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Case Study Report on the Best Practice of Sustainable Investment in APEC Region

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1 Project overview

1.1 Brief introduction to the Aluminum Corporation of China

The Aluminum Corporation of China (hereinafter referred to as "CHALCO") was established on February 23 2001, and is a state-owned key enterprise that's under the direct administration of the central government. CHALCO is mainly engaged in mineral resources development, non-ferrous metal metallurgy and processing, relevant trade and engineering technology, it is the world's second largest aluminum oxide supplier and the third largest electrolytic aluminum supplier, and its comprehensive strength in the copper industry is the first within China. CHALCO now owns 66 enterprises, and its business is widely spread in more than 22 countries and regions around the world. The total amount of the company's assets is 470 billion Yuan, the sales revenue in 2012 exceeded 240 billion Yuan, and it was on the list of the world's top 500 companies for 6 successive years. Five holding subsidiary corporations of CHALCO have been listed on the domestic and foreign markets. Among them, the Aluminum Corporation of China was listed in Hong Kong, China, China, New York and Shanghai, the CHALIECO and CHINALCO Mining Corporation International were listed in Hong Kong, China, Yunnan Copper and Yingxing Energy were listed in Shenzhen.

The mineral resources plate business of CHALCO cover the obtaining, exploration and development of mineral resources such as bauxite, copper mine, iron ore, and rare earth, forming a resources industry with certain advantages of scale. In 2013, the newly-increased quantity of copper in the resources plate was 2.2 to 4.2 million tons, and that of gold was 62 tons. The business of CHALCO in overseas resource development and project contracting has been expanded to more than 10 countries including Peru, Australia, the Republic of Guinea, India, Mongolia, and Viet Nam, and has established an image of "having principle, being responsible and having credit" for Chinese enterprises. In 2013, the CHINALCO Mining Corporation International was listed in Hong Kong, China successfully, and Peru Toromocho copper mine of CHALCO was officially constructed and put into operation.

1.2 Project context

CHALCO completed its acquisition of companies within the same industry in Peru in August 2007, and announced that the Peru Toromocho copper mine was put into operation in December 2013. The copper metal reserves in Peru are very rich, and rank third in the world. With the development of China's economy, the copper resources are in a shortage all the time. CHALCO's

successful acquisition and development of the Toromocho project would have a significant strategic meaning in enhancing the overseas copper resource development and building an overseas copper resources base for China.

The Toromocho copper mine held by the CHALCO Peru Mining company is located in Yaulli Province, Junin region, Peru, which is about 140 kilometers away from Lima, the capital of Peru. The altitude is 4500-4900 meters, and the amount of mineral reserves is 1.526 billion tons, while the amount of copper reserves is 15 million tons, and the total investment capital is 2.15 billion US dollars. The mine is designed to have a service life of 36 years, and after being put into production, the daily milling of ore is of 0.1172 million tons, while the yearly copper metal amount is 0.25 million tons. It is one of the super-huge type copper mines that are under development and construction around the world.

In 2007, CHALCO purchased the Peru Copper Company that is under the holding of a Canadian company with 0.86 billion US dollars, thus obtaining the mining rights of the Peru Toromocho copper mine.[1] According to the introduction of CHALCO, the Toromocho copper mine owns about 12 million tons of metal resources equivalents of copper, and is one of the super-huge type copper mines that are under development and construction in the world. And its copper resources are equal to 19% of China's total copper resources. If the coefficient of mining is 50%, it means that about 6 million tons of copper could be produced and the annual copper scale could reach 0.245 million tons.

In May 2008, CHALCO and the Peruvian government signed the share option performance agreement and obtained the mining rights of the Toromocho copper mine officially. According to the feasibility study report, the total investment of project construction is about 2.15 billion US dollars. Up to the end of March in 2011, CHALCO invested about 0.5485 billion US dollars on this project.

On July 26 2011, CHALCO obtained the construction permission for the main project of the Toromocho copper mine, and it was officially put into production before the end of 2013.

Since this project needs a huge investment on its development, CHALCO, which has a tense capital chain, plans to conduct financing on this project. Because of the low aluminum price and increased costs, from 2008 to the first three seasons of 2011, the asset-liability ratio of CHALCO was 75.83%、78.70%、79.63% and 80.66% respectively, showing a rising trend. The Toromocho copper mine is located in the Andes mountainous area, and the mineral resources mining of this place has been going on for several hundred years, while there are few improvements on the local economy and residents. Community relationships have become the most important question for international enterprises to conduct mineral and mining development.

2 Environmental and social impacts of the project

2.1 Environmental impacts

The Toromocho copper mine project is located in Yaosu province, Junin Region, Peru.

[1] Cao Kaihu, CHALCO Peru Copper mine project was decided in HK IPO[N]. China Business News , May 21, 2012，B02/company

Morococha town, where the project is located, is a traditional mine lot. Since the beginning of the 20th century, many mining companies have carried out mining in this area. The mining waste water was discharged into the Yaulli river through the Kingsmill tunnel which was built in 1934, thus polluting the Yaulli and Mantaro rivers. The daily life and agricultural and animal husbandry production of the over 0.9 million residents in the Mantaro basin was influenced by sewage along the years, so the treatment of the Kingsmill tunnel has been an urgent wish of the local residents for many years.

Before the Kingsmill water treatment plant was built, the water quality of the Kingsmill tunnel was acid, and had the following main features:

（1） The average PH value was 4.5, and the lowest 3.45. When the water of the Kingsmill tunnel is discharged into the Yauli River, because of the complement of clean water and flow of other runoff, the PH value is raised to 6.39.

（2）The temperature of the runoff is 5 degrees higher than the receiving water body.

（3）The contents of cyanide, phenol and grease all exceed relevant standards.

（4）The average solid suspended matter concentration is 195.7 milligram/liter to 180 milligram/liter.

（5）The runoff contains large amount of aluminum, arsenic, cadmium, copper, iron, magnesium, nickel and zinc. The aggregate level of above metal contents and dissolution rate all exceed the relevant standards.

The altitude of the Kingsmill tunnel drainage basin is 4000 meters to 4300 meters, and it belongs to a moist mountainous plateau area in the center of the Andes, where there are currently two main communities of flora and fauna. Currently, 9 kinds of mammals, 24 kinds of birds, 1 kind of reptile and 2 kinds of amphibians are found in this area. The water resources are the basis for maintaining the natural resources of this region, thus ensuring human life and biodiversity.

CHALCO abided by the local laws and regulations and international standards strictly in the Toromocho copper mine, paid attention to green construction during the project, and protected the local environment. CHALCO invested more than 50 million US dollars on building a sewage treatment plant before the construction of the Toromocho copper mine. Through the negotiation with local communities and families, it has purchased 5.5 hectares of land needed to build the sewage treatment plant and hired the world top engineering consulting institution AMEC for engineering design. The famous construction contractor COSAPI in Peru was responsible for its construction and first-class engineering company GMI was in charge of the supervision. The commencement of the Kingsmill water treatment plant was in 2008, and it was completed and put into operation in 2010. Thus, the pollution of the Kingsmill tunnel and the issue of water quality that has bothered almost a million residents for 80 years were both radically solved.

With the mining of the mine lot, on March 31 2014, the media reported that the waste discharged into the local lake from this copper mine from March 16 to 20 in 2014 contained pollutants, so the Peru environmental department asked CHALCO to suspend its operations at the Toromocho copper mine until the company stops discharging pollutants. Before that, the Peru environmental department discovered that the mine had polluted two lakes. CHINALCO Mining Corporation International announced on March 31, 2014 and confirmed that its subsidiary company MCP did received relevant notice and suspended the mining and pilot production timely. “OEFA once released a video on its website. In the video, yellowing sewage named “acid waste water” flows to a blue lake from the copper mine of CHALCO. CHALCO gave an explaination in its

statement on Friday, saying that this was caused by the rainy season and bad weather. When rainwater flows through the mine of the Toromocho project, it turns into muddy water and then flows into the lake at the foot of the mountain where the mine is at. Besides, it had built a water tank and emission system for rainwater before the construction of this mine.[2]

2.2 Social impacts

Morococha town, where the Toromocho copper mine is located, is a traditional mining town, and residents are primarily workers and their family members around the mine lot, so it has the features of a typical old mine lot, namely it is dirty, disorderly and unpleasant. Most of the citizens of Morococha town live in rented houses. They live in sheds established in a disorderly fashion around the mine lot, which is crowded to capacity. Adding to that the high altitude and bad living conditions, the backward traffic connections, and the difficult supply of drinking water, the living environment of the residents is really bad. The appropriate solution for residents living in the mine lot has become a long-term problem for the local government and development enterprises.

The bad natural environment and pollution of the Toromocho mine lot aggravated the local poverty. The mining industry has become the main economic kingpin, and governments at all levels have high expectations for mining enterprises and would even exert pressure on them. Many infrastructural projects that are supposed to be borne by the government are now borne by enterprises. To improve the lives of the people at the mine lot, CHALCO has carried out large-scale migration and construction projects. CHALCO has invested 50 million US dollars on the removal of cities, and the establishment of 1050 houses in Morococha new town. CHALCO claims that this new city would be the largest social project without a governmental subsidy in the mining history of Peru. At the same time, 98% of MCP's employees are aborigines, so it has brought lots of employment opportunities for the local people.

Besides, MCP pays great attention to the social impact of the Toromocho copper mine project on this region and has carried out various community welfare projects, including: donating desks and chairs to children, donating books and teaching facilities, educational infrastructure construction, dental treatment activities, garbage collection activities, training of community medical institutions, vocational skills lecture, CHALCO sports meetings, IPAE etc. These have not only brought lots of employment opportunities for the local people, but also improved the level in local education, medical treatment, infrastructure construction and production etc.

The president of Peru Ulama once said: CHALCO has positively promoted the local economy and social development during the project construction, and it deserves great compliment for its practical improvement of the living standards of the residents at the mine lot. During the exploitation of the Toromocho project, it has implemented various promises and adopted a responsible mining development mode, and it is hoped that with the good beginning and driving of Toromocho project there could be more comprehensive achievements in the Peruvian economy and society, including in mining development.

[2] CSR 环球： http://www.csrworld.cn/portal_mobile-p_mobile_view.html?aid=1743

3 Stakeholder analysis

3.1 The Chinese government

The Chinese government encourages and promotes the foreign investment of Chinese enterprises, and has implemented the "going out" strategy in recent years. The "Going out" strategy is also called an international business strategy, which means that Chinese enterprises should make the best of the "two markets, two kinds of resources" at home and abroad, taking part in international competition and cooperation through methods such as outward foreign direct investment, overseas project contracting and overseas labor cooperation, and realizing a modernized power strategy for China's sustainable economic development.

The Chinese government has released a series of policy papers in terms of enterprises' foreign investment, helping enterprises to "go out" faster and in a better way. *Outward foreign direct investment cooperation region guideline* is a kind of exploration for the "going out" of Ministry of Commerce service enterprises. Since 2009, the Chinese Academy of International Trade and Economic Cooperation and business institutions stationed abroad would compile and update this guideline each year by giving an objective introduction of the investment cooperation environment of some countries (regions) and giving hints of the problems that should be noticed in enterprises' multinational operation.[3] On February 18, 2013, the Ministry of Commerce and the Ministry of Environmental Protection released an Outward investment cooperation environment protection guideline, which was the first directive guidance that government departments gave on the enterprises' foreign investment cooperation environmental protection, guiding Chinese enterprises and the host region to do well in environmental protection together within the legal framework so as to help enterprises improve trans-national operation ability, speed up the integration progress, realize long-term self-development and promote the sustainable development of foreign investment cooperation, realizing the goal of mutual benefit and mutual development. On August 19 2014, the *Foreign investment management method* was approved during the 27th meeting of the Ministry of Commerce. It is divided into general provisions, references and verification, regulations and service, legal responsibilities and supplementary articles, in total 5 chapters and 39 articles, and it will be implemented from October 6 2014. This document has further specified the management standards of foreign investment in China, it represents a reform and perfection of the existing foreign investment management system, and it would play a positive role in promoting the establishment of a comprehensive foreign investment management system with scientific management, efficient supervision, good service and strong guarantees.

3.2 The Peruvian government

The foreign investment promotion law passed in 1991 – namely, the No. 622 Law, is the legal basis for Peru to absorb foreign investment. This law has also laid a legal foundation for regarding private investment as the engine for economic development. Peru has made reforms on its

[3] Website of China's Ministry of Commerce: http://fec.mofcom.gov.cn/gbzn/gobiezhinan.shtml

investment policy, the contents of the reforms includes the simplification of formalities and the cancellation of tariff walls, disinter-mediation on the market by the government during the convertibility system, liberalization in hiring workers, and establishing an institution for supervising market competition at the same time.

In order to establish a stable and foreseeable investment atmosphere, within the legal framework based on constitutional principle, national and departmental criteria, as well as international agreements, the law of Peru regarding investment aims to provide a guaranteed non-discriminatory treatment, a reasonable protection level and sufficient mechanisms for dispute resolution for investors at home and abroad. Peru would give priority to investment on infrastructure construction and investment on reducing costs through the maintenance of existing infrastructure and promotion of bigger economic effects, productivity and competitiveness as well as employment opportunities.[4]

On February 26 2014, the Ministry of Foreign Affairs of Peru and the Ernst & Young accounting firm issued a 2014-2015 Peru mining investment guideline (which can be found on the website of the Ministry of Foreign Affairs). This guideline includes the political structure of Peru, an introduction to the macro-economy, key economic indexes, the business environment, mining laws and taxation, geological potential, domestic mining trends and business activities.[5]

In this project, the Morococha town government performs a legal administration authority for this public land, it is responsible for the planning, examination and approval of this town, and promotes the welfare of local residents.

Legal basis for the construction of new towns and cities includes:

(1) Domestic laws in Peru

- Constitution
- Civil law
- Private investment law on engaging in economic activities on state-owned land or aboriginal land.
- Mining law
- Guideline on the community relations of the energy and mining departments

(2) International conventions

- World Bank business policy OP4.12 and procedural rules BP4.12
- Ecuador principle (Policies provided by international finance corporation on private sectors of Developing countries' promoting the sustainable investment)
- Code of conduct of international finance corporation on purchasing land and non-voluntary removal

3.3 The community

An investigation of the International Institute for Environment and Development published in May 2013 shows that the relationship between CHALCO and the local community is improving, including the establishment of a social responsibility fund to implement some social projects, which means that CHALCO attaches more importance to the social recognition of the project. The report

[4] http://finance.sina.com.cn/roll/20050330/23531474675.shtml

[5] Ministry of Commerce of PRC:
http://www.mofcom.gov.cn/article/i/dxfw/nbgz/201403/20140300503907.shtml

claims that CHALCO has absorbed the lessons from previous Chinese enterprises' investment in this region, embodying the fact that Chinese enterprises pays more attention to sustainable development and environmental protection. This is also consistent with the basic requirements that the Chinese government has on Chinese enterprises' going out and foreign enterprises which invest in China.

Morococha residents constituted different social groups based on different requirements and goals, such as cooperation, neighborhood committees, housing owner committees, parents associations, milk associations etc. these groups would negotiate with CHALCO regarding resettlement through the trans-department committee and Morococha Housing association（AVM）.

Through resettlement, Morococha residents would obtain benefits in the following aspects:

- New towns could improve the quality of life of residents
- Obtain high-quality residences
- Obtain the necessary basis services
- Obtain educational, health and other municipal infrastructure

3.4 The enterprise

CHALCO purchased the Toromocho copper mine in 2007, and while it did not start the mining immediately, it started protecting the environment and water sources. CHALCO pays great attention to environmental protection and community construction, especially the protection of local water resource, thus establishing a good relationship with the local community. CHALCO spent more than 0.8 billion US dollars in buying the mining rights, while the preparation before the mining cost 1.5 billion US dollars, and most of the capital was used in community service.

At the same time, CHALCO invested more than 50 million US dollars on building a modernized sewage treatment plant when not a single drop of mineral sewage is discharged, solving a problem that has bothered the residents for more than 70 years. Besides, CHALCO has also spent 0.217 billion US dollars on the local new town, and another 50 million on removal. Its work on local community service and environmental protection is still going on, and according to the reports of the Commerce newspaper in Peru, CHALCO Peru Company united with Peruvian enterprises to build a reservoir and sewage treatment plant, expanding the water supply pipelines for families in seven communities in the Junin region, and providing training courses for the local residents regarding treasuring water conservancy resources.

3.5 The media

On June 25 2014, the OMETAL.COM reported that the Vice general manager of CHALCO Zhang Chongzhong visited the vice minister of Peru's Energy and Mining Department Gillette Moore·Xinye[6]， and Xinye claimed that the CHALCO Peru Toromocho copper mine project is the largest mining project in Peru in recent years, and it is also the project with the highest equipped level within copper mine projects of the same scale. The Peruvian government has paid high attention to this project. CHALCO integrated positively with the local customs and habits, improved

[6] http://www.ometal.com/bin/new/2014/6/25/china/20140625131823653653.htm

the living conditions of local residents, solved the water pollution in the mine lot and provided development support in the aspects of employment, medical treatment, education and training, creating a happy life for local residents. It is hoped that CHALCO will expand its investment in more areas, and the Peru energy and mining department would give full support to CHALCO's development.

On December 16 2013, the China Mining Newspaper claimed that "China's biggest overseas copper mine project was put into production in Peru", and also that "the CHALCO Peru Toromocho copper mine is a typical successful case for China's foreign investment and also a sample project for Chinese enterprises to 'go out'." In 2007, CHALCO purchased the Peru Mining Company and acquired a multimillion ton super-large copper mine in Toromocho in the plateau area of Peru. During the exploitation and construction of the CHALCO Toromocho copper mine, the Export-Import Bank of China and the China Development Bank gave great support and assistance to the project, thus creating positive conditions for its successful production. On December 12 2013, many media outlets such as the Guangming Daily, China Economic Times, International Finance News, Ta Kung Pao and Shanghai Securities News all reported that the CHALCO Peru Toromocho copper mine was put into production, and this copper mine was the project with the shortest construction period and the largest equipment level within copper mine projects of the same scale around the globe, the largest mono-mining project in Peru, a region rich in copper resources, and the mining project with the biggest scale for Peru in recent years.

There were some international responses as well:

CHALCO has absorbed the lessons from the previous mining companies which conflicted with the local residents by hiring consulting company to be in charge of promoting "social relations for large-scale projects." CHALCO cooperated with colleges and research institutions, helping local residents in establishing shops and some health and educational projects.

——UK *Guardian*

If CHALCO could persuade all the residents to move to new Morococha town, and this could bring huge change to the enterprise's "social responsibility"—after Peru president Umara is in power, he has been trying to solve the hundreds of mining disputes in Peru.

——*Reuters*

Peru is the main destination for China to conduct mineral investment in Latin America. China's investment in Peru is not only a huge step for "South-South cooperation", but also brings huge vitality for the Peruvian economy- China may expand its investment o infrastructure construction and public transportation in Peru, promoting the development of these regions.

Some may worry that this kind of economy which relies on export products may damage the environment in Peru, or damage the rights of laborers and the guarantee of human rights. I on the other hand think that China's mineral investment in Peru respects local democracy and the rule of law.

Since CHALCO hopes to realize a satisfactory resettlement for both parties, we can see that they are trying to improve the industry standards. Now there are many other mining companies in Peru, and they are learning from CHALCO in the field of resettling local residents.

——Cynthia·Sabonn, Peru Pacific University International politics professor

To maintain a successful investment in Peru, the Chinese government and mining company need to construct a good relationship with senior officials of Peru, and pay attention to communications with the community at the same time, keeping synchronous development of social

responsibility project. Since there were constant social protests in places of Peru because of mining, Chinese investment enterprises have to adapt to the development in a social environment with strong grassroots organizations.

——*Forbes* online edition

In 2012, foreign direct investment (FDI) in Peru increased 49% on a year-on-year basis, and Peru is the region with the fastest increase in foreign investment. In 2012, Peru has absorbed 12.24 billion US dollars of foreign direct investment, and ranks 5th in Latin American countries, behind only Brazil, Chile, Columbia and Mexico.

The foreign direct investment attracted by the whole South American region has created a new record in 2012, with a total amount was 173.361 billion US dollars, which increased 6.7% on a year-on-year basis. 51% of investment in South America was used in purchasing resources, especially mineral products.

——Report from Economic Commission for Latin America and Caribbean

4 Company strategy and actions

Since 2007, CHALCO has carried out environmental protection in the Toromocho copper mine lot, taken part in community public benefit activities, and provided employment, medical treatment, education and training for the residents, thus supporting community development.

4.1 Dealing with pollution to protect the environment

CHALCO has invested more than 50 million US dollars in building the sewage treatment plant before the construction of the Toromocho copper mine, and hired the world top engineering consulting institution AMEC for engineering design. The famous Peruvian construction contractor COSAPI was responsible for its construction and the first-class engineering company GMI was in charge of its supervision. The commencement of the Kingsmill water treatment plant was in 2008, and it was completed and put into operation in 2010. Thus the pollution of Kingsmill tunnel and the issue of water quality that has bothered almost a million residents for 80 years were both completely solved.

To ensure the water use safety of residents in the new city, CHALCO established a small-scale water treatment plant, thus solving the problem of the impure water source that has bothered the residents for decades, and letting birds and fish return.

Construction of the Kingsmill water treatment plant

In 2006, according to the requirements of the Peruvian government, the predecessor of MCP, the Peru Copper Company promised that before the exploitation of this project, it would invest on the construction of the Kingsmill sewage treatment plant, thus solving the water pollution that has bothered the local for so many years.

After CHALCO completed the acquisition, it paid high attention to the implementation of this project and expressed to the Peruvian government that it would continue to fulfill its promise of establishing a sewage treatment plant. CHALCO invested more than 43 million US dollars on the design and construction of the sewage treatment plant. World first-class technologies were adopted, and the Kingsmill water treatment plant was completed in April 2010.

On April 27, 2010, the water plant started its pilot operations, and now they have been put into use. The construction of the Kingsmill water treatment plant has solved the issues of water pollution that have heavily affected the local mine lot for 70 years. Through the implementation of this project, the local government and residents realized that CHALCO is a transnational company with a sense of social responsibility. The sewage treatment plant built by CHALCO solved the sewage pollution for 0.9 million residents, and would benefit the local community as well as their descendants. Thereby, CHALCO has won the high praise of the government and local residents, thus setting up a sound political and social image.

In March 2014, the subsidiary corporation of CHALCO, MCP received a notice that some drainage has violated the environmental laws of the OEFA. As a precautionary measure, this notice asked MCP to suspend its mining and pilot production. The MCP stopped immediately and made evaluations on the claims of OEFA. The MCP gave a positive response to this news, and tried to optimize and improve its waste emission system, taking all the feasible measures to reduce the environmental influence and recover the mining operation and pilot production. On April 10, CHALCO said to the journalists of the China Securities Journal that the MCP has completed the optimization and improvement of the water management system. Soon after that OEFA conducted a site inspection regarding the relevant circumstances, passed a new resolution on April 11, and relieved all the precautionary measures conduced at the Toromocho copper mine.

4.2 Construction of a new city for the residents

CHALCO has built a modernized city and provided 1050 houses for the highland residents. The area of the new city is 1.8 square kilometers, and it is very modern. The new city is a world of difference from the old one, since it has almost all the functions of a modern city, including hospitals, churches, a gym, a market, a primary school, a nursery, a police station, a city hall and 12 amusement parks for children. Each park is equipped with a passageway for the disabled, trash cans are placed orderly, and special personnel are in charge of cleaning the streets. Out of respect for the living habits and religious beliefs of the local people, there are seven churches in the new city. There is a multi-functional gym which can hold 5000 people. Since its establishment in 2012, it has held many concerts. 1050 houses have been completed, and 900 households have moved to their new homes. In 2013, the Peruvian government set the new city as its prefecture.

Peru has rich mineral resources, however, for a long time, the method used to deal with the aborigines was generally to give the local residents some relocation payment and leave it at that. CHALCO was the first to solve the problems of the aborigines through building a new city.

The process of CHALCO's migration and construction of new cities and towns

CHALCO carried out the resettlement and construction of the new city through transparent communication with local residents and interested groups. Thus, the whole removal and construction was a process that all the residents took part in, and so it had legitimacy. The whole removal and construction of the new city was divided into four stages:

（1） Feasibility research, dialogue and planning stage

In this stage, CHALCO launched all the interested groups to participate in this process and create a space where each party could reach a consensus through communication.

（2） The construction stage of the new cities and towns

During this stage, the new city was built in the selected site. CHALCO maintained

communication with the local residents.

（3） Migration stage

During this stage it was attempted to reduce the influence on residents, ensure the continuity of municipal services, and at the same time, give special care to those families with patients or disabled people.

（4） Placement and local development stage

The goal at this stage was to help residents use the facilities in the new city as soon as possible, solve the potential problems and take best advantage of the new city.

4.3 Project construction and legal fulfillment of responsibilities

Adhering to the concept of common development, the company has integrated the construction of Peru's Toromocho copper mine project into the local social development, interacted and communicated with the Peruvian government, state council, all sectors of society and various stakeholders, listened to the public opinions and fulfilled its legal responsibilities.

From the project's development to its being put into production, in total 270 licenses are needed. Among those, the most important one is the environmental evaluation license, which costs the longest time to secure. The CHALCO Toromocho copper mine project's "environmental and social impact review" lasted 13 months, and the final completed environmental evaluation license exceeded 10 thousand pages. After the official submission of an environmental evaluation report, according to legal procedures, CHALCO held 3 special explanation sessions and one public hearing in the large regions, provinces, cities and communities of the project site, explaining the contents of the environmental evaluation report in detail and answering the questions of interested parties at the meeting. After that, it completed the written inquiry that the relevant departments of the Peruvian government had on the environmental evaluation report. In 2013, the Peru Toromocho copper mine project successfully obtained the 270 licenses awarded by the Peruvian government, including the "environmental and social evaluation".

4.4 Localization operations and promoting the local economic development

CHALCO regards itself as a member of the community, so it is rooted in the community and carried out localization operation, realizing the common development of enterprises and the local community, and building a harmonious enterprise ecological system.

Localization of management institutions: establish MCP to be responsible for the construction and operations of the Peruvian copper mine.

Localization of human resources: 98% of MCP's employees are aborigines. The management team is a localized team with talents from various countries, in which there are only five Chinese; it formulates talents' training plans, gives business and technical training to the aborigines, and pays attention to the employees' vocational development.

Localization of operation networks: implement localized purchasing positively, support and assist localization, have roots in the community's development and the local suppliers' development

to promote the community's economic development.

Localization of community participation: respect the local traditional culture and customs; organize consulting groups with the local government and social organizations, and be responsible for promoting "social relations of large-scale projects"; set up community routine working bodies to help guide the local residents in their business activities, and give a small amount of subsidies; absorb residents to take part in community management, for the housing allocations in the new city; establish a committee composed of 8 residents and 1 managerial personnel, to discuss and implement the allocation plan.

MCP's exploitation of the Toromocho copper mine would provide 2400 job positions and create 1.5 billion US dollars of profits for the local area in the next 30 years.

4.5 Effects of fulfilling responsibilities

Up to the end of 2013, out of 835 households in the Toromocho mine lot, 92% have already resettled, and it is estimated that 98% of the residents would move to a new city before the end of 2014. All the migration work is going to be completed in 2015; out of the 1200 employees at the mine lot, only five are Chinese, so the proportion of local employees exceeds 99%.

The improvements in the water supply quality in the Toromocho mine lot has greatly promoted the improvement of local people's life and production, and boosted the prosperity of the local economy. Many residents who had to move to other places because of the pollution and the sewage began to move back; the migration to the new city has avoided the boycotts by the local residents that are pretty common in other mining areas in Peru to a certain degree, thus effectively resolving the interest disputes and conflicts between the aborigines and mining enterprises, further promoting the economic and trade cooperation between China and Peru, and establishing a good image for Chinese enterprises. The Toromocho copper mine has provided more than 2400 jobs for the locals, and could create 1.5 billion US dollars of profit for the local area in the next 30 years. The Peruvian government has set the new city as its prefecture in 2013.

5 Influence on the company's costs and benefits

CHINALCO Mining Corporation International（3668）is making the final preparation for Peru's large-scale Toromocho copper mine, that is to be put into production before December 15, 2013 and would start its production expansion plan. The management of the company pointed out that capital expenditure is within the plan, and they are confident in making profits through the future copper concentrated business.

Until the end of July, the Toromocho copper mine, that cost 3.004 billion US dollars for capital expenditure, was the world's second largest copper mine project not put into production. The budget capital expenditure was 3.502 billion US dollars, namely, before being put into production at the end of that year, 0.5 billion US dollars could still be used, and about 10% of the quantities were not completed. The CFO of the company Liang Yunxing expressed his confidence that the costs would remain within the budget.

As for the issue of the local resident's resettlement, which has received the attention of the media, 82% of the residents have now moved away. As for those residents who are not willing to

move away, the CEO of the company Peng Huaisheng pointed out that they do not have to move away immediately. He thinks that the company's principles must be abided by, and he is not willing to use the shareholders' money to meet some people's requirements for a high compensation.

The company disclosed in June 2013 that based on the suggestions of the technical counselor, it planned to increase 45% of Toromocho's capacity, which means that the copper yielded each year could increase from 0.22 million tons to 0.32 million tons. This increase would probably cost 1.32 US dollars of capital expenditure. Peng Huaisheng pointed out that the production expansion plan will go from the third season of this year to the second season in 2016, and the capacity production within the production expansion plan would be started at that time.

Compared with the international copper price that's over 7200 US dollars for each ton, the production costs of Toromocho are quite low. Peng Huaisheng pointed out that even the cost in concentrated processing and depreciation were added, and the price would not exceed 4000 US dollars for each ton.[7]

6 Summary of the experience

CHALCO Peru Toromocho copper mine project is claimed as a model project for Sino-Peruvian cooperation. CHALCO promises that it shall fulfill its social responsibilities and various promises in the future, trying to improve the employment of local residents and at the same time striving for development. It protects the local environment, shares its development achievements with the local residents and promotes the local economic and social development. As a landmark project for Chinese enterprises' implementation of their "going out" strategy, CHALCO has made great efforts in its adaptation to the foreign investment environment and social risk management.

6.1 Conforming to international norms and paying attention to environmental protection

During the CHALCO Toromocho copper mine project, CHALCO abided by the local laws and regulations and by international standards strictly in the Toromocho copper mine, paid attention to green construction during the project, and protected the local environment. In 2008, CHALCO obtained the mining rights of the Toromocho copper mine project, while the company did not rush to start the construction; instead, it started to protect the environment and water sources so as to remove the concerns of local residents. Before the construction started, the established water treatment plant has radically solved the pollution of the Kingsmill tunnel, and the water quality issue which has bothered almost a million residents was finally solved for good.

There are some other Chinese enterprises which invest in Peru, but the progress of their projects were delayed because of environmental issues, and some were even criticized by environmental protection organizations for many times. However, CHALCO Peru Toromocho copper mine is the largest mining project and the biggest investment project for China in Peru, and since CHALCO

[7] CHALCO claims that Peru copper mine would not overspend, HK Economic Journal, August 16, 2013, A06/listed company

obtained its mining rights in 2008, it has received wide attention and support from the government, residents of both countries, and all sectors of society around the world. This project has acquired the more than 300 licenses needed including the project environmental evaluation report. CHALCO clearly claims that in future it will ask enterprises and projects to abide by the local laws, regulations and customs based on the positive attitude of being responsible for the environment and the interests of various parties, it will welcome supervision and help from all sectors of society, and it will disclose the relevant information in a more public and transparent way, thus making precious resources become a common treasure which could benefit mankind.

6.2 Being rooted in community development and fulfilling social responsibilities

CHALCO adheres to the concept of "responsible mining development" and regards treating its resources, the region and the residents at the mine lot well as its tenet, thus having a harmonious development with the local community. During the construction of the Peru Toromocho copper mine project, the "CHALCO model" of fulfilling responsibilities as an international citizen was explored, thus establishing an example for international mining development. If you want to obtain mining permissions, you have to obtain social permission first; if you want to build the mine, you have to build a mining city first— these are the responsible mining development concepts of CHALCO, which were embodied in the construction of its copper mine in Peru. Its investment in modernized cities, its migration project of over 1000 households on the highland, providing more than 1000 direct employment posts, together with its management institutions, human resources, operation networks and community participation are all localized. As a "going out" Chinese central enterprise, CHALCO always remembers its social obligations and becomes a qualified international business citizen. It interprets its corporate social responsibility and value of "turning stones into gold by touch and benefiting mankind" through voluntary and practical fulfillment of social obligations, trying to win the respect and praise from the international society and people in the host region of the project, and establishing a sound image for Chinese enterprises.

6.3 Initiating communication with stakeholders to obtain recognition

Peru is a traditional mining region, so its environmental evaluation adopts the standards of North America, with strict procedures and requirements. CHALCO has made a conscientious investigation on the environmental impact of Peru copper mine project, and held more than 30 explanatory sessions successively, thus letting the local residents understand the development plan of the Toromocho project and answering their questions patiently. After the official submission of an environmental evaluation report, according to legal procedures, CHALCO held 3 special explanation sessions and one public hearing in the large regions, provinces, cities and communities of the project site, explaining the contents of the environmental evaluation report in detail and answering the questions of people present at the meeting. After completing the legal step of "public participation", the company received three rounds of inquiry from the relevant departments of the Peruvian government in the aspects of technology, law, environment and society. Thorough

communication has allowed the company to obtain understanding and recognition of the project from the government, community and residents.

6.4 Adopting advanced technology and improving the management level

When confronted with a complicated project development environment, as an international and professional team, it is important not only to have a unified team culture, but also to achieve real integration with the local community, and deal with the relationship with the local government, community, media, social groups, and even religious groups. To unify the team thoughts and strengthen team management, CHALCO formulated working principles and regulations based on its operational principles and project development strategic goals. The preconditions were that principles and regulations would not be violated, that various goals would be completed based on the requirements, the work-flow of the Peruvian team would not be interfered with, group culture and concepts would be respected, and suggestions from various parties would be listened to. Because of excellent resources, advanced project design and construction level, advanced operation mode and management level, the cost of production estimation for CHALCO's project in Peru is lower than 75% of the global average for copper mines. The CHALCO Toromocho copper mine has adopted the internationally advanced EPCM mode during its construction for the first time, and it owns a large batch of globally first-class equipment including the largest electric shovel, mining truck, semi-autogenous mill, ball mill and flotation machine system, so that the various indexes of the project have become the new benchmark for copper mine projects around the world.

Case 2: The Acquisition of TULLY SUGAR LIMITED by the China Oil & Foodstuffs Corporation (COFCO)

1 Australian Tully Sugar Limited (TSL) Project overview

1.1 The China Oil & Foodstuffs Corporation (COFCO)

COFCO Corporation, which is short for China Oil & Foodstuffs Corporation, is the largest supplier of diversified products and services within the agricultural products and food industry in China. It is devoted to utilizing renewable natural resources to provide healthy and nutritious food and a high quality lifestyle and services, as well as contributing to improve people's living standards, social prosperity and stability.

COFCO is committed to providing society with value-added services through the creation of a fully integrated value chain, efficient management and effective integration of logistics, processing, R&D, brands and sales capabilities. Under the total industrial chain model, COFCO has systematically integrated wheat, corn, oilseeds and oil products, rice, barley, sugar, tomatoes, meat and other value chains for the entire process, from cultivation to the distribution of final food products.

1.2 The domestic sugar industry of the China Oil & Foodstuffs Corporation (COFCO)

In regard to the Sugar business, COFCO owns the largest beet sugar production base in the domestic market with 11 sugar mills in total, including 9 beet sugar mills in Northern China and 2 cane sugar mills in Southern China.

1.3 The process of the acquisition

In 2011, the international CIF of raw sugar was RMB 5700—5800 Yuan/ton, greatly lower than the current spot price, which is about RMB 7000 Yuan on the domestic market. With the increased cost of sugarcane plant, serious aging of sugarcane variety and relative decline of planting benefits, the increase in sugar output is currently almost impossible.

After 2011, the shortage of sugar in China remained above 2 million tons, which accounts for 1/7 to 1/6 of the annual consumption in China, thus influencing the price of sugar. In 2011, the

import quota of 1.945 million tons was far from enough. Due to the improvement of living standard and increased demands for sugar, domestic consumption is still increasing at a speed of 3%-5%.

The prospects for sugar consumption are good, while the insufficient supply cannot meet the demands. The production costs are still increasing, and the consumption is increasing as well, while the output cannot be increased, so there is a shortage of over 2 million tons and still expanding. Therefore, buying an overseas sugar refinery to obtain import resources is a wise act.

Tully Sugar Limited was established on November, 1925, and it is located in Queensland. It is a company owned by sugarcane farmers, and it is mainly engaged in sugarcane planting and processing. About 525 farms provide sugarcane for TSL. The sugar processing plant in question produces 0.26 million tons of raw sugar each year, which accounts for about 5.6% of the total yield of raw sugar in Australia, and all of its products are exported to other countries.

3.0899 million Shares of TSL are owned by 499 shareholders, and among that, half of the shareholders are sugarcane farmers. On May 18, TSL held a stockholders' meeting and the final decision obtained an agreement from 99.4% of the people present at the meeting. Thereby the limitation was cancelled, which is the reason why TSL received the competitive bidding of acquisition from different companies who want to own more than 20% of TSL's shares. 2

1.4 The process of COFCO's acquisition of TSL

To extend its sugar value chain globally, COFCO made a fundamental step towards overseas expansion. It acquired Tully Sugar Limited (TSL) in July 2011, which is now a wholly owned subsidiary of COFCO.

On May 29, 2011, COFCO claimed that Australian foreign investment review board has approved COFCO's acquisition plan of TSL.（Tully Sugar Ltd.）

Almost at the same time the sugar manufacturing enterprises in Australia released, on the official website of Tully Sugar Limited, the letter that the chairman of board, Ralph Craven wrote to the shareholders: on May 23, 2011, COFCO submitted the supplemental materials of bidding documents and raised the offer of acquisition to 43 Australian dollars each share, while before that, COFCO had officially sent a letter stating that it planned to purchase 100% of TSL's stock rights through its wholly-owned subsidiary, Top Glory. The price of each share was 41 Australian dollars, so the total price of the acquisition was 0.1329 billion Australian dollars (about RMB 0.9 billion Yuan).

In the case of COFCO, the initial offer of Bunge was also 41 dollars for each share. On May 18, 2011, on the day when the TSL's stockholders' meeting was held, Bunge raised their offer to 42 dollars. However, on May 23, COFCO raised its offer to 43 dollars, thus beating its competitor's offer. Nonetheless, on May 24, Bunge raised the offer to 43 dollars as well. Another competitor, Mackay Sugar Co.,Ltd., which was supported by one of the four global food enterprises, Louis Dreyfus, had an offer of 41 dollars for each share, and it gave favorable conditions as well by agreeing to provide 0.102 billion Australian dollars of debt financing at most.

For this acquisition, the shareholders of TSL could select the offers from the above three enterprises with freedom. Among those, the tender offer of Bunge ended on June 20, 2011, while the tender offer of COFCO and Mackay Sugar ended on June 21 and June 28 respectively. COFCO and Bunge were so close in making offers that COFCO did not make any comments on this acquisition and claimed that this was an open and transparent acquisition. The specific information

would be disclosed by Australia's TSL.

COFCO was the earliest to put forward the acquisition of TSL. The disadvantage of COFCO lay in the examination process in Australia, since this policy was specifically against China, and there was no limit for Euro-American enterprises. Australia has a special requirement that during the examination of foreign investment, merger and acquisition, "non state-owned enterprises" would be given the priority to become the acquiring firms.

Out of the three subjects under competition, the offer of Mackay supported by Louis Dreyfus was relatively lower, while this company owned 9% of TSL's shares and hoped to gain more shares. Nevertheless, COFCO had made preparations as well, and Ralph Craven specially pointed out a "privately reached agreement", claiming that COFCO proposed that the relevant interests of its currently-owned 20% of TSL's stock rights should be improved in the agreement privately reached with some shareholders.

Since China has an increasing demand for staple commodities such as food, cotton, oil and sugar, so when the state-owned grain enterprise of China is confronted with discriminatory policies while searching for food resources overseas, it has to face pressure from four food enterprises such as Bunge, which is in the upstream of agriculture. To make the acquisition successful, the CEO of COFCO, Yu Xubo, investigated Australia early in June 2011 with a COFCO delegation.

On July 4 2011, the progress of the acquisition reversed. The competitor, Bunge, gave a statement saying that it would quit the acquisition of Australia's TSL, and would sell its owned shares of TSL to COFCO. Bunge then sold all 6.9% of its owned shares of TSL to COFCO, thus making the shares owned by COFCO increase from 54.3% to 61.25%.

On July 5, 2011, COFCO announced that it has purchased more than 60% of TSL's shares, including the 6.9% owned by Bunge. The offer that COFCO made to the board of directors of TSL was 44 Australian dollars, which was only 1 dollar higher than the offer of Mackay Sugar. Under the circumstance that there was no higher offer, the board of directors of TSL accepted the offer of COFCO.

On July 19 2011, COFCO obtained 99% of TSL's shares and became the actual owner of TSL.[8]

In October, 2011, the National Development and Reform Commission examined and approved COFCO's acquisition of Australian TSL.[9]

2 The environmental and social influence of the project

2.1 The environmental influence of the project

Tully Sugar Limited (TSL) endeavors to reduce its environmental impact as a result of its milling operations and operates under an Environmental License (License No. 5010000056) which was issued under the Environmental Protection Act 1994, by the Department of the Environment of Australia. TSL has established and maintained high standards of Workplace Health, Safety and Environmental management throughout its operations. TSL provides buildings, plant, machinery and systems of work which are safe and environmentally sound, and facilities for the monitoring

[8] http://www.gxya.com.cn/news/article-477

[9] http://money.163.com/11/1215/17/7LB4QN9E00253B0H.html

and control of environmental factors in the workplace. TSL keeps a system for recording environmental incidents and complaints.

In order to be friendly to the community and avoid creating adverse impacts as a result of its operations, TSL adopts strict control of production waste such as water treatment and disposal, atmosphere management, environmental monitoring, by-product control and noise control, and assigns the responsibilities of waste management to relevant departments.

For instance, with regards to water management and disposal (waste oil and grease, oily rags, batteries, metal, asbestos, cleaning sludge, paint residues, solvents, packaging, paper, pesticide and chemical containers, empty oil drums, drop off and yard cleaning, Lab. cane waste, general waste), the departments of Administration, Civil and Production are responsible for waste tracking, while the departments of Civil, Electrical, Engineering and Production are responsible for waste management. (See 4.2.3 **IEMS AND ENVIRONMENTAL LICENSE**).

During the crushing season which typically occurs from June to November each year, 99% of the energy TSL uses is "green" renewable energy sourced by firing their 3 steam boilers with the biomass (bagasse) produced after extracting the juice from the sugar cane.

Since 1998, in addition to meeting TSL's own energy requirements, they have been exporting 10 Megawatts of excess renewable energy into the Queensland electricity grid when their plant is operational.

2.2 The social influence of the project

(1) Workplace health and safety

In conducting its business, TSL complies with legislative and regulative requirements set out in Workplace Health and Safety Act (WHS Act), which provides a framework to protect the health, safety and welfare of all workers at work and also protection for the general public so that their health and safety is not placed at risk by work activities. TSL has set up the Safety and Environmental Program, a safety committee with elected members from workers and management to facilitate the ongoing development and monitoring of the Tully Sugar Workplace Health through the joint consultation between employees and management.

(2) Relations with the community

TSL has a focused program of community support which includes:

1) Sponsorship of the Tully Tigers Rugby League;
2) Lead sponsor of "Skilling the Cassowary Coast", a program which introduces young students to work and career -opportunities in the region;
3) Sponsorship of community events and clubs including the Tully Show, local fishing competitions, bowling club and others;
4) Donations to local schools, health service providers and care homes for the elderly.

(3) Relations with workers

TSL attaches importance to improving the leadership of their management and their engagement with the employees. For instance, TSL has developed the Frontline Leadership Program where frontline supervisors receive formal training to improve their skills as supervisors and leaders.

(4) Relations with the cane growers

TSL encourages cane growers to provide a stable and sufficient supply of high quality sugar canes through the Cane Supply Agreement, which includes multiple incentives such as *Minimum*

CCS content Incentive, *Low Soil Content Payment*, *Early Cane Supply Payment*, and offers a planting allowance to growers for canes planted before September 30 of each year to supply in the subsequent year. COFCO has participated in developing 500 hectares of tree-to-cane land, which will be completed in 2014 and available to grow canes.

Greg Shannon, the agricultural and farming expert of TSL, provides services and expertise (Smart Cane Best Practice) to assist growers to improve the cane quality and farm productivity.

3 Stakeholder Analysis

3.1 The Chinese Government

With the continuous and rapid development of the Chinese economy, Chinese enterprises need more raw materials to meet the continuously expanding international and domestic market requirements, and "going out" and searching for resources overseas has become an important strategy for most enterprises. In recent years, China has been perfecting the policy for enterprises' going out, and most of the policies consist of privileges and encouragement. Before that, the Ministry of Commerce issued and implemented its *Overseas investment management method* and *Foreign investment control regulations* to encourage overseas mergers and acquisitions. After that the Ministry of Commerce, Ministry of Finance, and the National Development and Reform Commission formulated various policies to support enterprises going abroad, involving many aspects such as financing and taxes, banking, insurance, foreign exchange, exit and entry etc.

In 2001, the "going out" strategy entered the *Government work report* for the first time. Since then, except for 2007, "going out" was mentioned in the *Government work report* each year. In the *Government work report* in 2009, it was proposed that the "going out" strategy would be carried out continuously and that foreign investment or overseas mergers and acquisitions of various enterprises would be supported, and the lead of large-scale enterprises would be played in "going out".

The *State council's decision on investment system reform* issued in July 2004 has laid a solid foundation for Chinese foreign direct investment system transformation, and provided a clear direction for China to formulate a new foreign direct investment policy.

On October 1 2004, the *Regulations on examination and approval of overseas investment and establishing enterprises* were issued by the Ministry of Commerce of the PRC: "If the foreign investment of domestic enterprises is involved with the following situations, it will not be approved: violating the national laws, regulations and policies; causing the Chinese government to violate concluded international agreements; being inconsistent with the laws, regulations or customs of the host regions." These were the earliest regulations relevant to foreign direct investment of Chinese enterprises, and the environmental issues were not specifically pointed out. In 2005, the Ministry of Commerce issued the Working instructions on the examination and approval of Chinese enterprises' foreign investment and the establishment of companies. Article 8, which is about overseas investment involved with the implementation of international obligations, provides for international agreements pertinent to environmental protection and endangered animals and plants protection to be focused on during the process of examination and approval. In April 2009, the Ministry of Commerce released the first batch of *Outward foreign direct investment cooperation region)*

guideline for 20 countries, and environmental protection was involved.

The department competent for domestic import quotas, the Ministry of Commerce released the *Import tariff-rate quota application and distribution rules of sugar* from 2011 to 2015 (the release date of the rules for each year is September 30 of the previous year). The sugar import tariff-rate quota from 2011 to 2015 is 0.1945 million tons (including 0.4 million tons of sugar imported from Cuba), out of which 70% is the state trading quota; the import tariff-rate quota applicants for sugar must fall into one of the following categories: state trading enterprises; central enterprise with state reserve functions; enterprises with sugar tariff-rate quota of the last year and actual imports; sugar enterprises with the daily processing amount of raw sugar over 600 tons (including 600 tons), a registered capital of at least 10 million Yuan, with annual sales of sugar at 0.35 billion Yuan or more (from 2012, this changed to 0.45 billion Yuan); enterprises that are engaged in processing and trade with sugar as raw materials.

3.2 The Australian government

(1) Australia's Foreign Investment Policies

The Australian Government welcomes foreign investment. It has helped build Australia's economy and will continue to enhance the wellbeing of Australians by supporting economic growth and prosperity.

Foreign investment brings many benefits. It supports existing jobs and creates new jobs, it encourages innovation, it introduces new technologies and skills, it brings access to overseas markets and it promotes competition amongst industries.

The Australian Government reviews foreign investment proposals against their national interest case-by-case. They prefer this flexible approach to hard and fast rules. Rigid laws that prohibit a class of investments too often also prevent valuable investments. This case-by-case approach maximizes investment flows, while protecting Australia's interests. Their Foreign Investment Review Board (FIRB) will work with an applicant to ensure the national interest is protected. However, if they ultimately determine that a proposal is contrary to the national interest, they will not approve it.

The Government also recognizes community concerns about foreign ownership of certain Australian assets. The review system allows the Government to consider these concerns when assessing Australia's national interest.

The national interest test also recognizes the importance of Australia's market-based system, where companies are responsive to shareholders and where investment and sales decisions are driven by market forces rather than external strategic or non-commercial considerations.

(2) Foreign Acquisition and Takeover Act 1975（FATA）

The FIRB examines proposals and advises the Australian Government on whether those proposals are suitable for approval under the Government's policy. Whether a proposal is required to be submitted to FIRB by the investor depends on the monetary value, the nature of the investment, and the type of investor.

Investors are expected to understand Australia's regulatory environment and abide by all the relevant requirements. The Foreign Investment Review Board website provides guidance on some of the obligations that foreign investors need to consider.

Proposals for foreign investment in Australia should be submitted to the Australian Foreign

Investment Review Board (FIRB). FIRB outlines the information that needs to be included in the investment proposal, along with details on how to apply in the policy statement.

If foreign investment application would cause foreigners to control Australian enterprises, business or real estate, and this is thought to be inconsistent with the national interests of Australia, the government has the right to prevent this kind of foreign investment application. FATA and the *Foreign acquisition and takeover act in 1989* have set standards of capital for foreign investment, and foreign applications that are lower than this standard will not be examined.

In most industrial departments, small-scale investment projects will not need the examination and approval of FATA or records for future reference. As for large-scale investment projects, most of them would be approved unless they are thought to be inconsistent with national interests. The foreign Investment Review Board（FIRB） would ask the relevant stakeholders and other governmental institutions for suggestions during the examination, thus deciding whether the investment conforms to the national interests.

Based on considering wide public interests, the government will then decide whether the foreign investment conforms to the national interests. For instance, the special limitations on foreign investment in more sensitive fields such as community care, media and housing.

(3) Work Health and Safety Act 2011

The Object of the Act is:

The main object of this Act is to provide for a balanced and nationally consistent framework to secure the health and safety of workers and workplaces by—

1) Protecting workers and other persons against harm to their health, safety and welfare through the elimination or minimization of risks arising from work or from particular types of substances or plants; and
2) Providing for fair and effective workplace representation, consultation, cooperation and issue resolution in relation to health and safety at work; and
3) Encouraging unions and employer organizations to take a constructive role in promoting improvements in work health and safety practices, and assisting persons conducting businesses or undertakings and workers to achieve a healthier and safer working environment; and
4) Promoting the provision of advice, information, education and training in relation to work health and safety; and
5) Securing compliance with this Act through effective and appropriate compliance and enforcement measures; and
6) Ensuring appropriate scrutiny and review of actions by persons exercising powers and performing functions under this Act; and
7) Providing a framework for continuous improvement and progressively higher standards of work health and safety; and
8) Maintaining and strengthening the national harmonization of laws relating to work health and safety and to facilitate a consistent national approach to work health and safety in Queensland.

(4) Preparation of Safety Data Sheets for Hazardous Chemicals

This Queensland code of practice was made by the Minister for Education and Industrial Relations on 27 November 2011 and published in the Queensland Government Gazette on 2 December 2011.

This code commences on 1 January 2012.

This code is based on a national model code of practice developed by Safe Work Australia and approved by the Workplace Relations Ministers' Council on 10 August 2011 as part of the harmonization of work health and safety laws.

A safety data sheet (SDS), previously called a Material Safety Data Sheet (MSDS), is a document that provides information on the properties of hazardous chemicals and how they affect health and safety in the workplace. For example it includes information on the identity, health and physico-chemical hazards, safe handling and storage, emergency procedures and disposal considerations.

An SDS is an important tool for eliminating or minimizing the risks associated with the use of hazardous chemicals in workplaces.

The SDS must be reviewed every five years from the date of original preparation or the last revision of the SDS. It must be amended whenever any new information about the hazardous chemical is known or received or when the formulation changes.

It is not necessary to review the SDS if the manufacturer or importer has not manufactured or imported the chemical in the last five years.

An SDS should still be made available after the hazardous chemical is withdrawn from sale as it may be required by workplaces at a later date.

It is acceptable to have a translation of the SDS attached to the original SDS, provided the appended information clearly states the translation is not part of the original SDS. The original SDS is the SDS prepared in accordance with the WHS Regulations.

The order of information or format of an SDS may be changed to enable the information to be presented electronically in the workplace, for example in an electronic database. However, the manufacturer or importer's information in the SDS should be transcribed accurately even if the format is altered. A transcribed SDS should be clearly identified, enabling users to request the original SDS if required.

(5) How to Manage Work Health and Safety Risks - Code of Practice 2011

This Code of Practice on how to manage work health and safety risks is an approved code of practice under section 274 of the ***Work Health and Safety Act*** **(the WHS Act)**.

An approved code of practice is a practical guide to achieving the standards of health, safety and welfare required under the WHS Act and the Work Health and Safety Regulations (the WHS Regulations).

A code of practice applies to anyone who has a duty of care in the circumstances described in the code. In most cases, following an approved code of practice would achieve compliance with the health and safety duties in the WHS Act, in relation to the subject matter of the code. Like regulations, codes of practice deal with particular issues and do not cover all hazards or risks that may arise. The health and safety duties require duty holders to consider all risks associated with work, not only those for which regulations and codes of practice exist.

Codes of practice are admissible in court proceedings under the WHS Act and Regulations. Courts may regard a code of practice as evidence of what is known about a hazard, risk or control and may rely on the code in determining what is reasonably practicable in the circumstances to which the code relates.

Compliance with the WHS Act and Regulations may be achieved by following another method, such as a technical or an industry standard, if it provides an equivalent or higher standard of work

health and safety than the code.

An inspector may refer to an approved code of practice when issuing an improvement or prohibition notice.

This Code of Practice has been developed by Safe Work Australia as a model code of practice under the Council of Australian Governments' *Inter-Governmental Agreement for Regulatory and Operational Reform in Occupational Health and Safety* for adoption by the Commonwealth, state and territory governments.

A draft of this Code of Practice was released for public consultation on 7 December 2010 and was endorsed by the Workplace Relations Ministers' Council on 10 August 2011.

3.3 Enterprises[10]

To make the acquisition successful, the CEO of COFCO Yu Xubo visited Australia together with a COFCO delegation, and met the Australian Minister of Agriculture, the Western Australia Minister of Agriculture, the Deputy director general of Queensland's economic innovation and development bureau, the Queensland federal senator and the chairman of the national sugarcane planting association, trying to promote the success of TSL's acquisition, and hoping to strengthen cooperation with Australia in the agricultural field at the same time.

From June 1 to 3 2011, a delegation headed by the CEO of COFCO Yu Xubo visited Australia, and one of its main goals was to promote the success of COFCO's acquisition of TSL.

COFCO's delegation met with the Australian Minister of Agriculture Hon Joe Ludwig, the vice prime minister and private consultant of the finance minister and Western Australian Minister of Agriculture, Senator Hon Jan Maclucas of Queensland, the state where TSL is located, director general Devinka Wanigesekera of the Queensland employment economic development and innovation bureau, and the chairman of Australian national sugarcane planting association, Alf Cristaudo, and obtained their support.

3.4 The community and local sugarcane farmers

During the acquisition of Tully, COFCO had much communication with the local sugarcane farmers, shareholders, board of directors and community representatives, and gave relevant promises to the farmers, thus winning the support of the local sugarcane farmers. COFCO hoped to provide more development opportunities for the locals through the Tully project.[11]

4 Company strategy and actions

4.1 The constituents of the Health and Safety Committee

The committee will be known as the Tully Sugar Limited Health and Safety Committee,

[10] http://www.citygf.com/news/news_001034/201106/t20110609_1710065.html
[11] http://www.citygf.com/news/news_001034/201106/t20110609_1710065.html

hereafter referred to as the "Safety Committee".

The aim of the committee is to facilitate the ongoing development and monitoring of the Tully Sugar Limited Workplace Health, Safety and Environmental Program through the joint consultation between employees and management.

The primary function of a workplace health and safety committee is to assist in co-operation between the employer, principal contractor, contractor, and the workers in developing and carrying out measures to ensure health and safety at the workplace.

The Safety Committee shall consist of:

- Seven (7) elected employee representatives;
- Five (5) nominated employer representatives;
- The Workplace Health and Safety Officer;
- Two (2) Board Members (Ex-officio - observers only).

The seven (7) elected employee representatives shall consist of:

- One (1) employee representing the tradespersons;
- One (1) employee representing the process station / shift;
- One (1) employee representing the Cane Railway Department;
- One (1) employee representing the Cane Transport Department;
- One (1) employee representing day workers;
- Two (2) employees representing total workforce.

4.2 Integrated Authority No. 5010000056 - Section 311 Environmental Protection Act 1994

This integrated authority, issued in accordance with section 311 of the Environmental Protection Act 1994 (the EP Act), provides for the carrying out of different Environmentally Relevant Activities or Environmentally Relevant Activities at different places managed in an integrated way. This integrated authority comprises of one or more types of environmental authority/ies in accordance with sections 86, 93, 95, 104, 113 and 311, of the EP Act, and this integrated authority details the conditions that are relevant to each stated type of environmental authority.

(1) Licenses

This integrated authority consists of the following part(s):

Table 1-1 LICENCE/S (WITHOUT DEVELOPMENT APPROVAL) (SECTION 93)

Applicable Part &Schedule(s)	ERA No.	ERA name	Lot	Plan	Location
PART 1	17	Fuel burning	Lots 1 & 2 Lot 2 & 3 Lot 2	SP119165 RP738164 SP119165	Tully Sugar Mill Hort Street TULLY QLD 4854
	36	Sugar milling or refining			
	62	Concrete batching			
	72	Railway facility - for refuelling, maintaining or repairing rolling stock			
	17	Fuel burning	Lot 2		

	36	Sugar milling or refining	Lot 3 Lot 1	RP710330 RP710130 RP731421	Wastewater Treatment & Disposal Jarra Creek Road Jarra Creek TULLY QLD 4854
	62	Concrete batching			
	72	Railway facility - for refuelling, maintaining or repairing rolling stock			
PART 2	28	Motor Vehicle Workshop	Lot 2	SP119165	Tully Sugar Mill Hort Street

The aforementioned description of the ERA(s) for which this authority is issued is simply a restatement of the ERA(s) as prescribed in the legislation at the time of issuing the authority. Where there is any conflict between the above description of the ERA(s) for which this authority is issued and the conditions as specified in this authority as to the scale, intensity or manner of carrying out of the ERA(s) then such conditions prevail to the extent of the inconsistency.

(2) IEMS (Integrated Environmental Management System)

The holder of this environmental authority must complete the Integrated Environmental Management

System (IEMS) in accordance with the IEMS proposal submitted in support of the application for an environmental authority and:

- submit reports to the Administering Authority on the progress towards completion of the IEMS at quarterly intervals with the first report being submitted within three (3) months of the date of issue of this environmental authority;
- submit the completed IEMS to the Administering Authority by 1 May 1997; and
- commence implementing the IEMS by 1 June 1997.

Any amendment to the IEMS must be incorporated into the IEMS and submitted to the Administering Authority with the Annual Return immediately following the amendment.

1) Recording Environmental Incidents

Tully Sugar Limited has a system in place for recording environmental incidents. The first step involves filling out an Environmental Incident Log Sheet.

This Log Sheet is divided into two sections. Section A requires the details of the incident – day, date, time, location, description of the incident, and immediate actions taken. Section B is to be filled out by the person responsible for any further investigation. When the details have been filled in, the Log Sheet is to be signed off and placed in the Environmental Complaints and Incidents Folder, which is located in the Control Lab Office.

The second involves keeping the Environmental Incidents Log Book up to date.

The date, time and place of the incident should be written in the columns provided. The nature of the incident should refer to the relevant incident log sheet. This log book is kept with the Environmental Complaints and Incidents Folder in the Control Lab Office.

2) Recording Environmental Complaints

Tully Sugar Limited has a system for recording environmental complaints.

The first step in environmental incident reporting is the Environmental Complaint Log Sheet.

This Log Sheet is divided into two sections. Section A is to be filled out by the TSL person taking the message about the complaint. Section B is to be filled out and signed by the person who takes responsibility for the final investigation.

3) Emergency Response Procedures

A system of workplace practices and procedures is essential for successful environmental management. While the provision of improved facilities and equipment goes a long way towards improving the mills environmental management system, without good operating practices and procedures, any investments in equipment are quickly negated.

(3) IEMS and Environmental License

Table 1-2 IEMS AND ENVIRONMENTAL LICENSE

SUMMARY OF DEPARTMENTAL RESPONSIBILITIES									
		Admin	**Civil**	**CS&T**	**Elect**	**Eng**	**Farm**	**Prod**	**Safety**
Waste management & disposal	Waste oil and grease, oily rags, batteries, metal, asbestos, cleaning sludges, paint residues, solvents, packaging, paper, pesticide and chemical containers, empty oil drums, drop off and yard cleaning, Lab. cane waste, general waste	I	I,H		H	H		I,H	

	Lead waste		I,H					I,H	
	Pesticide containers, general farm waste		I,H				I,H		
	Mill process effluent							H,K	
	Septic tank sludge					H,K			
Water	Bagasse pads, Oil water separators, Tramway shed and mechanics workshop		G,E,K						
	Sugar and molasses loading, general factory operation							G	
	Ash plant and ponds, bagasse pads, Bunded		G,K			G,K			

	storages, Workshops, general factory operation, Diesel generator								
	Workshop, transformer bays and switchrooms				G				
	Effluent ponds					H,K		H,K	
	Fuel handling and usage including management of bunded areas around storage and oil/ water separators.		G	G		G			
Atmosphere	Boiler Stacks					A,K,D			
	Dust		A,K	A,K		A,K		A,K	
	Odour					A,K			

	Noise			F,K		F,K			
Monitoring	Water- Effluent ponds, groundwater bores, Banyan Creek, noise, Oil /water separators, BUA requirements							G,K,B,D, J	
	Atmosphere – Boiler stacks					D,K,B			
	Noise								F,D,B
By-products	Mill mud, Ash	I,J	I,J			I,J		I,J	
Complaints/incidents	Recording/ investigation/ response	B	B	B	B	B	B	B	B
Implementation	All areas	C	C	C	C	C	C	C	C
Training	All areas	C	C	C	C	C	C	C	C

LEGEND- refer	A	air management plan	F noise
	B	Commitment and policy	G stormwater
	C	IEMS implementation	H waste management

	IEMS-TSLNET		D	IEMS measurement and evaluation			I	waste tracking	
							J	mud and ash BUA	
			E	M/Vehicle workshop			K	License	
		Admin	**Civil**	**CS&T**	**Elect**	**Eng**	**Farm**	**Prod**	**Safety**
		Administration	**Civil Service**	**Corporation Science and Technology**	**Electric Power**	**Engineering**	**Farm**	**Production**	**Safety**

4.3 Training Opportunities - Selection Process

The purpose of TSL providing training opportunities is to ensure consistency and transparency in the way employees are selected to undertake formal skills development, and to provide clear guidance to those involved in the selection processes.

Training Opportunities - can either be enrolment in a course or courses; or a temporary position of fixed duration that is created to allow an employee to receive on the job training in the skills required to carry out the duties of a specific role within Tully Sugar Limited's operations.

In 2007 the functions of the Training Committee were absorbed into the JCC and the Training Committee ceased to exist. The JCC follows the guidelines previously established for the Training Committee. It has a role to assist Management with the implementation of skills development programs within the operations of Tully Sugar Limited.

There exists a desire to foster genuine and active participation from the workforce in skills development within Tully Sugar Limited. Nevertheless Management cannot delegate its responsibility to make decisions and reserves its right to do so. The JCC's role in the review of Training Opportunities is advisory only, and the final decision remains with the relevant HOD.

4.4 Waste Management Plan

This plan provides a management system to prevent waste contaminating the surrounding environment, and to reduce, reuse or recycle waste where possible.

The target of the plan is to minimize waste that can't be recycled or reused in other applications.

General:

- All waste must be **prevented** from entering the surrounding environment. It must be stored in the designated areas in such a manner that it cannot enter the storm-water system.
- Processes are to be put in place to **reduce** all waste products to a minimum by recycling or other means.
- **Documentation** and **records** of specified waste products that leave the factory site are to be kept.
- **Educational** and **training procedures** are to be put in place for all the mill's employees.

Table 1-3 The different kinds of Waste Generated at Tully Sugar Limited

Solid Wastes	Asbestos
	Car / Loco Batteries (Lead)
	General Waste (Cane Waste, Vegetative, Paper, Packaging Material, Timber and Building Products)
	Fuel and Oil Cartridges and Filters
	Lead from Laboratory Analyses
	Oily Rags
	Paint Tins
	Pesticide Containers
	Scrap Metals

	Empty oil and grease containers
Liquid Waste	Castrol Cleaning Sludge
	Control Laboratory Liquid Wastes
	E.D.T.A Residue
	Mill Effluent
	Oils and Greases Septic Tank Sludge
	Solvents
	Transformer Oil
Mill By-Products (transported and utilized under a BUA)	Ash
	Mill Mud

Table 1-4 Listed below are the waste we generate and how they are tracked

WASTE	**TRANSPORTED OFF SITE? Y/N**	**PROPOSED WASTE TRACKING**
Asbestos (other than cement sheets)	Y	Certificate
Asbestos (cement sheets)	Y	Notice
Car Batteries	Y	Certificate
Castrol Cleaning Sludge's	Y	Certificate
Control Laboratory Liquid Wastes	N	not required
E.D.T.A. Residue	N	not required
General Waste	Y	not required
Lead	Y	Certificate
Mill Effluent	N	Conditions
Oils and Greases	Y	Certificate
Oily Rags	Y	Certificate
Paint Residues	Y	Certificate
Pesticide Containers	Y	Certificate
Scrap Steel	Y	not required
Solvents	N currently	not required
	Y possibility	Certificate

4.5 Hazardous Materials Risk Assessment Procedure

The purpose of this procedure is to provide instructions and guidance in the identification of hazards and the assessment of risks associated with the storage, handling and use of dangerous goods, hazardous substances and combustible liquids.

This procedure is part of the Tully Sugar Limited Safety Management System, required under the Dangerous Goods Safety Management Act 2001 and parts 3 and 4 of the Dangerous Goods Safety Management Regulation 2001.

External reference documents relevant to this procedure include:

- Dangerous Goods Safety Management Act 2001
- Dangerous Goods Safety Management Regulation 2001
- National Code of Practice for the Storage and Handling of Workplace Dangerous Goods
- Workplace Health and Safety Act 1995
- Workplace Health and Safety Regulation 2008

Internal procedures/documents referenced include:

- SMS-HMP-001 Tully Sugar Limited Purchase of Hazardous Materials Procedure
- SMS-HMP-003 Tully Sugar Limited Hazardous Materials Register Procedure
- Tully Sugar Limited Hazardous Materials Register Spreadsheet
- Tully Sugar Limited Hazardous Materials Risk Assessment Spreadsheet

4.6 Commitments to the Tully Cane Growers[12]

(1) Some Commitments

1) It is an important issue for the profitability and therefore viability of local cane growers, because if original commitments are not honored, it will cost growers millions of dollars in lost revenue every year (the estimated lost revenue for growers would be $3.25 million, while the mill stands to gain by some $4.95 million).
2) On its purchase of the local mill, COFCO identified the opportunity to grow its business to remain profitable, but recognized that an expansion of the cane area that is not matched by a milling capacity would hurt growers financially, and it made a series of commitments to reassure growers that they would not be financially disadvantaged by supporting its expansion plans.
3) Comfortable with the written assurances given by COFCO that mechanisms would be put in place so they would not be financially disadvantaged, local growers recognized that expansion would be good for the local mill and community, and set about implementing their expansion plans. The local growers are funding a $33 million investment in the expansion – a project they are about half way through delivering.
4) While the growers' investment in expansion is on track, it is now in doubt whether COFOCO will meet their original commitments.
5) Negotiations over the local growers' supply contract with the mill have stalled after some 18 months over the fact that, to date, the mechanisms and guarantees that would need to become part of the supply contract to protect growers from financial disadvantage have failed to eventuate.

(2) Summary of the list of commitments

A summary of the list of commitments made by COFCO on purchase of the mill was provided as a personal letter from COFCO and also a lodged Bidders Statement to ASIC (Australian Securities and Investments Commission).

Table 1-5 Season Length

Commitment	Outcome

[12] http://www.canegrowers.com.au/page/Industry_Centre/advocacy/COFCO_must_honour_its_commitments_to_Tully_cane_growers/

Necessary Capital Investment to ensure mills Capacity Matches increased Cane Production	· COFCO plans supporting Tully to increase land area under cane whilst ensuring mill capacity matches growth and efficiency and · Invest in necessary capital expenditure to ensure that Tully maintains its high performance level.
Maintain High Performance Level	· COFCO plans to invest in necessary capital expenditure to ensure Tully maintains its high performance level and supports Tully's efforts to enlarge the scale of sugar cane planting and crushing
Mill Maintenance and Capacity	· COFCO plans to invest in maintenance which are aligned with Tully's current practices and COFCO's engineering standards · COFCO plans to invest necessary capital expenditure to ensure Tully maintains its high performance level and supports Tully's efforts to enlarge the scale of sugar cane planting and crushing.
Coordinate Expansion of Land and Mill Capacity	· COFCO believes the Plan should co-ordinate the expansion of land under cane and milling capacity. New land acquisition under cane should be done in conjunction with local growers and in a structured manner to allow for stable land pricing and young farmer market entry. · COFCO plans to support Tully to increase land area under cane whilst ensuring mill capacity matches growth and efficiency. · COFCO will support the Tully Board and Management in identifying opportunities to improve mill operations including additional capital investments to maximise the value for shareholders and cane growers together.
Existing Cane Supply Contract (CSC) to be used as a base	· COFCO supports early negotiations for ongoing cane supply agreements which are aligned to the success drivers of the Mill and the growers to support industry profitability and performance, using the current agreement as a base for continued improvement.
Ensure Equitable Access to Services	· COFCO sees significant value in having a seasonal planning group tasked to ensure all growers, regardless of size, have equitable access to the services and support of the Mill throughout the season

Table 1-6 Value in Contract

Commitment	Outcome
Commit to Best Outcomes for Growers and to work with Tully Cane Growers (TCGL)	· COFCO and CANEGROWERS Tully have agreed to work together to achieve the best outcomes for Tully Cane Growers.

Security of Cane Proceeds	· COFCO intends to ensure price transparency will be maintained for cane growers and existing raw sugar marketing arrangements and pricing formula for the sugar will be maintained.
Maintain Existing Cane Payment Formula	· COFCO intends to maintain the existing cane payment formula and the transparency provided by the payment mechanism.
Maintain Existing Incentives in the CSC	· COFCO to develop long term agreements with growers, harvesters and other industry stakeholders that build upon existing arrangements and incentive structures.
Marketing Arrangements:	· COFCO maintains current transparent industry arrangements · Risks involved in marketing arrangements continue at the same high standard
Credit Metrics and Security of Cane Proceeds	· COFCO intends to ensure that price transparency will be maintained for cane growers and existing marketing arrangements and price formula for sugar cane will be maintained. · Subject to cost-benefit analysis, COFCO to consider balanced alternatives to improve security and transparency for growers' financial entitlements · Reduce default risks by financially protecting the position of Tully Sugar with defined credit metrics and Cane Supply Agreement
	·
Existing Cane Supply Contract (CSC) to be used as a base	· COFCO supports early negotiations for ongoing cane supply agreements which are aligned to the success drivers of the Mill and the growers to support industry profitability and performance, using the current agreement as a base for continued improvement.
Develop Long Term Enforceable Agreements	· COFCO to develop long term agreements with growers, harvesters and other industry stakeholders that build upon existing arrangements and incentive structures.
Reintroduce independent arbitration	· COFCO is committed to working with Tully CANEGROWERS to achieve practical solutions for both individual growers and collective groups. Any disputes are resolved primarily through friendly consultation and consensus. However if further assistance is needed, all parties support the reintroduction of an independent arbitration.
Develop Negotiation Protocols and Transparency	· All parties, should it be necessary, to work together to develop negotiating protocols which will govern future discussions and agreements, allowing flexibility should market

	conditions change and provide sufficient security on existing agreements.

Table 1-7 OTHER

Commitment	Outcome
Strategic Plan	· A working group will be established with COFCO, CANEGROWERS Tully representative, young grower representatives, larger and smaller grower representatives, current mill representatives to work through the proposed District Plan
Tully Sugar Limited (TSL) Board Composition	· COFCO plans to establish a balance Tully Board consisting of active cane grower representatives, independent directors and COFCO representatives.
Work with TCGL on Mechanism for Appointment of Grower Directors Representatives	· COFCO plans to work with Tully CANEGROWERS to establish a mechanism for the appointment of the cane grower directors that reflects regional cane grower issues and transparency in the appointment process. · COFCO is committed to appointing three grower representatives to the Board of TSL which will provide practical guidance over the strategic mill operation.

5 Economic impact analysis

The investment scale (in millions of USD) of COFCO acquiring TSL is US$ 127.8 million[13].

TSL has grown since it was acquired by COFCO in 2011. The growth has partially been a response to a recovery in world sugar prices since 2008, and also a recovery from the damage caused by cyclone Yasi in early 2011. COFCO has supported this growth by returning over 500 hectares of land to cane production.

In 2013 TSL produced 2.335 million tonnes of cane from 26,120 hectares of harvested cane area. This was the third largest crop on record, a result from a record cane area.

The area to be harvested in 2014 is estimated to be 27,900 hectares, and the expansion is expected to continue through 2018, where we estimate that in excess of 29,000 hectares of cane will be harvested for crushing.

TSL has been responding to the existing and projected growth in the following ways:

(1) Capacity expansion – a 12% increase in crushing capacity was announced in January 2014. The additional capacity will be installed prior to the 2015 crush.

(2) Future capital investment in excess of $40 million budgeted for the period 2014-2016.

(3) Ongoing investment in new, larger capacity cane bins to improve the logistics and efficiency of the cane railway network. A further 500 ten tonne cane bins are to be brought into service by 2018.

[13] AU$136m @ FX0.94（0.94 is the rate of Australian dollar against the US dollar）

(4) Upgrades and strategically planned capital investment in key equipment in 2013-2014 including a $5 million refurbishing of the #1 boiler, a $1.5 million upgrade of rail line maintenance equipment, and a $0.75 million upgrade of the evaporator station.

(5) Annual maintenance for the 2014 calendar year will exceed $11 million.

6 Experience and lessons learned

(1) Australia has a special requirement stating that during the examination of foreign investment, mergers and acquisitions, "non state-owned enterprises" will be given priority to become the acquiring firms. In the case of this acquisition, COFCO was the earliest to make the tender offer for TSL, while it was at a great disadvantage in receiving Australia's examination. Thereby, it is clear that China has to change foreign countries' view of its state-owned enterprises, improving the requirements of state-owned enterprises and defending their reputation, thus improving the chances for their overseas investment in the future.

(2) Enterprises have to abide by the laws of the host region. When they invest in a host region, then they have to abide by the local laws and regulations and conduct their operations legally. In this respect, TSL under the holding of COFCO has done a very good job, since it formulated its plans and regulations based on the local laws, and relevant measures were implemented.

(3) Pay attention to the protection of the local environment and establish a sound environmental management system to avoid environmental risks. TSL that's under the holding of COFCO has a complete and comprehensive environmental management system. In fields such as sewage treatment and solid waste treatment, it has done a good job in the treatment of equipment and management measures, so it has not violated any laws or regulations pertinent to environmental protection.

(4) Enterprises should strengthen the training and education of their employees, improve their personal quality, and increase their investment on positive publicity for the enterprise, thus increasing their intangible leverage for future foreign investment.

(5) Strengthen communication with the local community, bear social responsibilities and fulfill promises positively, get along with the local community, and reduce social risks. After COFCO's acquisition of TSL, COFCO has strictly abided by and carefully implemented its promises to sugarcane farmers, organized community activities and carried out social responsibilities, thus establishing a sound international image for Chinese enterprises abroad.

Case 3: The China-Mongolia Tumurtin Ovoo Zinc Mineral Project

1 Project Overview

1.1 Tumurtin Ovoo zinc mine------treasure of the Gobi desert

Tumurtin Ovoo zinc mine is located in the Gobi area, in the central part of Sukhbaatar Province, Mongolia; the geographical coordinates of the center of the mine lot are 46º48′ in northern latitude and 113º19′ in east longitude (marked out by red symbols in the map below); it is near to Baruun-Urt, the provincial capital of Sukhbaatar Province, and is 520 kilometers to the southeast of Ulan Bator, the capital of Mongolia.

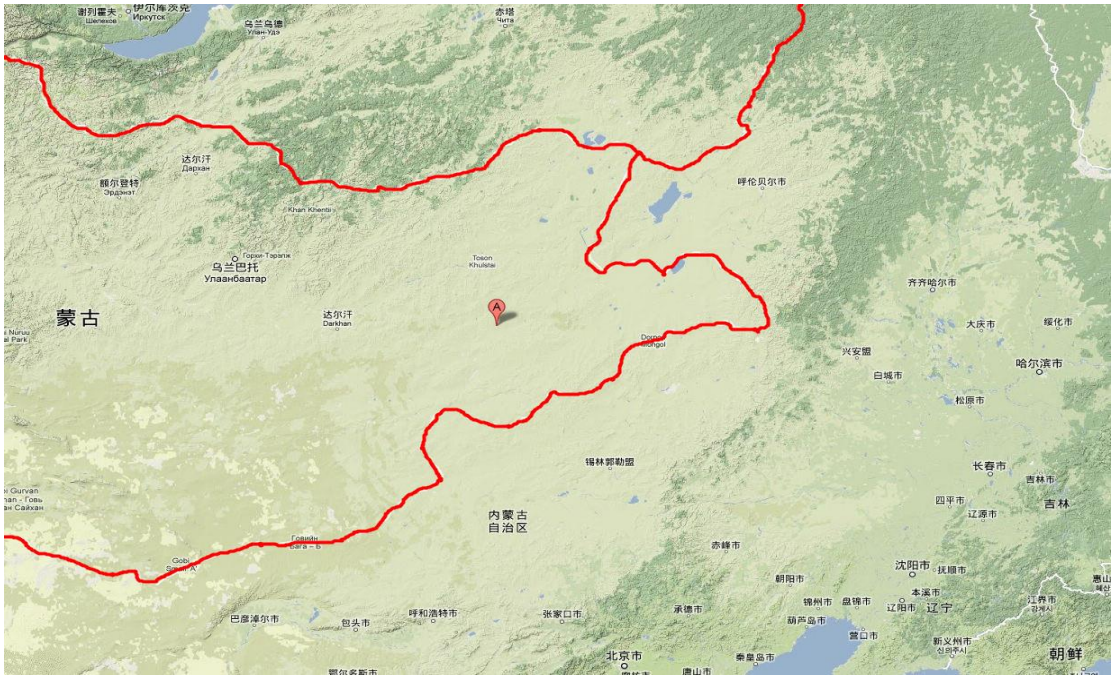

Figure 3-1 Geographical location of Tumurtin Ovoo zinc mine

Sukhbaatar Province is located in the southeastern part of Mongolia, with an area of 82, 900 square kilometers and a population of about 56, 000 people; its southern face borders the Xilin Gol League of the Inner Mongolia Autonomous Region in China, and the border is over 470 kilometers long. This province has a continental climate, the average annual precipitation is only 185-215 mm, the wind speed can reach 6-15 meters/second, the highest temperature can reach +39 DEG C in July, and the lowest air temperature can reach -42 DEG C in January, so its climate conditions are very poor. Generally, Sukhbaatar province can be classified as grassland zone, but it is not that the whole

province is really thick grassland and forest land. Many areas are savannah, with sparse vegetation; meanwhile, the hilly land includes a part of the Gobi desert. The economy of this province has relied on animal husbandry for a long time. The province abounds in pasture and medicinal materials, and is also rich in wild animal resources, such as wolves, foxes, rabbits, short-tailed Mongolian gazelles, and marmots. Asigate and Sukhbaatar counties within the province have fine-wool and half-fine-wool sheep, Erdanachagan county has Ujimqin sheep, and Bayandelger county has meat-milk dual-purpose cows. Besides, this province has an agricultural acreage of 14, 700 square kilometers, and the cultivated land is mainly planted with grain, potato and vegetables; 20, 000 tons of grain, potato and vegetables are harvested every year. Abundant husbandry resources are a natural treasure for the herdsman's life, and the exploration of the mines will certainly influence the geological environment. A contradiction between herdsman and mineral enterprise exists naturally, or at least there is such a risk. Meanwhile, this province possesses rich mineral resources, mainly including iron, coal, fluorite, copper, saw, tungsten, zinc and others, and also including precious stones such as rock quartz, kallaite, agate, marble and others, and building materials such as gravel, fireclay, lime and others. The vigorous development and utilization of these mineral resources are undoubtedly an important way to develop the province's economy.

The Tumurtin Ovoo zinc mineral bed is a large zinc-rich mineral bed which was founded in the 1970s. The geological reserves of this zinc mine (B+B) are 7,570, 000 tons, the average taste is 13.6%, and the amount of metal is 1, 030, 000 tons. If this zinc mine is reasonably excavated and used to benefit local people, it will provide abundant capital and a lot of jobs for local economical construction, so it is a treasure of the Gobi desert area in Sukhbaatar province. If such a large zinc mine in an area of the Gobi desert area with a weak geological environment and lacking in water resource is developed, it is a challenge for investor to well balance the relationship between the costs of exploration and environmental protection.

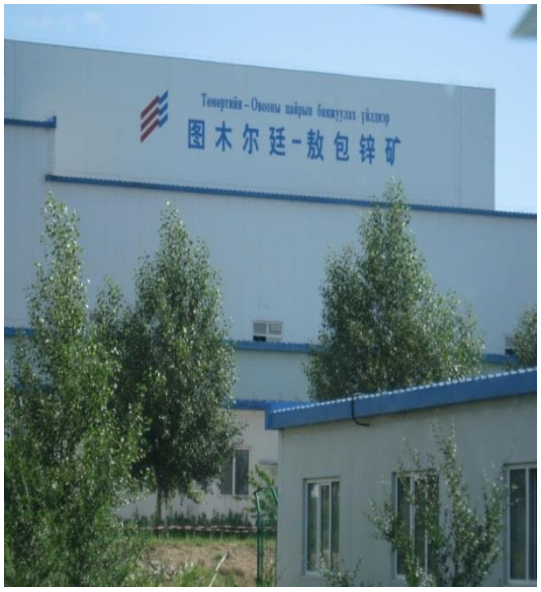

Figure 3-2 Factory

Figure 3-3 Pit

1.2 The Investor —— about Xindu mineral industry

The Chinese investor of the Tumurtin Ovoo zinc mine project is China Nonferrous Metal Construction Co., Ltd. (NFC), which is a listed company subordinated to the China Nonferrous Metal Mining Corp (CNMC). Established in April, 1983, the CNMC is a large central enterprise directly managed by the State-owned Assets Supervision and Administration Commission of the State Council, and also a pioneer among Chinese enterprises in practicing the "Going Out" policy and carrying out investment and cooperation in the international nonferrous metal mineral industry; this group covers over 30 countries and areas, and has invested and developed many high-quality resource projects with a significant influence overseas, and formed a development layout at scale of nonferrous metal mineral resource. The China Nonferrous Metal Construction Co., Ltd. is

an important part of this group, and mainly engages in international project contracting and nonferrous metals mineral resource development; on April 16, 1997, the CNMC carried out capital reorganization, stripped the high-quality property, restructured and built up the NFC, and listed in the Shenzhen Stock Exchange, with a general capital register of RMB 985, 000, 000. According to the corporate annual reports in 2012, the total assets of the company exceeded RMB 15, 000, 000, 000, and the net profit approached RMB 200, 000, 000 Yuan.

The Tumurtin Ovoo zinc mine project is the first overseas resource project of the NFC to carry out the national "Going Out" strategy, as well as the starting point for the NFC to carry out international resource cooperation. As early as 1998, the NFC established a joint venture company with the Mongolia Metal Import and Export Co, Ltd, the Xindu Mineral Industry Company, devoted to commonly developing the Ovoo zinc mine; "Xindu" means "city of zinc", and is expected to build the Ovoo to be a zinc resource base for Mongolia and the NFC in the future.

The Xindu Mineral industry is the largest China-Mongolia joint venture mineral enterprise in Mongolia, and the financing scheme of this project is fair and reasonable: out of the total investment of RMB 3,500, 500, 000 Yuan, a 200, 000, 000 Yuan concessional loan is provided by the Export-Import Bank of China, while the remaining 150, 000, 000 Yuan is contributed by the NFC. The zinc mine stock ratio is as follows: the NFC owns 51% of the stock shares during the repayment period, while Mongolia owns 49%; after the repayment is completed, each of them has 50%. This was called a "successful pattern" by Mongolia's then-president Nambaryn Enkhbayar, allowing Mongolia's people to enjoy more benefits from their resource development.

Table 3-1 Constituents of stocks of joint venture enterprise

	Repaying period	After repaying
Chinese stock	51%	50%
Mongolia stock	49%	50%
Note: According to Mongolia laws, the mine ownership belongs to Mongolia, and the joint venture enterprise is only responsible for development and operation.		

The opening of the Tumurtin-Ovoo zinc mine project was announced for 2003. After building up and smoothly putting the mine into production in August 2005, only 3 months were needed to make every production and technology index reach or exceed the design requirements. Moreover, all investment in fixed assets and working capital were received only for one year, thereby realizing the goal of putting the mine into production, reaching the forecast production amount and gaining a profit all in the same year. By July 31 2010, the dry weight of accumulated produced zinc concentrate was 56,250, 000 tons, the amount of zinc metal was 28,590, 000 tons, the accumulated realized sales income was 384, 000, 000 dollars, and the accumulated payment of various taxes was 62, 360, 000 dollars; donations amounted to 2, 695, 000 dollars, so it becomes the one of the most successful cases of Chinese enterprises engaging in foreign investment. Secretary-general Shangnalatu explained that Xindu Mineral industry is one of a small number of Chinese mineral enterprises which has achieved continuous profit from commissioning to today. Moreover, Xindu Mineral Industry has ranked in the top 100 Mongolian enterprises for many years continuously and once ranked in the top 10.

Figure 3-4 Diplomas and cups issued by Mongolia government and institute are fully placed in the exhibition room of company

2 The Project's Environmental and Social Influence

2.1 Possible and potential influences[14]

The exploitation of lead zinc mines includes cave exploitation and open exploitation generally; the cave exploitation producing techniques generally include topsoil stripping, drivaging, drilling, blasting, excavation and transportation (underground transportation, lifting), mineral warehouse (stock dump), and transportation to ore treatment plants. The mine construction includes working face stripping, exploration, and the construction of opening transporting system of the mining zone, mineral industry base in the infrastructure construction, explosive magazine, and construction of simple road networks. Specifically, the potential environment influence of this project includes:

(1) Soil erosion

Under a normal state, soil erosion is related to natural factors and human activity. Within mining, a large area of above-ground vegetation is tripped, the landscape is transformed, ore is thrown and waste soil and stone are stacked, thus the scale and intensity of soil erosion can be enlarged and strengthened, causing water and soil loss and a more serious ecological influence. In mining both the construction and the running periods have a great influence on the soil's environment. The construction period influences the soil through road construction, living quarter construction, land formation, the grinding of construction machines and personnel. The running period influences the surrounding soil and vegetation for the change of land utilization type and the penetration of water pollution, air pollution and solid waste.

The grinding of construction machines and personnel can damage the vegetation, break the granular structure of the soil, influence the sponginess and water permeability of the soil plough layers, and reduce the land capability; this kind of influence is a partial short-term influence and cannot influence the surrounding soil environment.

After starting the mining in the mine lot, its mining area, the ore stock dump and waste soil refuse dump will damage a part of the forest land. This affects the original landform and environment, and also the soil environment. Besides, the flowing dust pollution, domestic sewage and leaching water from the refuse dumps for the ore exploration, stack and transportation can enter the soil.

(2) The influence on the animal and plant ecology

The mine development will cause the original ecological system balance to be damaged during the construction period, but a new ecological system will be gradually set up, and the project land occupation will damage a part of the vegetation; the damage to shrub grass will damage the habitat of animals, in particular birds, and it will cause the migration of a part of the animals.

As the raised dust falls on the leaf surface of plants during the operation period, it influences the absorption of sunshine and moisture by the leaves, so photosynthesis is weakened and growth reduced; the emission of "waste water, waste gas and waste residues" will cause the accumulation of some harmful matters in the animals and plants of this area, but not influence their normal growth and life.

(3) Water and soil loss

The predicted period of water and soil loss is divided into a basic construction period and a production running period according to the different stages of the construction project. The underground zinc mine body is explored by adopting the footrill opening method, while a large amount of ground surface excavation and laneway opening is carried out during the construction period, thereby causing vegetation damage and waste residue stacking; moreover, it is easy to cause water and soil loss in different degrees at many construction sites; after the project shifts to the operation period, the large scale of excavation activities which disturb the ground surface and damage the vegetation are basically finished, and the main source of water and soil loss source is waste-rock yard; by carrying out soil and water conservation measures, the water and soil loss will be effectively controlled, while the possible amount of water and soil loss is limited. Therefore, according to the characteristics of the construction project, the predictions for water and soil loss for the project are divided between the construction period and operation period, wherein the construction period is the main predicting period.

Since Tumurtin Ovoo in the Gobi Desert area is lacking in water resources and sparse in land vegetation, the protection of land vegetation and the prevention of water and soil loss are the most difficult problems; if the original vegetation is further damaged in the process of exploration and production, it may cause desertification and the consequences cannot be imagined.

2.2 Actual influence

(1) Environmental influence

Despite the environmental risks mentioned above during the construction and operation processes of the zinc mine, the Xindu Mine has still achieved great success thanks to hard work and a high concern for the environment. The opencast working of the zinc mine has not obviously damaged the environment, but it has trasnformed the surrounding part of the desolate Gobi desert into an oasis, so that the mine is seemingly situated in grassland with an abundance of water and grass. Under the blue sky and white clouds, we could not see any smoke or dust and also could not hear any harsh noises. Zhang Yong, the deputy general manager of Xindu Mineral Industry, told us that the Xindu Mineral Industry has not suffered a single accident of environment pollution and has

not any untreated waste discharged to the grassland from 2005 to this time; moreover, the company has had a good performance in every annual environmental check carried out by the Mongolian environment protection department, and it will measure the water source and the eight water level points monthly. The water level changes a little, thereby being approved by the Mongolian environment protection department. The environmental restoration work is orderly carried out and has obvious effect. Mr. Zhang said that in general, Xindu Mineral Industry has a good job in environmental protection from 2005 to today. As an enterprise, we are working hard all the time and trying our best to help local government and people. ”

(2) Soil influence

Foreign enterprises investing in Mongolia are faced with both natural and environmental protection risks, and they also face certain social risks. First of all, due to their great affection for nature, Mongolians tend to want to protect nature and will protest mineral developments by foreign enterprises; secondly, the unequal distribution of mineral resource will intensify social contradictions. As for the herdsmen in the rural areas, they are undoubtedly the main victims of mineral resource development; on the one hand, they have to bear the wealth gap caused by uneven resource distribution; on the other hand, the animal husbandry that they live on is also threatened by the environmental damage. Therefore, the foreign investors have to pay special attention to the social influence of their investments in Mongolia, and really shoulder their social responsibilities.

The Tumurtin Ovoozinc mine adheres to the principles of “win-win cooperation, environmental protection, giving back to society”, strictly follows the local laws and regulations, respects local folk customs, and pays attention to make a contribution to local economic and social development; the investing company has already opened up water resource, reduced waste discharge, enlarged pollution treatment, strengthened ecological remediation, vigorously planted forests, protected the grassland, and strengthened training on safety and environmental protection; moreover, it has built up squares, roads, and park, donated medical equipment and subsidized undergraduates to finish their education, given gifts for children, and held the Aobao festival and other activities, all of which has had much benefit for the local people; therefore, the company has got a good reputation in the Mongolian government and the local community.

Since its investment and construction of Tumurtin Ovoo zinc mine, there is not any malignant event such as parade and strike, and the zine mine also has not investigated by any related environment NGO or got the lawsuit originated from the ecological environment. For Tumurtin Ovoo zinc mine implements outstanding social responsibility, local community and residents are benefited indeed, and so the local community residents support and advocate the Tumurtin Ovoo zinc mine strongly. Moreover, the Mongolia also entrusts and affirms Tumurtin Ovoo zinc mine sufficiently, and thereby creates convenient conditions for its production and operation activities, such as release of special vehicle in disease endemic period is a typical case.

3 Analysis of the Interested Parties

3.1 The Chinese government

(1) Related policies on foreign investment

Although China has made significant achievement with its "Going Out" strategy, there are few domestic laws and regulations stipulating environment protection issues at present, in particular regarding foreign direct investment. The existing laws specifically about environment issues include *Overseas Sustainable Forest Cultivation Guideline of Chinese Enterprises* and *Overseas Sustainable Forest Operation and Utilization Guideline of Chinese Enterprises*, but the core of both is the forestry logging industry instead of mineral development; the main landscape around Mongolian mine lots is grassland while forest zones are extremely limited. Besides, only some related foreign investment laws and regulations have generally described environmental protection. E.g. *Rules about Approval Items of Investment and Starting Business Overseas*, issued in Oct. 2004 by the Ministry of Commerce of the People's Republic of China, requires that in the following situations the foreign investment of domestic enterprises involved should not be approved: violations against the national laws and regulations, and policies; actions which may cause the Chinese government to breach concluded international agreements; inconsistence with the laws and regulations or the customs of the host area. This requirement is too broad; it lacks quantization and operability, and hardly constitutes a forceful restriction for enterprise activity. In the *Foreign Investment Cooperation Area Guideline-Mongolia* published by China's Ministry of Commerce, the general requirement of every department of the Mongolian government for enterprises investing in Mongolia in every industry is summarized. It also mentions the environmental protection law of Mongolia and asks Chinese investment enterprises to follow it, but it has no specific introduction and explanation. It can therefore be said that China's legal restrictions on this issue are lacking, giving many enterprises the opportunity to flaunt them.

(2) Attitude to the Tumurtin Ovoo zinc mine

The opening of the Tumurtin Ovoo zinc mine project was announced for 2003; in June of the same year, General Secretary Hu Jintao said when he visited Mongolia that, as a financial aid project, the zinc mine must be constructed to be a model of Chinese-Mongolian economic cooperation. In May 2005, Chinese Vice-Premier Wu Yi mentioned the significance of this project for the development of China-Mongolia economic and trade relations many times during her visit to Mongolia. In 2005, SASAC Chairman Li Rongrong entrusted Director Wang Xiaoqi to read the congratulatory letter on the ceremony for the production of Tumurtin Ovoo zinc mine. In the congratulatory letter, he said that the Mongolia zinc mine project represents the crystallization of the traditional friendship between the Chinese and Mongolian people as well as a successful model for China-Mongolia cooperation. After the mine was put into production, General Secretary Hu Jintao and President Nambaryn Enkhbayar sent letters to each other and were expected to concern themselves with the production and operation of the mine and create a "classic project for China-Mongolia cooperation"; the support of the governments of both countries was a huge honor for this enterprise.

3.2 The Mongolian government

(1) Related policies of Mongolia to attract foreign investment

As an inland economy suffering from a backward economy, Mongolia's abundant territory is a support for its economic development; since the economic transition, all the governments of Mongolia have taken the introduction of foreign capital as an important policy to promote the domestic economic development. The government consecutively formulated a series of laws and

regulations and supportive policies to attract foreign investment, including the *Foreign Investment Law, the Mining Law,* and *the Economy Free Zone Law*, thereby promoting foreign direct investment, and improve the environment for it. By July 2008, Mongolia had signed the Agreement on Investment Encouragement and Protection with 39 countries and areas, and signed the *Agreement on Avoiding Dual Tariffs* with 34 countries, thereby providing a good international environment for foreign direct investment.

On June 27 2001, the Mongolian government passed the decision No. 140, and confirmed that the *Catalogue of Key Industries for the Introduction of Foreign Capital* involves a dozen of fields, including animal husbandry, agriculture, processing and mining. Along with the development of Mongolia's economy and society, the Mongolian government will adjust the catalogue of key investment industries according to the development demand. Most of the encouraged projects are in the mining of mineral resources, such as the exploration and extraction of coal, oil, natural gas, and various metallic minerals. Therefore, it can be seen that the Mongolian government leads its own economic development with the hope of carrying out the deep processing of local resources domestically and improving the re-export of value-added goods rather than simply exporting cheap mineral resources.

Although Mongolia has formulated and modified many related laws for encouraging foreign direct investment, the current legal system is not perfect and it is unstable. Many influencing factors exist in the course of executing the law, so that good laws and policy cannot be smoothly carried out. Moreover, although the general political situation of Mongolia is relatively stable, its policy is changeable. In Mongolia, the sharpening contradiction of congress and political parties has caused governmental reorganization for many times and influenced the continuity of policy; many economic agreements and contracts signed with China cannot be executed on time, or are simply denied. Therefore, the creditworthiness of the Mongolian government is bad, particularly the national strategy for energy resources and mineral resource development are influenced by the external pressure of the common people and the fight for internal group benefits; the policy changes can thus be very big.

(2) Mongolia's environmental-protection policies

In order to coordinate the relationship between economic development and environmental protection, and respond to the appeals of the common people over environment protection, the Mongolian government has successively issued some laws and regulations on mineral development and environmental protection, including *Mongolia Mineral Law (new edition), Mongolia Foreign Investment Method, and Mongolia Environment Protection Law*. Moreover, Mongolia has detailed a National Strategy Environment Evaluation Guideline to guide the environment protection work of the whole region. For the introduction to Mongolia's environmental protection mechanism see Attachment I.

(3) Attitude of Mongolia's government to the Tumurtin Ovoo zinc mine

The construction of this project was a high concern for the Chinese leaders as well as Mongolia's leaders. In April 2000, the former Mongolian President Bagabandy was present at the foundation stone laying ceremony for the zinc mine; on May 29, 2004, the Mongolian Vice Prime minister Uland and the Chinese Ambassador in Mongolia Gao Shumao participated in the infrastructure stripping ceremony; in December 2004, Tsakhia Elbegdorj, Mongolia's new Prime Minister investigated the zinc mine site in person and expressed satisfaction with the construction status.

In 2005, the same day the mine was put into production, Mongolia's President Nambaryn Enkhbayar attended the completion ceremony along with over 40 vice-ministerial level officials. Mongolia's President Nambaryn Enkhbayar gave a speech. He highly praised the Tumurtin Ovoo zinc mine project as a milestone for Mongolia's mineral development, an advanced representative of Mongolia's mine production, a support for economically stable growth, and an example for Mongolia-China good relations and cooperation. When he was interviewed by a journalist from CCTV, President Nambaryn Enkhbayar further said that three years ago, this was an uncultivated land; but now a modern mine has been built within a single year, and thus a new page of our economic cooperation has opened. The President said he expected the operations of the mine to be better in the future, exploration to be strengthened further, and production capability to be enlarged, so as to make a contribution to Mongolia's economic development.

3.3 Employees of the enterprise

(1) The makeup of the Employees

The *Mongolia Mineral Law (new edition)* stipulates a high position fee for migrant workers and limits the ratio of migrant workers to local workers to 1: 9; this means that for every foreign staff in the mineral enterprise there shall be nine Mongolians. By July 2013, the Tumurtin Ovoo zinc mine has 340 official workers in total, including 306 Mongolians and 34 Chinese. Besides, there are about 40 seasonable temporary workers which are all from Mongolia. Except for the manager and members of the enterprise safety environment protection department, the management level of the other departments of the enterprise is undertaken by Chinese staff.

(2) Staff welfare and attitude

Mongolian staffs are basically engaged in the production work in the enterprise, and the enterprise provides very good labor guarantee measures and compensation and welfare. A miner who works at Xindu has an average monthly wage of around 2000 Yuan after conversion to Renminbi, which would be a middle class income in this location. If there are two workers in one family, their living standards will be improved. Besides, Mongolian staff enjoys dormitories for singles, and some of them have family dormitory buildings built by the enterprise. Such buildings would be first class residential area in this location.

During the investigation, Mongolian staff agreed that the enterprise provides a high salary and very good social benefits, so they have a strong sense of superiority. They claimed that the company performs its responsibility towards environmental protection very well, and has made outstanding contributions to the local environment and social development, particularly the Tumurtin Ovoo zinc mine which did a good job in infrastructure construction, personnel safety in grassland fire disasters, and local custom and festivals.

3.4 The financing side

The Tumurtin Ovoo zinc mine is a Chinese construction aid project for Mongolia, and its financing side is made up of the Export-Import Bank of China and the China Nonferrous Metal Mining Corp, out of which the Export-Import Bank of China provided the biggest loan. In 1995, the People's Bank of China issued a Notice on Carrying out Credit Policy and Strengthening

Environment Protection, and clearly required that financial departments of all levels should pay attention to protect the natural resource and the environment in credit work and take environmental protection and pollution prevention as one of the important factors to consider within bank credit. Since then, the State Council, Ministry of Environmental Protection, People's Bank of China, China Banking Regulatory Commission and other institutions published a series of policies and regulations to encourage financial institutions to carry out the idea of "green credit"; relatively important regulations include *Opinions on the Implementation of Environmental Protection Policy Laws and Prevention of Credit Risk* and *Opinions on Strengthening Social Responsibility of Financial Institutes of the Bank Industry*. On January 12 2009, the China Banking Association issued *Guideline of Enterprise Social Responsibility of Financial Institute of Chinese Banking Industry*, to encourage banking and financial institutes to implement a scientific development perspective, and promote the harmonious and sustainable development of the economy, society and environment. The Export-Import Bank of China also issued a series of related policies to strengthen self-restriction. In August 2007, the Export-Import Bank of China issued the Guidance for Environment and Social Evaluation of Loans Project of the Export-Import Bank of China, and asked to consider the social and ecological benefits as well as the economic benefit in the course of examining loans; the bank should investigate and supervise the project construction and operation conditions according to the evaluation results on environmental and social issues; in case that it is really found that the project has a serious negative influence on society and the environment, the bank shall ask the borrower to take timely measures to overcome and change this; for the borrower who does not listen to the dissuasion and continues to break social and ecological norms, the bank is entitled to take measures such as ceasing to lend, and require it to return its loans immediately according to the contract.

3.5 Community and local residents

The Tumurtin Ovoo zinc mine is far from the Baruun-Urt downtown and has no herdsmen around it. After interviewing the Baruun-Urt citizens, we learned that most of the Baruun-Urt citizens know the Xindu Mineral Industry and have a good impression about it, and have expressed their praise and recognition for its salary level, social benefits and assistance in construction to the city; moreover, they also very much approve of its performance in environmental protection. Then we also consulted the herdsmen around Baruun-Urt, who know a little about Xindu Mineral Industry but have conflicted with ordinary mineral companies, and they said that their land is now occupied for mining and their grassland is damaged but they haven't received enough compensation. However, in general, the hard work of Xindu Mineral Industry in environmental protection receives the approval of the local residents. A local Mongolian student said that since the establishment of the zinc mine, the problems that people worry about have not happened; viewed from afar, the whole mine looks like a park. Moreover, since the mine drives the local economic construction, many people have found a new job, the living standards have improved, the grass has turned green, water has increased and the wallets are full , so many people feel very happy."

3.6 NGOs

During the survey, we interviewed the government, chambers of commerce, enterprises, local residents and others, but we did not obtain any opinions and information on NGOs; local residents have no idea about what an NGO might be. Using various methods, we were still unable to find any concern or report by NGOs about the Tumurtin Ovoo zinc mine.

3.7 Reports by some of the media in China and Mongolia

The Xindu Mineral Industry has set up a positive image of Chinese enterprises in Mongolia and won the welcome of local residents, and it has also received concern and support from the Mongolian government; it is thus a bright spot for Chinese enterprises, and both the Chinese and Mongolian media have given related reports.

The Central People's Government net of the People's Republic of China reprinted a message by CNMC on August 3 2006 saying that the Tumurtin Ovoo zinc mine adheres to the principles of "win-win cooperation, environmental protection, and giving back to society", and pays attention to make contributions to local economic and social development; the mine donates medical equipment, helps undergraduates complete their education, gives gifts to children, carries out planting and other activities, which have many benefits for Mongolia and have won it a general good reputation from Mongolia's government and the local society. Mongolia's President Nambaryn Enkhbayar highly appreciates the advanced Chinese equipment, technology and construction invested in the Tumurtin Ovoo zinc mine, has expressed that large mineral resource projects can be developed by CNMC in the future, and has written an inscription expressing his pleasure for the mine: "the Tumurtin Ovoo zinc mine is an advanced representative of Mongolia's mine production, a support for the stable development of the economy, and an example for the friendly cooperation between Mongolia and China. The production of the mine drives the local economic development and also pushes forward the long-term friendly cooperation between the people from both countries."

The Ministry of Commerce of the People's Republic of China reprinted the message of the business office of the diplomatic mission in Mongolia on November 1 2006, and said that the Tumurtin Ovoo zinc mine is a model for the mineral cooperation between China and Mongolia". Since the China-Mongolia joint-venture Xindu Company was founded, the company has operated according to the law, pays taxes according to the rules and makes a great contribution to Mongolia's economic development, and so it has become a good sample for mutual benefit and win-win cooperation for China and Mongolia. At present, this mine employs 215 of Mongolia's workers and 62 foreign experts. It plays a positive role in increasing local employment and driving the development of the local economy. Since this plant has been put into production, the contribution rate to Mongolia's domestic GDP has reached 2-2.5%. Besides coal sales and service income have increased sharply, so that the national budget income has also increased. This company pays special attention to production safety and environmental protection. Company leaders organize safety production management and rectification regularly, and the company has had no personnel safety accident since 2005. Moreover, the company has complete labour protection appliance and utensils for staffs, and they enjoy annual leave with the pay and social benefits stipulated in the law. The company introduced advanced technological equipment to improve the production technical level

and reduce environmental pollution. At present, the mine's newly increased water per day is only about 1000 ton. Meanwhile, the company also carried out planting and greening activities in the plant and water source, and subsidized the greening business of West Uralt. During its own development, the Xindu Company has also actively worked for the local social public good, and taken measures to give back to the local community, drive the local economic development and win the advocacy and support of the local government and residents. This mine also cooperated with Sukhbaatar province, and provided aid to the education and hygiene department regularly, for instance the mine pays the tuition fees of 20 undergraduates in Sukhbaatar province every year, and has provided an advanced X-ray Fluoroscopy for the general hospital of the province and also decorated the ward. Besides, the mine invested 110, 000, 000 RMB to erect a 15 km optical cable between the mine point and West Uralt county, which connected the mobile phone networks of the Mobicom and Skytel companies. In 2006, for the 800th anniversary of the founding of Mongolia, the company subsidized the local Nadam Fair Activity, donated 50, 000 dollars to build up a "Unity Park" for West Uralt, and over 110, 000 dollars to repair the roads of West Uralt. A Message of the China Nonferrous Metals Net on March 28, 2008 said that "the Mongolia zinc mine is a model project for China-Mongolia cooperation", as it has been named by the presidents of both countries; the famous "Ovoo sprit" has been became a precious spiritual wealth for the overseas development of CNMC. Since it was put into production in 2005, every activity of production and operation of this mine has been smoothly carried out, and it has achieved the small miracle of being constructed, being put into production and getting a profit in the same year.

Figure 3-5 Mongolia leaders inspect Xindu Mineral Industry

The 22nd phase message of the China Metal Bulletin in 2008 said that on May 23 2008, Mongolia's Prime Minister Mr. Sanjaagiin Bayar visited the Tumurtin Ovoo zinc mine managed by the Xindu Mineral Industry Co., Ltd. in person. Senior officials of Mongolia's 25 government departments, including the Ministry of Industry & Trade, Ministry of Health, the State Council, Technical Supervision Bureau, Immigration Office, Ministry of Finance, General Administration of Customs, and the media accompanied him to investigate. Ltd. Zhang Shili, General Manager of Xindu Mineral Industry Co., Ltd. introduced production, operation, management, taxes, employment, environmental protection, and other aspects of the Tumurtin Ovoo zinc mine since it was put into production to Prime Minister Bayar, and the Prime Minister highly praised the excellent and effective production and operations of the Xindu Mineral Industry Co., Ltd., its outstanding contributions to local society, and its active efforts for the local environment; meanwhile, he declared himself very satisfied with the legal operations and the active tax payments of the company

over the last several years, and fully affirmed the active contributions of the company to the economic development of the local society and even the whole of Mongolia. Then Prime Minister Bayar and his party successively investigated the Tumurtin Ovoo zinc mine's mining area, the master control room, the grinding and floating workshop, the concentrated workshop and other working fields and domestic installations of vegetable greenhouses and highly praised the company for its scientific management, good operation, and highly-efficient operations.

The CNMC reprinted a message from Mongolia Net on December 2 2008 saying that "as the Mongolian partner of the China Nonferrous Metal Construction Co., Ltd (NFC) held by CNMC, Mr. Gang Bate, the vice-president of Xindu Mineral Industry Co., Ltd. was awarded with the highest national award, the "Meritorious Person of Industrial Enterprise" medal, issued by Mongolia's president. It is not only an honor for Mr. Gang Bate himself but it also represents the full approval of CNMC's investment and development in Mongolia by the Mongolian government. The Xindu Mineral Industry Co., Ltd. is a China-Mongolia joint-venture enterprise held by the NFC, and responsible for operating the Mongolia Tumurtin Ovoo zinc mine. This mine is an important project which attracts the concern of the presidents of both countries, and shoulders the hope of "Going Out" of the NFC and CNMC. From the construction period to the operation period, both parties have sincerely cooperated, the "Ovoo sprit" formed by the hard work and selfless contribution reflected by the staff of both countries has become an important mental strength to make the enterprise bigger and stronger, and has pushed Xindu Mineral Industry Co., Ltd. to rapidly ascend to the top 10 enterprise in Mongolia, win more than 50 awards issued by the Mongolian government, and become an important force pushing the economic development of Sukhbaatar province and the whole of Mongolia. It can thus be said that the company has promoted local peace, prosperity and stability, and won honor for the CNMC and even China's non-ferrous metals industry. At present, the crisis in international finance is sweeping across the globe, the development of the economy is highly influenced, and nonferrous metal enterprises are faced with a severe test. The Xindu Mineral Industry Co., Ltd. expressed the need to see the situation clearly, maintain firm confidence, face the difficulties, compact management foundations, compress costs, enlarge their scientific innovative intensity and solidly and effectively push work forward according to the requirements of CNMC and NFC, so as to guarantee the completion of various production and operation tasks this year; moreover, the company will strengthen its communication with Mongolia's government, stockholders and staffs to promote understanding, ride over the hard times together, achieve joint development and really turn the Tumurtin Ovoo zinc mine into a model of China-Mongolia cooperation."

Figure 3-6 Mongolia's Minister of Energy visited CNMC

On December 7 2009, CNMC reprinted a message from the General Office which said that "the Mongolian Minister of Mineral Energy Zhuoligete and his party visited CNMC during their visit to Beijing. Zhang Keli, the secretary of the party committee of CNMC and vice-president of NFC warmly received Minister Zhuoligete and his party. Minister Zhuoligete pointed to the fact that the Tumurtin Ovoo zinc mine introduced advanced technology and equipment and made important contributions to the local economic development; as the first company exporting zinc mine to a foreign region, the Tumurtin Ovoo zinc mine has played a very good demonstration effect in the economic cooperation of China and Mongolia. The Mongolian government and himself were also concerned with and supported the production and operation of this mine. Minister Zhuoligete said that Mongolia's Ministry of Mineral Energy will support the development of the contributing enterprises of CNMC and NFC in Mongolia as always, and continue to seek friendly cooperation with CNMC and NFC in the field of mineral resources."

From this, it is obvious that not only the investment activity of CNMC, but also the investment of other Chinese enterprises in Mongolia will be smoother. As a model for the overseas investment projects of Chinese enterprises, the mine improves the image of China and is of great significance in further close cooperation between China and Mongolia.

4 Company Policies and Behavior

4.1 Environmental protection

At first, the Xindu Mineral Industry oriented itself towards being a Mongolian enterprise, and therefore the following Mongolian laws and regulations were the foundation for its normal production and operation activities: enterprises must possess a firm law-abiding awareness, observe the law, operate legally and not overstep, all of which are foundations for being approved. Therefore, the environmental protection work of Xindu Mineral Industry must satisfy the requirements of every law and regulation of Mongolia, including the Mongolia Environmental Protection Law, and the Mongolia Mineral Law (new version); the government has strict requirements, so enterprises must reinforce their self-discipline and avoid any accidents. Besides, the grassland's environment is weak, and Mongolian people have a strong feeling for the natural environment, so enterprises should well protect the environment so as to obtain the approval of local residents, thereby structuring a harmonious environment, and guaranteeing that their own production and operation activities don't cause a disturbance. Based on this understanding, the Xindu Mineral Industry lifted environmental protection to an important position strategically, and made a priority of unity of economic benefit and environmental benefit, and synchronous inputs in production and environmental protection. The General Manager Mr. Zhang specially stresses the importance of this awareness of environmental protection and claims that it is a key factor for Xindu Mineral Industry to achieve environment protection today.

In order to spread environmental protection awareness to all staff, the enterprise specially set up a "safety and environmental protection department" and put environmental protection on an equal footing as production safety. General Manager Mr. Zhang told us that environmental protection is equally important as production safety in the mine enterprise, and they have a strong

relationship with each other. E.g. if the tailings pond collapses, it is not only a major safety accident but also an environmental protection accident; it brings huge damage to the grassland, therefore, safety is closely linked with environmental protection. In order to establish this awareness, the company adopted a series of measures. At first, before new staff is employed, the safety and environmental protection department will organize them to receive training in safety and environmental protection, and the object of the training includes staff from China and Mongolia. During the training, company also reminds staff of the need to "protect public property, save resources, organize clean production and protect the environment" in the staff manual. Secondly, during the production and operation, the safety and environmental protection department will formulate an environmental protection plan every year, and all environmental protection work shall be carried out strictly according to this plan. Meanwhile, regular safety environmental protection training will be carried out at intervals of two months and safety and environmental protection issues will be mentioned in the weekly dispatch meeting, thereby continuously strengthening the safety and environmental protection awareness of the staff. Finally, a major inspection of safety and environmental protection will be carried out in both summer and winter every year; once problems are found, an official rectifying letter will be issued regardless of its degree, asking to rectify it within the deadline. Old equipment is required to be updated regularly to avoid accidents. Through long-term training, education and inspection, the environmental protection awareness of staff has been basically set up.

During the ten years from the start of production to today, the enterprise has taken a series of actions to protect and improve the local natural environment, as is introduced in detail below.

(1) The protection and circulation of water resources

Before finding sources of water, the conditions for the Xindu Mineral Industry were very hard, and the process of looking for water was also very hard. At present, water for production and living comes from a water source over 30 kilometers from the plant, the depth of the source is over 200 meters, and so the enterprise leads water to the plant through underground pipelines. Even so, finding water for the enterprise still presents problems: first, the Mongolian government requires very high water resource taxes for production water, equal to 6-7 RMB per ton; besides, the water source is far from the plant, and the water is conveyed by two water pumps continuously; therefore, the water transportation costs are also very high. Secondly, if the water demand of the enterprise is high, it may cause a fall in the underwater level and make local people worry. Mongolia's government will test the underwater level in the vicinity of the water source area and urban areas so as to guarantee the water safety; the enterprise can receive approval to use water after passing these tests. Thirdly, a large amount of wastewater will pollute the environment; if the enterprise governs the wastewater, the production cost is certainly improved; if not, it will cause environmental problems. In order to solve the above problems, the enterprise is trying to circularly utilize the water resource. At present, the waste water utilization rate of Xindu Mineral Industry reaches about 63%; when pollution and water source consumption are reduced, the utilization of wastewater saves a lot for the enterprise, achieving the integration of economic benefit and environmental benefit.

The production's waste water comes mainly from two sources: beneficiation wastewater and tailings pond. For beneficiation wastewater, the Xindu Mineral Industry adopts the flotation tech

尾矿库：矿渣中析出清水，有野鸭栖息

orld. In the beneficiation, the enterprise invests and prepares a large tailings thick pond, which can separate solids from water. Waste after beneficiation is injected into the tailings thick pond, the sunken solid are the tailings, the moisture

content therein can be reduced to a low level, and the overflowing water thereon is collected by a pipeline and enters the waste water pond to recycle.

The other source for producing wastewater is the tailings pond. After being treated as above, the tailings still have some moisture residue, and tailings will be further settled after entering the tailings pond to discharge water. After the tailings enter the tailings pond, a small lake will be formed at one side with a low terrain. Xindu Mineral Industry has a pond under the tailings pond, and these moistures will be collected in the pond, and then discharged to the wastewater pond through the pipeline. In winter, water in the tailings pond will be frozen and cannot be used due to the cold weather; but in summer, all can be circularly used.

After the wastewater is gathered in the tailings pond, it can be applied to beneficiation again after treatment and also used for planting and other greening activities. It is a continuous circulating process, so the re-utilization rate of wastewater is very high.

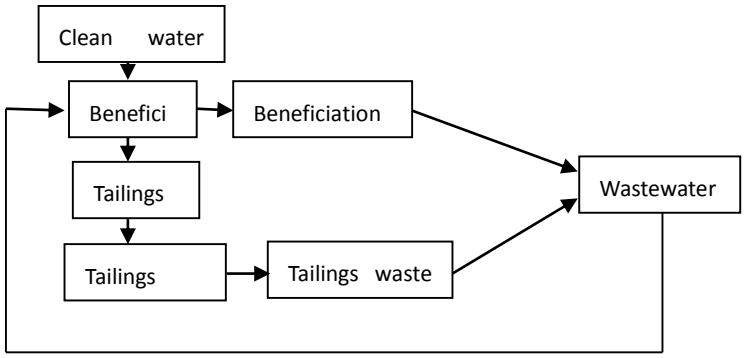

Figure 3-7 Production Wastewater Circulation Schematic Diagram of Xindu Mineral Industry

(2) Solid waste treatment and surface restoration

The solid waste of enterprise is mainly produced from tailings and waste stone.

The tailings in the tailings pond will be continuously piled up along with production; after excavating the whole pit, the piled solid tailings will carry out the surface soil coverage, and then grass will be planted on them, thereby reaching the purpose of ecological restoration. Although the tailings contain a small amount of chemical waste generated by beneficiation, this waste can be decomposed in nature because it is a tiny amount, so it will not damage the soil and the grass fields or people's health.

Waste stone is generated for the excavating pit. The Xindu Mineral Industry has two hillocks in the east and west; the enterprise will carry out the surface soil coverage and grass planting works at the hillocks, and 4000 square meters of hillocks will be completed approximately every year; surface soil for coverage is mainly from the submerged area of the tailing pond. After the surface soil coverage, the grassland can be basically recovered.

Both of the tailings pond and the hillocks are reasonably designed according to Mongolia's related laws and regulations, and designs are submitted to related government agencies and approved. Every year, environmental protection personnel from Mongolia's government will inspect the mine lot, detect the soil sample and water sample in the surroundings of the mine lot and check the recovery of the hillocks; the company passes these inspections with a good performance. Besides, according to government requirements, the company will automatically submit the surrounding soil and water sample semiannually to the environmental protection department for inspection.

Most of the Mongolian staff live in West Urgut, while only a minority of the staff live in the

mine lot, so domestic refuse is limited; but the enterprise has still especially designed a solid waste landfill and submitted it to government agency for approval. The domestic refuse is transported by a special vehicle and dumped at the landfill. The practices of the Xindu Mineral Industry thus demonstrate a complete awareness of environmental protection.

Besides, the company's lab will generate some poisonous chemical waste; for security reasons, chemical waste in the lab ware cannot be taken out, and a special person is assigned to recycle them according to the legal requirement. Buckets and other containers for transporting the chemical agent will be specially cleaned and then cut and delivered to a pointed place to treat.

At present, the solid waste disposal degree of the company reaches 100%, and every measure is in accordance with the requirements of Mongolian law; therefore, there is no land deterioration.

Figure 3-8 The grassland at surrounding of mine lot is well maintained and has not cause obvious land deterioration.

Figure 3-9 Dust absorption facility in ore-breaking workshop

(3) Treatment of air pollution

During the running process of the whole mine lot, the air pollutants are not many and mainly include three parts: smoke and dust generated by the boiler, ore crushing dust and dust raised during exploration and transportation.

The heat supply and hot water of the whole factory depend on the boiler. The boiler is fired by a high-quality low-sulphur coal, and the discharged smoke dust is few; meanwhile, the company has also mounted a smoke dust treatment facility for the boiler. The second kind of air pollutant is ore crushing dust; to make the mine reach the requirements for grinding, the ore must be broken, and it will cause a lot of powder dust. The ore is delivered to the top part of the ore-breaking workshop through a conveyor belt and then fine grinded; the tail of the conveyor belt is especially equipped with a dust treatment facility and a water spraying device so as to absorb the powder dust in this process and reach a very good dust removing effect. Besides, the whole producing process is sealed and carried out in a plant building built by plastic steel plates. No dust can be seen from outside of the plant building. At last, for the raised dust caused by the pit excavation and production

transportation, the enterprise prepares a special watering cart to spray water in the road and pit to reduce dust; the water used is also from the wastewater pond. The enterprise will maintain the grassland road for cargo transportation regularly.

(4) Planting and greening

Planting and greening are the most direct environmental protection measures. Tree planting on the grassland can play the effect of wind prevention and sand fixation, and it also can protect and improve the environment. But it is very difficult to plant trees on the grassland, as one can imagine. The Xindu Mineral Industry was put into production in 2005; since 2006, the company has insisted on planting trees every year, the annual average planted trees have been in the region of 1000-1200, and the planting area includes the periphery of the mine lot, and the inner part of the plant and water sources area. The ratio of sand and stone in the soil of the grassland is about 50%, and its moisture cannot meet the growth of saplings, so the just planted saplings are too weak to survive. Therefore, the company needs to assign a special person to look after this every day and also needs to use up a lot of water, so the cost is very high. With its continuously accumulated experience every year, the company has developed some methods, thus the rate of survival is improved. However, even though the saplings have survived, their growth is very slow. After the trees have grown for a period of time in the summer, these trees will be covered by snow in winter, and moreover the winter in the Mongolia grasslands lasts for seven months. Currently the aspens which have survived from 2006 are as thick as a water cup after growing for about eight years. Besides, trees rot away every year, and the enterprise needs to replant them timely. The amount of replanted trees is also high every year. Although it is very hard to plant trees, the surviving trees can play an obvious effect; meanwhile, greening is a requirement of the Mongolian government, so the Xindu Mineral Industry insists on this activity all the time.

Figure 3-10 Trees everywhere in the plant area

Figure 3-11 Planting region of industrial crops

Except for planting trees, the company also plants grass and flowers in the plant area to beautify the environment. The four sides of every workshop and the main road in the plant area are surrounded by colorful flowers; except for the rowing up trees, the whole plant area looks like a beautiful garden. Meanwhile, the enterprise also plants potatoes, radishes, Chinese cabbage and other industrial crops on the soil surrounding the plant area, and General Manager Zhang said that this can reach two purposes; on the one hand, these industrial crops can be supplied to the staff of the enterprise and enrich their diet; on the other hand, it can also play a greening role. This is the reflection of a united economic and environmental benefit.

(5) The safeguarding of the grassland

Fire disasters are the most serious hazard for the grassland. Every year in April and May the grass and trees are very dry after the winter; meanwhile, due to grazing, the grassland has cow dung, and cow dung is light and easy to burn; the burning cow dung will ignite the peripheral dry grasses due to the heavy wind on the grassland, and therefore the consequences could be unthinkable. Due to the limited economic development level, although the local government of Mongolia has set up a particular case bureau, they still do not have enough force to cope with the fire situation; therefore, the government asks every enterprise that meets the standard to cooperate with the actions of a particular case bureau and set up an emergency team itself. The safety and environmental protection department of the Xindu Mineral Industry has a very professional emergency team consisting of 35 persons in total; every team member is professionally trained, and has very professional and complete devices. A knapsack marked with the name of the team member has a relief suit, drugs and other belongings, and the equipment room has packed food and water. Every person is arranged with a helmet, a fire extinguisher and various other advanced tools. Team members are engaged in production at every position; when a special case happens, they will call out immediately. Meanwhile, the enterprise has a special emergency budget and a careful emergency action plan; all of these have guaranteed the high efficiency of the enterprise emergency team. Even though every mining enterprise has an emergency team with certain equipment according to the governmental requirement, few can reach the level of the Xindu Mineral Industry at present. The emergency team of the Xindu Mineral Industry acts like an army, being constantly on call and obeying the assignments of the local government.

Figure 3-12 The equipment is updated once every three years

In 2012, this emergency team had participated in a grassland fire extinguishing task twice, and in one incident, the team was the earliest to arrive at the scene. On April 24-26 2013, a grassland fire disaster happened in the vicinity of West Urgut; after receiving a notification, the emergency team took action immediately with one special vehicle and over 10 team members dispatched to cooperate with the government forces to put out the fire. Soon after, at 8.00 am on April 25, an extremely fierce fire started in the grassland near the mine lot, the Xindu Mineral Industry dispatched five vehicles and the whole emergency team to rush to the scene. The party recalls that when they arrived, the fire had extended all over two mountains; they were the earliest team on the spot and informed the provincial special case bureau of the fire. After fighting for about five hours, the emergency team put out the fire.

The Mongolia *National Environmental Report 2008-2010* shows that fires are the main way that the forest and grassland get destroyed; a timely control and extinguishing of fires on the

grassland can defend the life and environment of the grassland.

4.2 Integration with the community

Apart from the protection of the environment, the Xindu Mineral Industry also pays attention to its relationship with the local community. Since its start, the enterprise insists on providing some welfare to the local community yearly. In the West Urgut urban area, the Xindu Mineral Industry put a lot of money into helping the government to build Sukhbaatar Square and Unity Park. People can overlook the whole city of West Urgut from Unity Park, and it is the first-choice for citizens looking to relax. The company also built fitness equipment in the surrounding of a lamasery, and is helping the local government to build two roads of which one is to connect the urban area to the mine lot while the other one is to link the police office with the provincial government. The first road is advanced by 2-3 kilometers every year and is still under construction at present, and the second one is near to completion. Besides, from 2004, enterprise police offices 20 undergraduates in West Urgut every year. From the construction of Xindu Mineral Industry to now, the accumulated capital for the above activities has been more than 3 million Dollars.

Figure 3-13 Company staffs participated in Ovoo Festival

Mongolian staff is also engaged in the enterprise's production work, and the enterprise provides very good labor guarantee measures, compensation and welfare for them. The miners who work at the Xindu Mineral Industry belong to the local middle class; if the family is made up of a working couple, their living level can obviously be improved. The enterprise also employs capital to build family dormitory buildings for the Mongolian staff, which would locally count as first-class residential areas, and sells them to the staff at a low price. During the production process, the company provides articles for labour protection and health protection measures; staffs are arranged with an earphone, a safety helmet, a respirator and other protective equipment. Besides, the company also respects the living habits of local people very much, and so it has specially set up a

Mongolian food mess to provide sufficient amounts of various foods every day. During local festivals, the company will organize the staff to celebrate, including invite them to perform the Ovoo sacrifice at Tumurtin Ovoo, participate in the Nadam Fair, etc. On the routine bus between the mine lot and the family dormitory building, one Mongolian staff told us that some mining enterprises near West Urgut can provide a higher salary but no as much social benefits as the Xindu Mineral Industry, and he felt very happy to work there.

In February 2007, in Sukhbaatar province a livestock infectious disease erupted, something which has not happened for many years, and the disease was rapidly spread over the eastern area of Mongolia within a very short time. The local government and people paid much attention to the control and prevention of the epidemic. After learning of the situation, the Ovoo zinc mine immediately donated 2, 000, 000 Tugrik for preventing and treating the epidemic and purchased a lot of disinfectant drugs and tools; moreover, the company set up a disinfection and prevention station in the vicinity of the mine lot to provide the material and capital support for the disinfecting stations of West Urgut. The company's act of kindness got the strong support and help of Mongolia's government and people; in order to further prevent the epidemic situation from spreading, the government carried out traffic controls to limit the cross-regional driving of vehicles, but giving special care to the Ovoo zinc mine; even in the most strict period of traffic controls, the concentrated transporting vehicles of the Ovoo zinc mine were not interrupted, thereby ensuring the normal production of the company.

In early April 2013, the heavy wind and snow made the roads impassable, several leaders of enterprises wanted to visit staff in West Urgut, but they received notice from the provincial special case bureau that one minibus was trapped by the heavy snow, and three children were in the minibus. The weather was too bad at that time, and the provincial special case bureau had no equipment capable of rescuing them. After receiving the notice, the company immediately dispatched three large engineering vans to the spot, and timely rescued the minibus. The passengers in the minibus were saved.

These acts of the Xindu Mineral Industry are aimed to return the profits of mineral development to the society, and have won the approval and welcome of West Urgut citizens and local government, thereby creating a harmonious operational environment and improving the staff's enthusiasm for production

Figure 3-14 Clean and commodious family dormitory buildings; there are heating installation, tiles, solid wood floor and others.

5 Influence on the Company's Costs and Benefits

From its establishment to today, the Xindu Mineral Industry has always made a good profit; for lacking of data, we find it very hard to analyze the specific influence of the protection work of the environment on the enterprise's profit from a professional standpoint. But the protection work of the environment always influences the enterprise in two aspects.

On the one hand, if the enterprise shall undertake the social responsibility of protecting the local environment and maintain a good relationship with the community, it will certainly influence its production and operation activities. First of all, the investment capital comes from the enterprise's profit; the enterprise pays a lot of money for its activities in this department over the years, such as forest planting, waste treatment, social donations and purchasing of discharge equipment. This money could be used for enlargement and reproduction, and further increasing the high yields and profit. Therefore, these expenditures of the enterprise detract from its profit and will increase its costs. Besides, if the enterprise pays attention to momentarily protect the environment, reduce pollution and remove waste in the producing process, it will certainly influence the production efficiency of the enterprise, make some simple techniques become complex, reduce the mining capability and average daily output of the enterprise and also hurt its profit. Therefore, even though the Xindu Mineral Industry has good profits, if the investment in environmental protection and community activities were decreased, its profits might be higher.

On the other hand, the Xindu Mineral Industry is trusted and accepted by the local community and the Mongolian government, which created convenient conditions for its operation and production activities since the enterprise actively protects the environment. The special vehicle release in period of epidemic disease spreading is a classic case. Due to its outstanding performance in social responsibility, the enterprise is welcomed by local residents and has not faced parades, strikes or other negative events, and it has also not been investigated by any related environmental NGO or received any lawsuit due to its environmental record. All of this has allowed the operation and production of the mine to carry out smoothly, and the profit the enterprise has received from this may be higher than the cost it gets for protecting the environment.

Therefore, in conclusion, although the Xindu Mineral Industry spent a lot of capital which can be put into production to protect the environment and infuse it to the community, the practice of these activities guaranteed the normal production of the enterprise and further brought it benefits. If the enterprise did not focus on environmental protection in the beginning, and had to take remedial measures after causing the opposition and rejection of the local community, it could not save money and it would damage the social image of enterprise; it is hard for more investments to remove the negative influence. Therefore, the behavior of the Xindu Mineral Industry displays foresight, and each penny invested in environmental protection is greatly returned.

6 Inspirations

The successful experience of the CNMC in Mongolia is worthy of study for many Chinese enterprises. These enterprises are constantly troubled by various risks caused by environmental problems; the success of the CNMC makes us understand the benefit of actively protecting the

environment and constructing a harmonious community relationship for enterprises. According to our experience and the introductions of leaders and staffs from Xindu Mineral Industry, we can obtain the following inspiration in terms of environmental protection:

6.1 Enterprises must realize the importance of actively undertaking social responsibility and protecting the environment

Self-discipline is especially important when Chinese enterprises "walk out". Only by focusing on their own social responsibility and environmental protection, possible problems happening during the production and construction processes can be timely found out. Prevention before damaging the environment by production activity should be carried out first; but if it is not, it is never too late to make amends. Any ecological damage and conflict with the local community will cause a serious negative impact on the enterprise's development, as can be seen in many places. Particularly, some large enterprises should realize what the externalities and influences of their own behavior can be on their own future investment activities, those of other Chinese enterprises and bilateral economic cooperation, and think carefully before acting, so as not to hurt their own enterprise while damaging the national interest.

6.2 Foreign investment must strictly follow the local laws and environmental protection standards

An enterprise investing in a host region is like an enterprise of the host region, and must follow local laws and regulations, and operate according to the law. In Mongolia, although the legal system is under development, its execution and check are very strict; enterprises must operate legally so as to guarantee smooth production. Besides, since laws and regulations are often changed, an enterprise must expect changes in these laws and regulations at any time and timely adjust, and operate legally every minute and every second. When it comes to environmental protection standards, Xindu Mineral Industry performs production and discharge strictly according to the environmental protection standards of Mongolia. Although Mongolia's laws and standards are different from China and from international standards, the enterprise must follow Mongolia's laws first, and cannot overstep. Although Mongolia's environmental protection standard refers to the international advanced standard and is frequently changed, the overall level of domestic environmental protection standard is not low, and a part of the standard is situated at the leading level internationally.

6.3 The enterprise shall set up a special environmental protection agency and carry out institutionalized management

The company must set up a relatively good environmental protection system; combine safety

and environmental protection by setting up a safety and environmental protection department; formulate an annual environmental protection plan and a special budget, regularly carry out safety and environmental protection inspections, timely replace old equipment, and formulate a fixed handling scheme for problems. This institutionalized management pattern can help enterprises to timely find out hidden problems, maintain a level head in case of problems arising and better take preventive measures. Besides, the enterprise's every system should be discussed and approved by all the staff, and can be carried out with a supporting rate of over 65%; the staff's participation will improve their enthusiasm and approval for the system, and guarantee its strong implementation. With a good system in place, the staff's faults can be timely remedied, and the production safety and environmental protection can be carried out at the same time. The institutionalized management pattern lightens the pressure of the management level and improves the efficiency of management.

6.4 Enterprises engaging in foreign investment shall adopt a "localized management" pattern

The safety and environmental protection department of the Xindu Mineral Industry has seven full-time staff from the head of the company down to the employee, who are local Mongolians. The personnel localization of the safety and environmental protection department has two main advantages: first, it is more convenient for communication with the company's other staff. The safety and environmental protection department shoulders the important tasks of cultivating the safety and environmental protection awareness and checking the safety and environmental protection work, and needs to continuously carry out training, education, inspection, supervision and assessment on staffs; communication between local people is naturally more convenient and clearer than between Chinese and Mongolian parties; meanwhile, the criticism and education are easier to accept. Secondly, the local people can better understand the changes in Mongolia's government and laws. The above has been made clear about the variety of the investment environment in Mongolia, and in particular the environmental protection laws and every regulation involving mineral development. Mongolian staff can rapidly learn about these changes, timely report them and prepare a reaction; meanwhile, they can also conveniently contact Mongolia's Ministry of the environment, the technical supervision bureau, the local government, and other departments, so as to timely communicate. Thus it is easy to supervise things while strengthening the strain capacity of the enterprise.

6.5 The enterprise shall strengthen the environmental protection awareness and vigorously focus on environmental protection education

During the survey, we were quite impressed with the company's environmental protection awareness. The company adheres to the idea that "awareness comes before action and is more important than measures", and stresses the rule that " environmental benefit is always united with

economic benefit". The company always carries out environmental protection education for staff from both China and Mongolia, and requires them to reflect upon the environmental protection requirements from their own actions. Mongolian staffs have a native respect and love for nature, while the Chinese staffs are not as good as the Mongolians in this respect and shall learn from Mongolian staff in daily life. The Xindu Mineral Industry has promoted environmental protection awareness, and approved and supported the work for protecting the environment. Correct environmental protection awareness requires the manager to make clear how environmental and economic benefits are related, instead of regarding environmental pollution simply as the negative externality of enterprise production. When it comes to the Xindu Mineral Industry, the circular utilization of water resources and the planting of industrial crops are win-win measures; the enterprise spent a lot of money to protect the environment and integrate into the community, and it won the approval of the local government and people through its excellent performance, thereby avoiding conflicts arising from environmental problems, guaranteeing a harmonious environment for their operations and saving production costs for the enterprise. One only has to think that if measures are only carried out after the problems have already happened, the same handling costs will be spent and a lot of money will further be used to carry out crisis public relations and rehabilitation work; therefore, the practices of Xindu Mineral Industry achieve double the results with half the effort.

Of course, as an enterprise, profit must be the foundation for sustainable operations as well as the general purpose of the enterprise. Only with a strategic awareness, enterprises can realize the importance of long-term and overall benefits and develop a sense of social responsibility, and further protect the environment. Therefore, environmental protection work is unified with economic benefit and also serves it. The environmental protection behavior of enterprises must remain within their own capabilities and look for balance between their own operational ability and the demands of the host region. This also means that enterprises cannot certainly satisfy all the requirements of the host region; therefore, we should rationally treat the international criticism and denouncement of Chinese enterprises; they can be regarded as qualified operators if they have not crossed the red line of the law. However, it is skilful to look for this balance; the reasonable practice can better coordinate the benefits for both parties.

Besides, this company has some anther concepts which are worthy of being praised highly and studied, for example when it comes to the management of internal staff, it places **no limits of nationality, and follows the principle that the staff from China and Mongolia have the same personality and dignity even if they are different in ability, thinking, and quality**.

We expect that more Chinese enterprises can study these successful experiences from Xindu Mineral Industry, including localization patterns, special institutionalized management, advanced environmental protection ideas, and harmonious coexistence with the community, reach accords over development and green development, and turn their own investment activities into a flag. Enterprises cannot make their own investment activities fall by the wayside at least for ecological problems, and they also cannot set up a negative model and even cause an influence on the economic benefit of their own economy. Along with the the enlargement of the practicing force of China's "Going Out" strategy and the rise of Chinese economic strength, more Chinese enterprises will go abroad, and we expect that these enterprises can take environmental measures to the host region and carry joy all over the world in the way of the China Nonferrous Metal Industry's Foreign Engineering and Construction Co., Ltd. This way they can maintain a good image for their

operations in the international market while improving the capital of the overall brand of Chinese enterprises.

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Case 4: The Ramu Nickel Project in Papua New Guinea

1 Project Background

1.1 Chinese Enterprises' Involvement

The world class Ramu nickel project that integrates mining, beneficiation and refining is located in Madang Province, Papua New Guinea (PNG). Total investment for project construction is 140-180 million USDs, which is one of the biggest overseas non-ferrous projects to have been invested in by Chinese enterprises.

It is known that the China Metallurgical Group Corporation (hereafter referred to as the MCC) joined the Ramu nickel project in October 2003. On February 2004, China and PNG signed a cooperation framework agreement on this project. In the following year, MCC conducted profound and dedicated visits and evaluations of this project. The text of the agreement was agreed by both sides after several rounds of business negotiations.

In 2005, the MCC signed joint-venture agreements together with Australian Highlands Pacific, a Mineral Resources Development that is owned by the local government of PNG. With the relevant provisions of joint-venture agreement, the Chinese enterprise has an 85% share of this project, out of which MCC has 61%, Jinchuan has 13%, and JIEN Nickel and Jiuquan Iron & Steel (Co., Ltd)(hereafter referred as JISCO) has 11%. The MCC is responsible for the construction of this project, providing construction capital and early development and construction, while the subsidiary of Highlands Pacific- Ramu Nickel will have 8.56% equity of it.

On April, 2006, MCC, The Export-Import Bank of China and the National Development Bank signed the main project financing agreement. In September, general contact and supervision contracts of MCC Ramu nickle project were signed in Beijing, as the owner of the project, Ramu, signed general contract and supervision contracts with China ENFI Engineering Corporation and CISDI Group Co., Ltd; in November, the foundation laying ceremony was held in the place where the project is located in PNG.

The Project is an unincorporated joint venture[15] , as shown in figure 1, between MCC Ramu, MRML and MRRL, two subsidiaries of the Mineral Resource Development Corporation (MRDC), on behalf of the PNG government and landowner interests; and RNL, a subsidiary of the former developer Highland Pacific Ltd. Ramu NiCo Management (MCC) Limited, as the Manager of the Project appointed by all joint venture parties, is fully responsible for financing and capital arrangements, review and approval from domestic and overseas governments, investment control, schedule control, quality control, production operation and readiness of the Project[2].

[15] Unincorporated joint venture is also known as non-company joint venture, the applied fields in project financing focus on mining, energy development, primary mine processing, oil chemical industry, steel and non-ferrous metal etc. In terms of strictly legal concept, this investment structure is one kind of contract-based cooperation established between the investors instead of a kind of legal entity.

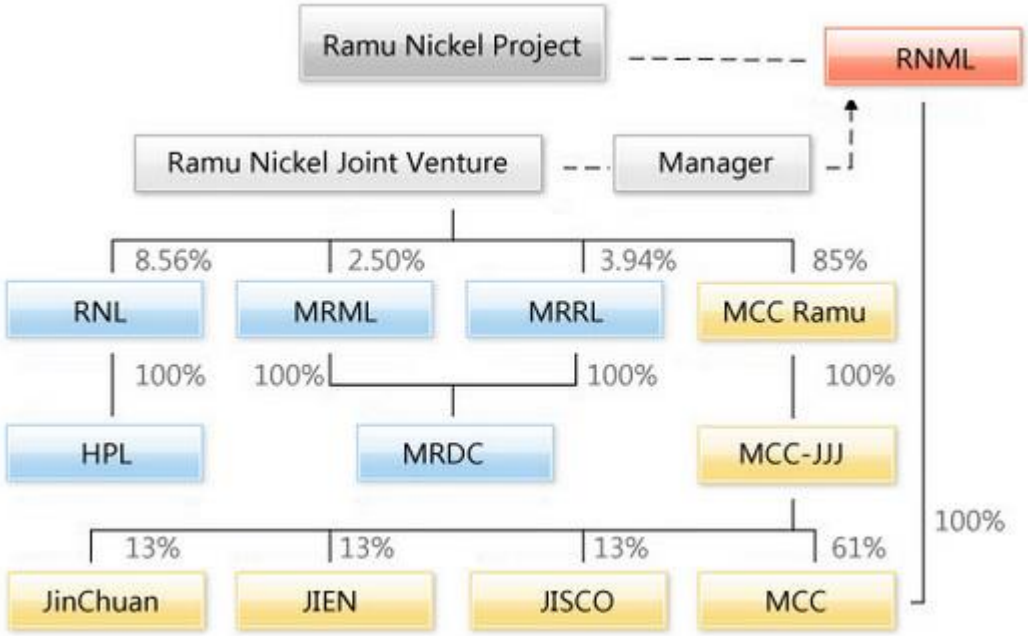

Figure 4-1 Unincorporated Joint Venture

1.2 Profile

It is known that the proven reserves in this project are over 45 million tons, the perspective resource reserves are 248 million tons, the product is nickel and cobalt hydroxide, the service life of the mine is 20 years, and the annual capacity of metal containing nickel is 33000 tons, with an annual cobalt capacity of 3300 tons. Its main construction had been completed in 2011, with a series of joint commissioning in cold and hot water, single series material-put commissioning was initiated in 2012, and nickel and cobalt hydroxide production began on March 19th.

With advanced laterite mine high-pressure acid leaching technique, a high temperature acid dissolution technology over 250℃ is applied to non-ferrous metallurgy, an innovative method combining cylinder mine washer and a tank-style scrubbing machine is applied to mine washing techniques for nickel laterite, and nickel laterite slurry is transported firstly with a long-distance pipeline, connecting mine and refinery, with a full length of 135 km, passing swampland and highlands. DSTP is firstly used to place laterite tailings.

The project mainly contains opencast working and hydrometallurgy of nickel laterite. It is anticipated that the service life of the project is 20 years. The project mainly consists of:

(1) Kurumbukari mine: opencast working, concentrator and slurry preparation;

(2) A pipeline about 135 kilometers long slurry that connects the Kurumbukari mine and the Basamuk refinery;

(3) A refinery in the Basamuk region: producing mixed nickel and cobalt hydroxide as an intermediate product. It includes mainly: vitriol factory, pressing acid leaching factory, iron and aluminum neutralization, limestone factory, power plant, wharf, limestone quarry and camp.

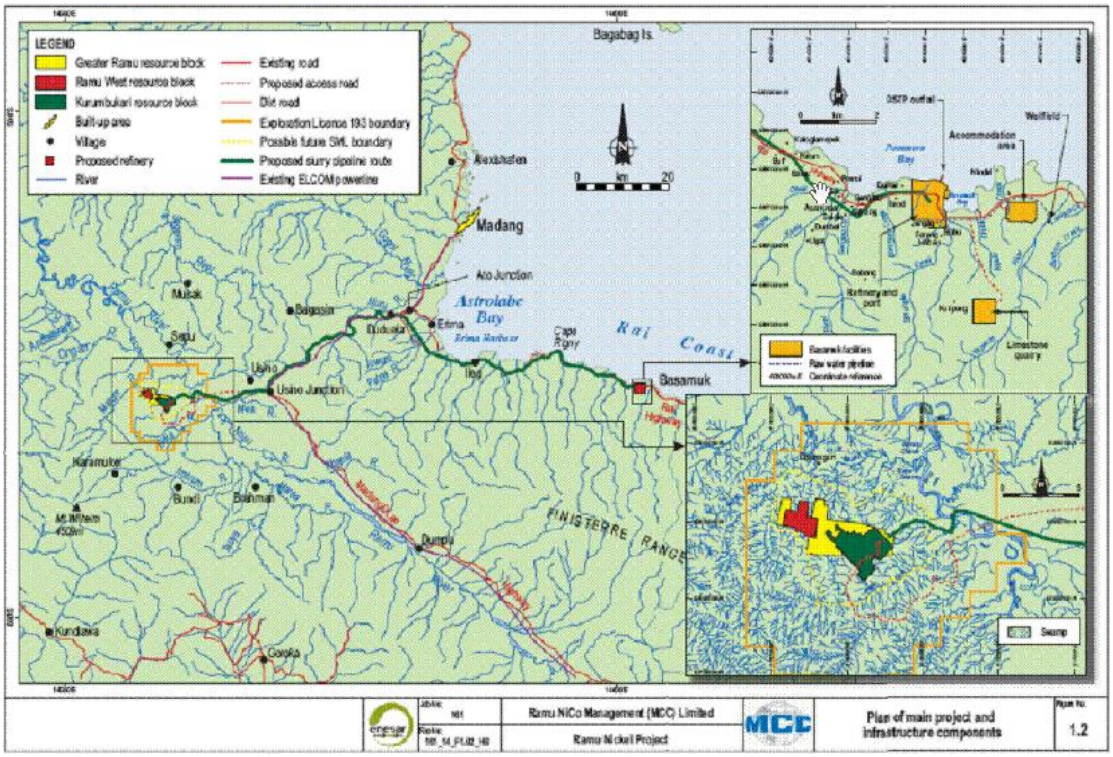

Figure 4-2 Location of nickel laterite[16]

The KBK Mine is located on the Kurumbukari plateau, 600m to 800m above sea level and 75km to the southwest of Madang. It consists of 19 unit projects in total, including open-pit mine, de-agglomeration plant, and beneficiation plant and supporting facilities such as water plant and power plant. The Project will build one great bridge with reinforced concrete structure over Ramu River whose width is 7 meters, of which the driveway is 6 meters wide and the sidewalk is 1 meter wide. The slurry pipeline will be laid on one side of the bridge. Detailed construction method for the great bridge over Ramu River will be determined by construction contractor.

[16] MCC RAMU NICO *2007 Environment Management Plan*, http://www.ramunico.com/plus/list.php?tid=196

Figure 4-3 Kurumbukari mine

The beginning of slurry pipeline is the slope in the east of Kurumbukari highland, and then passes through Ramu alluvial plain with 15 kilometers wide. Next, slurry pipeline crosses vast Finisterre Mountain in the east, and reaches Duduela in Astrolabe Bay, of which, the maximum altitude of Finisterre is 500 meters. The pipeline then passes Rai flat coastline and reaches the refinery in Basamuk finally after passing several river deltas, with full length of about 135 kilometers.

Figure 4-4 Slurry pipeline

The Basamuk Refinery is on the coast of Basamuk bay with 55km away from the southeast of Madang, 5m to 60m above the sea level and 55km to the southeast of Madang. It has 28 unit projects, including slurry treatment, high pressure acid leaching, CCD washing, neutralization ,Fe/Al removal and precipitation as well as supporting components such as limestone preparation, sulfuric acid plant, water plant, power plant and wharf.

The Basamuk refinery covers 670,000m^2, with an elevation range between 5 and 40m. The flat earthwork workload in the whole refinery is about 2,000,000m^3, of which stonework is about 1,400,000 m^3（70%）and earthwork & topsoil 600,000 m^3（30%）. Wherever possible, the stone excavated from the stonework can be used for filling the roadbeds and other engineering. The stonework should be piled in order to be used for future land and vegetation rehabilitation.

There will be about 4 kilometers long permanent roads built in the refinery, whose width is 12m, with 0.5m higher above the ground. The earthwork volume used for backfill of roadbed is 24,000m^3; however, the volume used for laying road face with 20cm thick will be up to 9,600m^3. Total volume of backfill material used for construction of the road is about 336,000m^3. One piece of area covering 25,000m^2 will be cleared for construction, where concrete mix station, pre-manufacturing factory, processing workshop, storage area, water supply facilities and power plant etc., will be deployed.

Figure 4-5 The panorama of the refinery

The living camp covers about 33,800m^2, which will be constructed in two phases. In phase 1, living area covering 3154m^2 will be completed, of which, there will be a dormitory covering 1985m^2 (10 single rooms, 20 double-person rooms, 43 four-person rooms), two conference rooms (each covers 39m^2), 20 offices (518m^2 in total), a dining hall（258m^2），a kitchen（215 m^2）and a shower room（100 m^2）. There will be 300 builders living in this camp from October 2006 to April 2007.

During the implementation, MCC RAMU NICO will strictly abide by local laws and regulations. PNG's environmental laws and regulations in terms of this project are as follows:

- *Environment Law 2000*
- *Environment Regulation(Procedure) 2002*
- *Environment Regulation(Permit and Handover)2002*
- *Environment Regulation(Stipulated Activities)2002*

- *Environment Regulation(Water Quality Standard)2002*
- *Environment Regulation(Expanse Withdrawal)2002*
- *Animal(Protection and Management) Regulations(Revision)*
- *Plant and Animal International Trade Regulations*
- *Mine Laws 1992*
- *Mine Safety Laws*
- *National Cultural Relic Protection Regulations*
- *Toxic and Hazardous Articles Regulations*
- *Quarantine Laws*
- *UN Convention on the Law of the Sea*

PNG constitutes some relevant laws pertaining to overseas investment projects, e.g. *The Law of the Mine (1992), Investment Promotion Laws (1998), Forestry Laws (1998), Fishery Management Laws (2000)*; in terms of the labor, overseas investors are required to abide by *Citizen Employment Law (1980),Non-citizen Employment Law(2008), Non-citizen Employment Law(2007), Act of Employing Foreigners* etc.; In addition, *Duty Law(1990), Custom Law, Land Law1996 ,PNG Constitution and Convention on AVOIDANCE OF DOUBLE TAXATION AND THE PREVENTION OF FISCAL EVASION WITH RESPECT TO TAXES ON INCOME* etc.[17] are also required to be abided by.

There are no relevant local laws and regulations available in Madang province.

2 Environmental and Social Impacts

2.1 Environmental Impacts

(1) Potential Environmental Impacts[18]

1）Land

The main impact is involved in occupying the land, destroying land resources, relocating the villages where the refinery is located and reducing the farmland.

2) Freshwater

The fish habitat may be impacted due to the increase of the concentration of suspended solids in the river, the increase of sediments in the floodplain, the decrease in the amount of fish and the possible fill of U-shaped river way from sea outlet of Ramu River.

3) Shallow Sea Water

The hydro-biological ecology, the coral reef living in shallow sea water and the water along the shores will suffer from turbidity and mud. During production, there won't be a significant impact on the shallow sea water, with little impact from the living sewage.

4) Deep Sea Water

Immersed tailings, which have a low toxicity, mainly impacts the water in a physical manner instead of a chemical one, and water quality is easily recoverable after production terminates; without an impact on existing fishery, there is little impact on undeveloped fishery resources in the

[17] Polices and Regulations(summarized)--Economic and Commercial Counsellor Office, PRC's Embassy in PNG.
[18] MCC RAMU NICO Project—Environment Guide 2008, http://www.ramunico.com/plus/list.php?tid=196

deep sea. In the 10 years after its termination, the sediment released will be covered by mud, so that the sea environment is recoverable.

5) Air

It is predicted that health is not harmed by air pollutants and dust, and the vegetation isn't either. The vegetation to the south of the refinery will suffer from sulfur dioxide some of the time, so that a vegetation test plan is required.

6) Sound Environment

The project is far away from the populated areas, and it is predicted that there will not be a significant impact on the outside.

(2) Actual Environmental Impacts

The PNG governments at various levels have approved of the Ramu NICO project, including the **DSTP**[19]'s environmental approval[20]. The DSTP refers to placing the tailings into enough depth to prevent them from causing a negative impact on the marine environment. The PNG government believes that the system design meets the requirements of environmental permits issued by the Ministry of Environmental Protection of the PNG, adopting internationally recognized environment design principles, mainly based on table 1.

Table 1 Simplified Table of Systematic Evaluation for DSTP[21]

Systematic design conditions for DSTP	The compliance of PNG Ramu NICO
The angle of the slope（>10°）outside the outlet is enough for slurry to float away effectively and automatically	Very good; the angle of slope outside the outlet selected is much greater than 10°, with about 20° in near region, and 12° in far region.
Stable slope	Good: the slope is much greater than 12°
There is stable deep sea basin in deep sea, which is sufficient for receiving tailing.	Very good; there is very deep and vast Vitiaz sea basin in 800-1600 meters deep.
Being released in mixed layer and light penetration layer	Satisfied; being released below 150 meters (the depth of the 2 layers above is not over 120 meters deep.
Density current with stable, tilted tailing slurry is sufficient to bring the slurry tailing to deep sea basin.	Satisfied; system design will have continuous and stable tailing slurry density current
There is strong current in deep sea, it is guaranteed that (rising) current won't bring the slurry to the mixed layer	Very good; the velocity of seabed current doesn't exceed 0.2 meter/sec, generally
Being released while tide level is between top 0.75 meters and bottom -0.95 meters.	Satisfied; system design is being operated and run according to the requirements

However, there are three different attitudes available internationally for DSTP—being denied, approved and conservative. The essence of this technology is to dump mine waste into the sea, which is harmful to human body and nature due to heavy metal contained, thus, PNG Fishery Administration stated that "this mine field is an unsustainable project socially, economically and environmentally that is not allowed".

[19] Australian Highlands Pacific www.highlandspacific.com. 2007: figure and words from the website.
[20] DSTP Plan of MCC RAMU NICO, http://www.ramunico.com/plus/list.php?tid=197
[21] Chen Zongchun. 2008.Study on DSTP Technical Scheme of Overseas Alongshore Smelting Tailing [D]

In 2010, Ramu Company was complained legally due to the possible impact to the environment made by DSTP system. RAMU NICO DSTP project underwent 21-month fierce and complex lawsuit process, during which the construction schedule was disturbed and delayed severely, with the reputation of the project impacted in certain degree, and the confidence that the investors and banks had for PNG national project was shaken, reflecting directly and indirectly economic loss, significantly[22].

2.2 Land Issue[23]

The total national area of PNG is 476 thousand square kilometers, 97% of which is traditional land owned by tribes; 1% is freely owned private land, with only 2% owned and controlled by the government. There are inevitable land issues where these resources are located, when mine resources are developed in PNG. During the early stages of development, and even the duration of the whole project, maintaining effective communication with landowners is not only an extreme challenge, but also a critical guarantee of whether the project is invested successfully or not.

2.3 Infrastructure Construction

In the following two investment fields—mine resources development and forest logging, the investors must not only pay resource taxes and make compensation for mine resources under the lands and forest resources that are both owned by traditional tribes, but also implement corresponding construction of infrastructure for the tribes and regions where the resources are located (e.g. building the roads, bridges, water and power supply facilities etc.) and shoulder social responsibilities (e.g. building the facilities like schools, clinics, churches, clubs and environmental facilities etc.).

Meanwhile, due to very poor infrastructure in PNG, most of which concentrates in inland and highland that have extremely poor infrastructure, infrastructure construction costs that must be input for implementing investment project is very expensive.

3 Strategies and Measures

3.1 Environmental Devotion

The environment is one of the most important components of the sustainable development plan and work for the Ramu Project. The focus on and support for the environment by the company made themselves felt through the whole construction and operation period. During the construction period, the key for environmental work is to make a baseline survey, project area environment management and supervision and environmental promotion and consultation campaign. From an environmental

[22] http://www.ramunico.com/plus/view.php?aid=1913

[23] Sino-overseas dialogue: http://www.chinadialogue.net/article/show/single/ch/644-Chinese-banks-time-to-go-green

point of view, after repeated comparisons and screenings, the company adopts DSTP techniques for processing the tailing. In order to guarantee a successful DSTP, the Management Company organizes and conducts a tailing attribute test, a toxicity test, a near density current model test and a far density current model test, acquiring reliable technical data for the environment protection of DSTP.

The company invested over 2 million USD to conduct an environmental background survey for the land and the sea and special survey for freshwater fish resources in Ramu River and deep sea fish resources in Basamuk where the project was located from 2006 to 2008. There were 2 weather stations and 6 hydrological observatories built for monitoring environment and collecting meteorological and hydrological materials, laying good foundation for environmental monitoring of the project[24].

The company attached importance to the communication and exchange with the stakeholders, and prepared and completed special animation commercial and a promotion manual in Pidgin, and visited the villages in the place where the project was located for promotion and communication, explaining environmental issues commonly focused by the public, meanwhile, environmental update and monitoring reports were reported to Ministry of Environment Protection of PNG regularly.

The company has been trying to promote common efforts and coordination between various stakeholders in order to create an environment friendly and sustainable Ramu project.

(1) Policy and Commitments

Achieving the environmental sustainability of our operation is one of our long term targets. We strive to meet the following objectives:

- To thoroughly implement an environmental management system in compliance with the laws, regulations and standards of the host region.
- To mitigate environmental accidents, minimize impacts on the community and continuously reduce environmental hazards.
- To adequately allocate responsibilities and resources, and to fulfill environmental commitments with team efforts.
- To implement employee training programs, supervise the environmental management of the contractors, contractors, and to enhance the environmental awareness of the whole team.
- To implement environmental assessment, monitoring and performance review.
- To promote regular dialogue and consultation with stakeholders on environmental matters.

(2) Environmental Management

Our construction stage Environmental Management Plan details management measures and steps to minimize environmental impacts, as originally proposed during the Environmental Impact Assessment. During the construction stage, we implemented management measures accordingly to reduce the impact of the construction activities while constantly monitoring the implementation and results. Those efforts will lay a good foundation for the environmental management works in the operational phase.

Ramu Nickel Management (MCC) Limited issued *Early Construction Environment Management Plan of RAMU NICO, Environment Factor Evaluation Principle of RAMU NICO and*

[24] MCC RAMU NICO, Local Survey of Land and Sea(2006 and 2007), http://www.ramunico.com/plus/list.php?tid=197

Environment Guide of RAMU NICO Project during Construction in 2008 etc. one after another, during construction.

(3) Environmental Survey Study[25]

The Ramu Environment Plan was prepared in 1999, after extensive environmental impact assessment and studies between 1993 and 1999 conducted by the Ramu Nickel Joint Venture. It was approved on 21 March 2000 by the Department of Environmental Conservation (DEC) of the PNG Government following six independent peer reviews.

From 2006, in cooperation with leading international environmental firms, Ramu Nico commenced a comprehensive environmental baseline survey. The survey assessed the basic environmental conditions of the project to provide data for future monitoring and analysis. By the end of 2008 approximately US$ 2 million was spent on the survey and associated activities. The management company closely interacted with the landowners, the Environmental Protection Ministry and the Mineral Industry Ministry of PNG, in order to meet the highest standards that they required. The land baseline survey included coral reef (including fishes) survey, surface hydrology survey, noise survey, meteorological survey, river water quality survey, air quality monitoring, health and diet survey, village statistics, freshwater fish survey and plant survey; the sea baseline survey included super stratum sea survey, seabed sediment and ecological characteristics survey, alongshore sediment and sea fish survey.

(4) Addressing the Questions about DSTP

Basic design[26] of DSTP began from 2006, which was completed together by experienced Joint Venture incorporated by US PSI and Canadian Hayco Company. Relevant results of DSTP design passed independent review by Australian Cardno Acil employed by Environment Protection Ministry of PNG on August, 2007.

On November 8th 2007, the Ministry of Environment Protection of PNG issued the environmental approval for RAMU NICO during construction and operation period (including DSTP). In 2006 and 2007, the environmental management plans during both the early period and the period of construction were approved.

The design, construction and operational monitoring of RAMU DSTP included:

- January 26, 2007 ENFI signed contract of DSTP system with PSI.
- February 23, 2007 PSI completed the works of outfall pipeline bathymetric survey and on-land pipeline's exploration according to the basic design contract.
- April 10, 2007 Ramu Nickel Management (MCC) Limited and ENFI examined the primary basic design based on the contract issued by PSI.
- July 27, 2007 RNML reviewed the basic design report (0 edition).
- June 24, 2008 PSI completed the tailing slurry test of the MHP.
- August 21, 2008 PSI completed the basic design report (1 edition) according to the latest design parameter provided by ENFI.
- September 27, 2008 RNML reviewed the basic design report (2 edition).
- October 29, 2008 PSI replied to the experts' comments about basic design report of DSTP system and agreed to further improve it.

[25]MCC RAMU NICO, MCC RAMU NICO, Local Survey of Land and Sea(2006 and 2007), http://www.ramunico.com/plus/list.php?tid=197

[26]DSTP Plan of MCC RAMU NICO, http://www.ramunico.com/plus/list.php?tid=197

On December 15th, 2008, the bidding of the general contract for conducting DSTP was carried out, based on the basic design documents.

In 2009, the basic design of the DSTP system had been completed, including a land tailing self-flow pipeline 446 m long, a near-shore mixing tank to which a sea water dilution pipeline 180 m long is connected, and a tailing release pipeline 415m long. The whole system doesn't have pumping equipment designed, but is driven by the gravity of the slurry.

In 2010, the DSTP was the target of serious complaints due to environmental disputes during its implementation, in response to which RAMU conducted three different measures: accelerating the compensation of the construction schedule that had been delayed within the scope allowed by the laws; mobilizing and uniting all the forces possible to attempt reconciliation; defending, testifying and responding in court. The Congress of PNG revised the *Environment Law* and acknowledged the environmental permits of the RUMU project; the RAMU company not only conducted DSTP awareness and community promotion of environment management, but also held a news conference for promoting it to the mainstream; officials including national leaders, ministers and governors of PNG visited the project area to call for support for the project from the public; and all walks of society advocated this project publicly. Finally, the system construction of DSTP was acknowledged by the Madang National Court in October 2010, and completed in December of the same year. The hearing of the case was concluded in March 2011. On July 26th 2011, Madang Court announced it would deny the application of forbidding the DSTP, which meant that the project can continue with its DSTP as scheduled.

Keeping the world aware of the Ramu Nickel Project while informing stakeholders on its progress and even informing the population within and around the project impact area is the challenge undertaken by the HSE Department of Ramu Nico Management (MCC) Limited. Not least, discussing the Environmental Impacts associated with the project and the strategies planned and implemented to control them is an important aspect made known to the stakeholders through the Environmental Impact/Project Update Awareness.

Column 1

Ramu Nickel Project Environmental Issues and Mitigation Measures Construction Phase:

1. Dust

At the construction sites, dust is often a problem caused by wind or by traffic. Dust is a nuisance and can affect your eyes, nose, throat, and can have a bad impact on local gardens, laundry, traffic movement, etc. If dust becomes a problem then report this immediately to your supervisor so that water can be applied onto the site to minimize dust. Vehicle movements may need to be limited in order to reduce dust as well. All vehicles at the project sites must move at 20km/ h or below to reduce dust.

2. Noise

Noise can be expected from trucks, machinery, construction equipment and tools. Noise can be a problem to workers, observers, the surrounding communities and wildlife. All machinery, vehicles and plants must be operated with mufflers or silencers where appropriate and maintained as needed. Noise generation must be avoided at night times when people are relaxing or sleep.

3. Litter

Litter such as bottles, food drink cans, plastic wrappers, plastic bags, and food waste can cause safety, health, visual, and pest hazard. All litter must be placed in specially recommended

containers provided for the different waste types. Site clean ups must be carried out as required by the Site Environmental Personnel. Environmental awareness and training have now been given to workers. If not too sure about litter manners, seek assistance form the Site Environmental Personnel.

4. Building Wastes

Timber off-cuts, paper, cardboard, sawdust, waste concrete, wire & metal straps, containers, drums and paint cans are all building wastes. These wastes are a problem to public health and make the work site untidy, and pose danger All building wastes have to be collected and put in separate piles for each type. Some can be recycled, some will be buried and the rest can be sent to the central dump.

5. Soil Erosion

Heavy rain can easily erode the top lose soils found around the mine site, pipeline and refinery site. These soils can then occupy drainages that would cause overflow resulting in damages to gardens, roads and sometimes houses as well. To stop soil erosion, land clearing must be limited wherever possible and all water running on surface soil, in drains or our land must be carefully controlled to stop erosion. RNML Environmental Personnel on site is to control erosion. If you see erosion problems then report to him/ her immediately.

6. Storm water

Storm water causes erosion on soil. All storm water on earth has to be carefully managed to see that it does not cause erosion. Sometimes concrete and timber culverts have to be built to control storm water going down slopes.

7. Topsoil

Topsoil is used for site rehabilitation and grass growth because it is full of plant food. Topsoil comes from site clearing activities and it must be saved on site. If topsoil is not saved it will be hard to allow the grass grow back properly.

Topsoil must always be saved carefully so it can be used for amenity planting or rehabilitation at the end of the development program.

8. Workshop Wastes

Workshop Wastes include waste oil, fuel, tires, batteries, fuel filters, used parts and packaging material. The oil and fuel can enter watercourses and is toxic to aquatic life. The waste oil can also contaminate groundwater.

To minimize the workshop wastes and reduce environmental impacts, all vehicles and machinery are to be refueled and maintained at the designated workshop area as much as possible. All waste fuel, oil, grease batteries, tires, fuel filters, discarded parts, etc must be saved and stored away from drainage, and care taken in disposal.

9. Sewage Disposal

Sewage is a pollutant with serious health risks. Toilets are installed for all workers to use.

Any damage done to septic tanks or other related problems must be reported to the Site Environmental Engineer immediately. These toilets must be used where possible.

All sewage and waste to be diverted to the treatment plant installed on site.

10. Dead Trees & Grasses

Waste vegetation can be expected during the initial site clearing, which can lead to risk of erosion, damage to watercourses and disturbance to wildlife if care is not taken to limit clearing and disposal of vegetation. Any problems related to disposal of vegetation must be reported to the Site Environmental Engineer. Vegetation must be disposed of carefully and never to a watercourse.

11. Site Rehabilitation

The worksite has to be cleaned up at the end of each step. Ensure that clean up is on time and done thoroughly. Rehabilitation to be undertaken at mine site, pipeline site, quarry sites, access roads, building construction sites,stockpiles, etc. The saved topsoil will be used for rehabilitation. The planting schedule, site preparation and planting, and management are all under RNML responsibilities. RNML has an Environmental Engineer who can provide any expertise needed.

3.2 Relocation, Land and Environmental Compensation[27]

In according to the Relocation and Compensation Agreement, Ramu has so far constructed 30 relocation houses which were handed over to landowner families on March 2011. The relocation timeline has been challenged by several factors, such as a lack of locally available technicians, weather and material delays. More seriously, the lack of public infrastructure and service further delayed the physical relocation after the houses were constructed. To move the process forward, we signed an agreement with the local government in February 2011, committing to help provincial governments to provide maintenance and public services for the relocation. On March 8th 2011, more than 100 landowners moved to their new houses located in Enekuai.

According to the Project Land and Environment Compensation Agreement ("LECA"), in the course of the development the company is responsible for 14 categories of compensation such as land use and land loss compensation, social inconvenience compensation, compensation for loss of bushes, trees, creeks and sea water and others. Under our CA Department we make the payment in accordance with the agreed rates and established record and verification procedures. By the end of 2010, we have paid 6.8million kina in total as compensation to landowners.

The compensation brings immediate benefits and development momentum to local landowners, and indirectly contributes to local economic development. With the compensation payment they can set up small businesses such as vegetable gardening, poultry breeding and shops, and some clans even purchase equipment to obtain more substantial spin-off business.

In Papua New Guinea, land ownership can be a fluid issue, in particular within the resources development industry. Currently, there are a number of registered land title disputes in the Project area waiting to be heard and determined by the Lands Title Commission, a government agency. For those disputed lands we will keep the compensation payment into a trust account pending the decision of the disputes.

[27]MCC RAMU NICO 2010 Sustainability Report，http://www.ramunico.com/index.php

3.3 Social & Economic Development

The Usino-Bundi and the Raicoast areas where the Project is located are among the least developed in Madang Province, where basic government services have been neglected for decades. Our commitment to assist the local community in social and economic development is documented in the Ramu MOA.

Since assuming the role of the Manager in 2005, we have been systematically implementing the Social and Economic Development Plan (SEDP) by stages, in order to improve the infrastructure, medical and education facilities urgently needed by local communities. By the end of June 2011, we have substantially completed all programs during the construction phase under SEDP.

Where possible and practical, we also go beyond our MOA commitments and assist in local agriculture development, community road construction, sharing project infrastructures with the public, and many other community development activities.

We implement several programs for local agricultural development[28] to help generate cash income for landowners and transfer them skills for long term development. As early as 2007, the agriculture development team under our CA Department carried out field surveys and studies on rice farming and helped local people achieved a good harvest at Ramu valley. We have also engaged Chinese agricultural experts to promote appropriate crops and spread farming techniques through our demonstration farms at both Krumbukari and Basamuk, and the cocoa programs along the Raicoast.

Figure 4-6 Supporting Local Agricultural Development

We help local landowners market their produce through direct purchases and through regular arrangements with the catering company on sites. This in turn encourages more local people to be involved in the agricultural development, and more programs are being implemented.

Under the Ramu MOA, we made commitments during different stages of the Project in relation to assisting local social and economic development. During the construction stage we are committed to 11 infrastructure upgrading and construction programs in the Project area with a total input of 3

[28] http://www.ramunico.com/plus/list.php?tid=251

million Kina. These programs, as listed below, have been substantially completed.

Table 2 Social and Economic Development Project

Project Name	District	Targets
KBK and Inland Pipeline area LOA office	Usino Bundi	KBK/Inland Pipeline
BASAMUK and Ileg LOA office	Raicoast	Basamuk / Coastal Pipeline
Enekwai police station	Usino Bundi	KBK
Enekwai health center	Usino Bundi	KBK
Ganglau primary school	Raicoast	Basamuk
Basamuk water and power supply	Raicoast	Basamuk
ILEG health center	Raicoast	Coastal Pipeline
Danagari water and power supply	Usino-Bundi	KBK
Enekwai water and power supply	Usino-Bundi	KBK
Usino primary school	Usino-Bundi	Inland Pipeline
Naru primary school	Madang	Inland Pipeline

3.4 Government Involvement [29]

We maintain regular consultation with the relevant agencies in the PNG national government, like the Mineral Resources Authority (MRA) and the Department of Environmental Conservation (DEC), as well as the Madang provincial government, to update the Project progress and discuss the issues to be resolved. Through our Community Affairs personnel, we foster close ties with the local level governments in the Usino Bundi and Raicoast regions to ensure their support for the development.

The Completion & Commissioning Ceremony for the Ramu Ni-Co Project was convened in the Basamuk Smelting Plant on December 6, 2012. Many officials and distinguished guests were present at this grand event, including: PNG's Prime Minister Peter O'Neill; Sir Michael Somare, the former Prime Minister & Father of the Nation of PNG; Mining Minister Byron Chan of PNG; Minister John Pundari for Environment & Conservation of PNG; Chinese Ambassador Qiu Bohua to PNG; and representatives from Chinese Ministry of Land and Resources, State Development Bank and Chinese Economic & Commercial Office in PNG. The ambassador Qiu stated that the total investment of RAMU NICO project was about 1.8 billion US dollars, making it not only the biggest project in the Pacific Islands to be invested in by Chinese enterprises, but also the result of joint efforts made by China, PNG and Australia. It is remarkable that this project can benefit the economic development of PNG and the community, increase employment opportunities, and further promote friendly cooperation at the level of the economy and trade between China and PNG.

The PNG's Prime Minister Peter O'Neill also gave a passionate address, and he firstly congratulated the completion and commissioning of the RAMU NICO project, and stated that it was significant that Sir Michael Somare, the former Prime Minister & Father of the Nation of PNG, was

[29] MCC RAMU NICO 2010 Sustainability Report, http://www.ramunico.com/index.php

so forward-looking as to introduce this project nine years ago, which would play a positive role for fully exploiting and using the rich mineral resources in Madang province and better promoting the development of the national economy and various local community careers. As new Prime Minister, he committed the new administration to continue to provide more support and guarantees for the future development of the project, as always[30].

3.5 The Relationship with the Community

In terms of the relationship with the local community, RAMU company turned developing and maintaining local relationships into a critical path for the RAMU project management. It attempted to sufficiently understand the reasonable requirements like we were in the locals' shoes, and fully respect the reasonable requests of landowners and local society from the point of view of harmonious coexistence and sustainability, and invested enough money to perform the obligations and responsibilities of developing local relationships.

The company organized environment awareness to make the public better understand the environmental impact and policies of the project. By 2010, the company had conducted awareness campaigns in 54 different places, with over 16,000 people in the audiences. Through this, we can not only deeply understand the environmental issues that the local community focus on most, and listen to the feedback about the company's environmental measures from the public, but also promote the company's environmental protection concept.

We make donations and actively assist local social, cultural and sport activities, including the traditional Kangal cultural festival at Saidor, Raicoast, the Sustainable Development Forum of Divine Word University, Madang Provincial Sports Team, KBK Ramu Ants Rugby team, Basamuk sports meeting and MCC-Basamuk soccer game. This assistance is greatly appreciated by the local people, particularly local landowners.

The MCC RAMU NICO project not only promoted economic development locally, but also cultural integration bilaterally. In order to strengthen the communication with local community, the company conducted a lot of language and culture training, including signing a cooperation agreement with DWU university of Madang province, and providing a series of training courses for the staff in three construction sites of the project. Thus, both parties built up a bridge for communication, including the impact brought by the project; community work conducted by the company for performing social, environmental and economic responsibilities; and how the company established a relationship of closer cooperation with local organizations, deepening language and cultural communication between the PRC and PNG.

In terms of health and education, since 2006, the company has been maintaining medical rescue stations in the villages near the mine and refinery regularly, providing staff and medicine; organizing a promotion team for making preventive promotion regarding HIV/AIDS and other diseases; and conducting many medical tours in the community. The company provided economic support for the primary and middle schools in the place where the project is located and improved teaching conditions, while providing tuition support for the children of local landowners, winning unanimous compliments from the local community. The local relationship department of the company employed special staff for women development affairs, which can help local women to master skills,

[30] Economic and Commercial Office to PNG

and actively promote them to participate in project construction and improve family income and children's welfare. There is mainly Christianity in the PNG, with many other religions available. The company provides special prayer places for the religious staff, with convenience. We bonded the relationship with church organizations, supporting the commencement of priest candidates in local churches and large rituals for the community in the churches.

Figure 4-7 RAMU NICO RAGBY football team established newly with the sponsoring fund

4 The Impact on the Costs and Income of the Company

By the end of 2010, MCC RAMU had paid about 3,171,850 USDs as land and environmental compensation for local families; it had built and delivered 45 high-quality houses for relocation; invested about 500 million Yuan (about 73 million US dollars) to bring corporate and outsourcing opportunities for the landowners; built and rehabilitated the schools and clinics in the project area, supported the students to study, provided medical services for the inhabitants regularly and supported cultural and sports activities, and opened a RAMU bridge and highway to the community; finally it provided employment opportunities for 3000 citizens of PNG. From 2009 to 2010, the company signed MOA with the stakeholders and completed seven community support projects. The investment and land compensation recently made by RAMU Company in terms of environmental protection can be seen from table 3 and 4.

Table 3 Investment for Environment Protection

Item	Expenditure from 2009 to 2010	Budget during operation
Environment monitoring activity	800,000 USDs	Average 1 million USDs annually during operation
Erosion control	20,000,000PGKs（8,690,000 USDs）	From 2011 to 2012, 1 million PGKs annually (about 435.5 thousand USDs)
Land rehabilitation	200,000PGKs	1 million PGKs annually (about

	（about 86,900 USDs）	435.5 thousand USDs) during operation

Table 4 Payment of Land Compensation

Item	Year	Amount
Land and other compensation	2006	58,058.30PGKs（25,226.33 USDs）
	2007	900,280.50PGKs（391,171.88 USDs）
	2008	2,169,848.95PGKs（942,799.37 USDs）
	2009	3,014,178.85PGKs（1,309,660.71 USDs）
	2010（by October）	648,211.60PGKs（281.647.94 USDs）
Total amount		6,790,578.20PGKs（2,950,506.23 USDs）

Source: *Sustainability report 2010* of MCC RAMU NICO

According to a *Feasibility Study Report i*ssued by ENFI and the existing annual capacity of nickel and cobalt and their market prices, the project will produce 31,000 ton of nickel annually, and 3,000 ton of cobalt annually. Taking a nickel price of 13,640 USDs/ton and a cobalt price of 28,000 USDs/ton into account, annual incomes of RAMU can reach 507 million USDs annually, with total annual cost of about 329 million USDs, with a total annual profit of 178 million USDs, and with a profit after tax of 150 million USDs.

5 Experiences and Lessons Learned

The experts point out that the Ramu program has realized a fast schedule and an economical investment in terms of sufficient feasibility studies and environment evaluation, and it is a sustainable development program that is effectively involved in the international economic cooperation, as well as a successful example of "going overseas" for China[31].

Due to the limitation of the local laws, regulations and taxation systems, MCC RAMU NICO must register in the region where it is located for operations; due to the complexity of the program, in which most of the partners involved are international, there are internationalized, fully socialized and localized management features which make the staff of the company more diverse. The staff and consulting team are from China, PNG, Australia, Canada and US etc. In terms of the various existing jobs of RAMU, including establishing a management system framework during operations, building a "professional, international and local" team, improving health and safety standards and shouldering environment protection responsibilities, fully complying with international practices and operational standards, the company is dedicated to become a newly international mineral

[31] http://spzx.foods1.com/show_1560425.htm

company with a better leadership.

In the Ramu Nickle/Cobalt program:

The company invests a lot in terms of environmental protection, including previous local surveys and advice for environmental measures. The environmental risks brought by investing this program have been reduced significantly, laying a good foundation for the success of the Ramu Nickle/Cobalt program.

The company tries a lot in terms of community construction and development, doing well in terms of relocation and land and environmental compensation; the progress of this program is moved forward on the premise of establishing a good relationship with the community, avoiding a significant negative impact on the community and reducing the risks to be brought to the community.

The company has done well in terms of social responsibility, and assisting local society and economic development through MoA is just one successful example for one enterprise to perform its social responsibility. Its reputation was considerably improved.

Many aspects of the company's affairs were published in its website in the form of a text, with a sustainability report prepared, in order to guarantee the transparency and publicity of the relevant affairs of the company, playing some role for promoting the progress of the local project.

The company has made certain efforts in terms of promoting a sustainable conception, and although there have been results, the lawsuits have been caused by the DSTP issue, which have caused the program's progress and schedule to be delayed, causing some losses in terms of the economy and the enterprise's reputation. Therefore, it is necessary to closely communicate with the stakeholders, governments, communities and NGOs.

Case 5: Project of China Minmetals Corporation's Purchase of Australia's OZ Mining Company

1 Background of the project

1.1 Project overview

On June 11 2009, China Minmetals Corporation purchased 100% of the prime assets of the world second largest zinc manufacturer and the third largest mining company in Australia, the OZ Mining Company, thus coming into possession of assets such as the Laos Sepon copper and gold mine, the Australia Golden Grove Copper zinc mine, the Century Zinc lead mine and the Rosebery Zinc/lead/silver mine, and obtaining 3.15million tons of copper, 17.13 million tons of zinc, 2.5 million tons of lead, 0.187 million tons of nickel, 167 tons of gold and 9276 tons of silver; meanwhile, it has acquired cooper, lead and zinc exploration projects with good prospects, and increased the resource reserve of the main nonferrous metals such as zinc, copper and lead. On June 18 2009, China Minmetals officially registered and established its wholly-owned subsidiary (Minerals and Mining Group Limited，"MMG" for short), which is responsible for the centralized management of the purchased assets.

(1) Brief introduction of the company

The acquiring firm, the China Minmetals Corporation, is a large-scale enterprise group that's mainly engaged in the exploitation of metal and minerals, production trade and comprehensive services, and ranked 169th in the world's top five hundred companies in 2012. The China Minmetals Group is the current largest supplier of metallurgical industrial raw material integration in China. In recent years, the China Minmetals Group has expanded its overseas market, for example it cooperated with AICOA to purchase 30 years of aluminium oxide; it cooperated with Chile to purchase 15 years of copper; and it united with Jiangxi Copper in 2011 and spent more than 0.4 billion Canadian dollars (about RMB 3.2 billion Yuan) to complete the purchasing of Northern Peru Copper with 100% shares.

The party that was purchased, the OZ Mining Company, is the second largest zinc manufacturer in the world, and the third largest mineral products company in Australia. Its headquarters are in Melbourne, and they were combined by Oxiana and Zinifex in July, 2008. The OZ Mining Company went public and was listed for transactions at the Australian Securities Exchange（ASX）. It owns 18.22 million tons of zinc, which is equal to 18.74% of China's zinc resource reserve in 2007; and it owns 2.6 million tons of lead, which is equal to 6.28% of China's lead resource reserve in 2007. It also has mineral resources and exploratory projects in many countries, including Australia, Canada and Southeast Asia (Laos, Thailand, Cambodia and Indonesia).

(2) Brief introduction to the acquisition process

The financial crisis in 2008 seriously influenced the cash flow of OZ, because of short financing and long investment, and the bank pressed for the payment of debts, so the company's cash flow broke up immediately. On November 28 of the same year, OZ applied for suspension and sold part of its assets through issuing shares or bonds, and suspended officially on December 2. At this time, the China Minmetals Group communicated with OZ's Board of Directors and proposed the acquisition application. In the same year, the OZ Mining Company proposed its application to Australia as well. In March 2009, the Australian government rejected the application of Minmetals since it was involved with military safety. Under this circumstance, Minmetals adjusted its strategy timely and got rid of the part involved with military safety, and submitted its application again. On April 23, the Australian government approved the application of Minmetals. Just when the stockholders' meeting was about to be held, several investment banks in Australia proposed new financing plans and tried to prevent the acquisition application of Minmetals. On this occasion, the China Minmetals Group adjusted its strategy timely and passed a resolution with 92.48% of votes during the shareholders' meeting on June 11. The board of directors of OZ Minerals recommended this acquisition, and the independent institutions also claimed that the method of full cash is the most suitable transaction, conforming to the interest of the board of directors. The conditions of several mine lots of MMG are as follows in table 1:

Table 1 Brief introduction of mine lots of MMG

	Location	Products	Age limit of mine	Product sales
Century	Northwest of Queensland	Zinc concentrate Lead concentrate	Until about 2016	Leave the bay with a full load of concentrate each week for clients in Europe, Australia, China and Asia.
Golden Grove	450km away in the northeast of west Australia, and 280km away in the east of Geraldton	Zinc concentrate Copper concentrate Expensive metal concentrate	Until about 2019	The concentrate is exported to smelting plants in China, Japan, India, Thailand and Australia from the nearby Geraldton harbor
Kinsevere	30km away in the north of Lubumbashi(provincial capital) in Katanga province in Congo, Africa.	Cathode copper	Until about 2018	Cathode copper is sold to clients by the mine age limit framework contract
Rosebery	Rosebery town in the west coast of Tasmania, Australia	Zinc concentrate Copper concentrate Lead concentrate gold ingot	Exceed 2024	Concentrate is transported to Burnie harbor by railway and transported to Hobart and Nyrstar in Port Pirie by bulk cargo ship. Gold ingot is sold to Australian Gold Refiners in Perth and then refined to gold

				bar. This bar would then be sold to fiscal institutions.
Sepon	About 40km away in the north of Sepon town, Savannakhet province, South central Laos	Cathode copper Gold ingot	Copper: until about 2020 Gold: until about 2013	Cathode copper is transported to cable, wire and copper tube manufacturers in Southeast Asian countries through overland and waterway. The produced gold ingot would be transported to Australian Gold Refiners by air and refined to gold bar. The gold bars would then be sold to fiscal institutions.

1.2 Relevant policies of China

With the rapid and continuous development of the Chinese economy, Chinese enterprises need to expand their requirements of international and domestic markets. "Going out" to seek resources has thus become an important strategy for most enterprises. The Chinese policies on enterprises' going out have been perfected constantly in recent years, and most of the policies are of encouragement. Before that, the Ministry of Commerce encouraged overseas acquisition and released *Offshore investment management approach* and *Foreign investment management regulations*. After that, the Ministry of Commerce united with the Ministry of Finance and the National Development and Reform Commission, and formulated various polices to support enterprises "going abroad", involving many aspects such as finance and taxation, insurance, foreign exchange, departure and entry etc.

In 2001, the "going out" strategy entered the Government work report for the first time. Since then, except for 2007, the Government work reports over the years have all mentioned "going out". In the Government work report in 2009, it's mentioned that the "going out" strategy would continue to be implemented, "supporting various foreign investment and overseas acquisition of enterprises and letting large-scale enterprises play the key role in 'going out'."

The Decision of the state council on investment system reform, issued in July 2004, has laid a foundation for China's foreign investment policy system reform, thus providing a clear direction for China to formulate new investment policies.

In December 2008, the China Banking Regulatory Commission introduced *Guidance on risk management of commercial bank M&A.* It allowed commercial banks to grant the loan for paying the transaction price of M&A to the acquirer or its branch company. This policy represents a change from the regulations stating that it is forbidden to grant loans for M&A projects contained in the 1996 General provisions for loans, thus providing new financing channels for the enterprises with investment in acquisitions. It has created conditions for lever acquisition and is conducive to carrying out acquisitions at home and abroad for domestic enterprises.

In the *Steel industry adjustment and revitalization plan* which was passed in 2009, the following courses of action are clearly proposed: encouraging large-scale enterprises to engage in mines abroad with whole investment or joint investment, organize and implement the overseas mineral resources projects; supporting key enterprises that conform to the necessary conditions to carry out resources exploration, development, technical cooperation and foreign acquisition.

On March 16 2009, the Ministry of Commerce stated in *Offshore investment management approach* that if the local enterprises want to carry out foreign investment in which the amount invested is between 10 million and 0.1 billion US dollars , they only need to report to the provincial business department for examination and approval; for foreign investment on energy and minerals, the Ministry of Commerce will only reserve the examination and approval jurisdiction of a few large-scale and sensitive foreign investments, including foreign investments of over 0.1 billion US dollars and foreign investment in certain specific countries. The introduction of these policies has made it much more convenient for Chinese mineral enterprises to go out and conduct transnational acquisitions. The acquisition of OZ Minerals made by China Minmetals Non-ferrous Metals Co.,Ltd. with 1.206 billion Australian dollars (0.852 billion US dollars) has been approved by the National Development and Reform Commission and the Ministry of Commerce.

In July 2009, the State Exchange Bureau in the State Administration of Foreign Exchange issued *Management provisions on direct foreign investment made by domestic institutions.* It stated that the domestic institution should obtain the approval of the competent department in foreign direct investment, and make the investment through establishment and acquisition. It can trade with its own foreign liquid assets, loan at home and abroad, and purchase foreign currency with RMB, material objects, intangible assets or other foreign exchange assets authorized by the State Administration of Foreign Exchange.

In 2011, under the overall background of the "12th five-year plan", the relevant guiding policies of overseas acquisition by Chinese enterprises were released rapidly, and the government planned to issue quality affirmation in terms of Chinese enterprises' overseas resource acquisitions, thus strengthening the management of their overseas acquisitions.

1.3 Relevant policies of Australia

The Australian government has realized the contribution that foreign investment has made to boosting economic development, so the government basically welcomes it. In the meanwhile, the government has realized that there is a worry about the Australian assets owned by foreign enterprises within their economy, and one of the objectives of the government's foreign investment policy is to balance the worries about Australian assets owned by foreign enterprises within their economy and the economic benefit brought by foreign investment.

According to the [Foreign Acquisition and Takeover Act 1975（FATA）], if foreign investment applications would cause Australian companies, businesses and real estate to be controlled by foreigners, and this is thought to be inconsistent with Australian national interest, the government has the right to prevent this foreign investment application. FATA and [Foreign Acquisition and Takeover Act 1989 have set capital thresholds for the examination of foreign investment, and investments that are lower than this threshold will not be examined or approved.

In most of the industrial departments, small-scale investment projects do not need the examination of FATA or records, and as long as they are not large-scale investment projects that

are thought to not conform to national interest, they can be approved. The foreign Investment Review Board（FIRB）would ask the relevant interested parties and other government organizations for advice during the examination of foreign investment, thus deciding whether the investment conforms to national interests.

Based on considering the wide public interest, the government will decide whether the foreign investment conforms to the national interest. For instance, there are some special limitations on foreign investment in community care, media and housing which are more sensitive.

2 Environmental and social influences of the project

As a multi-national enterprise with a high sense of responsibility, China Minmetals is committed to become a localized enterprise with a sustainable development capacity conducting global operations, trying to integrate the seven principles of the international enterprise social responsibilities ISO26000 standard into its global operations, thus maximizing its contribution to sustainable development. The seven principles in question are taking responsibility, transparency, moral conduct, respecting the interest of interested parties, respecting the rule of law, respecting the international code of conduct and respecting human rights.

To better realize the sustainable development of the project, MMG implemented its social responsibilities so as to increase its social recognition degree and cultural identity. On October 27 2011, an Australian report on sustainable development was released successfully in Melbourne, and it has obtained the praises of the former prime minister of Australia and all sectors of society. This report was the first social responsibility report ever released publicly in Australia. Since that year, a social responsibility development report has been released every year.

China Minmetals Corporation Australian report of sustainable development in 2010 was the first to make use of the international enterprise social responsibilities ISO26000 standard. The contents involve organizing governance, labor, environment, fair operations, community participation and development. More than 300 sustainable development indexes and lots of cases and comments of interested parties were disclosed. The system is complete, with rich contents and a unique design, so it is conducive to effective communication between interested parties.

In the aspect of the economy, China Minmetals is an enterprise group in global operation and a localized company as well. Within the globe, this group tries to promote the sustainable development and optimal configuration of metal mineral resources, establish a new order of international metal minerals, and boost the sustainable development of the global economy; drive the local economic development and allow the interested parties to share in the enterprise development achievements.

In the aspect of safety and health, China Minmetals is committed to recognize, eliminate and control the safety and health risks brought to employees, the community and the environment by enterprise operations, seeking to have no accidents or casualty; trying to enhance the employees' awareness of safety and health through training; advocating healthy and safe working and living styles of employees; and asking the clients and suppliers to realize sustainable development through responsible use of products.

In the environmental field, China Minmetals is committed to minimizing the environmental footprint of its operations; enhancing energy efficiency and reducing energy consumption; reducing

materials use, recycling or reusing materials to minimize pollution; protecting and maintain biodiversity; and implementing specific plans to lower the emissions of greenhouse gas.

The company also aims to develop a sustainable environmental management system based on ISO14001 to effectively integrate new business, and compile a water resource management strategy and an implementation plan; carry out research on climate change according to water consumption and drainage in the water resource audit system report released by the Australian mining association, thus formulating an energy management plan for all the mines in Australia, and submit the energy efficiency opportunity (EEO) and national greenhouse and energy reporting system（NGERS）; formulate a management plan for biodiversity, and develop review tools to quantize the risk of closing mines and evaluate the quality of the closing plans; try to reduce 20% of the recordable environmental incidents in the next few years, reduce the use of energy and water, enhance the proportion of circulating and recyclable water and continuously lower the influence that operations have on the environment.

In the social field, China Minmetals implements its responsibilities and obligations as a global citizen, abides by the laws and regulations of the operation site, carrying out open, transparent, and sustainable operations; respecting human rights, supporting employees' development, assisting employees in realizing the goal of "working for a beautiful life", increasing the employment opportunities of the locals; continuously expanding community investment, communicating with the interested parties, serving the local community through multiple methods, driving the local economic development and realizing social prosperity.

3 The company's policies and behavior

As an internationalized mining enterprise, MMG pays high attention to the promotion and implementation of the enterprises' social responsibilities, and the committees of the board of directors provides direction and guidance for sustainable development, for example the standing safety, health, environment and community (SHEC) committee. The tenet of the SHEC Committee is to assist the board of directors in effectively implementing its responsibilities relevant to the safety, health and environment of the employees, the contractor and the community who are all influenced by the enterprise's activities. The committee established an SHEC management system for the company based on international standards (such as the ISO14001 environmental system and the OHSAS18001 occupation, health and safety management system）. The SHEC network was initiated to allow the professionals in SHEC to participate through operation, exploration and development activities. The SHEC network holds a monthly discussion and goes to the MMG mine lot to discus SHEC performance, strategy and planning for the whole company.

3.1 Environmental and resources protection

(1) The concept of environmental protection

MMG is committed to integrate the concept of environmental protection into the full life circle of the mine operations, including exploration, feasibility research, construction, closing and trade etc… At the operation and exploration site and the office areas, a unified environmental standard is implemented. The environmental risks would be managed under the guidance of the ISO14001

international environmental management system standards, thus minimizing the influence of operations on the environment.

China Minmetals is not only aimed at green development, but also committed to implement environmental protection obligations. After the establishment of MMG, the Group Company implemented green integration and continued to carry out the strict standards of environmental protection in other countries. For example, in the mine which the company operates in Laos, the supervision of environmental protection in many aspects such as sewage and atmospheric pollution is carried out according to the criteria of both Laotian and international law. Procedures such as emissions permission, land use and interference permission have been established gradually. There is a commitment to develop green mining, conduct land reclamation at the mine lot and stabilize the landform with vegetation. It is required that all the mine lots should not suffer from serious environmental accidents, violate the permission conditions, and unify the classification of accidents and report procedure; the mines should strengthen their requirements on safety, health, environment and the community; formulate and set key performance indexes to measure the safety, health, environment and community performance of the mines, and evaluate them with relevant standards; after the exploitation of a mine, it should be closed according to plan; a management plan should be formulated in the aspects of acid rock drainage, water resource management, energy and greenhouse gas management, and energy efficiency upgrading projects should be implemented.

(2) Water resource management

1) Water resource utilization

Water is a precious natural resource, and the company has realized the significance of maintaining minimized operations for aquatic and physical systems. MMG applied water resource pipes to mine exploration, feasibility research, construction, operation and closing, and took the management of water resource as one of the most important tasks to realize sustainable development. Water resources are extremely critical for the operation of MMG, since they are mainly used in the processing of iron ore to concentrate, dust suppression, watering the roads, to supply drinking water, and for living and reclamation at the mine.

Special column 1: the Century mine lot upgrades its water resource management system

At the end of 2009, the Century mine lot made rectifications to the fist 3.5 km of the Page river, cleaning the soil polluted by sewage, and the accumulative capital invested exceeded 12.4 million US dollars. The following measures were taken: NO. 3, 8 and 10 sediment dam were widened; pumping capacity was upgraded, the water flow rate in the sediment dam was increased, maximizing the storage space in rainy seasons, and reducing the possibility of overflow; quicken the recovery of southwestern hillock, limit and generation of sewage; a pipeline at the sewage treatment works in Darimah village and the Century gangue storage equipment room was installed, allowing the effluents to directly enter the gangue storage equipment room for treatment rather than rely on evaporation. The water impact assessment results show that the ecological environment of the renovated Page river was clearly upgraded, and was the best it had been since 2005.

Figure 5-1 The No. 10 sediment dam of the Century mine lot

Figure 5-2 A corner of the Century mine lot

2）Wastewater discharge

MMG measured the water consumption and tried to use more circulating water when possible. It also used the water equilibrium model and plan at the mine exploitation site to support the upgrading of water-use efficiency in the future and reduce the reliance on new water, ensuring a long-term and reliable supply of water resources. In the meanwhile, the existing water management system at the mine takes the effective collection and storage of water resources as the goal, minimizing the external supply during periods of high water consumption.

Special column 2: treatment when the emission of cadmium exceeded the standards in Wownaminya lake of Golden Grove mine lot

In 2009, the Golden Grove mine lot detected that in Lake Wownaminya, the emissions of cadmium exceeded the standard. An expert group consisting of mining, processing, engineering and environmental departments implemented a short-term cadmium action plan. The teams redesigned the evaporation pond, increased the sedimentation time, and cleaned the sedimentation in the sewage treatment system regularly, thus reducing the sedimentation in the evaporation pond. The implementation of this plan upgraded the waste water treatment system, and the cadmium content in the waste water reached the emission standards.

Figure 5-3 Sewage treatment site of the Sepon mine lot

(3) Tackling climate change

The influence on the environment of climate change brought about by energy use is a key sustainable development issue for China Minmetals. In 2010, China Minmetals signed the United Nations "Caring for Climate Initiative", thus joining the largest scale commercial activity for tackling climate change. MMG is committed to minimize its influence on the environment through the effective management of energy, greenhouse gas emissions and carbon, thus upgrading its management of carbon and energy efficiency and innovation to reduce energy use and the emission of greenhouse gasses.

MMG established an energy and climate change steering committee to promote innovation for enterprises in Australia, recognize the chances to reduce energy use and greenhouse gas emissions, and minimize the influence that its operations have on the environment. In 2010, MMG reported the data of energy and greenhouse gas emissions from 2009-2010 according to *2007 Australian government's national greenhouse gas and energy report act* and submitted the energy evaluation timetable in the future three years based on the *Australian government's energy efficiency chance act*, thus finding the chance to upgrade energy efficiency through the evolution and development of energy research.

1）Commitment to low-carbon development

During its development strategy, MMG has planned the use of renewable energy sources such as solar energy. The company chose energy-saving buildings for the offices of its headquarters in Melbourne. It has also implemented the principle of energy efficiency, and recycles and builds its offices to be some of the most energy-saving sites in Australia. Meanwhile, the company products are highly recyclable, with copper and lead being 100% recyclable, and zinc 80% recyclable.

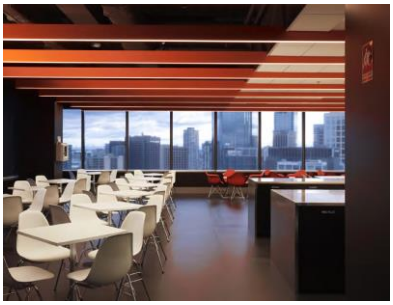

Figure 5-4 Employees' offices **Figure 5-5 Employees' resting area**

2）Automatic systems of illumination

The Century mine lot has developed a set of automatic starting systems for factory illumination, realizing complete automation during nighttime illumination in the 45 factory areas. This innovation has obtained the Queensland mine health and safety award, and received both the optimum innovation judge's award and the optimum innovation public's choice award for the first time. At the same time, the project has had huge economic and environmental profits: 3,077 US dollars are saved in each factory annually, saving a total amount of 138,465 US dollars; 64,250 liters of diesel are saved each year, saving 93,375 US dollars; 1,460 hours of staring man-hour are saved annually（90 US dollars/hour）, saving 131,400 US dollars; 16,060 hours of operation are saved annually; finally, the emission reduction of carbon in the mine lot reaches 173,475kg annually.

Figure 5-6 The automatic staring system for factory illumination designer David McGrory

Designer David McGrory attends an awards ceremony.

3）Utilization of renewable energy sources

From September to November 2010, a second-level hydropower station in the south (annual energy output of 1000 megawatt) and two small-scale hydropower stations (energy output of 40 megawatt) started running successively. The Sepon mine lot and three hydropower stations signed the power purchase agreement, and the maintenance and operation agreement for the hydropower stations, so the energy safety at the mine lot was upgraded effectively. Through the calculation of material balance, the utilization rate of renewable hydropower in the mine lot in November 2010 reached 95%, while in December it reached 99%.

(4) Biodiversity management

MMG is committed to establishing a suitable biodiversity compensatory method through

effective management of biodiversity to reduce the influence that its operations have on biodiversity, protect and recover land, and protect and upgrade biodiversity.

1）Biodiversity protection at the Sepon mine lot

The Sepon mine lot positively implements biodiversity management: it has conducted investigations at Namkok Headwaters, confirmed the endangered species on the International Union for Conservation of Nature, carried out an implementation plan for biodiversity together with wildlife protection associations, thus protecting precious species such as the saola, otter, muntjac, and gibbon.

2）Biodiversity protection at the South Hercules mine

On the high slopes of the Hamilton Mountain outside the Rosebery mine, a 1.8km-long road and a working area were established for feasibility tests to be conducted for the potential mine, while at the same time a 7 km long road was also restored. If the test were successful, it would be the first step of a series of activities during the future development of the South Hercules ore deposit. South Hercules is located on a high mountain above the snow line, and there are four meters of precipitation each year. It is close to the Stone protection zone, so there are many limitations during the mine exploitation. Therefore the design and planning of the mine take minimizing its influence on the environment as the core. After completing the mine exploitation, comprehensive reclamation of the region will be conducted. For the first time it will be attempted to transfer the endangered species Grooved Cheeseberry （Planocarpasulcata），and conduct drainage and cleaning along with the traces and construction causeway between Ring River and Bakers Creek, which has demonstrated a high awareness of environmental protection.

Figure 5-7 Aerial view of South Hercule

Figure 5-8 Drinking water treatment plant in South Hercules

(5) Plans for the closure of the mine

Relying on community partnership, landform design and recovery were carried out to realize a sustainable land use for the environment, the economy and society and local communities' activities after operations begin. MMG paid much attention to environmental and community requirements during the closing of the mine, formulated a plan for closing the mine and conducted evaluations periodically to find the best solutions. In 2010, MMG compiled a "guideline to the mine-closing plan", which specified the requirements of the plan in all stages including exploration, development and operation. The consistency of the method was upgraded, and the planning was concentrated within the mine's service life. The process of closing the mine is shown in the following picture.

MMG implemented closing of the mine in a positive fashion. The Century mine lot held a

discussion on closing the mine, appointed relevant supervisors and carried out its closing and repair; the Sepon mine lot examined the internal closing measures; the Golden Grove mine lot conducted a triennial examination of the closing plans for the mine; the Rosebery mine lot carried out discussions on the plan for closing south Hull Crie.

On November 8 2010, the Sepon mine lot invited the local government officials, representatives of environmental protection organizations, representatives of the local community residents and senior leaders of the Sepon mine lot to discuss the plan of closing the mine. There are about ten years left until the closure of the Sepon mine, so the members of the seminar discussed the issues of how to ensure the employment of surrounding residents, improvement of living standards, environmental protection, community safety and cultural heritage byimplementing certain standards, thus allowing the Laotian government and the local community to benefit from the mine exploitation.

(6) Rigorous environmental management

MMG tries to manage the risks through the implementation of the ISO14001 environmental management system. In 2010, MMG conducted the yearly ISO14001 environmental management system certification in the Golden Grove, Sepon and Rosebery mine lots, and they all obtained the new certifications. The Century mine would start the ISO14001 certification in 2011.

In November 2010，the metal concentrates of the Golden Grove mine lot were found to have exceeded the 24-hour lead dust emission concentration during the shipment at Geraldton harbor. The mine lot then conscientiously stopped the transportation of the cargo, revised the loading agreements and specifications and also took the following measures: a gale warning apparatus was installed to ensure that the loading of cargo would stop during heavy wind; it was determined that loading should be conducted only when the wind blows toward the sea surface to ensure that the Geraldton community would not be influenced; strict supervision of the loading was ensured; and foam dust suppression agents were sprayed on the conveyor and handling equipment. Based on the above measures, an air sampling apparatus was placed in different places at the harbor and in the community so that independent monitoring could be conducted. A series of scientific research was conducted to explore the potential influence that concentrate products, lead sulfide, copper and zinc have on the surrounding environment and community. Meanwhile, the Geraldton community was extensively asked for suggestions until the problems were solved.

3.2 Harmonious community relations

(1) Policies

The company’s policies in this field include promoting localization operations, implementing localization purchasing and driving the development of the local economy; promoting community development plans, driving the continuous improvement of the residents’ life; protecting the environment and cultural heritage of the community; making earnest efforts to promote public welfare, helping and supporting the poor, driving the standardization of public benefit activities; respecting local culture, strengthening community participation, and building harmonious community relation.

(2) Participating in community development

With the increasing pace of globalization, China Minmetals has extended its social

responsibility to all corners of the area. MMG has strictly abided by Australian laws and regulations, expanded community investment continuously, communicated fruitfully with the relevant parties, and served the local community through multiple ways, improving the community's ability for self-development, and making contributions to local economic development and social prosperity. In 2010, MMG invested 6.281 million US dollars in community construction, community enterprise development and educational training.

1) Strengthening communication with the community

During its operations, MMG attempts to become familiar with the community's requirements, demands and priorities through methods such as consulting, surveys and holding discussions. After confirming its social investment and community development activities, it consults representatives of the community for suggestions so as to make the enterprise's development conform to the demands of community development.

To better understand the demands of the community where the mine lot is located, and design more projects that conform to the community development requirements, the MMG organized community investigations at its three mine lots in Australia, Century Rosebery and Golden Grov. The survey was a one-on-one interview with 12 important interested parties in the community, and telephone investigations were conducted with 1200 community residents. Century was committed to obtaining the support, attention and understanding of the local community and residents through close cooperation and finding out their opinions of the work program.

2) Strenghtening the community's ability to develop

MMG feels that improving the ability to self-develop is the foundation for boosting community construction. MMG strengthens the infrastructure construction of the community where the operation is located, enhances the local potential for self-development, improves local life and drives the development of the local economy and society.

a) The Sepon mine lot established a "community trust fund" to enhance the local potential for self-development

The Laos Sepon mine lot has established a "community trust fund" to manage the local community development projects. Since 2003, MMG has provided half a million US dollars for the Laotian government each year, with a total of 2.9 million US dollars provided up to the present, and they are used in community construction, including road construction, setting up of cables, medical equipment, local education, tourism, the manual manufacturing industry and developing the Laos women federation. By the end of 2010, 73 villages in total have benefited from this fund. Since 2006, the fund has provided courses for the local high school students, the study period is 6 years, and 43 students were admitted. The MMG cooperated with the Royal Children's Hospital of Melbourne and some non-profit organizations, and carried out training courses for professionals in pediatrics in Laos. The "community trust fund" in the Sepon mine lot has not only provided more educational opportunities and better infrastructure for the residents, but also reduced their excessive dependency on natural resources. Their ability for self-development is enhanced, incomes are increased and long-term development is realized.

Figure 5-9 The electric power facilties donated by Sepon mine lot

Figure 5-10 Sepon mine lot uses local factory to make overalls to drive the development of local manufacturing industry

b) Golden Grove signed a "Memorandum of understanding" with the operation site

In January 2011, the Golden Grove mine lot and Yalgoo prefecture where the operation site is located signed a Memorandum of understanding, which ensures that it would provide assistance in economic aspects for Yalgoo prefecture, aiming to conduct community infrastructure construction, improve residents' living standards, drive local economic and social development, and establish a long-term friendly relationship between the mine lot and the community. In 2010, the mine lot invested about 0.165 million US dollars in the repair of roads and the development of a healthy community. About 130 residents from Yalgoo prefecture have benefited from it.

3) Promoting community employment

MMG adheres to the principle of "internationalization of the company, and localization of employees". According to the actual situation of the enterprises, effective measures are formulated to provide employment opportunities for the interested parties at the operation site (including the local people), thus promoting the employment of the community located around the operation site, and boosting the development of the regional economy and society. In 2010, the degree of localization of MMG's employees reached 99.78%.

After purchasing the original OZ, the company has honored the promise made before the acquisition, and insisted that the original employees and management team would be preserved, including all the personnel involved with assets such as exploration, production, management, operation and sales, realizing a stable merger in this aspect.

4) Assisting community education

MMG pays high attention to education and training in the communities where the operation site is located. At the same time as providing training relevant to mining knowledge, it also supports and sponsors the community in developing educational projects, improving the local educational level and development abilities.

a) The Rosebery mine lot "two-year training program" welcomes new students

In order to prepare itself for the aging of its employees, the Rosebery mine lot formulated training programs for the local young people, with a training period of five years. It not only provided Rosebery training opportunities for the young, but also expanded the way and the scope of recruiting new employees. On January 24 2011, the Rosebery mine lot welcomed 12 young students from the Tasmanian community, who would receive a two-year training at the Rosebery mine lot to enhance their professional quality and ability in mining.

b) The Rosebery mine lot taught the local primary school students mining knowledge

The Spreyton primary school is close to the Rosebery mine lot. In May 2011, 19 students from this school visited the Rosebery mine lot and received a geologists' introduction on mineral samples. They visited the site and observed the mine cars used in the underground mine. During this activity, the children put forward many questions relevant to minerals and mining work, and the employees at the Rosebery mine lot answered them patiently.

5) Assisting in disaster relief

MMG cares for the local community when there is a serious natural disaster; it donates to disaster areas and helps the local community to fight against disasters to improve their ability for rescue and reconstruction.

The Century mine lot is located in the northwest of Queensland and keeps a close contact with the local community. During the floods in 2011, more than 0.2 million people were affected and thousands of people lost their homes, so the post-disaster reconstruction needs a long time. In January 2011, MMG responded to the appeal to fight against the floods and support the recovery of the disaster areas made by the prime minister of Queensland by donating 80 thousand Australian dollars.

6) Participation in community activities

MMG is very active in participating in community activities, seeking cooperation opportunities with community organizations, thus promoting development in many aspects such as the local economy, society and environment.

a) The Rosebery mine lot supports the local festival celebrations

The Rosebery mine lot has been supporting the preparatory committee of the "Rosebery festival". In February 2011, the Rosebery mine lot integrated its 75th anniversary celebration with the "Rosebery festival", bringing a series of celebratory activities for the local residents, such as art exhibitions, pet exhibitions and joint performances, enriching the community life and allowing people to share in the happiness of development.

b) Golden Grove supports the "Midwestern life-style and education" project

Golden Grove has sponsored the "Midwestern life-style and education" project for two years, helping the students in local schools acquire an awareness of healthy life, diet, keeping away from drugs and alcohol and boosting the students' living skills. In August 2010, this project organized some of the students from Meekatharra high school, Cue primary school and Yalgoo primary school and the employees of Golden Grove to carry out regional education activities.

(3) Focusing on aboriginal issues

1) Respecting the rights and demands of the aborigines

Many operation sites of MMG are located in aborigine communities, so the enterprise should abide by the regulations and laws relevant to aborigines in Australia and protect their cultural heritage, respect the rights of the aborigines, understand the development requirements of the aborigine community, and provide education, training and employment opportunities at the same time as economic assistance.

The Century mine lot signed the *Bay area community agreement* with the local government and aborigine community.

The *Bay area community agreement* was a triple agreement signed by the Century mine lot, the Queensland government and four aborigine communities, aiming to provide education, training and employment opportunities for the local people, and promising that it would protect the local

aborigine culture and environment.

The main contents of the agreement include: protecting the cultural heritage of the aborigines, respecting the rights of aborigines, understanding the development requirements of the aborigine community, and providing education, training and employment opportunities at the same time as economic assistance. Lowering the aborigines' degree of dependency on welfare and enhancing their ability for self-development. Ensuring the aborigines can take part in the company operations. Not invading the residences of the aborigines. Try to protect the natural environment and resources of the aborigines. Specifying and protecting the cultural regions of the aborigines. Ensuring that aborigine culture will not be damaged because of the improvements in their material life, and enhance the aborigines' understanding of their own beliefs and lifestyle through activities such as community and cultural development. Ensure that the health standards, employment rate and educational opportunities of the aborigines can reach the average level of Australia.

2）Supporting the training and employment of aborigines

MMG has provided education and training for the aborigine community, thus improving their skills and making them able to develop even after the mine is closed; at the same time, they initiated the recruitment of aborigines at the operation sites located in the aborigine community, increasing local employment opportunities and boosting local development. By December 2010, there were in total 213 aborigines in the Century mine lot, or 21%; and 14 aborigines in Golden Grove, or 2.5%.

By June 2011, 25% out of all the employees (about 240) of the Century mine lot came from the aborigine community. The company pays high attention to the training and development of aborigine employees by carrying out a pre-job training plan, providing support both inside and outside of the mine lot, skills improvement training and improving their professional skills and language ability, allowing them to do various kinds of work. Currently, the company has hired more than 70 aborigines who have finished all the courses of the pre-job training plan, and more than 30 have completed the courses of the skills improvement training.

Figure 5-11 Century aborigine employees receive training

To enhance the employment rate of aborigines in Western Australia and meet the local community development requirements, the Golden Grove mine lot has provided pre-job training for the aborigines in Bayalgu. The training period is 10 weeks, and it is mainly designed for aborigines aged 18-25, aiming to help them obtain second-level certificates for resources and infrastructure, operation certificates for shovel-cars and elevated work platforms, and grasp the basic work skills of posts available at the mine lot, helping young people to seek employment opportunities in mining and other industries. The first batch of trainees in 2010 included 4 women and 3 men.

3）Cultural protection and exchange with the aborigines

MMG has formulated effective measures during its operations to reduce its influence on the culture of the aborigines. These measures focus on the protection of their original cultural customs and natural scenery. It is arranged for employees to take part in training on the aborigines' culture, allowing them to learn more about their customs and habits, and be able to communicate effectively with the local community.

a) The Century mine lot protects the aborigines' culture

The Century mine lot was located near a community of aborigines in Queensland. In order to protect local culture from being influenced, a batch of "cultural protection observer" with a deep understanding of local customs and habits was hired to supervise the influence that the operation of the mine lot might have on the community's culture and landform and propose suggestions for improvement as well.

b) The Golden Grove mine lot carries out a "multi-cultural popularization" project

The Golden Grove mine lot realizes that its work has a definite influence on the economy, life and culture of the local community. In order to reduce this kind of influence, it is necessary to strengthen communication with the aborigine community, and improve the employees' understanding of local culture and life. In 2010, the mine lot carried out a "multi-cultural popularization" project and 148 employees participated in it. This project included organizing employees to visit the cultural relics of the aborigines, providing medical assistance for the aborigine community and helping the development and spread of aborigine art.

c) The Sepon mine lot respects the original culture of Laos

The Sepon mine lot admits that it will have an influence on the local culture during the phase of resource development. It has therefore initiated measures to protect local culture. In 2007，the Sepon mine lot signed a *Memorandum of understanding* with the state heritage department and the information and culture ministry of the Laotian government, with revisions made in August 2010. In the *Memorandum of understanding,* the Sepon mine lot promised that it would recognize and protect the original culture of Vilabouly district where the operation was located, thus promoting the development of culture. Even though today the Sepon mine lot was thought to be a remote jungle area, the research shows that brass was used as early as 2000 in Vilabouly，and there was metal trade with other villages, so Vilabouly was an important trade distribution center at that time. In 2008, a bronze drum named Heger I was found in this region, and it is now shown in the national museum of the capital of Laos, Vientiane.

4 The cost and profits for the company

In June 2009, China Minmetals successfully purchased the main assets of Australian OZ Minerals and established MMG based on this. This acquisition was awarded the title of best acquisition in the globe by the *Asian Financial Magazine* in 2009. After this acquisition, China Minmetals has adhered to the tenet of mutual benefit and win-win results, continuously perfecting its operation management mode and implementing the enterprise's social responsibilities.

Under the operation and management of China Minmetals, MMG started to make profits in 2009. During the seven months from June to December 2009, MMG's profits were 0.1725 billion US dollars, and the return on investment was 12.5%. Minmetals has invested all the profits on the operations of MMG, thus promoting the rapid development of the company.

In 2010, MMG made 0.727 billion US dollars of profits, among which 0.4 billion was net profit, and the return on investment was 29%. MMG has been successful on both sales revenues and profits, and remained within the top three in global zinc concentrate production, as well as maintaining its industrial status in important cathode copper, copper concentrate, lead concentrate and gold manufacturers, and playing a positive role in boosting the economic and social stability & development in Australia.

5 Other influences

The overseas investment of Chinese enterprises is not just an economic activity, but it also has a profound political and social meaning. The process of going out for Chinese enterprises is a process of economic and cultural communication between China and foreign countries. The overseas operations of these enterprises do not only represent the enterprise itself but also involve the overall image of China. During the MMG's operations, China Minmetals has implemented the enterprise's social responsibilities, not only making its overseas operations more solid, but also building a bridge for the friendly relations between countries and peoples.

At the same time as it obtains resources and development, China Minmetals has implemented its social obligations towards the development of the "going out" strategy in recent years, and has obtained outstanding achievements. The company's contribution to the local economy, and its focus on employment, environmental protection and community building contributed to create a sound image of "being responsible" for Chinese enterprises and a global social responsibility system and vision. In 2009, China Minmetals joined the United Nations Global Compact Organization, and became a member of the "leading project" of the only 55 enterprises in this organization in 2011, thus taking on a leading role of international social responsibility. In recent years, according to national environmental protection standards, China Minmetals has established a "green mine lot", promoted harmonious development and won multiple awards including the "Excellent implementation of social responsibilities of central enterprises" appraised by the State-owned Assets Supervision and Administration Commission, and the "Vanguard enterprise in environmental protection" appraised by the United Nations Global Compact Organization. For several years, it has compiled and released a *Sustainable development report of China Minmetals,* and it was the first to adopt the latest ISO26000 standards around the globe. It compiled and released the *Sustainable development report of China Minmetals(Australia)* for the first time, winning the "special style award" and "excellent innovation award" appraised by the United Nations Global Compact Organization.

The friendly cooperation between China Minmetals and Australia has created a new mode of eastern and western cooperation. This mode is based on promise and trust, takes mutual development as the goal, takes advantage of the skills and experiences of local employees, thus attracting a diversified management team, and provides strong support in decision-making and capital. Everyone is unified to continuously create the maximum value for the interested parties. The sound development of MMG has witnessed the huge success of this mode and has become the unique bridge and successful example for Sino-Australian economic and trade relations.

6 Experiences and lessons

Looking at this acquisition, the focus from the outside is mainly on the acquisition itself, while from the perspective of Minmetals, the purpose of the acquisition was not just to get hold of the resources but also to take advantage of the management team of OZ and further expand overseas by virtue of mature foreign managers, forming a framework which complements resource advantages both at home and abroad. Zhou Zhongshu claimed that it is necessary to use the management of OZ Minerals because it has strong operational advantages in aspects such as exploration, selection, smelting, production and circulation, therefore this acquisition is not just about obtaining the current production capacity, but about the resources to be developed.

After the acquisition, the China Minmetals Group strictly abided by and implemented the various promises such as the preservation of the original management team and employees, and maintaining and increasing local employment; building a new development strategy and taking advantage of the resource advantages of the original OZ and the capital channel advantages of Minmetals, thus trying to build a diversified nonferrous metal mineral company with a leading international position and an internationalized platform for China Minmetals to carry out global mineral development; perfecting the governance structure of MMG; transferring resources in the aspects of trade channels, production and processing for Minmetals, and carrying out internal business collaboration with MMG.

Professor Huang Xueli from the Royal Melbourne Institute of Technology（RMIT）has been doing long-term research on the acquisition made by Chinese companies in Australia, and when interviewed by a Journalist from *Talents*, he claimed that "the joining of a foreign-invested management team was key for the successful acquisition of OZ by China Minmetals. This is a unique kind of advantage, because from the perspective of westerners it is still a western company, and they still contact westerners, while there is a strong Chinese financing channel in the background. From the perspective of the Chinese, this is a company controlled by China, while there is a western professional team. Real internationalization means combining in ways which make use of the common advantages."

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