "going out" together has been created.

Pima Mining Project, Democratic Republic of Congo

The Group integrates itself into major projects in the mining market in Democratic Republic of Congo.

Mabende Hydrometallurgy Project

Create new records in terms of its development scale and speed.

Chambishi Copper Mine, Zambia

It is the first Chinese overseas nonferrous metal mine, known as "the landmark of China-Africa cooperation".

Luanshya Copper Mines, Zambia

The Group got 80% of the company's stock equity in 2009, marking another example of Chinese enterprise "going out" after the financial crisis.

Chambishi Copper Smelter, Zambia

It is the first overseas pyro-metallurgy plant invested by China and the largest crude copper smelting plant that China invested in Zambia. It has won "The Luban Prize for Construction Project".

Construct high-quality project

CNMC has advantages in overseas project construction. NFC has ranked Top 225 Global Project Contractors and Top 200 Global Design Company. The quality projects of China No. 15 Metallurgical Construction Group Co., Ltd (China 15MCC) have won "The Luban Prize for Construction Project", "National Quality Engineering Award", and "Architecture Structure Quality Project".

As of now, we have contracted many highways, residential houses, cement plants, copper mines and smelting plants in more than a dozen of countries and regions, such as China, Laos, Kazakhstan, Iran, Angola, Ethiopia, and Zambia. Our brand advantage and highest level have been reflected in international EPC. In 2015, we have carried out projects in more countries, expanded the scale of the project, and extended our service in chemical industry, civil architecture, and water supply engineering, etc., promoted our ability to make profits, cultivated new economic growth point and provided new services for resource exploitation.

36 countries	Contract businesses are carried out in 36 countries
>$6.4 billion	The total output of overseas projects is more than $6.4 billion
>$1.4 billion	The export of large-sized complete sets of Equipment and technology exceeds $1.4 billion

On-going overseas construction projects

>$2.5 billion	Drive more than $2.5 billion of domestic equipment exportation
≈ 12500 people/year	Drive about 12500 domestic labors export per year
>11000 people/year	Provide more than 11000 jobs per year for the host country

- Eight projects aimed at enhancing supervision of project management ability and carried out by Xincheng Construction Supervision & Consulting Co., Ltd have won ministry–level quality project award.
- China 15MCC has won 12 provincial and ministerial–level quality project awards and 1 national quality project award.

Case

25 million tons·create core competitiveness with quality projects

Kazakhstan, the heartland of Central Asia, is the frontline of international capacity cooperation. The two world-class mine project Bozshakol Copper Mine Project and Aktogay Copper Mine Project, contracted by NFC, process 25 million tons of raw ore every year. As the first world-class mine project designed and managed according to western standards, Bozshakol Copper Mine Project has been granted “Altyn Sapa Award” by the president of Kazakhstan Nazarbayev.

Improve comprehensive service

We will transform China's foreign trade from "massive import and export" into "quality import and export" and form a new pattern of open economy. This will be beneficial for other countries to accelerate their industrialization and increase job opportunities. It will also provide more chances for China and developed countries to explore the third-party market together. We get what we want and achieve mutual benefits and win-win result.

--- Li Keqiang, Premier of China

Trade & services is an indispensible part of nonferrous metal industrial chain. It is the third largest component of CNMC business operations, besides resource exploitation and construction projects. By taking advantage of overseas development, we improve our service level and service quality in the field of trade, supervision and insurance so as to achieve balanced, coordinated and sustainable development of our main business.

Trade Services ---Innovative Forms

We explore internationally acceptable patterns and gain exclusive selling rights, trade qualifications and channels by participation, stock conversion and other methods.

We improve trade service network and push forward the construction of logistics base and commercial service network platform so as to boost the operation efficiency.

Supervision Services ---Increasing Qualifications

Xincheng Construction Supervision & Consulting Co., Ltd, which originally had class A supervision qualification for nonferrous metallurgical equipment, is now further qualified to supervise mining equipment, heat power station equipment and electric transmission and transformation equipment. This will pave the way for its marching into cross-system and multi-industry equipment manufacture supervision market.

Insurance services ---Creating Values

Golden Bright Insurance Broker Co., Ltd has segmented, upgraded and optimized all kinds of insurance plan, saving 6.23 million RMB of insurance premium and 22.34 million RMB in total. This has fully reflected the value of professional services.

Case

CNMC International Trade Co., Ltd improves trade services

In 2015, CNMC International Trade Co., Ltd optimized its trading service structure, stabilized the marketing channel and raw material supply, explored international markets in South Korea, Australia and Russia, etc., enriched raw material types such as coal, titanium concentrate and aluminum oxide as well as agricultural products, increased profits, prevented and controlled risks, increased the popularity of CNMC International Trade in the international market and continued to be listed in the "Top 500 Chinese Foreign Trade" .

When the construction of Tagaung Taung Nickel Mine entered into an important phase, CNMC International Trade was also busy with purchase, storage and transportation. It is really a big challenge for the plant to purchase the largest rotary kiln and electric furnace used in the project for the first time. The company decided to make centralized purchasing by CNMC International Trade Co., Ltd and CNMC Nickel Mine Co., Ltd forming an equipment bidding and purchasing team to conduct strict supervision on technologies. By the time of completion, the company had held 130 equipment bidding, signed 224 contracts worth 940 million RMB in total, and purchased more than tens of thousands of equipment spare parts. After more than 2 years of hard work, the company finished its purchasing work, saved more than 300 million RMB and promoted international capacity cooperation.

Sustainable Development Practice

Innovation-Driven Development: Transform thinking Pattern to Improve Quality and Increase Efficiency

Efforts on the innovation are essential to the sustainable development of the business, society and China as a whole. With persistent depression in price of the nonferrous metal, technology, product and management innovation serve as a foundation for the success and sustainability of business. We are committed to innovation-driven development, work hard on the innovation in these three areas, look in the longer terms and seek to enhance competiveness.

Whoever grasps the key link of the innovation gains the advantage.

---Xi Jinping, President of China

Achieve Strategic Innovation

In 2015, confronted with the "New Normal" , and the broad trend in the SOE reforms and requirements entailed by the "Going out" strategy, we have held seminars on the reform and development and meetings on "maintaining growth", which discuss the strategic direction and thinking and reach consensus on the general mindset of tapping the resources, going international and moving upmarket. This tenet will be put into practice in the "Thirteenth Five-Year Plan" . In 2015, with the aim of "restructuring, strengthening management and maintaining the growth", we've been implementing the "One Company One Policy" and "One Factory One Policy", so as to improve the quality of our assets, overcome the difficulties and ensure steady growth.

Case

CNMC Albetter "Deepening Reform, Strengthening Management and Boosting Performance"

In 2015, in the face of economic new normal and complicity in the market, CNMC Albetter focused on deepening reforms, strengthening management, and boosting performances by reinforcing the working-team building, expanding marketing shares and carrying out the refined management. The efforts on management have brought us 64.71 million RMB, with copper tuber, copper slab band's general final product rates being 81%, and 63.09%, respectively, an increase of 2% and 1.5%. We reduced the cost by 3.08 million and 1.10 million and have realized stable operation.

Promote Product Innovation

Against the background of the grim market, CNMC forges ahead with product innovation. When the "Made in China 2025" is intergraded into the latest generation of IT industry, the Group sees the opportunity and encourages the affiliated companies to develop high-tech and high-value products and services and drive the product upgrading.

Case

4600 Meter·Filling the void

CNMC Pump (Shenyang) Co., Ltd (hereinafter referred to as China Pump) develops the state-of-the-art reciprocating diaphragm pumps designed for the 4600-meter plateau, filling the void in the domestic industry.

Case

Electro-optical Switch has Become Popular among the Clients

In 2015, Guiling Mining Institute speeded up the efforts to put project about the nanoparticle and intraocular lens into commercial use and achieved great success. After many trials for optimizing, a lot of progress has been made in the KTP output, quality and techniques. KTP has been available in the market and is very popular among the clients

Strength Scientific and Technological Innovation

Scientific and technological innovation is an inner driver for sustainable development and greater business benefits. CNMC has been implementing innovation-drive strategy, as demonstrated by its efforts to improve mechanism platform to facilitate innovation and to increase its investment in R&D, technological upgrading and equipment. The aim is to march into the high-value and high-tech business, to put scientific and technological achievements to commercial use and to drive better results and industrial development with cutting-edge technologies.

Innovative Capacity

CNMC works to boost innovative capacity by building a better innovative mechanism and cultivating a large pool of talents.

Innovative Mechanism

Seven design & research institutes

Three national engineering research centers

Two nationally-accredited laboratories

Three national business technology centers

Three academician workstations

Five post-doctoral research centers

Innovative Talents

2 academicians of Chinese Academy of Engineering

123 experts entitled to special government allowances of the State Council

9 are selected to be part of the New Millennium Thousand Talent Project

1 is selected to be part of National Advanced Talents with Special Support"

4 are honored with the title of National Technical Master-Hand

The establishment of National Key Laboratories on Rare Metals and Special Material, the first national key laboratory of enterprise, has been approved

Organize the signing of the Scientific Goal Responsibility Pledges for the 2015-2016 "Ten, Hundred and Thousand Tech-Talents".

Finish the job of applying for the 2015 "Hundred, Thousand and Ten Thousand Talents Project".

Low Cost and High Performance

By putting scientific and technological achievement into commercial use, CNMC works to create value with innovation that leads to greater resource efficiency and lower cost. In 2015, CNMC was awarded with "Innovative Business Award" for its senior executive's impressive performance among state-owned enterprises, and ranked first in the third batch of the national innovative businesses.

Integrated Use of Recourses

- Increase efforts to solve technical difficulties
- Drive the innovation in production process and equipment
- Increase integrated recourses utilization efficiency

Lower Production Cost

- Improve the production process
- Drive down the production cost

Greater Economic Benefits

- pply the technology into the product development and project
- Improve the economic added value

Case

Overcome the Technical Difficulties in Tapping Chambishi Copper Resources in Zambia

CNMC achieved great success in breaking through the bottleneck in tapping Chambishi copper resources, with extraction rate rising from 44.2% to 68% in 2015, dilution rate going from 15% to 11%, and extracted copper rising from 310 thousand tons to 870 thousand tons in 2014. Besides solving technical problems, CNMC looked for the long-term development of the copper resources by working out regulations for mining and incorporating them into the management of the mines in Zambia and by formulating over 10 standard procedures and practices such as Standard Practices for High Stress Area in Main Orebody and Standard Practices for Adopting Filling Ming Techniques in the Western Orebody. This effort does a lot in optimizing the techniques and procedures and strengthening control and oversight of the practices and, therefore, in boosting performance and driving down cost. The project passed some experts' assessment in 2015. The overall technology has reached the world-leading level and is the meritorious winner for the China Nonferrous Metal Industry Scientific and Technological Award.

Case

The Second Award·Key Technology in Producing High-Quality Nickel out of the Nickel Ore and the Large-Scale Research on the Equipment

Based on the characteristics of the nickel ore in Tagaung Taung, Myanmar, CNMC Nickel Co. Ltd. develops a refining system with RKEF techniques at the center, and has realized energy saving, safer operation and environmental friendly in producing high quality ferro-nickel and is now leading the national efforts to refine the nickel in a clean and effective way.

Progress in the Industry

As a powerful force in the forefronts of nonferrous metal technology, CNMC leads the industry to make breakthrough in the area. In 2015, 16 scientific results won "China Nonferrous Metal Industry Scientific and Technological Award". Among companies that go global, one CNMC Zambian subsidiary won the first class award for consecutive 6 years and CNMC Nickel Co. Ltd has won this award for the first time.

Patent

- CNMC is awarded with 237 patens in 2015, among which 76 are for innovation and 40 are for national and industry standard.
- CNMC Orient Group Co., Ltd. (hereinafter referred to as China Orient) was awarded "the 17th China Patent Recognition Award" for its preparation method of high-nitrogen-content capacitor grade tantalum powder and tantalum powder prepared therefrom and tantalum capacitor.
- China NERIN Engineering Co., Ltd (hereinafter referred to as NERIN) was awarded "the 17th China Patent Recognition Award" for its cathode plate picks equipment.

Deepening the Management Innovation

Steady and effective internal management is essential to the sustainable competitiveness of the business. CNMC is keeping up with the changing internal and external operating environments and making innovative adjustment to the management system and operating procedures. This is to enhance the comprehensive competitiveness in the quality, cost and efficiency of the product and the project and to move towards integrated management and make greater value in the industrial chain.

Operating Management

- We must strengthen innovation of the operating management and take measures to ensure that all sorts of businesses are doing well.
- We must watch out for the economic and nonferrous metal industrial situations and offer advice on the strategy and operating management.
- We must forge ahead with the project development and create new investment mode and make low-cost takeover by seizing the right opportunities.
- We must make greater efforts to explore prospective mines and tap the internal potentials to increase the economic benefit of prospecting.
- We must strengthen the legal system and provide legal services for the business development.
- We must reinforce financial management and improve the internal control system to keep the risk under control and to ensure available capital for daily operation.
- We must focus more on the selection and cultivation of talents with sophisticated expertise and provide a foundation for enhanced performance and effectiveness.
- We must strengthen efforts on the innovation, identify new areas of growth and help generate business profits.
- We must encourage companies that go overseas to build corporate culture and create an enabling environment for development.

Case

To Proceed with 6S Refined Management

Tieling Mineral Processing Reagent Co., Ltd (hereinafter referred to as Tielig Reagent), afflicted with China Nonferrous Metals Group Shenyang Mining Investment Co., Ltd, was recognized as the High-Tech Company in Liaoning Province. Building on the success in innovation of processes, Tieling Reagent focuses on refined management and improved performance. The theme of refined management is to extend it into the work-team refinement. The company has introduced "6S" to the work-team management, so as to ensure standardized basic management, normalized safe production, optimized cost management, unified equipment management as well as clean site oversight and transparent evaluation.

The Four-in-One New Mechanism

Internal control serves as the foundation for improving the operating management and preventing the risks. In 2015, with the goal of clarifying internal control and responsibilities, optimizing the procedures, boosting performance, driving down cost, controlling risks and strengthening competitiveness, the group improved the internal control system and created a comprehensive management mechanism that integrated internal control, oversight over performance, defense against risks and diagnosis of management deficiency.

Internal Control

- Improve the methods of internal control evaluation.
- Keep track of the internal control evaluation; improve the internal control system and revise the Handbook for Internal Control.

Oversight over Performance

- With the help of internal auditors, audit the receivables and stock management of the invested companies.
- Conduct oversight over the performance, offer solutions to problems detected in the oversight and ensure that the invested company get things right.

Risk Prevention and Control

- Prevent financial risks concerning duty, trade business and foreign exchange.
- Beef up the risk prevention and control in specific areas such as trade management and operation management.
- Promote the legal audit, prevent the legal risks and conduct studies on overseas legal risk prevention and control.

Diagnosis of The Management Deficiency

- Conduct the diagnosis of management deficiency and work out corresponding solutions to individual business.
- Explore means to integrate different departments of companies and individual companies. Beef up the central control.
- Implement the accountability system, give performanc-es-based incentives and disincentives and make sure that all the lessons are learned and that businesses remain stable and progressing.

Practice In The Sustainable Development.

Sustainable development: well-balanced drive for strong and healthy growth

CNMC continue to promote structural adjustment. “Expanding Business” was implemented for survival, which was an imperative in the period of the “Twelfth Five Year Plan”. Bearing the aim of survival in mind in the changed climate, we now have to shift our focus towards strong and healthy growth, deepen the structural reform, promote coordinated development of domestic and overseas businesses and well-balanced development of the industrial chain, beef up the risks prevention and control, strengthen the quality and safety management and improve the quality and benefits of our development. That’s how we can stand out in the market competition.

◉ **The tailing pond has become a paradise for migrant birds.**

True gold doesn't fear the burning of fire. True partners can not only enjoy feasts at good times, but also move on together at bad ones.

--- Xi Jinping, President of China

Optimize Industrial Distribution

CNMC should take advantage of "going out" and stick to the model of "mutual help, complementarities, mutual promotion and win-win cooperation". It should work together with partners to optimize industrial distribution and product structure, which focuses on new materials, environmental friendly technology and comprehensive recycling of resources. CNMC should make efforts to reach the higher end of the value chain by enhancing added value of its products. It should also cultivate new profit growth point and cluster competitiveness to foster the balanced development of industrial chain, which integrates exploration, design, construction, mining and metallurgy, processing, equipment manufacturing, logistics and trade.

It is essential to form competitive advantage at the industrial chain and fully realize win-win cooperation between enterprises and value chain partners if an enterprise wants to enhance its sustainable competitiveness. Faced with the severe downturn of the market, it is necessary for the non-ferrous metal industry to adjust and reconstruct its value chain. We perseveringly promote the coordinated development of resource development, construction engineering and trade services. We stick to moving towards the high-end industrial chain with joint efforts of the value chain partners.

--- Zhang Keli, President of CNMC

Balanced development at home and abroad

- Combine our "going out" practice with national strategies including "One Belt One Road", international capacity cooperation and African "Three Networks and Industrialization" initiative.
- Export our leading capacity, equipment and technology to some countries along the "One Belt One Road" region and to most African countries, so as to further develop engineering contracts and international trade. We should carry out more "quality" projects and improve effectiveness.

Coordinated Development of Industrial Chain

- Implement the national strategy that encourages people to start their own businesses and practice innovation, foster high value-added goods and services as new profit growth points.
- Closely follow the industrial transformation and upgrading, encourage and support enterprises to extend to the higher end of the value chain.

Common Development with Clients

- Focus on clients' demands, strengthen R&D and innovative and specialized products design, provide high-quality and diverse goods and services for clients.
- Enhance customer management, stick to quality and integrity, constantly improve the degree of satisfaction and realize common development with clients.

Partner
Set up Sino-Metals Leach Zambia Limited (SML) with private enterprise Hainan Zhongfei Investment Co., Ltd. in the form of cash investment; Daye Nonferrous's Xinying Company has been listed in the New OTC Market through successful restructuring; Guilin Tebon Geology and Mining Co., Ltd. has attracted strategic investors through restructuring and is intended to be listed in the start-up board.

Cooperation Area
Integrating industrial chain and value chain, different capitals, different cultures, values, operating concepts and management patterns among partners through SOE reform, introducing strategic investors and listing in the New Third Board and start-up board.

Partner
Tsinghua University, University of Science and Technology Beijing, Central South University, Institutes of Technology of Tianjin, Hebei University of Technology, Kunming University of Science and Technology, etc.

Cooperation Area
Subject study and consulting and training

Partner
Provinces and cities including Hubei, Liaoning, Ningxia, Inner Mongolia, Guangdong, Guangxi, Shandong, Tianjin and Jiangxi.

Cooperation Area
Resources exploration and development, product trade and construction project contracting, etc.

Partner
Suppliers

Cooperation Area
Purchasing and operating

Partner
Foreign banks, policy banks, four state-owned commercial banks, joint-stock commercial banks and other non-bank financial institutions including JP Morgan and CICC

Cooperation Area
Credit aid, bond issuing

Partner
Indonesian BRMS, Congo Mining Co., Baosteel Group, China XD Group, COSCO Group, China Aviation Technology Group, CFHI, GRINM, BGRIMM, Chaocol, China Gold, CRCC, China Chengtong Group, Jinchuan Group

Cooperation Area
Resource exploration and development, product trade

Partner
Companies from South Africa, Zambia, USA, Turkey, Portland and Mongolia and other countries

Cooperation Area
Resource exploration and development, product trade

Build responsible supply chain

CNMC has formulated the Supplier Management Guidelines that integrates supplier qualification investigation, dynamic management and comment into the purchasing procedure. It has enhanced anti-corruption, strengthened management of suppliers and promoted suppliers' capability to fulfill their duties through scientific, transparent, responsible and clean purchasing.

Responsible Purchasing Procedure

Before the purchase
Supplier qualification review and field inspection

During the purchase
Management of key facilities and materials

After the purchase
Conduct customer rating and dynamic management, sign a centralized purchasing framework agreement with suppliers, and optimize close cooperation so as to form a healthy and open supply chain environment.

Case
Work together with suppliers, Chinese enterprises further "go out"

CNMC has established equal, mutually beneficial and win-win relations, carried out active communication with the suppliers and take the initiative to understand the needs of suppliers in difficulties, especially under special circumstances (such as earthquake, etc.); it actively uses its 30 years' experience of overseas operation to give full play to the channel advantage, brand advantage, upstream and downstream industrial chain advantage and overseas advantages, so as to help Chinese enterprises "Going Out" and implement "made in China 2025".

Strengthen Risk Prevention and Control

CNMC strictly controls risk, supports the balanced development of the industrial chain, which provides a solid risk defense for its competitiveness. Most of its project investment pays off on schedule or in advance. In 2015, it issued Comprehensive Risk Management Methods, which improved important links and formed an organic set with specific risk management regulations and norms and internal control norms, and improved the overall risk prevention and control system.

Across-the-board Risk Management

Business and financial risk	Innovate evaluation index model and manage defective business
Legal risk	Formulate National Guidelines of Legal Risk Prevention for Overseas Companies
Investment risk	Formulate Investment Negative List of Overseas Chinese Mining Companies under "One Belt One Road"
Trade risk	Investigate financing trade and organize training on trade risk management and seminars
Labor force risk	Settle labor disputes and prevent gaps in talents
Environmental risk	Prevent environmental pollution and carry out overseas energy-saving and emission-reduction management
Safety risk	Raise safety risk awareness and increase safety knowledge

Comprehensive Quality Management

Products and engineering quality are the guarantee for us to improve quality and efficiency and enhance our competitiveness. CNMC sticks to innovative development and comprehensively improves the quality management capacity. In 2015, CNMC held "quality month" around China and training in all forms were held to raise awareness of quality. Advanced technologies were applied to the production and engineering projects to ensure the smooth running of the system. CNMC constantly raises the level of quality management and achieves the goal of zero major quality accidents and customer complaints.

Raise Quality Awareness

Various activities including on-site experience exchange, seminar on quality and salon on quality management were held during the "quality month"; we organized different forms of quality skill training and basic training seminars on new technology, new craft and new equipment; we held activities including QC group, "Five Small", job training, skill contest and quality model selection.

Carry Out Quality Examination

Carry out examination that aims at "detecting hidden quality trouble" and emphasizes "quality safety of special equipments" so as to make its quality reach the standards of first class enterprises.

Enhance the quality management of projects

Case

Fill the void—Evaluation of Chambishi Copper Smelter Project phase 1

In 2015, CNMC group arrived in Zambia to evaluate the 1st phase of Chambishi Copper Smelter Project. It commented on the results and effectiveness according to the previous goals set in project decision and the influence index on economic and social environments, which filled the void of project evaluation and improve decision-making level of investment projects.

Reinforce Safety Control

All companies shall raise their awareness that safety comes first, fulfill main responsibility in production safety, build basic capacity of safe production and resolutely prevent major safety accidents.

--- Xi Jinping, President of China

We stick to the safe production idea of "respecting life and prevention first", constantly raise our awareness of safe production, enhance the management and responsibility with the goal of safe production, upgrade safety standards of manufacturing enterprises and build pilot group of safety management standardization. We enhance safe production supervision through information platform, pay attention to key production links and realize specific management of every work section or procedure. We strengthen detection of hidden danger and emphasize safety management of contractor so as to constantly enhance risk management level and safety guarantee capacity. In 2015, CNMC realized the goal of zero major production safety accident.

Lay a Solid Foundation for Safety

We have established three-dimensional security education and training system, targeting at new staff, special operation personnel, basic-level operators, employees at key work section or teams members, which enhanced employee's safety awareness and practical abilities; we actively conducted safety promotion activities so as to reach a broad consensus that safe production is a red line as well as a bottom line. It has increased the level of safety management and laid a solid foundation for safe production. By 2015, 265.36 million RMB has been invested into safe production training. 60,308 people attended the training and 100% of basic-level operators have joined in it.

Enhance safe production training

97 **people**	**Organize 97 basic-level team leaders from CNMC Group to attend safety training for the first time**
1 **people**	**Organize 1 people to attend overseas safety supervision skill training**
60308 **people**	**Organize all companies to hold training of different levels and all together 60,308 people have been trained**
265.36 **million**	**CNMC invested 265.36 million RMB into safe production training**
100%	**Safe production training has covered 100% basic-level operators**

HSE training for Bozshakol on-site workers

Case

1797 people · HSE Safety Training for On-site Workers

In Oct. 2015, 1797 operators attended HSE training at Bozshakol. The training course combined real characters and the needs of the project and thus included construction in cold weather, operation at high place or with limited space, which yielded great effects.

Create a safe production environment

Warning Education of Accident Cases

Compile Collection of Accidents in 10 Years, which included 40 accidents of 13 types happening in 9 enterprises

Calligraphy and painting photographic exhibition of safe production

Hold a calligraphy and painting photographic exhibition that displayed nearly 100 works about safe production

Knowledge contest about safe production

Organize 28,000 people to participate in the knowledge contest about Law on Safe Production

Essay competition about safe production

Send 131 articles to participate in "Strategic Theory and Practice on Security Development" Essay Competition organized by China Association about Work Safety

Carry out "safe production month"activities

Organize all companies to carry out a series of activities during the safe month, including keynote speeches, family communication, security and consultation as well as job training

Enhance security level

We attach great importance to security capacity building and safety production management mechanism improvement. We make great efforts to strengthen the safe production objective management and main responsibility fulfillment, push forward the upgrading of safety production standardization, and actively create a safety management standardization demonstration team. We continue to promote standardized, scientific, and systematic safety production; we build a safe production information platform to strengthen supervision over key enterprises and foreign enterprises and advance the efficiency and technology in supervising safe production.

Safety management system guarantee

Safe production objectives management and main responsibility fulfillment

Build safe production standards and a demonstration team

Build an information platform for safe production

Case

Use WeChat to Promotes Communication about Safety Management

In 2015, we designated a group of safety management staff to run WeChat. We built real-time communication with safe production managers, staff and basic-level team leaders through WeChat and greatly promoted view exchange and communications about safety management.

Six Systems Mine Security and Danger-Prevention Construction

Monitoring and controlling system

Monitor related parameters of a safe environment and safety control devices, equipment, and institutions according to these parameters.

Underground communication system

Promote the underground wireless communication system and underground broadcasting system.

Water-supply rescue system

Install water supply valves to ensure water supply in every operation station in case of disaster or emergency.

Personnel positioning system in coal mine

Carry out timely rescue according to the positioning data of personnel or devices in coal mine.

Compressed air self-rescuing system

Avoid mine accidents through self-rescuing equipment if the air is filled with coal ash or gas.

Emergency system

Include self-rescuer, escape capsule, shelter and fixed water-proof havens.

Case

Strengthen employee's safety guarantee

For TSAIRT Mineral Co., Ltd. which is situated at a remote place, employee life safety is an important part of its safety management. It made clear provisions on occupational health, food safety and other aspects, which effectively protect employees' production and life safety.

Monitoring and controlling system

Set up monitoring points in the working environment, monitor real-time changes of powder dust, noise and other indicators, assign labor protection appliances in accordance with the provisions, reduce threats to employees' health caused by the working environment.

Food safety

Strictly check the procurement, storage and use of food, eliminate substandard and expired food so as to ensure that employees can eat qualified food.

Traffic safety

The roads and communication conditions in Mongolia are poor, increasing the risk of long-distance travel. Given the circumstances, TSAIRT equipped vehicles with satellite phones and GPS positioning devices, and asked them to give timely report of where they have just arrived, so as to ensure smooth communications with every vehicle that goes out.

Stationed place safety

Hire local security companies to safeguard personnel and property safety

Strictly check electricity in the living area to prevent electric shock and fire accidents.

Medical safety

Infirmary with Mongolian doctors and nurses are set up.

A translator must be present when a Chinese employee sees a doctor in case of misdiagnosis and medical accident which result from language barriers.

Reinforce Safety Risk Control

Detect potential dangers

We increase safety inspection on potential risks among grass-roots and at operation places. We implement detecting mechanism for similar potential risks, establish risk analysis system, and carry out strict closed-loop management on rectification and supervision, and gradually form a long-term online management system for detecting and rectifying potential risks. We actively do good precaution to pre-control accident sources. By the end of 2015, 5,976 safety inspections have been carried out, over 13,478 potential risks have been detected and 98% of them have been rectified.

Special rectification of dangerous chemicals

Detect 641 dangerous chemicals storage problems.

Hazard source management

Collect and compile information table of hazard source monitoring for each enterprise affiliated to the Group Organize mine enterprises to list clearly hazard sources at each key position.

Potential risk management of overseas construction projects

Follow up the rectification of 349 potential problems of overseas construction projects including Baxiaku in Kazakhstan.

Safety protection in special period

Implement the system in which leaders take the initiative in emergency duty, security check and information report during special periods such as holidays, the flood season and the "two sessions". Achieve the goal of zero accidents at important time.

Emergency management

We actively promote emergency management, make or revise emergency plans to ensure that the comprehensive plans, special plans, on-site disposal program are consistent, which improves the effectiveness and operability of emergency plans. we construct emergency rescue bases which are equipped with a full range of relief materials, establish and improve the maintenance of emergency relief materials and carry out regular emergency drills, constantly improving emergency preparing, response and rescue capabilities. By the end of 2015, 1293 emergency plans have been hammered out and 437 emergency drills have been held with 11,772 people participating in these activities.

Emergency rescue drills at NFCA

Case

7 emergency drills on water shutoff and fire accidents

NFC Africa Mining Plc (hereinafter referred to as NFCA) summarized and drew on nationwide blackouts, underground fires and other emergencies in recent years, formulated and revised special emergency plans for flood, fire, electricity blackout and water shutoff. It organized 7 emergency drills on water shutoff and fire accidents in 2015 and sent a representative team to participate in the 10th Session of National Emergency Rescue Competition in Zambia.

Safety Management of Contractors

Today, with extensive and in-depth economic cooperation, the contractor management has become an integral part of business activities. We continue to strengthen safety management of contractors and outsourcing companies, establish and improve the outsourcing safety supervisory system and mechanism, perform strict HSE management system based on international practice and jointly improve the level of safety management together with the contractors.

Establish "security check" of outsourcing projects

Set criteria of assessment for safety investigation over outsourcing projects; set safety supervision posts to check outsourcing projects day and night.

Implement "equal management" method

Integrate the outsourcing projects into project management and sign a responsibility pledge of safe production; designate specific personnel to manage the installation, maintenance, and mine construction of outsourcing equipment; implement equal organizational system, equal educational opportunities, same criteria of assessment and equal punishment and reward.

Implement "safety deposit" system

Require companies to turn over safety deposit in proportion to the construction cost before they start the mine factory project; set up special investigation for deposits.

Leaders lead the team in outsourcing projects

Require regional managers and leaders from outsourcing company to lead the operating team in the mine at the same time, and they are both responsible for mastering operation information and settling on-site problems.

Establish outsourcing "blacklist"

Formulate outsourcing security credit files; establish a "blacklist" of illegal and illicit behaviors conducted by outsourcing companies and personnel after investigation.

Safe production drill of overseas enterprises

Sustainable Development Practice

Green Development: Build a Beautiful Environment

Creating an ecological civilization featuring harmony between human and nature is important to the goal of building a beautiful world and achieving sustainable development in the world. Nonferrous industry has great impact on the environment and is faced with the challenges of resource shortage, huge energy consumption and environmental pollution. The whole society has put forward stricter requirements on the green development of the industry. We pay close attention to the environmental impact caused by our production and operation; we vigorously promote energy saving, emission reduction and pollution abatement; we constantly improve the efficiency of resource utilization; we endeavor to build a beautiful world while creating value for the society.

◉ NFC Luanshya Building

We should vigorously step up ecological civilization construction, strengthen our comprehensive management measures, take on our responsibilities, promote clean production, enlarge green area, and build a better ecological environment.

--- Xi Jinping, President of China

Efficient Utilization of Resources

To implement the strategy of comprehensively saving and efficiently using resources, we must have an in-depth knowledge about the basic situation of China's resources, accelerate our pace in transforming our thinking pattern, form the concept of economical, intensive, recycling utilization of resources, and strengthen the reform and innovation.

---Recommendations for the 13th Five-Year for Economic and Social Development

Mineral resources are fundamental for mining enterprises to achieve sustainable development. By strengthening resource management, pushing forward technological transformation, and developing cyclic economy, CNMC has improved its efficiency in resource utilization and made great efforts to develop, use, and protect the limited natural resources in a reasonable way.

Case

Strengthen employee's safety guarantee

By taking advantage of Panyu Industrial Park in Daye, Daye Nonferrous Metals Group Holding Co., Ltd is building a modernized industrial park that achieves cyclic utilization of renewable resources and tries to make the park a major base to supply renewable resources for Central China. By 2015, the park has won special permission to recycle discarded appliance, mechanical and electrical products as well as discarded automobiles. It has also been granted the title "City Mineral Product" demonstration base.

After the project is put into operation, it will provide

>80000	tons	scrap copper	**60000**	tons	plastic
100000	tons	iron and steel scrap	**>300000**	tons	renewable resource

General plan of the industrial park

Stick to Green Production

Mining enterprises must attach great importance to the practice of integrating environmental protection and governance of the mining area into resource exploitation and protection. They must establish an impeccable environmental protection management system and mechanism, pay close attention to the ecological construction in the mining area and employees' physical and psychological health, plant more trees and grass in the mining area, make the area more beautiful and build a garden-like enterprise with beautiful sceneries.

---- Green Mining Pact of China Mining Association

CNMC sticks to green development and integrates ecology construction, management and protection into the operation and management of the Group. We have established strict environmental supervisory system, kept strengthening environmental management and energy-saving management, carried out more reforms in energy-saving technologies, and devoted ourselves into building green mines and developing ecological nonferrous metal industry.

Enhance environmental management

CNMC constantly integrates and improves environmental management system, enhances environmental supervision and inspection, pushes forward environmental protection and risk control and emergency management, and creates a green platform for environmental management.

Guided by policy research

Carefully studied the new environmental protection law and other laws and regulations, actively participated in 5 seminars and other activities held by the Ministry of Environmental Protection and NDRC.

Push forward energy management benchmarking

Organized 8 major energy consumption enterprises to hold energy management experience exchange meeting.

Further perform major role in responsibilities

Compiled and released environmental protection, energy saving and emission reduction working focuses for 2015.

Upgrade management

Introduced early warning mechanism for energy saving and emission reduction, regulated environmental protection investigation and inspection procedures.

Prevent environmental pollution

Recorded and carried out the removal of environmental risks, and carried out project environmental impact assessment management.

Enhance environmental protection risk prevention

Carried out environmental protection, risk identification and elimination.

Case

Strengthen exploitation loss and dilution management

Chambishi Hydrometallurgy Company vigorously strengthens the management of exploitation loss and dilution. It can thoroughly eliminate thin-layer horse stones and the triangle of top and bottom surrounding rock, and recycle thin-layer vein. The practice has largely reduced the loss of ore and the mix of surrounding rocks. The exploitation loss rate and dilution rate in 2015 were 1.37% and 2.15%, respectively, decreasing by 3.63% and 2.85% compared with design loss rate and dilution rate. It has dramatically reduced the ore dressing cost and boosted production efficiency.

Strengthen Efforts in Energy Saving and Emission Reduction

CNMC keeps enhancing energy saving management, carrying out more reforms in energy-saving technologies, eliminating outdated capacity, and promoting economical and intensive utilization of energy and resources. The Group integrates pollution prevention and control into its business operation, regulates the management of waste water, exhaust gases, and solid wastes, and minimizes the negative impacts on the environment. The discharge of waste water, exhaust gases, and solid wastes in every operating company should comply with local laws and industrial standards.

In 2015, the comprehensive energy consumption of the Group in producing per ten thousand RMB output value amounted to 0.23 tons of coal, decreasing by 10% on year-on-year basis; the emission of sulfur dioxide reaches 19911.55 tons, decreasing by 6% on a yearly basis. The Group outperformed in SASAC energy saving and emission reduction assessment and had no environmental pollution incidents in 2015.

Energy saving and emission reduction are promoted everywhere

5000 tons

Daye Nonferrous Metals Group Renewable Resource Recycling Park has been granted the title "City Mineral Product" demonstration base. Smelting plant smoke collection and treatment project will reduce more than 5000 tons of sulfur dioxide after being carried out.

22.54 million RMB

CNMC Albetter invested 22.54 million RMB into thermoelectricity production, so as to achieve clean production. This made the concentration of major pollutant emission such as smoke, nitrogen oxide and sulfur dioxide lower than local restrictions.

>20 million RMB

The new tailing pounds built by China Nonferrous Metal Mining Co., Ltd are transformed from "dry emission" to "wet emission", saving 35 million RMB of construction investment and more than 20 million RMB of operation cost annually.

68.8 tons 97200 kW·h

CNMC (Tianjin) Nonferrous Metals Co., Ltd transformed the automatic water supply system in the sewage station, saving 68.8 tons of water every day. Every pump saves 97200 kilowatt-hour each year.

4 million kW·h

CNMC Fushun Hongtoushan Mining Co., Ltd is equipped with SVG (2400 kilowatt) automatic reactive compensation devices, saving 4 million kilowatt –hour each year.

11.3 million RMB

CNMC (Guangxi) Pinggui PGMA Co., Ltd invested 11.3 million RMB into mine inflow governance and has successfully achieved standardized emission.

Case

China 15MCC·diversified measures to achieve energy saving and emission reduction

In 2015, China No. 15 supervises energy saving and emission reduction activities of its branches and sets specific goals for each branch, which has taken diversified measures:

- Replace traditional engineering construction materials with energy-saving and emission-reduction materials.
- Promote the use of solar energy and electric power indemnifying measures. Formulate reasonable construction energy consumption index.
- Recycling water comes first when water is needed for the operation of machines, equipment and for watering.
- Water the construction site to reduce the dust.
- Monitor the air and water safety in the project site with monitoring instruments.
- Carry out all kinds of activities to promote the awareness of energy saving, emission reduction, and environmental protection.

Green Mine Construction

CNMC sticks to reasonable development, strengthens unified planning and management of mineral resource exploration and exploitation, utilizes resources in a reasonable and efficient way, minimizes the impacts of exploitation activities on the surrounding environment, endeavors to construct green mine and develops an ecological nonferrous metal industry.

Case

Muliashi Tailings Pound use stripping earthwork to build dam

Muliashi Tailings Pound built a dam in the dry season of 2015. It used stripping soil to build the dam, greatly reducing the cost investment. The company invested 2.10 million dollars to build the dam and 6.25 million dollars to strip the soil. Investment in stripping soil is the common operation of the company, the equivalent to saving 6.25 million dollars to build the dam.

Case

Over 200 mu·"Green Mountain Project"

In 2015, CNMC Fushun Hongtoushan Mining Co., Ltd launched the "Green Mountain Project" and designated more than 200 mu of green land and mobilized more than 1000 people. It took 8900 hours to finish the project. Excavators, bulldozers and other special vehicles worked for more than 300 hours on the site. 350 dumpers were put into operation and more than 10000 cubic metres of earth and stone were cleared. Approximately 80000 trees of a dozen types were planted. The tailings pound and discarded stone ledge have now been incorporated into tourism development plans.

Tailing pound transformation project

Discarded stone ledge transformation

Case

Three technologies·innovation propel the development of "Green Mine"

CNMC Shenyang Nonferrous Metallurgy E&R Institute, Ltd improves economic and technical norm of smelting recycling, reaching and even exceeding national environmental protection level. It has propelled the construction of "Green Mine".

- **In the mining area:**
  Focusing on efficient mining technology, ventilation system optimization, filling, anchor-plate retaining and other technical problems, the institute has applied new technology and carried out new equipment research.
- **Mineral processing:**
  It conducts researches on new ore dressing technology, procedure optimization, new technology that combines ore dressing and smelting, tailings pound safety, etc.
- **Metallurgy:**
  It conducts researches on hydrometallurgy high-value technology, resource recycling technology and pollution control technology, etc.

Protection of Natural Ecological Environment

Mining companies should keep advancing their performance in environmental protection to "contribute to conservation of biodiversity and integrated approaches to land use planning."

---Ten principles of ICMM's sustainable development framework

CNMC upholds the principle of "protective development and protection in development". In view of ecological environment of the mines, we take prevention and protection measures as priorities. The ecological environment of mines is comprehensively harnessed and that of used mines is restored to minimize environmental problems brought about by mining.

Water Resources

CNMC is committed to utilizing water resources in a responsible manner. We will strengthen water management and, in our projects, provide comprehensive water resource protection with strict control over soil erosion and production impact on waters. We also undertake to discharge zero waste water through recycling of industrial water.

Pinggui PGMA under blue sky and white clouds

Case

Three patterns for systematic solutions to water pollution

With the scientific breakthrough of Subtropical Agriculture Institute of the Chinese Academy of Science, Great Yangtze River Environment Engineering and Technology Co., Ltd, affiliated to Daye Nonferrous Metals Group Holding Co., Ltd, was able to provide systematic solutions of ecological management, namely Nitrogen and Phosphorus Resource Utilization, to water pollution by aquaculture, rural domestic sewage in small-scale watercourse at a low cost. In this way, sewage can be purified to rejoin the ecological cycle, which eventually leads to an increase in economic value and income. The core technologies are known as Myriophyllum Aquaticum Wetland Pollution Elimination Technology, Biological Matrix Purification Technology, and Myriophyllum Aquaticum Resource Utilization Technology.

Aquaculture waste water treatment and resource utilization pattern

Combine multi-level biological matrix purification system and multi-level myriophyllum aquaticum wetland system to dispose waste water.

Agriculture non-point source pollution ecological treatment pattern

Use small-scale biological matrix tank (with rice straw fillings) and multi-level biological wetland(namely myriophyllum aquaticum wetland combined with economical aquatic plants wetland)

Eutrophic water body ecological treatment pattern

In all model parts of the rivers harnessed, chemical oxygen demand, pollutant such as nitrogen, phosphorus, etc, decreased 30% to 50%, and water clarity increased to about 100cm, within 60 days of treatment.

Case

40 kW·h is saved each year through water and energy management

Targeting at the problem of "large flow, low efficiency, and high energy-consumption" in cooling water circulating system for electricity-generation in smelters, Daye Nonferrous Metals Group Holding Co., Ltd, developed energy management contracting and established specialized hydraulic mathematical models and parameter capture standards to build a "energy-efficient pump", thereby coordinating the systems and eliminating vain consumption. After transformation, one power-generation circulating pump consumes 178 kilowatt, compared with the previous 202 kilowatts. On this measure, electricity saving ratio can be as much as 11.6%, equivalent to 40 kW·h saved a year.

Energy consumption of power-generation circulating pump per hour

Before transformation	202kW
After transformation	178kW

By calculations on current operations

Electricity saving ratio	≈ 11.6%
Electricity saved amount of a year	40 kW·h

Case

Four aspects of water resources management in Pakrut Gold Mine Project

- **Drained water in mining production**
  Drained water in mining production is ground water, which can be used to satisfy production need. The excess is discharged into Pakrut River.
- **Waste water in concentrator production**
  Apart from water used, the rest, through pressurization, is transported back to the elevated tank for returned water. No such kind of wastewater is discharged.
- **Rainwater and wastewater in tailing pond**
  Flood defenses are installed in the tailing pond, with measures to prevent surface water and rainwater from flooding in.
- **Domestic sewage**
  Domestic sewage receives on-spot primary treatment before being transported through pressurization by the submersible pump to domestic sewage treatment station. Disposed wastewater is collected for later use in carwash, greening and watering on the roads.

Pakrut Gold Mine Project in Tajikistan

Land resources

In terms of protection and rational utilization of soil resources, CNMC takes a series of actions. It avoids damage to the land resulting from digging, occupying, etc., in the mining process. Based on the project site construction, production methods used and the overall land use planning, we take appropriate measures to deal with the issues brought by mining and to restore the land used to usable conditions.

Case

Seven steps in the new integrated "topsoil stripping - mining - reclamation" method

As a response to the reclamation requirements in "Preliminary Design for Myanmar Tagaung Taung Nickel Mine Project", CNMC Nickel Co., Ltd. (hereinafter referred to as CNICO) take gradual steps towards land reclamation synchronized with mining, by timely reclaiming the mine gob year on year and restoring the vegetation soon, so as to conserve the ecological environment. The method has several main steps:

Trees and grasses planted on the side slope in Myanmar Tagaung Taung Nickel Mine

Biodiversity

CNMC includes prevention and protection measures for biodiversity in project planning, mining and closure management, to minimize the side effect of mining on living beings. In 2015, no incident related to severe impact on biodiversity occurred in any branches.

Measures for biodiversity protection

Before mining:
Make sound plan to avoid the breeding season of wild lives

During mining:
Mark rare plants and animals within the region

After mining:
Green the mine regularly with efforts to maintain ecological balance

Case

Overhead transmission line on higher towers in Myanmar Tagaung Taung Nickel Mine Project

To protect the primeval forests along the route from being destroyed, CNICO heightened the towers from the average 40 m to a range between 60 m and 80 m when constructing the 140-kilometer-long transmission line in Myanmar Tagaung Taung Nickel Mine Project. In this way, the habitats for many rare wide lives can be conserved to the fullest.

overhead transmission line on higher towers for biodiversity protection

Communicate the concept of environmental protection

CNMC is committed to environmental protection, employing the digital technology to popularize the latest policy, laws, regulations and other legal knowledge about the environment protection, launching Energy Conservation Week featuring a wide variety of activities, and encouraging its employee to be part of efforts to protect the planet.

Case

20 million RMB·Green Office has become a fashion

There is a special fish tank in the hall of CNMC Nickel Mine Building. The fish tank has a layer of slag on the bottom and contains disposed sewage. CNMC Nickel Mine shows in an appealing way to the local people that the sewage produced by Tagaung Taung has already been purified.

Case

The garden-like factory in the African forests

CNMC has invested in the Mabernd Project, which is honored with the garden-like factory in the African forests. The environment-friendly way of doing business is the value that CNMC people cherish, laying a solid foundation for future development.

Keep fish with water quality monitoring

Mabende Project

Case

Four aspects·Zambia-China Economic and Trade Cooperation Zone practice environmental protection

In 2015, the environmental protection activities carried out in Zambia-China Economic and Trade Cooperation Zone involved the following areas:

- Rainwater and sanitary sewer system: publicize the importance of separating rainwater and sewage by showing the project to the public.
- Bare land in the green public area: increase green coverage ratio, create a working, living and production environment that is green and harmonious.
- Build nursery garden: provide nursery stocks for environmental greening; publicize the fact that growing seedlings and planting trees are of great importance to the protection of ecology.
- Promote the use of electricity power generated by solar photovoltaic for street lamp illumination. Publicize the fact that using new energy is of great importance to energy saving and emission reduction.

Sustainable Development Practice

Shareable Development: Share Socio-Economic Value

Coordinate the development of enterprises and local economy and society. Allowing the employees, local enterprises, local community and local people to enjoy the fruits created by overseas enterprises is an important goal of sustainable development. Enterprises have profound influence on employees, local community and the environment and are closely followed by stakeholders. We actively create good developmental environment for employees and support the economic and social development of the local community, so as to enjoy our fruits with stakeholders.

◉ Celebrating festivals with local employees

Build a harmonious team

In order to stimulate the employees' potential, CNMC has long been devoted into employee training and tutoring. It now further improves the incentives and workers' welfare, seeks for operation and management talents, and works hard to drive the development through high-quality personnel. CNMC regards employees as the most precious asset, cherishes talents, cares about employees, endeavors to provide comfortable working environment and hopes that every employee will enjoy his or her work and have no other worries, so as to lead the company to forge ahead.

Respect and Protect Human Right

CNMC complies with local laws, regulations and International Conventions on Human Rights, safeguards the basic rights and interests of employees, acknowledges their diversified values, and respects and protects their privacy.

Equal Employment

We, following related laws, regulations and policies, equally treat employees with different nationalities, gender, religious beliefs and cultural backgrounds. Meanwhile, we refrain ourselves resolutely from child labor. In 2015, we didn't do anything against human rights when hiring our staff, nor did we discriminate any candidate or employee.

Distribution of talents
(by the end of 2015)

9359	business-management talents
12351	professional or technical personnel, among whom there are 6587 people holding administrative posts
32004	skilled talents
9672	overseas talents
47127	in total

Educational Background Structure of The Employees

Age Structure of The Employees

Democratic Management

The Company encourages frank communication, establishes democratic management system with Workers' Congress and the Trade Union as its basic forms, strives to protect employees' right to know, participation right, expression right and right of supervision, and provides a platform for employees to learn and participate in the operation, reform and development of the enterprise.

The first Congress of Workers and Staff

Case

The First Workers' Congress

In 2015, the Group held the first Workers' Congress and further pushed forward employee representative walk around inspection systems. Democratic management, labor emulation and giving reasonable suggestions, etc, cover all the invested enterprises overseas.

Employee Training and Career development

CNMC sticks to the strategy of "thriving enterprises through talents". Focusing on "educating people", we endeavor to establish and improve long-term mechanism for the selection, cultivation, assessment, encouragement, and promotion of talents, enhance the construction of four talents teams, namely business management talents team, professional and technical personnel, highly-skilled talents team and overseas talents team. We help to realize the potential of employees and provide better career development channels and promotional platform for our employees.

Reinforce Training In The Headquarters

- We organized different training courses for employees from different departments and different levels.
- By the end of 2015, 87 employees have taken 32 training courses and studied for more than 2400 hours in total.

Reinforce The Management of The Group's Vocational Education Center

- We compiled the procedures and standards of the training work at the vocational education center.
- We organized and coordinated relevant departments to carry out 3 specialized training. More than 240 employees have participated in the training.

Reinforce The Construction of The Network Learning Platform

- We formulated a general plan and a concrete proposal for the construction of the on-line learning platform at the vocational education center.
- From June 2015 to August 2015, more than 1000 professional and technical personnel completed their study on the Internet successively.

Case

First-China-invested enterprises in Zambia-China Economic and Trade Cooperation Zone launched labor emulation activity

In May 2015, CNMC and China Machinery Metallurgy Construction Material Industrial Union launched labor emulation activity in China-invested Enterprise Zone. This is the first time that regional labor emulation activity has been carried out abroad by Chinese enterprises, featuring innovation and exploration. It shows that CNMC is gaining momentum for "Going Out".

Case

10 Types of Technology Innovation Activities · Fruits from Model Workers' Innovation Studio

In 2015, CNMC (Guangxi) Pgma Co Model Workers' innovation studio conducted more than 10 types of technical innovation activities throughout the year and produced 5 innovations.

Set Up Organization and Improved The Mechanism

- We set up a Leading Group with director as the head of group and party secretary, trade union chairman, deputy director as the deputy heads.
- We established "model worker Innovation Studio management approach", "model worker Innovation studio system" and other management systems.

Built A Platform to Nurture Talents

- We built a working platform in which model workers and other employees can participate and mobilize workers to actively participate in enterprise technological innovation and invention.
- We developed "technology incentives" and "Employee Suggestion incentives" to strengthen incentive mechanism.

Staff Localization

When the CNMC operates overseas, we support the localization of staff and actively create employment opportunities for the locals. We respect the religious beliefs and cultural practices of employees in different places, create a favorable corporate culture, help strengthen cultural integration of Chinese and foreign employees, and reduce the conflicts caused by cultural differences.

Case

94% · Localized CNMC Non-mining Employees

- **We increased efforts to hire local staff, and improved the ratio of management personnel**
  By the end of 2015, local employees have taken up 94% of the total number of employees. Chinese employees account for 6% of the total labor force, well below the 10% bar required by the local government.
- **We improved management system of localized staff**
  We signed labor contracts when recruiting local employees, carefully studied the terms of the contracts, made efforts in specifying the terms of the contracts as long as they do not violate local labor laws.
- **We emphasized on motivating and training local staff**
  Compared with major local peer companies, the salaries and benefits of the CNMC are at the middle and upper level, with a clear advantage in the housing provident fund, medical systems, supplementary pension insurance and others.
  We developed annual training plan, involving corporate culture training and operational capacity training. About 400 people receive training every year.
- **We created a harmonious corporate culture**
  We stuck to the traditions of Chinese and foreign employees celebrating festivals together and organized parties among local staff during festivals.
  We integrated CNMC's core values into the logo image and painted the logo design in the company's buildings, uniforms and other locations.
  We formed cultural and sports teams consisting of Chinese and foreign employees, including football teams, basketball teams, etc.
- **We selected outstanding domestic and foreign staff**
  We increased the hiring efforts among young cadres with proficient level of English and management.
  In January, managers from various departments received daily personnel management training.
  In September, the first phase of English training program targeting Chinese employees was carried out, and speaking and writing courses given by lecturers were opened.

Case

Diverse overseas staff training programs

Through various training methods, CNMC created a foreign enterprise management personnel team consisting of team members who are at their prime of life and adaptive to the actual demands of "Going Out" national strategy. CNMC also trained international professional personnel who are familiar with international mining, project contracting and international trade business and who have a good command of technologies, languages and laws.

Interdisciplinary enterprise management personnel consisting of the enterprise leaders and senior managers

- Pay attention to cultivate their ability to work independently
- Improve their conception of big picture and sense of responsibility

Specialized and technical personnel consisting of engineers and technicians

- Develop their sense of innovation, their ability to learn new technologies and adapt to the foreign culture and life.
- Establish long-term cooperative relations with Beijing Science and Technology University and other colleges and universities

Skilled personnel consisting of various types of skilled workers

- Develop their abilities to conduct skilled and independent operation and maintenance of construction equipment, and abilities to deal with technical problems in processing operation.
- Set up overseas technical schools, collaborate with local universities, and carry out vocational education and training

Local employee team

- Train foreign senior personnel, and send them to study in China
- Tumurtin-Ovoo Zinc Mine set up a vocational college to train generations of nomadic herders into modern industrial workers.
- Promote the "going out" of the first pilot vocational education center approved by the Ministry of Education and help train local staff

CNMC Luanshya Technical School

Non-Mining employees obtained training certificates

Care about employees

CNMC regards employees as its largest corporate wealth. The company cares about employees' work and life, constantly improved their working environment and quality of life, strives to improve employees' well-being, and ensures that employees share business development's fruits.

Make fried eggs and tomatoes for the staff

Help staff in need

CNMC actively explores new ways to help workers in difficulties, makes efforts to build trade union platform to help employees to safeguard their legal rights and solve practical problems. In 2015, we conducted research among invested enterprises and urged all operating enterprises to establish a standardized and effective mechanism to help needy workers at a preliminary level. CNMC also developed a subsidy management approach for staff in headquarters and revised application procedure for medical aid fund. The help and aide process was further standardized.

Case

6149 persons · passing the love to people around

In 2015, Daye Nonferrous Metals Group Holding Corporation distributed various relief funds totaling 4.15 million RMB to a total of 6149 needy workers (wherein, aid fund expenditures totaling 2.20 million RMB, aiding 2301 needy workers).

Do the basic work of helping the poor

Three levels of dynamic management work to help needy workers.

Show warm care to the employees

4226 people **1.75** million RMB

During the Spring Festival, a total of 4226 needy workers received aid worth of 1.75 million RMB (864,300 RMB of which is from Aid Fund, distributed among 1941 workers)

Stipend Action

432 people **532** thousand RMB

432 children of the employees received 532,000 RMB in supporting their study at universities (Aid Fund distributed 38,500 RMB for grants and 28,000 RMB for scholarships)

Care about the sick workers

343 people **1.39** million RMB

In 2015 (the fourth quarter of 2014 to the third quarter of 2015), a total of 343 seriously-ill workers received relief funds worth of 1.39 million RMB.

Modify management approach of the company's Employees Mutual Help Fund

899 people **1.04** million RMB

By the end of 2015, the fifth Employees Mutual Help Fund has issued a total of 1.04 million RMB to 899 people.

Work-life Balance

CNMC encourages employees to strike a balance between work and life, cares about the physical and mental health of employees, and strives to enhance the quality of life and the wellbeing of its employees. We organize sports games, talent show, broadcast gymnastics and other activities to relieve employees' stress; we also organize talks on health and psychology lectures to respond to employees' confusion, relieve their psychological stress, and create a "home of workers" for the staff.

"Deft hand" Talent Show

Case

More than 40 artworks · "Deft hand" Talent Show

In 2015, the company held a "Female Workers Deft hand" talent show. The talent show collected more than 40 art works from female workers in the headquarters. The works were divided into categories: life, art, and appreciation. After female workers gave their votes, "My Favorite" works were selected. It showed the passion for life and positive spirit of the female workers.

Case

Colorful life of the staff

Employees' broadcast gymnastics

Chess game in Shenyang Research Institute

Football match organized by CNMC International Trade Co., Ltd.

Yoga class organized by Daye Nonferrous Metals Group Holdings Co., Ltd for female employees

Basketball game in Kazakhstan

Zambian female employees celebrates the International Women's Day

Integration into the community development

We consider ourselves as part of community development and actively implement the national strategy for precise poverty alleviation and spare no efforts to eradicate poverty. We fully respect the local religious beliefs and cultural traditions, continue to improve basic public services, infrastructure, education, health and employment in community, and normalize volunteer activities and public service activities. We conduct active communication and collaboration with the community and work with various parties to promote local economic development, community development and livelihood improvement. In 2015, we donated 8.64 million RMB.

Push forward poverty reduction

Poverty alleviation and development are related to the well-being of tens of millions of Chinese people. According to statistics, there are 70.17 million poor people in China. Geographically speaking, there are 14 contiguously poor areas and 592 key counties for national poverty alleviation and development. Poverty is both a weakness in building a moderately prosperous society and a most severe and realistic difficulty.

> We should have in-depth implementation of precise poverty alleviation programs. The arrangement of programs and management of fund should be more accurate and precise, so that poor people really benefit.
>
> **--- Xi Jinping, President of China**

Case

"3 + 2 + 1" • Mode for Precise Poverty Alleviation

NMC NingXia Orient Group Co., Ltd actively implements the demands of precise poverty alleviation and deepens poverty alleviation work in Lujiagou Village, Malian, Xiji County. It identifies 552 persons from 132 households as poverty reduction targets, lays out a "3 + 2 + 1" precise poverty alleviation and development Plan ("3" means three production activities including farming, labor, planting, "2" means the two leaders lead the development, "1" means micro-platform for social interaction of poverty alleviation and development model), and gradually helps the poor village and households get rid of poverty.

- We established information sharing WeChat platform for Lujiagou Village, Malian; with timely delivery of employment information and we are tracking the re-employment situation.
- We verified credit rating for the 132 poor households who have established their own archive.
- We selected 20 leaders to lead the village to the rich.
- We guided and completed the compilation and registration work of professional farming cooperatives in Lujiagou Village.
- We conducted "1 + 1" online pairing volunteer service and created a "national intelligence Poverty Alleviation" project according to the situations of some poor households whose poverty resulted from the lack of education.

Case

15 years · CNMC's focused poverty alleviation

Lianghe County, Dehong, Yunnan Province is one of the most important counties where national poverty alleviation work has been conducted. Since 2001, the company and Lianghe have formed designated support units. Lianghe has received a cumulative contribution of more than 9 million RMB. CNMC actively supports local drought relief, implements drinking water projects to improve production and the living conditions of the local villagers, and donates money to schools to promote local educational development.

By 2015, our actions include

- We provided 1.4 million RMB of poverty alleviation funds, of which 1.1 million RMB was for the construction of school buildings and canteens and another 300 thousand RMB for financing poor college students.
- We designated one cadre to be the General Party Secretary of Guangping Villiage, Hexi, Lianghe, dehong, Yunnan Province to promote precise poverty alleviation work.
- We went to Xiaochangxiang secondary school and Menglong primary school to supervise and research about the dormitory's construction project.

Build Harmonious Community Relations

We fully respect the local cultural traditions, customs and religious beliefs, conduct active interactions with local communities, and respect the reasonable demands and decision-making process in dealing with community affairs. Through innovative communication, we strengthen communication and cooperation with stakeholders, actively integrating into the community development.

Case

$ 300,000 · To promote community development

CNMC Nickel Mine upholds the "harmony" philosophy and signed "On the Establishment of a Social Responsibility Fund Agreement" with the local government. The establishment of an annual social responsibility fund of $ 300,000 is a long-term mechanism to promote the community development.

Workers from China 15th Metallurgical Construction Group Co., exchange with community workers

Case

Smooth service channels and building a harmonious community

China No.15 Metallurgical Construction Group Co., Ltd actively smooths service channel with the community, conducts seminars with community committees, visits the community to discuss matters, provides feasible suggestions and comments to promote community building, and builds in-depth understanding of the community situation and revisits these households in a timely manner. It forms a new mechanism called "work in the unit and in the community" and lays a solid foundation for building a harmonious community.

Improve the Community Facilities

We work to improve the living standards of the community by providing basic services such as access to electricity and water, building road and bridge, renovating the shanty town, improving the health care, and providing free job training for the residents.

Provide basic services

- Access to electricity
- Access to water

Facilitate the community employment

- Increase jobs
- Provide free skill training

Improve health care

- Build hospitals
- Provide medical equipment and expertise
- Improve medical services
- Launch the campaign to educate residents about the basic information and prevention of diseases

Improve infrastructure

- Build roads
- Renovate houses
- Build schools
- Renovate the shantytown

Case

Renovation Project of the Shanty Town surrounding the deserted mine in Mt. Hongtou

With the joint efforts of central and local governments and the business, Hongtoushan Mining Co., Ltd renovated the shantytown and, by and large, made the houses available to the employees in the company.

Renovation of the shanty town surrounding the deserted mine

Case

7200 people and over 200 households·provide villagers in Burma access to electricity and water

Access to electricity

- Electricity is in short supply in Myanmar. According to the Asian Development Bank, Burma's existing electric capacity can barely satisfy 26% of its population's demand.
- In 2014 and 2015, CNMC Nickel Co., Ltd provided 4 villages, 5 temples, 1667 households totaling over 7200 people with access to electricity, weaning them off oil lamp and diesel generator.
- The company provides every household with 10 kilowatt hours per month for free and provides free electricity for the temples and infrastructure, relieving the communities a total of 200 thousand RMB in electricity bill in the whole year of 2015.

Supply power to nearby villages

Access to water

- In 2014 and 2015, CNMC Nickel Mine Co., Ltd provides 3 villages, 2 temples, and 200 households with access to water and build 7 supplying spots and relieves the pressure on the use of water in the local communities.

Build water supply points

Case

Commitment to be a socially responsible player, cementing the relationship between China and Africa

In 2015, we are committed to being a responsible player in Africa, part of the development of the local communities.

100 thousand dollars

We invested 100 thousand dollars into a road that connects the local communities with Shabituba.

24 thousand dollars

We donated 24 thousand dollars to the local government to purchase dumpers.

35 thousand dollars

We invested 35 thousand dollars to expand the village roads, stretching 12.5 kilometers in the Shangku Louvet region, making it easy for the local people to get around.

We dispatched personnel and loaders and hoists to help Likasi Utility and GCM with reparations of the electrical equipment to ensure the steady supply.

10 thousand dollars

We donated 10 thousand dollars for the charity.

Invested enterprises in Zambia have donated money to build children's recreational facilities in Chambishi village

Case

Five year: Sino-Zambia Friendship Hospital

Sino-Zambia Friendship Hospital is built for the wellbeing of the staff in the Sino-Zambia trade zone and the local people. The hospital introduces ultrasonic Doppler, Nuclear Magnetic Resonance, digital x-ray machines, laparoscopes, and lithotripter, significantly improving the health care in the local communities.

Act	Measures	Achievements
Fight against AIDS and the transmission from mother to fetus	We launched the campaign to educate people about the AIDS, carried out the census; we offered free treatment; we gave child-bearing counseling to mothers after they deliver a child; we took AIDS prevention measures on newly-born babies.	Of all the mothers infected with AIDS, we followed up during the 6 weeks after the delivery, and none of them transmitted the virus to the babies whose testing results are negative.
Keep the price of medicine unchanged	Even with the hyperinflation in Zambia, Sino-Zambia Friendship Hospital decided to keep the price of medicine unchanged.	We made it easy for the local people to see the doctor.
Standardize the medical skills	Perform the less-invasive laparoscopic cholecystectomy, appendectomy, ectopic pregnancy surgery at lower expense and with few wounds on people.	The year 2015 has witnessed 20 gynecological and laparoscopic surgeries without medical treatment dispute.
Provide special medical equipment and services	Based on the common diseases in Zambia, the hospital introduced lithotripter in 2013 and improved the systematic l treatment to urinary stone disease.	In 2015, 85 patients with lithiasis recovered.

Sino-Zambia Friendship Hospital

Case

Help local community get jobs

NFC Africa Logistics Co. Ltd. provides financial aids for employee's family to learn techniques and skills.

We encourage and provide financial support for local employees to participate in technical training and further education in college as well as help their family members learn knowledge and skills. Employees can submit applications for their family members who need financial support to learn skills. The application will be determined and supported by the company.

The hydrometallurgy company encourages local employees and their families to receive education and training.

In 2015, the hydrometallurgy company set up "Workers Re-education and Children Education Financial Aid Mechanism", to which the company offered 1350 kwacha (150 dollars) of education grants per year for every Zambian local employee's family, in order to encourage and support the employee and their family to receive education and improve their techniques and skills.

NFC's Aktogay Project provides job opportunities for more than 1000 Kazakhstani people.

By building roads for neighboring towns and villages, repairing houses, and supporting local education, NFC's Aktogay Project has directly provided jobs for more than 1000 local people in Kazakhstan, which greatly promotes local employment rate and income level.

Мадақтама

ГРАМОТА

Уважаемый Цин Цзин Ман!

Поздравляю Вас с Наступающим 2016 годом! Желаю Вам и всему коллективу ТОО «NFC Kazakhstan» здоровья, интересных замыслов и их благополучных воплощений, ярких значительных событий, личного счастья и дальнейшего процветания компании.

Аппарат акима Актогайского поселкового округа выражает огромную благодарность Вам и руководителю строительной площадки «NFC» господину Чэнь Цинь Чзинчай за оказанную помощь поселку и жителям Актогая.

Успешная реализация такого социально - значимого проекта, как строительство «ГОК Актогай », было бы невозможно без Вашего участия.

И.О. акима Актогайского поселкового округа З.Кесикбаева

2015 год

A Thank-you note from Aktogay government

The company financed my wife to learn how to use computer, which not only helped her find a satisfactory job after acquiring computer technical certificate, but also improved our family's living condition.

---A local employee from NFC Africa Logistics Co., Ltd.

Endeavor on developing commonweal activities

We continue to carry out socially useful activities so as to perform our due social responsibilities. We set up public welfare platforms by way of new media such as WeChat and Weibo. We cooperate with civil organizations such as NGOs and community representatives to jointly advance the normalization of socially useful activities.

Case

"Donate Used Clothes to People in Need"

In 2015, CNMC Learn from Lei Feng Club launched a philanthropic activity, "Donate Used Clothes to People in Need". They mobilized all urban residents and employees to donate used Clothes to people who were living in nearby poor areas by setting up donating booths and making notices in the company's OA office web, Weibo, WeChat and other media platforms. The club received 2316 clothes in total and all of them were sent to Home of Small Good of Hope Project in Shizuishan city, which sent all the donations to the poor areas.

Case

Celebrating Christmas with African Children

On December 24th, 2015, 80 employee representatives from Chambishi Copper Smelter Ltd. celebrated Christmas with more than 80 kids from Children's village of Mufulira community. The company prepared a buffet, abundant barbecue food and Christmas presents, played a variety of shows, and gave out clothes, shoes and hats gathered from the living base to the kids.

Employees of Zambia Chambishi Copper Smelter Ltd celebrated Christmas with Africa Children

I have been working in Africa for several years. I often walk in the villages with clusters of bushes and live in the community where all the staff live and grow. We care about the community and share production fruits with one another. This year, we celebrated Christmas with kids from the Children's village, which gave us new feelings in the New Year.

--- An employee of Zambia Chambishi Copper Smelter Ltd.

Sustainable Development Commitment

Promotion of Sustainable Development:

- Compile and release social responsibility report annually and expand the channels of communication and the influence of the report.
- Further improve long-term mechanism for social responsibility management.
- Participate in the selection and recognition of excellent social responsibility practice cases and social responsibility report.
- Carry out social responsibility research and training; improve the overall quality and practical ability of the staff in charge of social responsibility in the company.

Economy:

- By 2020, we will have made major breakthroughs in the exploitation of overseas and domestic nonferrous metal resources and owned 30 million tons of nonferrous metal resources in total.
- Follow the laws of economics and the laws of corporate growth, deepen the reform, strengthen the management, control risks, and vigorously carry out "Going Out" strategy and "One Belt One Road" initiative. We will become the world's first-class mining group with international competitiveness.
- Promote talent team construction, management ability and risk-control ability.
- Make major breakthroughs in scientific and technological innovation, system and mechanism improvement and the development of emerging industries.

Environment:

- Reinforce the basic management of energy-saving and environmental protection; strengthen the construction of institutional system.
- Pave way for the "Thirteenth Five-Year" energy-saving and environmental protection plan; step up the construction of information-based system.
- Enhance the supervision of energy-saving and environmental protection businesses; strengthen the environmental risk control.
- Track in time the emissions of overseas enterprises and enhance peer benchmarking.

Society:

- Enhance safety production management, improve intrinsic safety level and achieve the goal of zero particular serious accident.
- Build a platform and provide a mechanism for domestic and overseas employees to engage in orderly communication.
- Enhance the resource ability building of the vocational education center in a comprehensive way.
- Find out a more scientific and efficient assessment and designating method; push forward reform employee income distribution at all levels. .
- Comprehensively strengthen the resource ability building of vocational education center; boost local workers' skills through the "Going Out" vocational education platform.

The Ten Principles of the Global Compact

Standard explanation of the general information

The Ten Principles		Index
Human Rights	Businesses should support and respect the protection of internationally proclaimed human rights	Comply with the law, regulations of the country or region where the business operations are carried out and the International Human Right Conventions. Protect employees' basic interests and rights, acknowledge employees' diversified values, respect and protect their privacies.
	Make sure that they are not complicit in human rights abuses	Encourage frank communication. Establish democratic management system with the Workers' Congress and the Trade Union as its basic forms. Try to protect employees' right of knowledge, participation right, expression right and right of supervision. Provide a platform for employees to learn and participate in the operation, reform and development of the enterprise.
Labor	Businesses should uphold: the freedom of association and the effective recognition of the right to collective bargaining	Implement democratic management system and actively promote transparency and collective negotiation.
	The elimination of all forms of forced and compulsory labor	Comply with relevant laws and regulations and recruit and use work force in an equal and indiscriminate way. Treat employees equally regardless of his or her nationality, race, gender, religious belief and cultural background. Completely eradicate forced labor.
	The effective abolition of child labor	Never use child labor.
	The elimination of discrimination in respect of employment and occupation	Strictly comply with local laws. Never examine the employee differently with the excuse of his or her race, ideology, religion, political stance, native place, birth place, gender, sexual orientation, marriage, appearance, somatopsychic disturbance and his or her membership in the Trade Union in the past.
Environment	Businesses should: support a precautionary approach to environmental challenges	Integrate the environmental protection and governance of the mining area into the process of mine resource exploitation and protection. Promote cleaner production, develop cyclic economy, and protect the ecology.
	Undertake initiatives to promote greater environmental responsibility	Formulate a strict environmental supervisory system. Continue to strengthen environmental management and energy-saving management of the enterprise. Step up the application of energy-saving technologies.
	Encourage the development and diffusion of environmentally friendly technologies	
Anti-corruption	Businesses should work against corruption in all its forms, including extortion and bribery	Vigorously promote anti-corruption & integrity promotion. Carry out "The three guidelines for ethical behavior and the three basic rules of conduct" topic education as well as anti-corruption inspection in the Group. Organize invested enterprises to do corruption risk identification.

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Reader Feedback Sheet

Dear Readers:

Thank you very much for reading the CNMC Sustainable Development Report 2015. CNMC attaches great importance to your opinions and invites you to give us your precious ideas and suggestions so that we can continue to improve this Report.

CNMC Sustainable Development Report Composing Team
June, 2016

Your Remarks of This Report (Please mark √ at corresponding places)

Report Structure:	☐ Very good	☐ Good	☐ Average	☐ Not so good	☐ Disappointing
Information Quality:	☐ Very good	☐ Good	☐ Average	☐ Not so good	☐ Disappointing
Literal Statement:	☐ Very good	☐ Good	☐ Average	☐ Not so good	☐ Disappointing
Design & Typesetting:	☐ Very good	☐ Good	☐ Average	☐ Not so good	☐ Disappointing
General Opinion:	☐ Very good	☐ Good	☐ Average	☐ Not so good	☐ Disappointing

1. Which part of the report interests you the most?

2. What do you want to know more but is not included in this report?

3. What suggestions do you have for our future sustainable development reports?

4. What suggestions do you want to give for our future social responsibility work?

Thank you very much for your support, please fill your opinions in the above sheet and mail it to the Strategic Research Department of China Nonferrous Metal Mining (Group) Co., Ltd.

Address: CNMC Building, No.10, Anding Road, Chaoyang District, Beijing, China
Or you can send you email to: csr@cnmc.com.cn

2015

Exploring Resource Value,
Building A Harmonious Society Together

CNMC

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