



CHINA VANADIUM  
TITANO-MAGNETITE MINING  
COMPANY LIMITED

中國鈦鉭磁鐵礦業有限公司

(Incorporated in the Cayman Islands with limited liability)  
(Stock Code: 00893)

**CONSOLIDATE  
THE FOUNDATION  
WITH  
INCLUSIVENESS**

ENVIRONMENTAL,  
SOCIAL AND  
GOVERNANCE REPORT

**2017**

# WE AIM TO BE A **TOP-NOTCH ENTERPRISE**

打造一流企業

## CORE VALUE

- We deliver with integrity
- We explore opportunities
- We uphold the essence of commitment and responsibility
- 誠信、開拓、責任

## VISION

- To explore Exceptional Potential in Mining
- 中國鐵鈦，  
太（鈦）不平凡（鈦）

## MISSION

- We reward shareholders
- We care for the community
- 回報股東，回報社會

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# Environmental, Social and Governance Report 2017



## ABOUT THIS REPORT

China Vanadium Titano-Magnetite Mining Company Limited (the “Company” or “China VTM Mining”, and together with its subsidiaries, the “Group”) is publishing its third Environmental, Social and Governance (“ESG”) report. This report presents the Company’s concepts, action plans and performance in sustainable development for stakeholders.

### Scope

This report discloses the information on the Group in fulfilling its economic, environmental and social responsibilities. This report covers the period from 1 January 2017 to 31 December 2017. Some content may look back upon the performance of the Group in past years with a view to presenting the report in a more informative and comparable manner.

This report includes the information on Mancala Group, which might influence some performance indicators of the Group compared to 2016.

### Frequency

This is an annual report.

### Reference

This report has been prepared in accordance with the “Environmental, Social and Governance Reporting Guide” set out in *Appendix 27 of the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited* (the “Stock Exchange” or “HKEx”) (the “Listing Rules”).

### Report Availability

This report is available in both Chinese and English. Please visit [www.chinavtmmining.com](http://www.chinavtmmining.com) or [www.hkexnews.hk](http://www.hkexnews.hk) to view both versions.

# Environmental, Social and Governance Report 2017

## CHAIRMAN'S STATEMENT

Dear shareholders,

I am pleased to reiterate the Group's support in promoting a stable, healthy and sustainable mining industry as guided under the Chinese's government 13<sup>th</sup> Five-Year Plan. China's issues of sustainability are historically linked to the industrial processes, which have been supporting the country's previous economic development model. Now, we have read and discussed much about China's "New Normal" economic rebalancing policies meaning that managing this transition in a sustainable manner will remain as a key emphasis. Along the way, I could not agree more that China needs to cut its carbon pollution as fast as it can, as much as possible – which we have seen various strategic plans and preventive measures implemented by the Chinese government to cap carbon emission growth.

In a bigger picture, it also appears to me that China may be posed to lead related discussions in the world's climate diplomacy and green-energy initiatives given that China itself is now the largest emitter of greenhouse gases and its recent remarkable pledge to the Paris Agreement. In this aspect, the Chinese government has spent and will continue to spend serious monies on sustainability ambitions, inclusive development and renewable energy. In Sichuan province, where our key operations are, the local government echoes the implementation of ecological civilisation and environmental protection initiatives, which include deepening administrative examination and approval reform for sustainability development of the local mining industry.

During the year under review, we upgraded our equipment with better emission control and invested in technologies for environmental protection. We will continue to work towards improving efficiencies, reducing energy consumption, minimising wastage and optimising capacity utilisation as part of our thoughts in developing responsible mining practices. Specifically, we have evaluated rehabilitation plans, worked on restoration of mine sites, monitored the tailings disposal process, recycled tailings disposal and implemented various related preventive measures to protect the surrounding ecological and geological conditions. In such areas, we do consult our foreign mining services specialist too. In this aspect, we expect capital expenditure budgets for environmental compliance are getting increasingly higher.

Very importantly, the Group commits to providing a fair, safe, healthy and friendly working environment for its employees in promoting positive employee morale, encouraging ideas sharing, improving productivity and reducing work injuries. During all these years of the Group's mining development, various initiatives have also been evaluated and implemented to progressively transform rural communities (where our mining operations are mainly located) into more vibrant towns and better living environments with enhanced income and improved livelihoods – which are in line with both the government and our "industrialisation-leading-to-urbanisation" sustainable growth policies.

As such, in supporting our investment parameters, we hope to bring transformational change to the societies for good. In reviewing our future strategies, we must think ahead, plan ahead towards integrating societal value with our sustainable business development strategies, which should or may include more efficient uses of resources and strategic reviews of our long-term development plans.

**Teh Wing Kwan**

*Chairman*

Hong Kong, 28 June 2018



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## GROUP PROFILE

The Company has been listed on the main board of the Stock Exchange since 8 October 2009. During the year ended 31 December 2017, the Group was principally engaged in mining and ore processing, sale of self-produced products, trading of coals and steels, management of strategic investments and providing specialist mining services. The Group now owns five vanadium-bearing titano-magnetite mines (namely the Baicao Mine, Xiushuihe Mine, Yangqueqing Mine, Cizhuqing Mine and Haibaodang Mine), one ordinary iron ore mine (namely the Maoling-Yanglongshan Mine), one gypsum mine (namely the Shigou Gypsum Mine), five processing plants (namely the Baicao Processing Plant, Xiushuihe Processing Plant, Hailong Processing Plant, Heigutian Processing Plant and Maoling Processing Plant) and one iron pelletising plant. All mines are located in the Sichuan province, a region with the most abundant vanadium-bearing titano-magnetite resources in China.





# Environmental, Social and Governance Report 2017

## CORPORATE GOVERNANCE

The Company is committed to upholding corporate governance to ensure that formal and transparent procedures are in place to protect and maximise the interests of its shareholders. Under the supervision of the Board, the management is responsible for designing and implementing the Group's risk management and internal control systems. The Group has set up three lines of defense for risk management. As the first line of defense, the business units (e.g., sales department and production department) are responsible for identifying and assessing business risks and developing risk mitigation measures; as the second line of defense, the functional departments (e.g., compliance department and finance department) are responsible for assisting the business units to improve the risk management and monitoring the effectiveness of risk management; and the internal audit function, as the third line of defense, assists the Board and the audit committee in reviewing the effectiveness of the Group's risk management and internal control systems.

As and when required during the year, the management convened meetings which were chaired by the senior management and attended by, among others, managers from subsidiaries and department heads from headquarters. The Group's decisions on operations, implementation of investment projects, financial matters and the updates on risk management and internal control were considered and determined in these meetings. For more information about the Group's corporate governance, please refer to the Corporate Governance Report in the Company's Annual Report 2017.



# Environmental, Social and Governance Report 2017

## ESG MANAGEMENT

The Group is committed to minimising adverse impacts on its employees, customers, suppliers, the community and the environment while making every effort to maximise the interests of all parties and achieve common development.

In order to strengthen the ESG management capabilities, the Group has established broad ESG indicators and information collection systems according to the requirements of relevant policies and standards. The Group has assigned specific personnel to be responsible for continuously improving the performance of those indicators. Focusing on important ESG matters such as product quality, production safety, environmental protection and protection of employees' rights, the Group has established and will continue to implement management systems to meet the demand of its stakeholders.

## Stakeholder Engagement

Through reviewing the types and natures of stakeholders affected by different levels of the Group's operations, we identify the important stakeholders and their participation manners while we adopt corresponding measures to satisfy their needs. In particular, effective communication with our stakeholders, which can foster mutual understanding of each others' needs and promote discussion on future cooperation measures, has become an increasingly important work area of our departments.

Communication with stakeholders			
Types of stakeholders	Needs	Responses	Communication channels
Shareholders	<ul style="list-style-type: none"><li>Continuous and stable investment returns</li><li>Timely disclosure of information</li><li>Enterprise operations complying with relevant laws and regulations</li></ul>	<ul style="list-style-type: none"><li>Improve business portfolio diversity and operating cash flow</li><li>Establish a sound system for disclosure of regular and ad hoc information</li><li>Improve internal compliance system</li></ul>	<ul style="list-style-type: none"><li>Annual and interim reports</li><li>Corporate announcements</li><li>Press releases</li></ul>
Clients	<ul style="list-style-type: none"><li>Sustainable, reliable and safe supply of products</li><li>Timely response to clients' demands</li><li>Improvement in product quality</li></ul>	<ul style="list-style-type: none"><li>Establish a comprehensive safety supervision system and response system</li><li>Establish a responsible identification system for clients' needs</li></ul>	<ul style="list-style-type: none"><li>Continuous communication through visits, emails and other official channels</li><li>Entering into long-term cooperation agreements</li></ul>

# Environmental, Social and Governance Report 2017

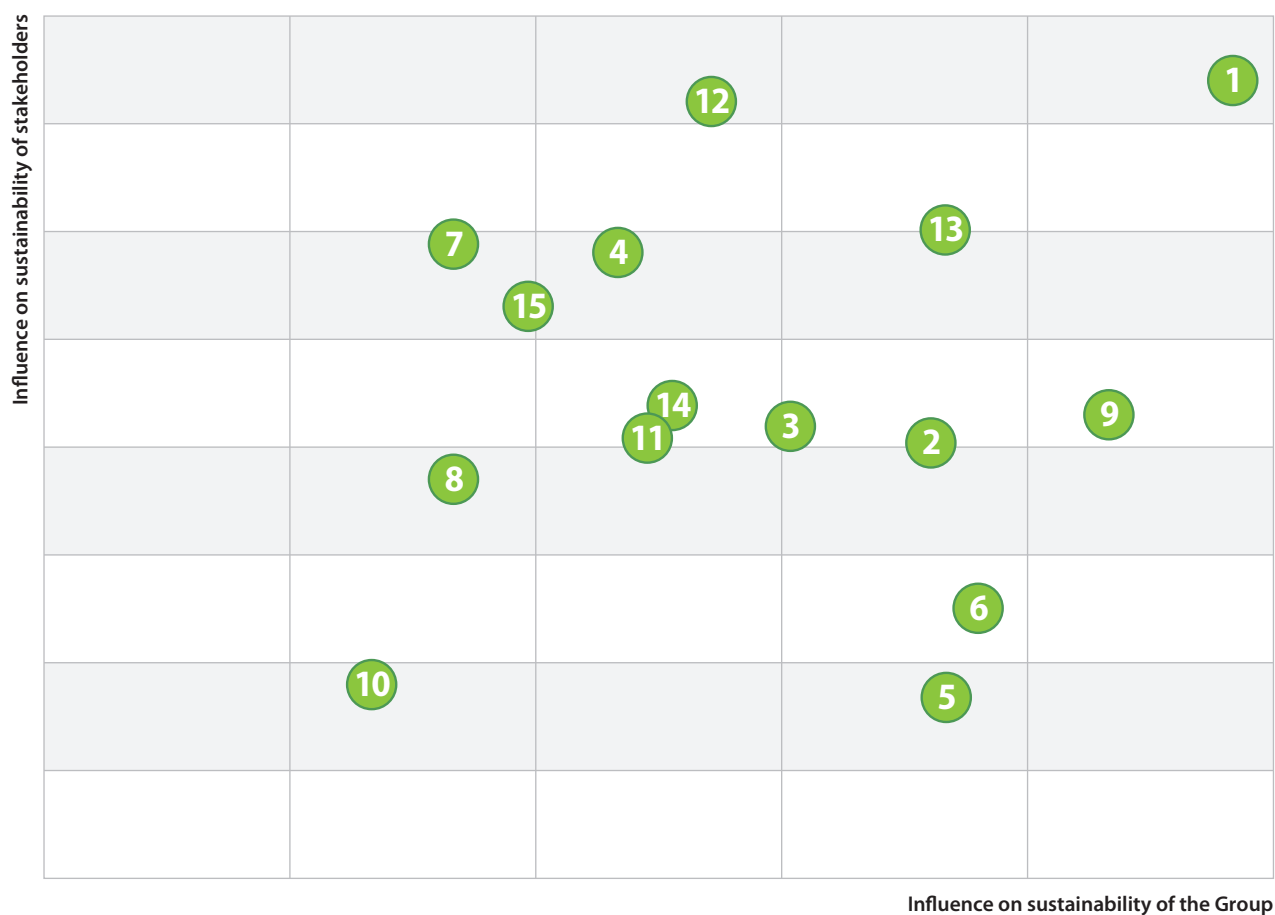
Communication with stakeholders			
Types of stakeholders	Needs	Responses	Communication channels
Employees	<ul style="list-style-type: none"> <li>• Sound health and safety protection</li> <li>• Decent working environment</li> <li>• Plenty of opportunities for career development</li> </ul>	<ul style="list-style-type: none"> <li>• Establish work safety and health policies in line with relevant laws and regulations</li> <li>• Improve internal systems for managing staff recruitment and promotion</li> <li>• Enrich employees' daily lives</li> <li>• Provide diversified employee welfare</li> </ul>	<ul style="list-style-type: none"> <li>• Internal memos</li> <li>• Team building</li> <li>• Staff counselling</li> </ul>
Suppliers	<ul style="list-style-type: none"> <li>• Fair, just and open procurement process</li> <li>• Punctual performance of contractual obligations</li> </ul>	<ul style="list-style-type: none"> <li>• Ensure transparency in the procurement process with internal and external supervision</li> <li>• Reasonable management and control of cash flow to ensure timely payment</li> </ul>	<ul style="list-style-type: none"> <li>• Publish announcements and notices for procurement and tender on government websites</li> <li>• Corporate corruption reporting hotline</li> </ul>
Government	<ul style="list-style-type: none"> <li>• Promote local and peripheral industry development</li> <li>• Enterprise operations complying with relevant laws and regulations</li> </ul>	<ul style="list-style-type: none"> <li>• Provide job opportunities and tax contribution at the location of operation</li> <li>• Receive supervision from the government and improve internal compliance monitoring system</li> <li>• Ensure compliance with relevant laws and regulations regarding environment, safety and integrity</li> </ul>	<ul style="list-style-type: none"> <li>• Participate in government meetings and pay regular visits to the government authorities</li> </ul>
Community	<ul style="list-style-type: none"> <li>• Contribute to community development</li> <li>• Engage in community activities and maintain good communication</li> </ul>	<ul style="list-style-type: none"> <li>• Improve local infrastructure construction</li> <li>• Maintain good communication with local residents</li> </ul>	<ul style="list-style-type: none"> <li>• Survey of community representatives</li> <li>• Regular visits</li> </ul>
Banks	<ul style="list-style-type: none"> <li>• Good creditworthiness and ability to pay debts</li> <li>• Stable business development</li> </ul>	<ul style="list-style-type: none"> <li>• Pay debts on time to maintain good creditworthiness</li> </ul>	<ul style="list-style-type: none"> <li>• Regular and direct communication</li> </ul>



# Environmental, Social and Governance Report 2017

## Material Aspect

Every year, the Group reviews the materiality matrix in order to align itself with the latest trends of macroeconomics and the changing context of the industry, and reflects feedback obtained from ongoing stakeholder engagement. In 2017, the Group reviewed the materiality matrix based on the outcome of a desktop study. The desktop study included media analysis and peer analysis of sustainability performance.



- 1 Safety
- 2 Employees' rights
- 3 Waste
- 4 Energy saving and emission reduction
- 5 Quality control

- 6 Compliance
- 7 Supply chain
- 8 Charity
- 9 Occupational health
- 10 Career development

- 11 Water
- 12 Bio-diversity
- 13 Corporate governance
- 14 Anti-corruption
- 15 Community development

# Environmental, Social and Governance Report 2017

## PROTECTING THE ENVIRONMENT

In recent years, China has made great efforts in promoting the construction of ecological civilisation, the transition of economic development and the promotion of green and low carbon environment. To conform to the adjustment of national strategy, the Group actively advocates the concept of sustainable and green development, reduces waste discharge, decreases resource consumption, protects ecological environment, and promotes a harmonious and sustainable development among people, society and the environment. Therefore, in addition to complying with all relevant environmental laws and regulations, the Group is formulating management approaches and taking measures to reduce energy consumption, waste discharge and the use of natural resources. The Group continuously maintains its operation in compliance with the *Professional Management Measures for Safety and Environmental Protection* (《安全環保專業管理辦法》) and the *Rules for Evaluating Safety and Environmental Protection* (《安全環保考核細則》) to effectively achieve its management goal on environmental matters. Moreover, the Group has continued to work on reclamation in mining areas to maintain the ecological balance.

### Water Resource

In recent years, China has vigorously promoted the conservation and protection of water resource, implemented the most stringent management of water resource, strengthened the water pollution control and improved the national environmental standards for sewage disposal. The Group pays great attention to water usage as a large volume of water is required for ore processing. As all mines and plants of the Group are located in mountainous areas with abundant rainfall, most of its water resource comes from mountain river streams and the associated water, rather than being drawn from the local rivers/lakes or the public water supply systems. Besides, as Mancala Group only provides specialist mining services, the fresh water consumption in its mining area does not fall within the scope of disclosure of this report.

The Group is also in full compliance with the water drawing permit from the local governments and the *Water Law of the People's Republic of China* (《中華人民共和國水法》) and has put great efforts in improving water efficiency.

The Group applies strict management measures to reduce water consumption during the process of production and operation. The major water saving measures adopted by the Group include utilising the tailing pond recharged water and preventing water leakage. The tailing pond in Huili County, Sichuan province (near the Xiushuihe Mine) was completed in 2013. The Group could reuse the water disposed from the tailing pond by recharging it to the processing plants. In 2017, 15,598,392 tons of waste water produced in the Group's manufacturing process were recycled and reused. In 2017, the Group saved a total of 3,926,640 tons of water.

The Group is spot-checked quarterly by local environmental supervision departments for its tailing effluents to further ensure the disposed Chemical Oxygen Demand ("COD") and ammonia nitrogen meet national standards. In 2017, the volumes of COD, ammonia nitrogen and dust generated were 0.29 tons, 0.047 tons and 17.28 tons, respectively. Throughout the year of 2017, no water pollution incident was recorded and the total waste water discharge was 722,800 tons.

### Fresh Water Consumption (tons)

	2017	2016
Stream	1,224,976.00	743,041.88
Associated water	21,000.00	33,000.00
Total	1,245,976.00	776,041.88
Fresh water consumption per production value of RMB10,000 (tons)	9.48 <sup>1</sup>	4.23

Note:

1. Fresh water consumption per production value of RMB10,000 increased by approximately 5.25 tons compared with 2016, mainly because more water was consumed in the processing plants for the upgrading of iron products in 2017.



# Environmental, Social and Governance Report 2017

## Energy Consumption

The Group places great emphasis on the energy consumption management. The Group strictly adheres to the *Management of Power, Energy and Measurement* (《動力、能源、計量管理辦法》) in order to effectively reduce its energy consumption and strengthen its energy saving management system, which could create a sustainable operation environment and an unified management of energy consumption and expense settlement. We maintain a timely record of our energy consumption using ledgers. We consume mostly electricity in our daily production and operation. The Group has entered into a supplier contract with the local hydro-power station in Wenchuan County, Sichuan province to supply it with all the electricity required in its mines and plants and reduce emissions of greenhouse gas ("GHG") simultaneously. In 2017, Huili Caitong saved 524,844 kWh of electricity.

The Group mainly uses gasoline for its business vehicles and diesel fuel for its mining machinery and equipment. Accurate ledgers for gasoline and diesel fuel are kept by recording the data of fuel cards. Besides, as Mancala Group only provides specialist mining services, the energy consumption in its mining area does not fall within the scope of disclosure of this report.

### Energy Consumption

		2017	2016
Gasoline (kL)		73.62	67.68
Diesel (kL)		1,072.34	964.40
Electricity (MWh)	Electricity purchased from external grids	140,965	130,639
	Clean energy purchased	7,442	7,153
Energy consumption per production value of RMB10,000 (kgce)		142.07 <sup>1</sup>	99.00

Note:

1. Energy consumption per production value of RMB10,000 increased by approximately 43.07 kgce compared with 2016, mainly because additional drilling and underground work was conducted as the mineral resources were hosted in a lower mafic-ultramafic layered intrusion at the Group's certain mines in 2017.

## Emissions Control

The Group conducts standardised management of emissions and disposals in accordance with relevant laws and regulations, including but not limited to the *Environmental Protection Law of the People's Republic of China* (《中華人民共和國環境保護法》), to minimise impacts on the environment. The Group also adheres to the goals of energy saving, emission reduction, environmental protection, efficiency improvement and promotes the construction of a sustainable enterprise. Additionally, the Group also aims at reducing waste production during the process of production and operation, promotes and adopts new technology, and at the same time eliminates outdated technology and equipment. As Mancala Group only provides specialist mining services, the emissions in its mining area do not fall within the scope of disclosure of this report.

# Environmental, Social and Governance Report 2017

## • Solid Waste

The Group strictly complies with the *Law of the People's Republic of China on the Prevention and Control of Environmental Pollution Caused by Solid Waste* (《中華人民共和國固體廢物污染環境防治法》) regarding waste management and insists on a scientific and effective treatment of solid waste during the process of production and operation. The Group strengthens its waste management in all aspects and places great emphasis on maximising the recycle and reuse of resources, disposing waste reasonably, and reducing the environmental impact caused by waste disposal.

The two major types of solid wastes generated during the process of production and operation are waste rocks and tailing slurries. The Group stacks them in the tailing pond for contractors to handle them on a regular basis.

In 2017, the total amounts of waste rocks and the tailing slurries produced by the Group were 3,881,790 tons and 4,317,000 tons, respectively. The amount of disposed waste is detailed in the table below.

### Disposed Waste (thousand tons)

	2017 (Note 1)	2016
<b>Waste Rocks</b>		
Stack	3,862.51	1,800.94
Outsourcing	19.28	139.00
Total	3,881.79	1,939.94
Waste rocks disposed per production value of RMB10,000 (tons)	29.46	10.58
<b>Tailing Slurries</b>		
Stack	4,160.00	2,394.11
Outsourcing	157.00	101.25
Total	4,317.00	2,495.36
Tailing slurries disposed per production value of RMB10,000 (tons)	32.77	13.61

Note:

1. Disposed waste increased compared with 2016 was due mainly to more waste produced from additional drilling and underground work during the mining process and upgrading of iron products in the processing plants in 2017.



# Environmental, Social and Governance Report 2017

## • **Hazardous Waste**

The Group discloses information on the hazardous waste annually and standardises the management of hazardous waste storage in accordance with relevant national standards, including the *Standards for Pollution Control on Hazardous Waste Storage* (《危險廢物貯存污染控制標準》) (GB18597-2001) and the *Management Measures for the Transfer of Hazardous Waste* (《危險廢物轉運聯單管理辦法》). Besides, we have also developed a *Hazardous Waste Management System* (《危險廢物管理制度》) and an emergency plan for our daily operation and management. The Group has also entered into contracts with qualified third parties to entrust them with the professional treatment of hazardous waste. In 2017, 1.79 tons of waste lubrication oil were reproduced, with 0.014 kg per production value of RMB10,000.

## • **GHG Emissions**

The global environment faces a severe challenge of responding to climate warming and environmental pollution while contemporaneously meeting the increasing demand for energy. Recently, China has enhanced its efforts regarding the comprehensive GHG control and formulated its 13<sup>th</sup> Five-Year Plan to control GHG emissions to set up the emission goals in 2020, aiming at reducing carbon emissions per unit of gross domestic product and speeding up the development of energy-saving and emission reduction projects in key industries.

As a mineral enterprise, the Group prioritises the reduction of GHG emissions and is in compliance with the *Energy Conservation Law of the People's Republic of China* (《中華人民共和國節約能源法》) and the *Law of the People's Republic of China on the Prevention and Control of Atmospheric Pollution* (《中華人民共和國大氣污染防治法》). The Group constantly lowers its emissions by reducing business travels, encouraging telephone conferences and promoting a paperless office. More importantly, in order to reduce GHG emissions, the Group adjusts its energy consumption structure by purchasing more clean energy resources instead of traditional energy resources. In 2017, the Group purchased 7,442,460 kWh of clean energy resources to reduce carbon emissions by 5,654.78 tons. It is worth noting that Aba Mining has realised 100% clean energy utilisation by purchasing electricity generated from a local hydro-power plant.

As shown in the table below, the main sources of GHG emissions are indirect energy emissions and direct emissions from business vehicles. There are no direct emissions from boilers or other coal-fired or gas-fired equipment in the production process.

### GHG Emissions (tons)

		2017	2016
Direct emissions	Gasoline and diesel	2,946.12	2,758.54
Indirect emissions	Electricity purchased	88,941.73 <sup>1</sup>	24,033.75
Total		91,887.85 <sup>2</sup>	26,792.29
GHG emissions per production value of RMB10,000 (tons)		0.70	0.15

Notes:

- In 2017, 140,964,787 kWh of electricity were purchased from the national grid and 7,442,460 kWh of renewable energy were purchased from a local hydro-power plant.
- The total emissions refer to the direct emissions generated from gasoline and diesel, and electricity purchased from the national grid and a local hydro-power plant.

# Environmental, Social and Governance Report 2017

Considering that the amount and the effect of treatment cannot achieve the desired and anticipated result, the Group replaced the old-style plate and framed filter-press with advanced ones in 2017. After the technical improvement, not only did the Group meet the requirements of environmental emission standards, but it also achieved the following goals:

1. improved the treatment capacity of the tailings pulp and avoided the insufficient treatment capacity of the tailings pulp that affected the overall production line;
2. improved the treatment performance of tailings pulp; and
3. reduced labour cost.

During the reporting period, the Group has completed relevant procedures for the technical upgrade, such as Environmental Impact Assessment.

## Ecological Remediation

The Group actively prevents and countervails the impacts on the ecological environment caused by production and operation related activities and strictly adheres to the *Water and Soil Conservation Law of the People's Republic of China* (《中華人民共和國水土保持法》), *Regulations on the Implementation of the Water and Soil Conservation Law of the People's Republic of China* (《中華人民共和國水土保持法實施條例》) and other regulations and requirements imposed or promulgated by the national and local governments in China in areas where the constituent companies are located. According to the Land and Resources Bureau's compulsory requirement, the Group is currently drafting a land reclamation scheme, which will be reviewed by experts before landing.

The Group pays great attention to the environmental matters by improving the utilisation of natural resources and minimising the impacts on the ecological environment. In 2017, the reclamation area of waste mine reached 215,953.19 square metres and the Group has also invested RMB115,000 in greening the mining area, which covered 79,761.33 square metres.

The Group's employees are encouraged to develop a long-term habit of conserving energy and resources, such as implementing measures to reduce the paper usage, and water and electricity consumption in production lines and offices.



# Environmental, Social and Governance Report 2017

## RESPECTING THE PEOPLE

Competition among enterprises does not only focus on market and technology, but also in the quality of employees. The Group follows the sustainable strategy of human resources management and focuses on the development of employees, performance management, training, competitive remuneration package and efficient incentive mechanism with a view to attracting and retaining outstanding talents in order to achieve the best results.

### Legitimate Employment

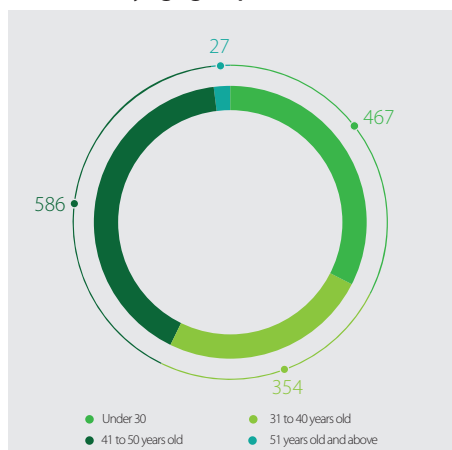
The Group adheres to the “people-oriented” approach, protects employees’ basic rights and interests, pays attention to employees’ needs, and also strives to create a healthy, safe, open and equal working environment, so as to promote employees’ loyalty and success.

#### • Employee Recruitment

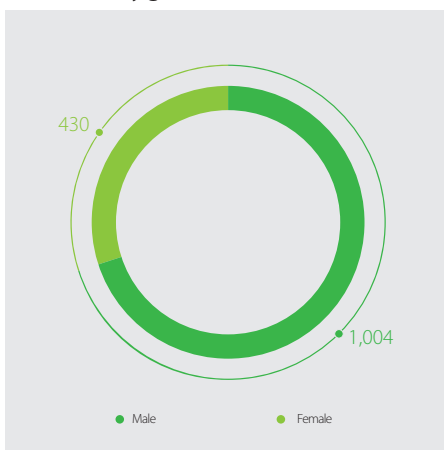
The Group complies with the *Labour Law of the People’s Republic of China* (《中華人民共和國勞動法》) and the *Labour Contract Law of the People’s Republic of China* (《中華人民共和國勞動合同法》) as well as other relevant laws and regulations. The Group has also formulated and implemented administrative measures in terms of recruitment. The *Human Resources Management Measures* (《員工管理辦法》) clearly states the management procedures for recruitment, which stringently prohibits discrimination in gender, race, religion, age, etc. Additionally, in compliance with the local labour laws and regulations, the Group also prohibits child labour and forced labour in the process of recruitment and employment. The Group has no material non-compliance with applicable laws and regulations on child labour and forced labour for the year 2017.

At the end of 2017, the Group had a total of 1,434 employees who have entered into labour contracts with the Group.

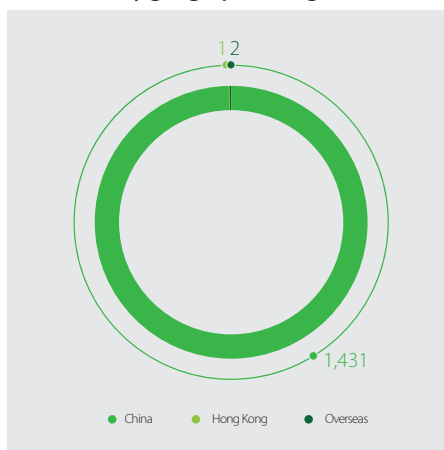
Workforce by age group



Workforce by gender



Workforce by geographical region



# Environmental, Social and Governance Report 2017

- **Employee Engagement**

The Group has undertaken various actions to create a positive atmosphere to ensure that all employees are respected and encouraged to express their opinions in order to better engage them in the Group's corporate governance.

The Group formulates and implements the *Administrative Measures on Compensation and Benefit* (《薪酬管理辦法》), the *Administrative Measures on Objective* (《目標管理辦法》) and the *Administrative Measures on Employee Leave* (《員工休假管理辦法》), providing employees with competitive remuneration and benefits that both match their performance and the internal remuneration structure of the Group. Besides, such measures allow the Group to provide various kinds of insurance for its employees such as pension, unemployment, medical care, employment injury and maternity along with housing provident funds. The Group provides diversified benefits such as fitness and business etiquette training for different positions.

The Group values employees' opinions. To improve relevant management systems and measures, the Group regularly organises employee representative congress to collect rational suggestions.

In 2017, the social insurance coverage within the Group was 100%.

## Individual Development

The Group provides employees with a broad development platform through clear career development paths and a thorough training system. The Group has (i) formulated and implemented the *Human Resources Management Measures* (《員工管理辦法》); (ii) set up a scientific position system; (iii) reinforced the composition of the working team; and (iv) established a system to nurture, select and manage talents based on the responsibilities and requirements for a particular position.

- **Promotion Path**

The Group's people strategy focuses on offering exciting work and development opportunities, rewarding good performance and providing quality leadership. The Group selects and recommends potential candidates in various ways, including tutor recommendation, job rotation, on-the-job training, etc.

The Group focuses on providing employees with significant and diverse career opportunities at various functional levels for management staff, administrative staff, technical staff, operational staff, and sales and marketing staff. The Group defines a clear set of roles, responsibilities and accountabilities for all employees and provides a variety of in-house and external trainings to enhance basic and expert job competence.

# Environmental, Social and Governance Report 2017

## • **Training**

The Group has formulated and implemented the *Administrative Measures for Training* (《培訓管理辦法》) and guidelines for staff learning and development which standardise the training and management work, enhance the comprehensive capability of employees and promote the all-round development of employees. The Group also provides employees with various opportunities for training and development, such as expertise advancement, knowledge exchange with industry peers and project management enhancement according to different positions and ranks. The Group customises training programmes for employees through various channels such as on-site training, distance and online training, self-study with courseware, secondments and visits.

In 2017, the average training duration per capita was 14.19 hours, among which the average training duration of senior management, middle management and staff was 5.26 hours, 8.47 hours and 14.39 hours, respectively.

## **Safety Matters Most**

The Group attaches great importance to occupational safety and health of all employees and strictly complies with relevant laws and regulations, including the *Work Safety Law of the People's Republic of China* (《中華人民共和國安全生產法》) and the *Law of the People's Republic of China on the Prevention and Control of Occupational Diseases* (《中華人民共和國職業病防治法》).

In addition, the Group strengthens occupational health and safety management and occupational disease prevention by complying with the *Occupational Health and Safety Management Systems* (《職業健康安全管理體系》) (GB/T28001-2011) by formulating and implementing the *Manual for Safety Supervision System* (《安全監察制度》) and the *Management Measures for Occupational Health* (《職業健康管理辦法》) in order to ensure the effectiveness of the systems. By adopting modernised management mode, the Group implements scientific, standardised and institutionalised production and operational activities, including production safety management to prevent occupational diseases, safeguard the health of labour and raise employees' awareness of safe production to ensure production safety.

## • **Safe Production Management**

The Group has developed an inspection system to strengthen the administration and management of production safety, and achieved standardisation and institutionalisation of the inspection. In 2017, the Group formulated and implemented policies relating to safe production, including the *Safety and Environmental Management System* (《安全環保管理辦法》), the *Safe Production Responsibility Management System* (《崗位安全生產責任制》), the *Administrative Measures for Implementation of Labour Supply* (《勞動用品實施管理辦法》), the *Occupational Injury Management System* (《工傷管理辦法》), etc. Additionally, Mancala Group has developed its Safety Management System (shown in the table below).



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## Mancala Safety Management System

Commitment & Leadership	Risk Management	Documentation & Documental Control	Legislative Compliance	Organisation & Responsibilities	Training & Competency
01 Policies 02 Mancala Core Values 03 Mancala Safety Management Plan 04 Mancala Cardinal Rules 05 Key Performance Indicators 06 OHS Roles and Responsibilities 07 OHS Annual Report 08 OHS Staff and Resources 09 OHS Strategy-Objectives & Targets 10 EOM Management Meetings	01 Operational Risk Assessments 02 Job Safety Analysis 03 ManSafe Checklists 04 Hazard Reports	01 Document Control Register 02 Health & Hygiene 03 Energy Isolation & Tagging 04 Working at Heights 05 Confined Space 06 Electrical Safety 07 Cranes & Lifting 08 Pressurised Systems 09 Mobile Equipment 10 Ground Stability 11 Explosive and Magazine Plans 12 Remote Control Equipment 13 Guidelines 14 SWMS & Work Instructions 15 Compliance Registers 16 Management Plans 17 Medical Management 18 OHS-Previous Standards 19 Share Point Template 20 Tender Info	01 Federal Legislation 02 State Legislation 03 Australian Standards 04 Codes of Practice 05 Permits and Licensing 06 Safe Work Australia 07 SDS's 08 MDG Guidelines 09 Worksafe Compliance & Visits	01 Organisational Chart 02 Position Description	01 Training Management Plan 02 Training Competency & Skills Matrix 03 Mancala Inductions 04 Visitor Induction 05 Employee-OHS- Files 06 Toolbox Topics & Safety Talks 07 MVM Training 08 Monthly Safety Themes 09 RII Units 10 General Training 11 USI Register 12 TasTAFE Contract
Communication & Consultation	Incident & Injury Management	Emergency Management	Monitoring & Review	Contractor Selection & Management	Change Management
01 Safety Alerts 02 Safety Notifications 03 Maintenance Bulletins 04 Safety Meetings 05 Newsletters 06 External Safety Alerts 07 Mancala Business Services Weekly Update 08 General Presentations 09 Health & Wellness Initiatives	01 Incident Templates 02 Incidents & Events	01 Crisis Management Plan 02 Emergency Management Plan 03 Evacuation Plans 04 Evacuation Drills 05 First Aid Facilities 06 Trigger Action Response Plans (TARP) 07 Emergency Equipment 08 Employee Assistance Programmes	01 Safety Improvement Audits 02 Task Observations 03 Workshop Inspections 04 Underground Inspections 05 Internal OHS System Audits 06 External OHS System Audits	01 Contractor Work Permits 02 Contractor Category Table 03 Post Award Project Specific Requirements 04 Project Prestart Compliance Checklist 05 Sub-Contractor Tender Questionnaire 06 Contractor Inspection Checklist 07 Contractor Meeting Minutes 08 Services Contracts	01 Template 02 Design Risk Assessment

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The Group actively takes actions in safety management by involving all employees in the safe production management process and building a safety management network in accordance with its corporate hierarchy. Moreover, the Group continuously makes efforts in increasing the investment in safe production, conducting safe production training and drafting the Emergency Rescue Plan (應急救援預案). In 2017, there was 1 fatality due to an accident in production and 236.66 lost days due to work injuries. The Group commits itself to leveraging all available resources to aid injured employees and their families as much as it could. In total, the Group invested RMB6,379,301 in safe production management in 2017.

- **Occupational Health**

As an employer, the Group takes its responsibilities very seriously and tries its best to minimise the risks of accidents and health hazards. The Group has formulated and implemented the *Management Measures for Occupational Health Policy* (《職業健康管理辦法》) in order to guarantee the health and safety of employees at work. The Group organises education and training seminars regarding occupational health and safety on a regular basis to enhance the consciousness of occupational health and safety within the scope of duties. In accordance with the requirements of the *Law of the People's Republic of China on the Prevention and Control of Occupational Diseases* (《中華人民共和國職業病防治法》), the Group has created health profiles for employees and initiates inspections for employees on an annual basis. In 2017, the Group provided occupational disease inspections for 482 employees.



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## OPERATIONAL PRACTICE

The Group actively takes measures to create a sustainable environment for its business development and the community, including selling qualified products, establishing fair procurement procedures and in-place anti-corruption schemes.

### Product Liability

The Group continuously strengthens quality management of products and services, maintains good communication and interaction with its clients, timely responds to clients' needs, and strives to win clients' recognition and satisfaction with its first-class products and services.

The Group has a highly concentrated client group, who needs a stable supply of products. In order to provide clients with qualified iron products, the Group strictly follows the *Measures on Professional Quality Management* (《質量專業管理辦法》) during its production to formulate the quality management procedure and the accountability of responsible managers and employees. Since the Group provides iron products to reputable trading companies (not to end users directly), and has built a long-term business relationship with them, no issues have arisen in relation to advertising, labelling or customer's privacy during the sales.

### Goals for Product Quality

- Guaranteed grading of TFe in vanadium-bearing iron concentrates > 54% (Heigutian Processing Plant and Baicao Processing Plant – 55%, Xiushuihe Processing Plant – 54%)
- Chemical contents meet the standards as agreed
- Granularity high of vanadium-bearing iron concentrates < 200, with a target amount of not less than 50%
- Guaranteed grading of TFe in ordinary iron concentrates ≥ 65%
- Customer satisfaction level: not less than 90%

Given that the Group is in the upper stream of the whole value chain and does not provide products directly to end users, the products cause no direct harm to people's safety and health.

### Supply Chain

The Group places great emphasis on the common growth with suppliers by strengthening its communication with suppliers through various ways, with an aim of jointly establishing a healthy, benign and sustainable green supply chain.

The raw materials for ore processing are mainly steel balls, plates and other industrial consumables. Purchases are carried out based on the purchase plans proposed by the production department according to the production plan. Based on open, fair and impartial procurement principles, the Group strictly controls the procurement process to ensure the quality of procurement. A list of requirements on suppliers and contractors' environmental and social responsibility has been developed accordingly. In the process of screening and assessment, the Group regularly reviews the quality indicators and social responsibility performances of its suppliers and contractors, and continuously encourages them to improve their performances.

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## Anti-corruption

Constantly improving employees' awareness of anti-corruption is one of the key tasks of the Group's compliance management. The compliance department of the Group is guided by the *Toolkit on Directors' Ethics*, released by the *Independent Commission Against Corruption of Hong Kong*, to identify and assess any inappropriate business actions in the Group. The Group optimises the internal compliance management by providing trainings on related laws and regulations, setting up integrity report mailbox, billboards and other channels to strengthen the communication between the Group and the staff in terms of the internal control, anti-corruption and anti-bribery.

Besides, the Group has also set out code of ethics and conflict of interests, and principles against unfair competition in its own Employee Handbook. Each employee is required to make a declaration to abide by the rules set out in the Employee Handbook to guard against corruption upon signing the labour contract with the Group. Also, all employees receive training in terms of the Employee Handbook annually and further declare their compliance. In 2017, there was no major breach of conduct by the employees within the Group.

Meanwhile, the Group has opened anti-corruption reporting channels to all stakeholders including internal staff, suppliers and customers to allow them to report in real name or anonymous forms. By integrating these measures into its daily operation, the Group aims at creating a healthy, fair and transparent business environment with both internal and external stakeholders.

## SUPPORTING THE COMMUNITY

The Group is committed to making positive contribution to poverty alleviation and supporting the development of sports and culture among the local community. Most of the Group's mines are located in impoverished areas where minorities reside. The Group not only respects minorities' cultural values, but also opens communication channels to understand their needs and take targeted measures to help local residents to lift themselves out of poverty. For instance, the Group supports the local community by offering job opportunities, bringing more residents into business, encouraging employees to participate in volunteer activities and contributing to charities. In 2017, the Group obtained the *2016 Social Contribution Award of Wenchuan County* (2016年度汶川縣社會貢獻獎) and the *2016 Outstanding Contribution to Industrial Development Award Wenchuan County* (2016年度汶川縣工業發展貢獻獎). In 2017, the Group's philanthropic activities totalled RMB806,050 and the total number of hours contributed to philanthropic activities was 20.

In 2017, the Group supported two villages in Weizhou town, Wenchuan County, Sichuan province, namely Maoling village and Yubeilin village for poverty alleviation. One of the Group's mines is located in Maoling, which is close to Maoling village. In order to increase per capita income for rural residents in Maoling village, the Group invested approximately RMB200,000 and outsourced business opportunities such as engineering constructions, maintenances and services to Maoling villagers. The Group helped more than 20 local villagers in poverty and provided over 10 job opportunities. Yubeilin village had difficulty in getting access to clean drinking water. The Group donated RMB30,000 to install clean water pipes for Yubeilin village, which solved the problem of obtaining clean drinking water for the people living in Yubeilin village.



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## GLOSSARY

"Aba Mining"	Aba Mining Co., Ltd.* (阿壩礦業有限公司), a limited liability company established in the PRC on 27 February 2004 and an indirect wholly-owned subsidiary of the Company
"Baicao Mine"	白草鐵礦, the vanadium-bearing titano-magnetite mine located in Huili County, Sichuan province and operated by Huili Caitong, with a mining area of 1.88 sq.km.
"Baicao Processing Plant"	the ore processing plant located near the Baicao Mine and operated by Huili Caitong
"Board"	the board of directors
"China" or "PRC"	the People's Republic of China excluding, for the purpose of this report, Hong Kong, the Macau Special Administrative Region of the PRC and Taiwan
"Cizhuqing Mine"	茨竹箐鐵礦, the vanadium-bearing titano-magnetite mine located in Huili County, Sichuan province and operated by Huili Caitong, with a mining area of 1.279 sq.km.
"Environmental Impact Assessment"	the process of evaluating the likely environmental impacts of a proposal and identifying options to minimise environmental damage
"Haibaodang Mine"	海保幽鈦鐵礦, the vanadium-bearing titano-magnetite mine located in Renhe District, Panzhihua City, Sichuan province, with an exploration area of 26.2 sq.km.
"Hailong Processing Plant"	the ore processing plant located near the Cizhuqing Mine and operated by Huili Caitong
"Heigutian Processing Plant"	the ore processing plant located near the Yangqueqing Mine and owned by Huili Caitong
"Hong Kong"	the Hong Kong Special Administrative Region of the PRC
"Huili Caitong"	Huili County Caitong Iron and Titanium Co., Ltd.* (會理縣財通鐵鈦有限責任公司), established in the PRC on 7 July 1998 and has been a foreign equity joint venture in the PRC since 29 December 2010 and an indirect wholly-owned subsidiary of the Company
"Mancala"	Mancala Holdings Limited, a limited liability company incorporated in the Cayman Islands on 19 April 2016 and a subsidiary of the Company, in which the Company acquired in 2017 and directly owns 81% equity interest

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"Mancala Group"	Mancala and its subsidiaries
"Maoling Extended Exploration Area"	formerly an independent exploration region with an area of 2.83 sq.km. covered under the extended exploration permit of the Maoling Mine (covering 1.9 sq.km. of the mining area of the Maoling Mine), has been consolidated with the Yanglongshan Mine since September 2012 to form the Maoling-Yanglongshan Mine
"Maoling Mine"	毛嶺鐵礦, an ordinary magnetite mine located in Wenchuan County, Sichuan province, with a mining area of 1.9 sq.km.
"Maoling Processing Plant"	the ore processing plant located near the Maoling-Yanglongshan Mine and operated by Aba Mining
"Maoling-Yanglongshan Mine"	an exploration region with a total area of 11.6 sq.km. covered under the exploration permit of the Maoling-Yanglongshan Mine (the mining area covered is owned by the Maoling Mine), formed from the combination of the Maoling Extended Exploration Area and the Yanglongshan Mine since September 2012 and operated by Aba Mining
"Shigou Gypsum Mine"	Shigou gypsum mine located at Hanyuan County, Ya'an City, Sichuan province, with a mining area of 0.1228 sq.km.
"Xiushuihe Mine"	秀水河鐵礦, the vanadium-bearing titano-magnetite mine located in Huili County, Sichuan province and operated by Xiushuihe Mining, with a mining area of 0.52 sq.km.
"Xiushuihe Mining"	Huili County Xiushuihe Mining Co., Ltd.* (會理縣秀水河礦業有限公司), a limited liability company established in the PRC on 26 June 2007 and a subsidiary of the Company, in which the Company indirectly owns 95.0% equity interest
"Xiushuihe Processing Plant"	the ore processing plant located near the Xiushuihe Mine and operated by Xiushuihe Mining
"Yanglongshan Mine"	羊龍山鐵礦, an ordinary magnetite mine located in Wenchuan County, Sichuan province, formerly an independent exploration region with an area of 8.79 sq.km. covered under the exploration permit of the Yanglongshan Mine, and has been consolidated as the Maoling-Yanglongshan Mine with the Maoling Extended Exploration Area since September 2012
"Yangqueqing Mine"	陽雀箐鐵礦, the vanadium-bearing titano-magnetite mine located in Huili County, Sichuan province and operated by Huili Caitong, with a mining area of 0.25 sq.km.

\* For identification purpose only

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## FEEDBACK FORM

Dear reader:

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Address: Unit A, 4th Floor, E168, Nos. 166-168 Des Voeux Road Central, Hong Kong

Email: [ir@chinavtmmining.com](mailto:ir@chinavtmmining.com)

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☐ Shareholder    ☐ Employee    ☐ Supplier    ☐ Customer    ☐ Government    ☐ Community  
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In addition to the content that has been disclosed, what kind of information do you wish to read?

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