

Chinese Investments *in* Myanmar

A Scoping Study

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Global Environmental Institute
Investment Trade and the Environment Program Team



Chinese Investments in Myanmar - A Scoping Study

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FOREWORDS

The purpose of this scoping study conducted by the Global Environmental Institute (GEI) is to provide a better understanding of the presence and operations of Chinese companies involved in overseas foreign direct investment activities (ODFI) in Myanmar, along with direct and indirect environmental and social impacts associated with investments in target jurisdictions.

This report summarizes the findings of stage one of the scoping study, which focussed on identifying Chinese companies with investment interests in Myanmar and documenting information relating to these investments in mining, hydropower, agriculture, infrastructure and tourism sectors.

CHINESE INVESTMENT IN MYANMAR

The Myanmar government liberalized its trade policy to induce foreign investments in 1988. Since then, China-Myanmar bilateral trade has been growing steadily until the beginning of the 21st century.

In 2001, Chinese government launched the “Go Global” policy, which encourages outward investment of domestic enterprises. Then from 2005-2010, the Chinese Foreign Direct Investment (FDI) in Myanmar increased dramatically. It is illustrated by the amount of FDI change as shown in Table 1 and Table 2. The drastic growth, however, makes Myanmar an outstanding case compared to any other members of the Association of South East Asian Nations (ASEAN). The reason behind the unusual surge of investment is multi-folds. One primary issue is that, China has rapidly become the world’s largest consumer of imported resources. Myanmar, rich in its natural resources, thus suddenly becomes more attractive to China. The lack of competitors due to international sanctions over Myanmar also provides China an ease of access. Besides the above, Myanmar’s strategic location for China is also noted as an important reason. By 2011, China had become Myanmar’s biggest trading partner, while it only held the third place after Thailand and Singapore three years before then.

The enthusiasm from Chinese investors, however, chilled not after long and the investments plummeted. In March 2011, the reformist government took office in Myanmar. Political tensions between the two countries grew as the elite in Myanmar concerns that Myanmar had become too dependent on China. Human rights groups also expressed concerns over Chinese investment projects. Following that, two major investment projects from China encountered serious difficulties – the Myitsone Dam and the Letpadaung Copper Mine. Investments from Chinese companies dropped drastically to \$217.8 million in the fiscal year

in 2011, while the number was \$875.6 million in the previous year. Although the investment amount has grown back steadily and China is still the largest investor of Myanmar, some Chinese companies might still wait and observe the new political development until the election in the end of 2015.

TABLE 1 CHINA'S OFDI FLOWS TO ASIA AND MYANMAR ALONE (2005-2013)

		(Million USD)								
Country/Region	2005	2006	2007	2008	2009	2010	2011	2012	2013	
TOTAL	12,261	17,634	26,506	55,907	56,529	68,811	74,654	87,800	107,840	
Asia	4,484	7,663	16,593	43,548	40,408	44,891	45,495	64,785	75,600	
Myanmar	11.5	12.6	92.3	232.5	376.7	875.6	217.8	749.0	475.3	

FIGURE 1 CHINA'S OFDI FLOWS TO MYANMAR (2005-2013)

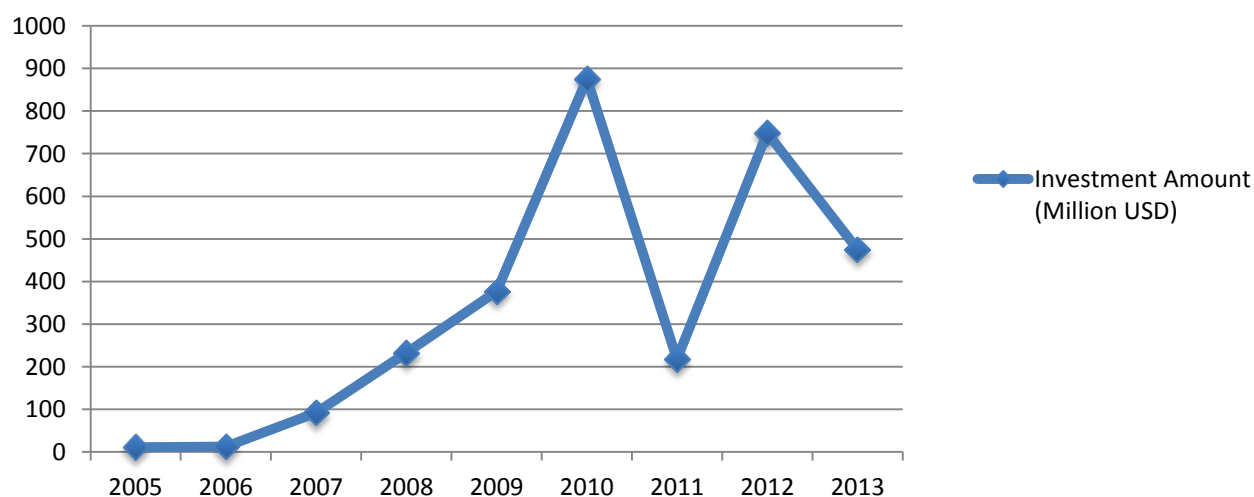


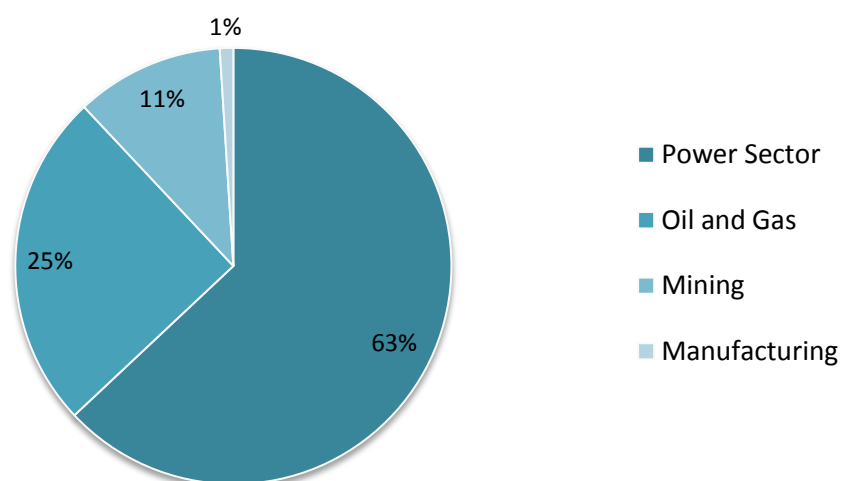
TABLE 2 CHINA'S OFDI STOCK FOR ASIA AND MYANMAR ALONE (2005-2013)

		(Million USD)								
Country/Region	2005	2006	2007	2008	2009	2010	2011	2012	2013	
TOTAL	57,206	75,026	117,911	183,971	245,755	317,211	424,781	531,940	660,480	
Asia	40,954	47,978	79,218	131,317	185,547	228,146	303,435	364,410	440,010	
Myanmar	23.6	163.1	261.8	499.7	929.9	1,946.8	2,181.5	3,093.7	3,569.7	

SECTORS AND FORMS OF INVESTMENT

Chinese investments in Myanmar are mainly focused on the sectors of hydropower, oil and gas, and mining. According to statistics from the Myanmar Embassy, by 2011, 63% of China's investments in Myanmar were in power sector, while investment in oil and gas and mining sectors occupied 36%. The total of the three makes up 99% of all Chinese investments in Myanmar. Besides these sectors, recent years have witnessed more investments in other sectors, such as infrastructure construction, which includes economic zones and transportation facilities like roads, railways and port facilities. Because of the nature of these abovementioned sectors, one typical feature of the Chinese companies invested in these major projects is that most of them are state-owned companies (SOEs).

FIGURE 2 CHINESE INVESTMENTS IN MYANMAR, BY SECTOR (2011)

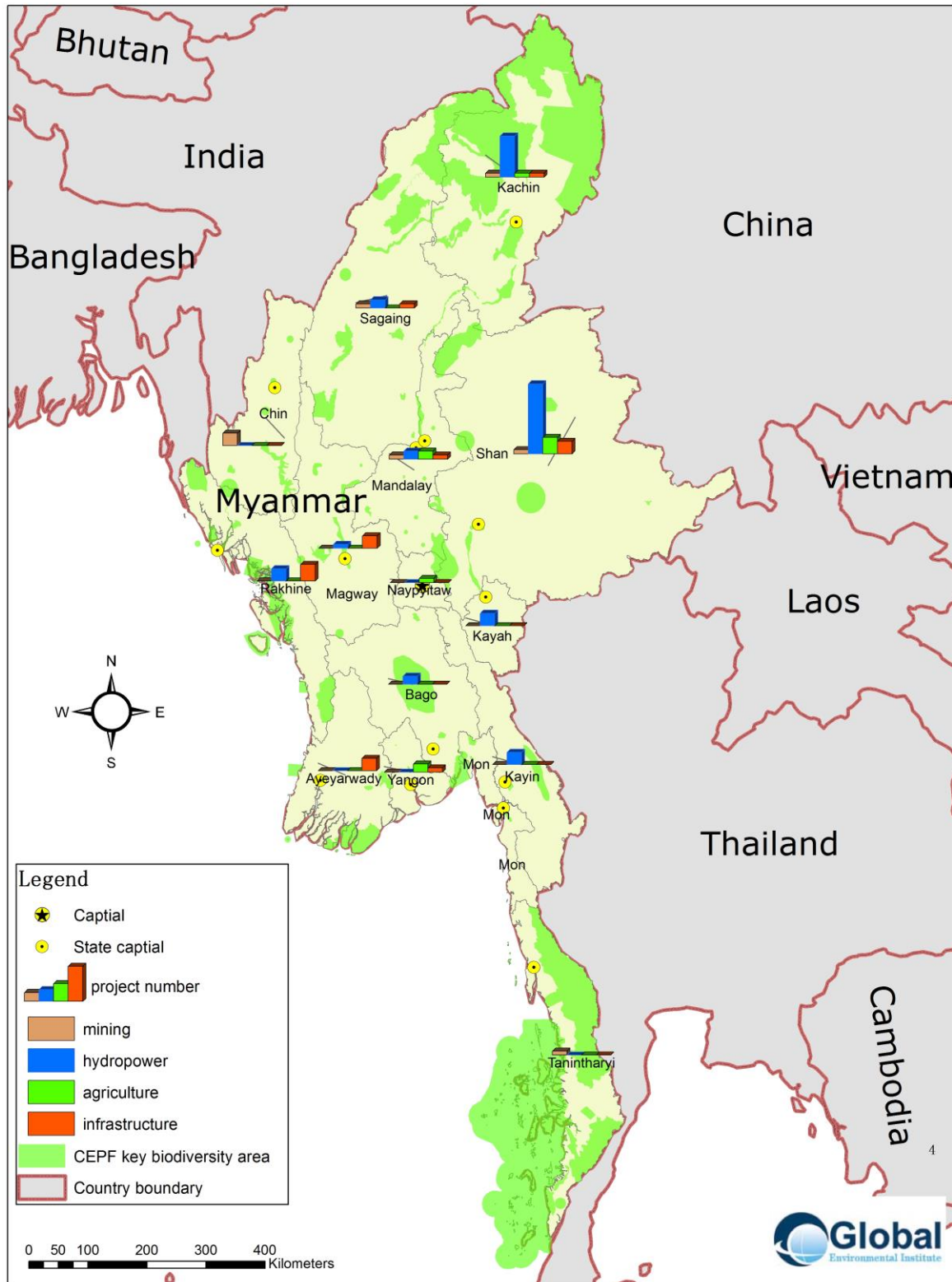


Chinese investors in the agriculture sector are very much in small portion and diversified. Those projects under the opium substitution plan along the China-Myanmar border areas such as Shan State (including Kokang and Wa Special Region) and Kachin State, mainly focus on sugar cane, rubber and fruit plantation, and are mostly made by private companies from Yunnan Province, with a couple of Yunnan provincial SOEs involved. Agricultural plantation demonstration projects, on the contrary, are made largely by both national and provincial SOEs. No Chinese investment projects in tourism in Myanmar were identified during the preliminary research.

According to Myanmar's new Foreign Investment Law, an investment may be carried out in either of the following two ways: a) as a 100% foreign-owned entity; b) by way of a joint venture with a Myanmar citizen or the Myanmar Government. Both forms exist for Chinese investments, with most SOEs establishing joint venture projects with large Myanmar

companies, while private companies usually tend to invest alone or collaborate with Myanmar local companies, often related to Chinese decedents.

FIGURE 2 NUMBER AND TYPOLOGY OF CHINESE INVESTMENTS IN MYANMAR



MINING

Following analysis of the data summarized in Table 3, a total of 7 mining projects with 13 Chinese parent and subsidiary companies are identified with interests in Myanmar's mining sector. These companies can be classified into three distinct groups, as follows:

- 1) SOEs with investments in large-scale mining projects;
- 2) Specialized SOE subsidiaries providing engineering and other contracting services;
- 3) Private companies with investments in small-scale projects and conducting exploration.

Most identified mining projects are medium to large in scale¹ and have Chinese SOEs involved, therefore their information is comparatively easier to acquire; while upon conversations with the Chinese Chamber of Commerce (CoC) in Myanmar, there are much more small enterprises or even individual investors from China, mostly Yunnan and Sichuan provinces, investing in small-scale mining projects in central, north and north-eastern parts of Myanmar, whose detailed information are hard to collect.

¹ Defined by investment amount – projects between US\$30 million and US\$200 million are considered as medium scale projects, while those over US\$200 million are large scale projects.

TABLE 3 CHINESE COMPANIES IDENTIFIED WITH INTERESTS IN MYANMAR'S MINING SECTOR

Company Name	Company Type	Company Role	Local Partner	Project Name	Project Location	Project Status
China Nonferrous Metal Mining (Group) Co., Ltd. (CNMC)	Central SOE (CSOE)	Investor	Myanmar No. 3 Mining Enterprise (50% share in the project)	Tagaung Taung Nickel Mine	Thabeikkyin Township, Mandalay Region	Operational
Taiyuan Iron and Steel (Group) Co. Ltd. (TISCO)	SOE	Investor				
China Metallurgical Group Corporation	SOE	N/A				
China ENFI (China ENFI Engineering Co., Ltd. and China ENFI Engineering Corporation)	Subsidiary company	Contractor (design, equipment supply, construction support and commissioning)				
China North Industries Corporation (NORINCO)	SOE	Parent company	N/A	N/A	N/A	N/A
Wanbao Mining Co., Ltd.	Subsidiary company	Investor	N/A	N/A	N/A	N/A
Myanmar Wanbao Mining Copper Limited	Overseas subsidiary	Local operating company	Myanmar No. 1 Mining Enterprise (51% share in the project)	Monywa Letpadaung Copper Deposits	Sagaing Region	Under construction
Myanmar Yang Tse Copper Limited	Unknown	Local operating company	Unknown	Monywa Sabetaung and Kyisintaung Copper Deposits	Sagaing Region	Operational
China North Industries Corporation (NORINCO)	SOE	Parent company	Myanmar government (20% share in the project)	Mwetaung Nickel Mine	Tiddin Township, Chin State	Advanced stages of exploration (feasibility study completed)
China North Industries Corporation (NORINCO)	SOE	Parent company	N/A	N/A	N/A	N/A

Wanbao Mining Co., Ltd.	Subsidiary company	Investor	N/A	N/A	N/A	N/A
Myanmar Wanbao Mining Copper Limited	Overseas subsidiary	Local operating company	Myanmar No. 1 Mining Enterprise (51% share in the project)	Monywa Letpadaung Copper Deposits	Sagaing Region	Under construction
Myanmar Yang Tse Copper Limited	Unknown	Local operating company	Unknown	Monywa Sabetaung and Kyisintaung Copper Deposits	Sagaing Region	Operational
China North Industries Corporation (NORINCO)	SOE	Parent company	Myanmar government (20% share in the project)	Mwetaung Nickel Mine	Tiddin Township, Chin State	Advanced stages of exploration (feasibility study completed)
Wanbao Mining Co., Ltd.	Subsidiary company	Investor				
Zijin Mining Group	SOE	Parent company				
Jinshan (Hong Kong) International Mining Company	Subsidiary company	Investor				
China Metallurgical Group Corporation	SOE	Investor	Unknown			
China ENFI Engineering Co., Ltd.	Subsidiary company	Conducted feasibility study				
China National Heavy Machinery Corporation	SOE	Contractor (design, equipment supply, technical instruction for erection, commissioning, technical training)	Project owned by Shan Yoma Nagar Co. Ltd	Tigyit coal mine	Pinlaung township, Southern Shan State	Operational
China Minghua Group LTD	Private	Investor	Unknown	Kalonta tin mine	24km NNE of Dawei, Tanintharyi region	Operational
North Mining Investment Company	SOE	Investor	Unknown	Mway Taung Phar Ttaung copper mining project	Chin State	Feasibility study proposal submitted

SOES WITH INVESTMENTS IN LARGE-SCALE MINING PROJECTS

The SOEs that can be classified in this group are some of China's, and indeed the world's, largest companies. Often through their network of subsidiary companies, many of which are big players in their own right, they make investments in resource development projects in China and overseas. Often these investments are to secure access to resources - such as minerals and metals - which the company and wider industry sector within which it operates in China will need to sustain its operations over the course of the coming decades. As such, the resource development projects invested are typically large-scale and underpinned by support at the highest levels from the Chinese and host country governments.

Four Chinese SOEs were identified with interests in a total of four of Myanmar's largest and most high-profile mining projects. China Nonferrous Metal Mining (Group) Co., Ltd. (CNMC) and Taiyuan Iron and Steel (Group) Co. Ltd. (TISCO) are both investors in the Tagaung Taung Nickel Mine. Through its subsidiary Wanbao Mining Co., Ltd, China North Industries Corporation (NORINCO) has invested in developing the Monywa Copper Mine (Letpadaung and Sabetaung/Kyisintaung Deposits) and the Mwetaung Nickel Mine. Zijin Mining Group Co., Ltd is also an investor in the Mwetaung Nickel Mine, through its subsidiary Jinshan (Hong Kong) International Mining Company.

CHINA NONFERROUS METAL MINING (GROUP) CO., LTD. (CNMC)

Tagaung Taung Nickel Mine

Founded in 1983, China Nonferrous Metal Mining (Group) Co., Ltd. (CNMC) is a large scale, central government SOE under the management of SASAC. According to the company's website, CNMC's major businesses include the development of nonferrous metal mineral resources, construction engineering, and relevant trade and technological services². It has built and put into production several nonferrous metal mining projects overseas.

In 2004, a joint venture was formed between CNMC and Myanmar's state-owned Number 3 Mining Enterprise, with a 75-25 distribution in favour of CNMC. In 2008, both parties signed a production sharing agreement to develop the Tagaung Taung nickel mine, whereby CNMC committed to provide all the capital and the Number 3 Mining Enterprise the mining rights. In the same year, it became clear that the project's distribution had been altered to a 50-50 split, with delays attributed to negotiations over the Myanmar government's stake in the project³. In 2010, it was reported that CNMC had signed an agreement with Taiyuan Iron & Steel Group (TISCO) to jointly develop the mine (see further information on TISCO below).

² (China Nonferrous Metal Mining (Group) Co., Ltd. (CNMC))

³ (Moran, 2010)

The mine is located 200km North of Mandalay in Thabeikkyin Township, Mandalay Region. Construction was completed by 2012 and the mine is currently in operation, following investment of over \$850m USD. This represents the largest cooperation project in mining between China and Myanmar, as reported by CNMC in 2014⁴. According to China ENFI Engineering Corp. (ENFI) – the Chinese company responsible for design of the mine - it has an annual output capacity of 25,000 tons of nickel metal⁵, and CNMC’s agreement to operate the mine is understood to be for 20 years.

TAIYUAN IRON & STEEL GROUP (TISCO)

Tagaung Taung Nickel Mine

Established in 1934 in Shanxi Province, Taiyuan Iron & Steel Group (TISCO) is a local government SOE and one of the world's largest stainless steel producers.

In 2010, TISCO signed an agreement with CNMC to jointly develop the Tagaung Taung nickel mining project, whereby TISCO would inject capital into CNMC Nickel to acquire an increased share in the increased capital stock. At the time, a spokesman from the company was reported as saying that resources from the mine would greatly alleviate China’s nickel shortage and reduce domestic stainless steel producer’s risks from fluctuations in nickel prices, and that the company was actively carrying out mining projects in several countries outside of China⁶. In 2014, a spokesman for TISCO reiterated China’s urgent need for nickel supplies and confirmed that the Tagaung Taung nickel mine would provide 20% of the company’s annual demand⁷.

CHINA NORTH INDUSTRIES CORPORATION (NORINCO)/ WANBAO MINING CO., LTD.

Monywa Copper Mine (Letpadaung and Sabetaung/Kyisintaung Deposits), Mwetaung Nickel Mine

China North Industries Corporation (NORINCO) is a central government SOE founded in 1980, with its headquarters in Beijing. Through its various subsidiaries, NORINCO is involved in the research and development of weapons and defense products and heavy-duty equipment and vehicles, along with engineering contracting and the development of petroleum and mineral resources.

Wanbao Mining Co., Ltd., incorporated in 2004 and also based in Beijing, runs the mineral business of NORINCO. It focuses on investment in overseas nonferrous metal resource

⁴ (China Nonferrous Metal Mining (Group) Co., Ltd. (CNMC), 2014)

⁵ (China ENFI Engineering Corp. (ENFI), 2013)

⁶ (China Mining Association, 2010)

⁷ (China Daily Asia, 2014)

development and conducting mineral and non-ferrous metal trade. Wanbao controls various subsidiary entities overseas, including two in Myanmar.

The first of these entities is Myanmar Wanbao Mining Copper Limited (MWMCL), founded in 2011 and responsible for operating the Monywa Letpadaung copper mine project in Sagaing Region. The original contract between China and Myanmar to develop the Letpadaung copper deposits was signed by then Chinese Premier Wen Jiabao during a visit to the country in 2010. An amendment to the product sharing contract was subsequently agreed and signed in 2013, following strong local resistance to the project and political intervention by Aung San Suu Kyi. Under the terms of this, MWMCL and its business partner Myanmar Economic Holdings Limited (MEHL, a conglomerate controlled by Myanmar's military⁸) retains 49% of the benefits (understood to be a 30%:19% split), while the Myanmar Ministry of Mines represented by No. 1 Mining Enterprise holds 51%. MWMCL carries all the investment and operational risks of the project⁹.

The Letpadaung mine remains under construction at the time of writing, with Wanbao hopeful that construction will be completed in 2015 and the mine ready to begin production in 2016. However, development of the mine has faced local opposition since its inception. In 2012 police were reported to have forcefully dispersed protestors, injuring 100 Buddhist monks, while as recently as December 2014 police again clashed with protestors with 20 injured and one killed¹⁰.

Once operational the mine is expected to have an annual output of 100,000 tons of copper cathode, while MWMCL's investment is expected to be in the region of \$1.1 billion USD, which would surpass other Chinese mining investments in Myanmar.

The other subsidiary entity controlled by Wanbao Mining in Myanmar is Myanmar Yang Tse Copper Limited (MYTCL). MYTCL owns and operates the **Sabetaung and Kyisintaung (S&K)** mine, an open-cut copper ore mine consisting of two primary deposits located in the Monywa District of Sagaing Region. Wanbao is the latest of a series of international companies to be involved in development of the S&K mine under several eras of ownership, having acquired the projects in 2011 with estimated total investment of \$487 million USD. The mine is currently operational and has an annual output of 39,000 tons of copper cathode^{11 12}.

Wanbao also has another mining interest in Myanmar, in the form of a 10% stake in a joint venture with Jinshan (Hong Kong) International Mining Company – a 100% subsidiary of Chinese SOE Zijin Mining Group - who controls the remaining 90%. The joint venture holds

⁸ (The Wall Street Journal, 2014)

⁹ (Myanmar Wanbao Mining Copper Limited, 2015)

¹⁰ (Mining.com, 2014)

¹¹ (Myanmar Yang Tse Copper Ltd.)

¹² (Wanbao Mining Ltd.)

80% interest in the Mwetaung Nickel Mine, with the Myanmar government controlling a 20% stake. The project is located in Tiddin Township, Chin State, and latest reports suggest the mine is not yet in operation, but in advanced stages of exploration¹³.

ZIJIN MINING GROUP CO., LTD / JINSHAN (HONG KONG) INTERNATIONAL MINING COMPANY

Mwetaung Nickel Mine

Zijin Mining Group Co. Ltd is a large-scale Chinese state-owned mining group with its headquarters in Shanghang County, Fujian Province. The company describes itself as the largest gold producer and second largest copper producer in China, and an important producer of zinc, tungsten and iron ore. Zijin is listed on the Shanghai and Hong Kong Stock Exchanges¹⁴.

Jinshan (Hong Kong) International Mining Company is a 100% subsidiary of Zijin Mining Group. The company controls a 90% stake in a joint venture with Wanbao Mining Ltd, who owns the remaining 10%. The joint venture holds 80% interest in the Mwetaung Nickel Mine, with the Myanmar government controlling a 20% stake. The project is located in Tiddin Township, Chin State, and latest reports suggest the mine is not yet in operation, rather in advanced stages of exploration¹⁵.

SPECIALIZED SOE SUBSIDIARIES PROVIDING ENGINEERING AND OTHER CONTRACTING SERVICES

One trait of Chinese overseas investment projects is a tendency for project developers to appoint other Chinese companies to carry out contracting work on projects, as GEI has observed in the course of its research on Chinese OFDI.

Since the beginning of its economic rise, China's SOEs have been responsible for developing their respective industries at home, and as a result have developed considerable expertise through decades of project development experience across all sectors of the economy. At the top of the SOE hierarchy is the parent or 'Group' company, which typically controls various subsidiary companies performing different functions below it. These functions can include research and development, project design, engineering and construction services, along with equipment manufacturing and supply, amongst others.

As these SOEs have begun to carry out projects outside China's borders over the past decade, it is common practice for them to contract these types of services from their subsidiary companies, or the subsidiaries of other SOEs, which they have successfully

¹³ (Zijin Mining Group Co., Ltd.)

¹⁴ (Zijin Mining Group Co., Ltd)

¹⁵ (Zijin Mining Group Co., Ltd.)

cooperated with in China. Since some of these companies have become genuine experts in their respective fields, it has also become increasingly common for non-Chinese organizations to contract these companies for their services.

Two such SOE subsidiaries were identified as being involved as a contractor in mining development projects in Myanmar. China ENFI has providing contracting services in the development of two Chinese-backed mines, while China National Heavy Machinery Corporation (CHMC) provided services to a locally-registered company to develop the Tigyt coal mine.

CHINA METALLURGICAL GROUP CORPORATION (MCC) / CHINA ENFI

China Metallurgical Group Corporation (MCC) is a central SOE under the direct auspice of SASAC, with its headquarters in Beijing. Founded in 1994, MCC engages in EPC, natural resources exploitation, papermaking, equipment fabrication and real estate development.

The China ENFI Engineering Co., Ltd. and China ENFI Engineering Corporation (China ENFI) was established in 1953 and is now a subsidiary of MCC. China ENFI specializes in metallurgical and mining engineering, environmental protection, chemical engineering, architecture and construction, and rare metals and light metals engineering design services.

China ENFI has provided such services to two Chinese-backed mining projects in Myanmar. At the Tagaung Taung Nickel Mine (invested by CNMC and TISCO), China ENFI was responsible for overall design of the mine including process design, critical equipment supply, on-site construction services and commissioning support. The company also completed the feasibility study report for the Mwetaung Nickel Mine project (invested by NORINCO and Zijin Mining Group).

CHINA NATIONAL MACHINERY INDUSTRY CORPORATION (SINOMACH) / CHINA NATIONAL HEAVY MACHINERY CORPORATION (CHMC)

China National Machinery Industry Corporation (SINOMACH) is a central government SOE established in 1997 and headquartered in Beijing. SINOMACH specializes in machinery research and development, machinery manufacturing, project contracting, and trade and service businesses in China and worldwide. The company controls 50 wholly-owned or holding subsidiaries, 11 listed subsidiaries, and over 180 overseas service organizations¹⁶.

China National Heavy Machinery Corporation (CHMC) is a 100% subsidiary of SINOMACH and also headquartered in Beijing. CHMC is engaged in engineering contracting and project management in various sectors including metallurgy and mining.

¹⁶ (China National Machinery Industry Corporation (SINOMACH))

In Myanmar, CHMC provided design, equipment supply, technical instruction for erection, commissioning and technical training services for the Tigyit coal mine. The open pit mine is already operational and located at Pinlaung Township in Southern Shan State. It is owned by Shan Yoma Nagar Co. Ltd, a locally-registered company.

PRIVATE COMPANIES WITH INVESTMENTS IN SMALL-SCALE PROJECTS AND CONDUCTING EXPLORATION

Several private companies originating from China were also identified with interests in Myanmar's mining sector. A lack of available information presented a challenge when researching these types of companies and the projects they are involved in.

The information gathered indicates that the private companies identified in the study are much smaller players compared to their SOE counterparts, and the mining projects invested are also smaller in scale. While SOEs tend to partner with the Myanmar government in development projects (via the Ministry of Mines and its Mining Enterprises), there is some evidence that private Chinese companies seek local partners in the form of other private companies, including setting up joint ventures with local partners.

CHINA MINGHUA GROUP LTD

China Minghua Group Ltd. is a private company with Chinese origins. Sparse information on the company's website (Chinese-English language) includes reference to a company named China Minghua (Hongkong) Co., which suggests links to Hong Kong and that there is more than one company operating within the China Minghua Group, although registration details for these companies could not be located. Contact details are provided for offices in Thailand (Bangkok) and Myanmar (Yangon) only.

The company states that its President "has devoted himself to the development and utilization of natural resources in Burma", and lists several such projects that the company has engaged in since 2002.

In 2002, the company acquired the mining rights for a tin-tungsten mine in Kalonta, Dawei, Tanintharyi in Burma. The mine covers an area of 24.6 km² and has an ore treatment plant capable of daily processing 500 tons of raw ore. It is not clear from the information available if the mine is still operational or not.

In 2007, the company submitted an application to the government for mining rights to a new mine covering 5 km² in the area of the original mine, the products from which are mainly exported to Malaysia.

In 2010, the company acquired mining rights over what it describes as "three, large-sized rocky mountains and high-quality river sand near Salween River in Hpa-an (the capital city of Kayin State) in the south of Burma". The gravel and stone produced from the mine are

mainly used for the construction of CNPC's crude oil terminal project in Kyaukpyu and the construction of public works in Yangon¹⁷.

ASIA PACIFIC MINING LIMITED (APML)

Asia Pacific Mining Ltd. was incorporated as a private company in Hong Kong in 2007¹⁸, although it describes itself as a "Western-led company" on its website¹⁹ in reference to the background of the company's management team, who it also describes as having experience completing mining transactions in Myanmar. APML is advised by Myanmar's former Deputy Minister of Mines, U Ko Ko Than.

In 2014 APML was granted approval to explore for silver, lead and zinc on lands surrounding the existing Bawdwin mine in Shan State, under its 100% owned AP-4 exploration licence granted by the Myanmar Ministry of Mines which covers a total of 649km². Following significant discoveries of sulphide silver-lead-zinc mineralisation from exploration activity carried out, latest reports suggest that the area was expected to be ready for drilling in April 2015²⁰.

APML also reports on its website that the company is in the advanced stages of licensing other mineral prospects in Myanmar, most notably for copper and gold in the Sagaing Region where 3 separate applications have been lodged with the Ministry of Mines, while also negotiating with local business groups in districts of Myanmar where there is a history of mining activity.

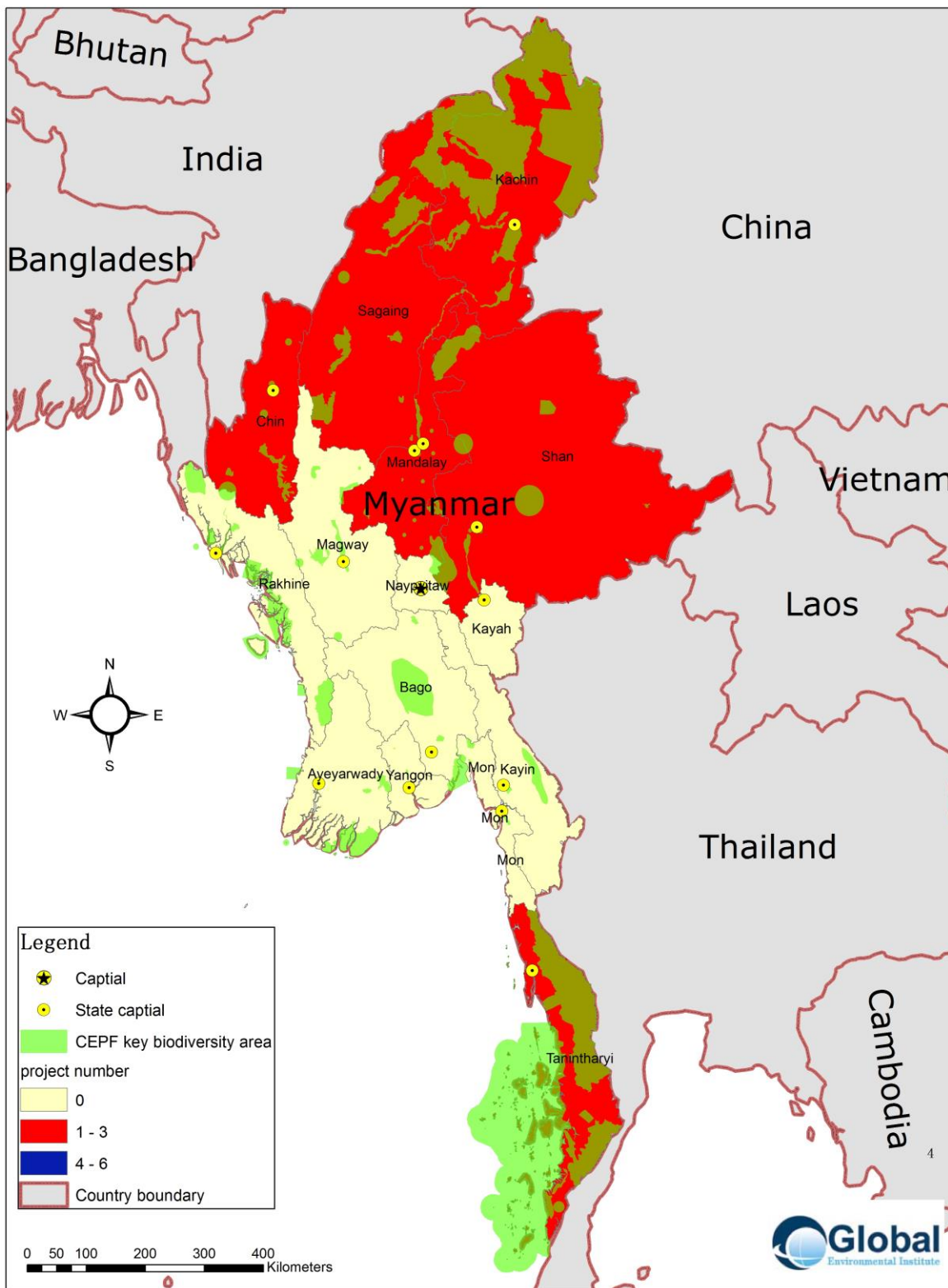
¹⁷ (China Minghua Group Limited)

¹⁸ (Hong Kong Companies Registry, 2015)

¹⁹ (Asia Pacific Mining Limited)

²⁰ (PR Newswire, 2015)

FIGURE 3 NUMBER AND DISTRIBUTION OF MINIG PROJECTS WITH CHINESE CAPITALS



HYDROPOWER

In hydropower sector the most important sections are power (generation and transmission) and construction (mainly specialized civil and electro-mechanical construction, as well as associated equipment manufacturing). There is some overlap, as some of the power companies have construction activities, and some of the construction companies are specialized in the power sector. The Chinese hydropower industry, including those organizations relevant for international activities, is predominantly owned and controlled by China's central government and firmly rooted in the home market, as all these key sections of interest for Chinese hydropower investments are among those considered to be of national interest.

The current structure of the Chinese hydropower sector, which is now the largest in the world since 2010 when China's power consumption surpassed that of the US, is the result of a major reform in 2002 that separated generation, transmission and distribution, and ancillary industries.

TABLE 4 SOES RESULTING FROM THE BREAK-UP OF STATE POWER CORPORATION IN 2002

Generation "Big Five" (Regulated competitive market)	Transmission and Distribution (Regulated regional monopolies)	Support Companies (Competitive market)
China Huaneng Group Co.	State Grid Corporation	China Electric Power Engineering Consulting Group Co. Ltd
China Huadian Group Co.	China Southern Power Grid Co. Ltd	HYDROCHINA (now a subsidiary of POWERCHINA)
China Guodian Group Co.		Sinohydro (now a subsidiary of POWERCHINA)
China Datang Group Co. China Power Investment Company (acquired by State Nuclear Power Technology Company recently)		China Gezhouba Group

Following analysis of the data summarized in Table 5, a total of 44 hydropower projects with 26 Chinese parent and subsidiary companies are identified with interests in Myanmar's hydropower sector. Among the 26 identified companies, only 3 are privately owned, while the rest 23 are all SOEs of different kinds. Most of those identified hydropower projects are located in upper Myanmar, particularly Kachin State and Shan State in the upstream of Irrawaddy River and Salween River, where there are huge hydropower potentials and geographically close to China, with a couple of others in Mandalay Region, Sagaing Region, Rakhine State, Kayah State and Kayin State.

Similar to the cases in the mining sector, the SOEs that identified with interests in Myanmar's hydropower sector are some of the world's largest hydropower development companies. In their overseas engagement these enterprises respond to an interconnected mix of commercial and political/foreign policy objectives or motivations. For example, a particular project may be suggested by a company that, while state-owned, is being operated as an essentially autonomous business entity; the commercial driver may be dominant although the state-owned company will retain some political drivers. The same project may be planned to receive financing from a Chinese policy bank; the motivation for the financing may be a mix of commercial and foreign aid policies, which in turn will be influenced by broader central governmental foreign policy objectives. In some cases in Myanmar, due to the country's political importance to China, higher government bodies may be directing these investments from the view of a combination of foreign policy and strategic resources/energy security concerns, as the case of CPI's Myitsone cascade and Three Gorges Corporation's Mong Tong project.

TABLE 5 CHINESE COMPANIES IDENTIFIED WITH INTERESTS IN MYANMAR'S HYDROPOWER SECTOR

Company Name	Company Type	Company Role	Local Partner	Project Name	Project Location	Project Status
China Datang Corporation	CSOE	Builder	Ministry of Electric Power No 1	Tapein (240MW)	Tarpain River, Kachin State	In operation
Datang (Yunnan) United Hydropower Developing Co Ltd	Subsidiary company	Developer	Ministry of Electric Power No 1	Tapein (240MW)	Tarpain River, Kachin State	In operation
		Developer		Tapain-2 (168MW)	Tarpain River, Kachin State	Under Construction
		Developer & builder		Ywathit (4000MW)	Kayah State	Suspended (?)
China Datang Overseas Investment	Subsidiary company	Financier	Unknown	Htukyan (105MW)	Shan state	Unknown
				Hanna (45MW)	Shan state	Unknown
				Thakya (150MW)	Shan state	Unknown
				Palaung (105MW)	Shan state	Unknown
				Bawlakae (180MW)	Kayah State	Unknown
				Sinedin (76.5MW)	Rakhine State	Unknown
				Laymyo (600MW)	Rakhine State	Under Construction
Laymyo-2 (90MW)	Rakhine State	Under Construction				
			Thahtay (111MW)	Rakhine State	Under Construction	
Sinohydro Corporation	CSOE	Contractor	Ministry of Electric Power No 1	Tapein (240MW)	Tarpain River	In operation
		Builder	Unknown	Shweli-1 (600MW)	Shweli River, Shan state	In operation
		Financier	Unknown	Thaphanseik (30MW)	Sagaing Region	In operation
		Developer & builder	Ministry of Electric Power	Yeywa (790MW)	Dokhtawady River, Mandalay Region	In operation
		Builder Contractor	Unknown Unknown	Zawgyi-1 (18MW) Lower Paunglaung Dam (280MW)	Sittang River, Shan state	In operation In operation

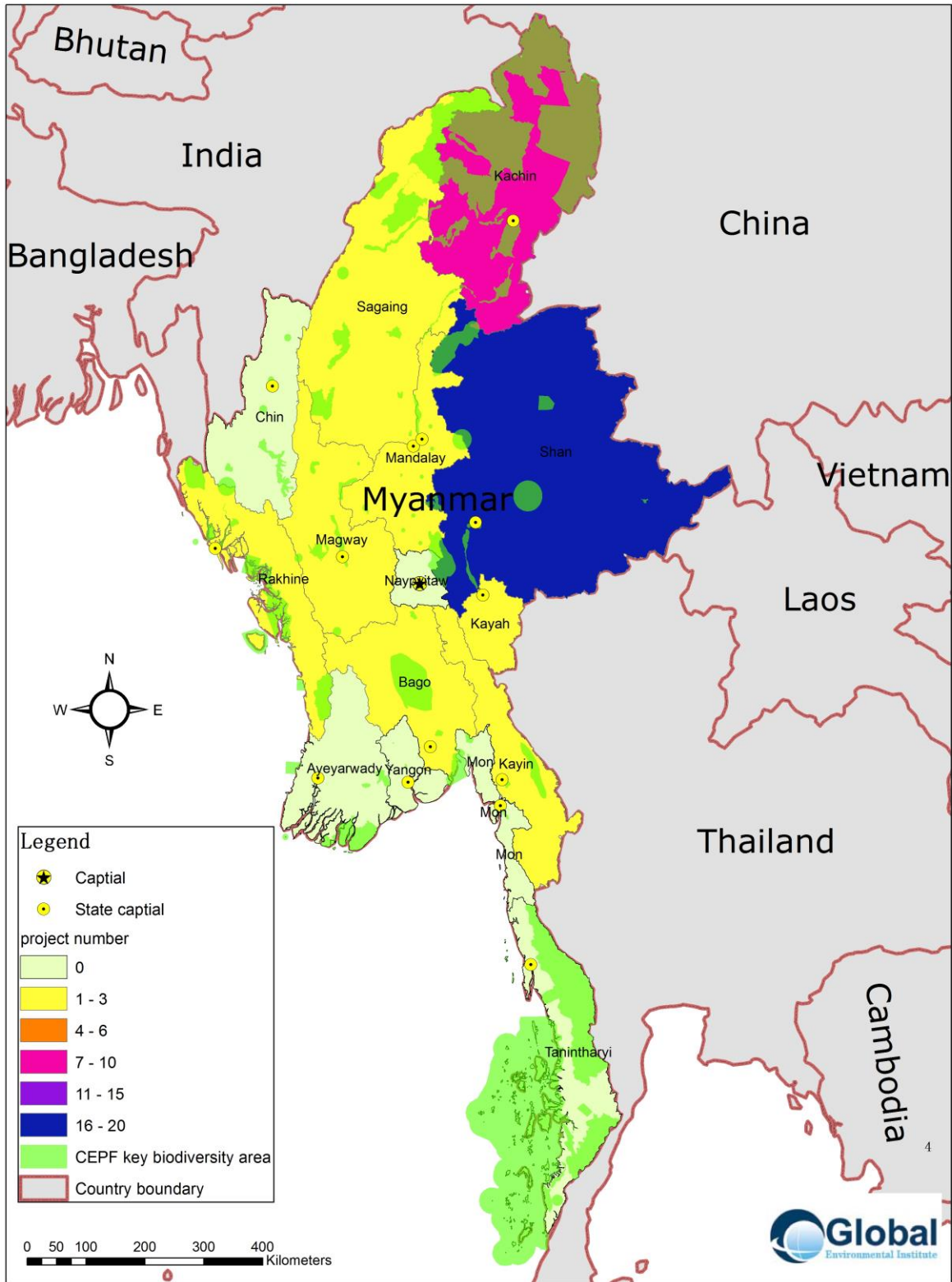
		Contractor	Ministry of Electric Power	Myitsone (6000MW)	Ayeyawaddy River, Kachin State	Suspended
		Financier	IGE (Myanmar)	Naung Pha (1000MW)	Salween River, Shan state	Contracts signed
		Financier	IGE (Myanmar)	Mantaung (200MW)	Salween River, Shan state	Contracts signed
		Builder & contractor	IGE (Myanmar)	Mong Tong (7110MW)	Salween River, Kayin State	Suspended
		Financier & builder	IGE (Myanmar)	Hutgyi (1360MW)	Salween River, Kayin State	Unknown
Huaneng Langcang River Hydropower Co	SOE subsidiary company	50% owner of Yunnan United Power Development Company	N/A	N/A	N/A	N/A
Yunnan Hexing Investment and Development Co;	Private	34 % owner of Yunnan United Power Development Company	N/A	N/A	N/A	N/A
Yunnan Union Resources & Engineering Co	Provincial government SOE	16% owner of Yunnan United Power Development Company	N/A	N/A	N/A	N/A
Yunnan United Power DDevelopment Company Development Company Development Company	Subsidiary company	Financier	Unknown	Shweli-1(600MW)	Shweli River, Shan state	In operation
		Financier	Unknown	Shweli-2 (520MW)	Shweli River, Shan state	Under construction
Huaneng Langcang River Hydropower Company	CSOE subsidiary company	Builder	Unknown	Shweli-2 (520MW)	Shweli River, Shan state	Under construction
Yunnan Machinery Export Import Company	Provincial government SOE	Contractor	N/A	Shweli-1 (600MW)	Shweli River, Shan state	In operation
		Contractor	N/A	Zawgyi-1 (18MW)	Unknown	In operation
		Contractor	N/A	Zawgyi-2 (12MW)	Unknown	In operation
		Unknown	Unknown	KengTawng/Kyaing Tong (54MW)	Pawn River	In operation
		Developer/Contractor	N/A	Lower Paunglaung Dam (280MW)	Sittang River, Shan state	In operation
		Contractor	N/A	Kaunglangphu (2700MW)	N'Mai River, Kachin State	Suspended

		Contractor	Asiaworld (Myanmar)	Lasa (1900MW)	Mali River, Kachin State	Suspended
		Contractor	N/A	Shweli-2 (520MW)	Shweli River, Shan state	Under construction
China International Trust & Investment Co. (CITIC)	SOE	Financier	Unknown	Thaphanseik (30MW)	Sagaing Region	In operation
		Financier & developer	Ministry of Electric Power	Yeywa (790MW)	Dokhtawady River, Mandalay Region	In operation
		Builder	Unknown	Yenwe (25 MW)	Yenwe Creek, Sittang river, Kyaukdagah Township, Shan state	In operation
		Developer	Unknown	Mone Creek (75 MW)	Mone Creek (Sidoktaya Township)	In operation
China Power Investment Corporation (CPI)	CSOE	Financier	Ministry of Electric Power	Yeywa (790MW)	Dokhtawady River, Mandalay Region	In operation
		Developer & builder	Ministry of Electric Power	Myitsone (6000MW)	Ayeyawaddy River, Kachin State	Suspended
		Financier	Asiaworld (Myanmar)	Chibwe (3400MW)	Chibwe River, Kachin State	Suspended
		Financier	Asiaworld (Myanmar)	Wutsok (1800MW)	Ayeyawaddy River, Kachin State	Suspended
		Financier	Asiaworld (Myanmar)	Kaunglangphu (2700MW)	N'Mai River, Kachin State	Suspended
		Financier	Asiaworld (Myanmar)	Yenam (1200MW)	Ayeyawaddy River, Kachin State	Suspended
		Financier	Asiaworld (Myanmar)	Pisa (2000MW)	N'Mai River, Kachin State	Suspended
		Financier	Asiaworld (Myanmar)	Laiza (1900MW)	Mali River, Kachin State	Suspended
		Financier	Asiaworld (Myanmar)	Chibwengae (99MW)	Ayeyawaddy River, Kachin State	Suspended
China National Heavy Machinery Corporation (CHMC)	SOE	Contractor (support for construction of transmission lines and dam)	Ministry of Electric Power	Yeywa (790MW)	Dokhtawady River, Mandalay Region	In operation
State Grid Corporation of China	CSOE	Contractor (support for construction of transmission	Ministry of Electric Power	Yeywa (790MW)	Dokhtawady River, Mandalay Region	In operation

Central China Power Grid Co.	Subsidiary company	lines) Contractor (support for construction of transmission lines)	Ministry of Electric Power	Yeywa (790MW)	Dokhtawady River, Mandalay Region	In operation
Yunnan Power Grid Corporation	Subsidiary company	Financier	Unknown	Keng Tong (96MW)	Shan state	Unknown
		Unknown	Unknown	Wantapeng (25MW)	Shan state	Unknown
		Unknown	Unknown	Solu (165MW)	Shan state	Unknown
		Unknown	Unknown	Mongwa (50MW)	Shan state	Unknown
		Unknown	Unknown	Keng Yan (28MW)	Shan state	Unknown
		Unknown	Unknown	Heku (88MW)	Shan state	Unknown
China Gezhouba Group Corporation	SOE	Contractor	Ministry of Electric Power	Yeywa (790MW)	Dokhtawady River, Mandalay Region	In operation
		Contractor (supply and installation of machinery & equipment)	N/A	Kyauk Naga Dam (75MW)	Shwegyin river, Shwegyin Township, Bago region	In operation
		Contractor	Ministry of Electric Power	Myitsone (6000MW)	Ayeyawaddy River, Kachin State	Suspended
		Builder	Asiaworld (Myanmar)	Chibwe (3400MW)	Chibwe River, Kachin State	Suspended
China National Electric Equipment Co. (CNEEC)	SOE	Contractor	Ministry of Electric Power	Yeywa (790MW)	Dokhtawady River, Mandalay Region	In operation
		Builder	N/A	Yenwe (25 MW)	Yenwe Creek, Sittang river, Kyaukdagah Township, Shan state	In operation
		Builder	N/A	KengTawng/Kyaing Tong (54MW)	Pawn River	In operation
Hunan Savoo Oversea Water & Electric Engineering Co	Private	Contractor	Ministry of Electric Power	Yeywa (790MW)	Dokhtawady River, Mandalay Region	In operation
Zhejiang Orient Holdings Co., Ltd.	Provincial government SOE	Builder	Unknown	KengTawng/Kyaing Tong (54MW)	Pawn River	In operation
Ningbo Huyong Electric Power Material Co., Ltd	Provincial government SOE	Developer	Unknown	Lower Paunglaung Dam (280MW)	Sittang River, Shan State	In operation
HydroChina Kunming	SOE subsidiary	Developer	Unknown	Lower Paunglaung	Sittang River, Shan	In operation

Engineering Corporation				Dam (280MW)	State	
YPIC International Energy Cooperation & Development Co Ltd	Provincial government SOE	Financier	IGE (Myanmar)	Gawlan (100MW)	Nawchankha River	Contracts signed
		Financier	IGE (Myanmar)	Wxhonghgze (60MW)	Nawchankha River	Cancelled
		Financier	IGE (Myanmar)	Hkankwan (140MW)	Nawchankha River	Contracts signed
		Financier	IGE (Myanmar)	Tonxinqiao (320MW)	Nawchankha River	Contracts signed
		Financier	IGE (Myanmar)	Lawngdin (435MW)	Nawchankha River	Contracts signed
Hanergy	Private	Financier	Hydropower Implementation Department, Asiaworld	Kunlong (1400MW)	Salween River, Shan state	Under construction
China Southern Power Grid	CSOE	Builder & contractor	IGE (Myanmar)	Mong Tong (7110MW)	Salween River, Kayin State	Suspended
China Guodian Corporation	CSOE	Financier	Unknown	Natabat (200MW)	Kachin state	Unknown
		Unknown	Unknown	Mawlight (520MW)	Sagaing Region	Unknown
		Unknown	Unknown	Natabat (180MW)	Kayah State	Unknown
China Three Gorges Corporation	CSOE	Financier, builder & contractor	IGE (Myanmar)	Mong Tong (7110MW)	Salween River, Kayin State	Suspended

FIGURE 4 NUMBER AND DISTRIBUTION OF HYDROPOWER PROJECTS WITH CHINESE CAPITALS



AGRICULTURE

Following analysis of the data summarized in table 6, the 10 Chinese parent and subsidiary companies identified with interests in Myanmar's agriculture sector can be classified into four groups, as follows:

- 1) SOEs with investments in large-scale agricultural projects;
- 2) SOEs with investments in strategic/technical demonstration projects in collaboration with Myanmar government;
- 3) Private companies with investments in small and medium-scale plantation of fruits and crops to sell back to China;
- 4) Private companies from Yunnan Province and Yunnan provincial SOEs with investments often in rubber and fruits plantation along the China-Myanmar border as opium substitution projects.

Although the number of identified Chinese companies and projects in the agriculture sector is very limited, these companies are very typical in their categories.

SOES WITH INVESTMENTS IN LARGE-SCALE AGRICULTURAL PROJECTS

The investments of Beidahuang in both agricultural plantation and meat cattle projects serve as overseas bases of the company as part of its market expansion in the world. Often the productions from these bases will either be exported back to China or exported to international markets directly. Such investments typically have support from both the Chinese and Burmese government, and set to be comprehensive projects including all related facilities. It is also very likely that they have financial support from policy banks.

SOES WITH INVESTMENTS IN STRATEGIC/TECHNICAL DEMONSTRATION PROJECTS IN COLLABORATION WITH MYANMAR GOVERNMENT

Demonstration projects are driven either by the Chinese government or by the needs of the SOE itself, i.e. as a pilot to diversify the company's business. In the identified two demonstration projects, the COFCO one is the former and the Yunnan Provincial Overseas Co. Ltd one the later. Government-driven demonstration projects are directed and funded by government aid programs and are undertaken by SOEs or government-owned research institutions; while in company-driven cases it is more of the SOE's own willingness to carry out such projects.

PRIVATE COMPANIES WITH INVESTMENTS IN SMALL AND MEDIUM-SCALE PLANTATION OF FRUITS AND CROPS TO EXPORT BACK TO CHINA

Such companies are usually medium-scale trading companies, mostly from Yunnan Province in the case of Myanmar, that specializes in border trade, particularly agricultural products.

They start their businesses from doing border trade, and as the business grows, some of them begin to think about securing their own sources of production by investing in agricultural plantation in Myanmar, where land and labor costs are much lower than in China. Products from such investments are aimed to be exported back to China.

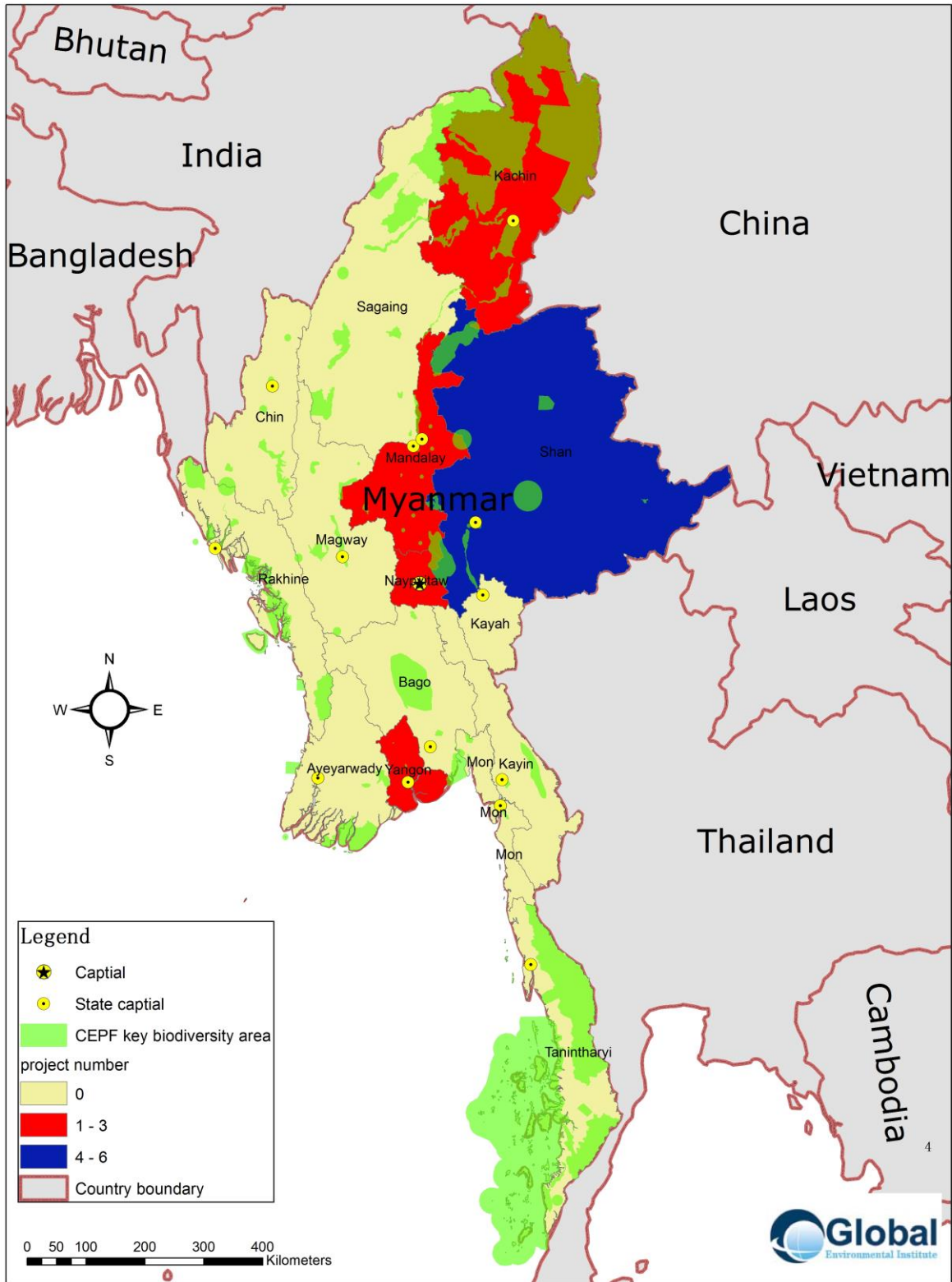
PRIVATE COMPANIES FROM YUNNAN PROVINCE AND YUNNAN PROVINCIAL SOES WITH INVESTMENTS OFTEN IN RUBBER AND FRUITS PLANTATION ALONG THE CHINA-MYANMAR BORDER AS OPIUM SUBSTITUTION PROJECTS

Companies involved in opium substitution projects are mostly small-scale private companies from Yunnan Province, especially those prefectures along the China-Myanmar border, with a couple of Yunnan provincial SOEs and local county-level implementation entities of provincial SOEs. Most of the opium substitution projects are in Wa State, Shan State Special Region 4 and Kokang. Companies sign contracts with local government at Myanmar side, do plantation and export products back to China as required. According to statistics, there are 198 Chinese companies with interests in the opium substitution projects.

TABLE 6 CHINESE COMPANIES IDENTIFIED WITH INTERESTS IN MYANMAR'S AGRICULTURAL SECTOR

Company name	Company type	Role	Local partner	Project	Location	Status
Yibin Beidahuang Food Processing Co. Ltd (jointly established by Heilongjiang Nongken Beidahuang Business Trade Co. Ltd, an SOE subsidiary, and Sichuan Hejiu Agriculture Group Co., a private company)	Partially hold by SOE subsidiary	Investor	Shwe Sapar International Trading Co. Ltd	Agricultural plantation base (rice, corn, etc.) and processing and storage center	Mandalay Region	Agreement reached in December 2014
			Shwe Ying Trading International Co. Ltd		Naypyitaw	Agreement reached in December 2014
Yunnan Provincial Overseas Investment Co. Ltd.	Provincial SOE	Investor	Ayeyawady local agricultural department	High yield rice species cultivation demonstration	Ayeyawady Region	Operational
China National Cereals, Oils and Foodstuffs Corporation (COFCO)	Central SOE	Investor	Ministry of Agriculture and Irrigation	Cassava plantation demonstration	Yangon suburban areas	Operational
China CAMC Engineering Co. Ltd	Central SOE subsidiary	Investor	Unknown	Farm (fruits plantation)	Yangon suburban areas	Operational
Baoshan Kangfeng Sugar Group	Private	Investor	Unknown	Cassava and sweet potato plantation	Kachin State, Kokang and Muse	Operational
Lincang Jingying Sugar Industry Co. Ltd	Private	Investor	Unknown	Cassava and sweet potato plantation	Kokang, Shan State	Operational
Wanting Changhe Trading Co. Ltd	Private	Investor	Unknown	Watermelon plantation	Mandalay Region	Operational
Menglian Farm (of Yunnan State Farm)	Provincial SOE	Investor	Unknown	Rubber plantation	Wa State (Shan State Special Region 2)	Operational
Dongfeng Farm (of Yunnan State Farm)	Provincial SOE	Investor	Unknown	Rubber plantation	Shan State Special Region 4	Operational
Yunnan Jinchen Investment Co. Ltd	Private	Investor	Salween River Development Company of Wa State	Rubber plantation	Wa State (Shan State Special Region 2)	Operational

FIGURE 5 NUMBER AND DISTRIBUTION OF AGRICULTURAL PROJECTS WITH CHINESE CAPITALS



INFRASTRUCTURE

Much has been written about China's interest in developing large-scale infrastructure projects in Myanmar and the various strategic motivations behind this interest. This study does not seek to delve into the reasons behind decisions made by the Chinese government and its companies to invest in such projects, but rather summarize the investments that have already been made and introduce those which may yet occur.

Following analysis of the data summarized in table 7, the 9 Chinese parent and subsidiary companies identified with interests in Myanmar's infrastructure sector can be classified into two groups, as follows:

- 1) SOEs with investments in large-scale, strategic regional infrastructure projects
- 2) Specialized SOE subsidiaries providing engineering and other contracting services

TABLE 7 CHINESE COMPANIES IDENTIFIED WITH INTERESTS IN MYANMAR'S INFRASTRUCTURE SECTOR

Company name	Company type	Role	Local partner	Project	Location	Status
China National Petroleum Corporation (CNPC)	Central SOE	Investor (51% ownership) and contracted to design, construct, operate and maintain both pipelines.	State-owned Myanmar Oil and Gas Enterprise (8% share)	Myanmar-China Gas Pipeline	Kyaukryu Port (Myanmar) to Guizhou (China)	Operational
			State-owned Myanmar Oil and Gas Enterprise (49% share)	Myanmar-China Oil Pipeline	Kyaukryu Port (Myanmar) to Kunming (China)	Operational
		Investor	Ministry of Energy	Kyaukpyu deep-sea port	Maday Island	Operational
CITIC Group	Central SOE	Prospective developer (subject to tender process)	Unknown	Kyaukpyu Economic and Technology Zone	Kyaukpyu, Rakhine State	Tender process ongoing
CITIC Construction Company Ltd	Subsidiary of CITIC Group	Prospective developer (subject to tender process)	Unknown	Kyaukpyu Economic and Technology Zone	Kyaukpyu, Rakhine State	Tender process ongoing
China Railway Engineering Corporation	Central SOE	Build, operate, transfer	Ministry of Rail Transportation	Myanmar-China railway	Kyaukpyu (Myanmar) to Kunming (China)	MOU signed 2011. Project reportedly cancelled 2014
Zhuhai Zhenrong Corporation	Central SOE	Joint owner of Guangdong Zhenrong Energy Co., Ltd	N/A	N/A	N/A	N/A
Guangdong Zhenrong Energy Co., Ltd	Partially owned by CSOE	Developer	Myanmar Economic Holdings Ltd & HTOO Group (JV partners)	Oil refinery	Dawei, Tanintharyi Region	Approved by China NDRC. Awaiting approval from Myanmar authorities.
Yunnan	Provincial	EPC contractor	Yuzana Group	Myitkyina-Tanai-	Linking Myitkyina in	Under construction

Construction Engineering Group	SOE				Pangsau Pass section of the Stilwell Road	Kachin State to Pangsau Pass on the Arunachal Pradesh border	
China National Machinery Industry Corporation (SINOMACH)	Central SOE	Parent company	N/A		N/A	N/A	N/A
China National Heavy Machinery Corporation (CHMC)	Subsidiary of SINOMACH	EPC contractor	N/A		Tigyit coal-fired power station	Pinlaung township in southern Shan State	Operational
China CAMC Engineering Co., Ltd.	Subsidiary of SINOMACH	Investor	Established Myanmar Rice Mill Co Ltd (MRMC) in joint venture with Myanmar Millers Association		Rice mill	Sarr Ma Lauk village in Nyaung Toun township, Ayeyarwaddy delta region	Expected to be operational by 2017
		EPC, responsible for design, supply of equipment, installation, technical supervision and training	N/A		Thilawa shipyard	25 kilometres south of Yangon	Completed in 2002
		EPC, responsible for design, manufacturing and supply of steel structure and major equipment, construction management plan and supervision	N/A		Ayeyawady bridge (Yadanabon)	Ayeyawady river, connecting Mandalay and Sagaing	Completed in 2008
		Unknown	Unknown		Myitkyina bridge	Unknown	Unknown
		EPC - design, supply of steel truss, accessories and equipment and supervision of truss erection	N/A		Ayeyawady bridge (Pakokku)	Ayeyawady River, connecting Magway and Mandalay	Completed 2012
		Unknown	Unknown		Magwe-Minbu bridge	Ayeyarwady River, from Minbu to Magway	Completed
		Unknown	Unknown		Kyaukse cement	Kyaukse Town	Completed 2002

Unknown	Unknown	plant		
Unknown	Unknown	Dedaya bridge	Unknown	Completed
		Nyaungdon (Bo Myat Tun) bridge	Ayeyarwady River	Completed 1999
Unknown	Unknown	Yone Seik cane sugar mill	Unknown	Completed
EPC - design, equipment supply, technical guidance, training, construction supervision	N/A	Sarlingyi textile factory	Sarlingyi	Completed

SOES WITH INVESTMENTS IN LARGE-SCALE, STRATEGIC REGIONAL INFRASTRUCTURE PROJECTS

Kyaukpyu Port in Rakhine State has been and remains a target for developers from China and other countries. This study identified three Chinese central SOEs who, along with their subsidiary companies, are involved in large-scale infrastructure projects relating to Kyaukpyu.

The first is China National Petroleum Corporation's (CNPC), who's China-Myanmar oil and gas pipeline project is already operational. Both pipelines begin at Kyaukpyu and run across Myanmar to China. CNPC also developed a deep-sea port at Kyaukpyu as part of the pipeline project.

The second is CITIC Group and its subsidiary CITIC Construction Company Ltd, which has expressed an interest in developing the Kyaukpyu Economic and Technology Zone. At the time of writing, the decision of a Government tender process to select a developer had not been made.

The third is China Railway Engineering Corporation (CREC), who signed an MOU in 2011 to develop the China-Myanmar railway which was expected to follow the same route through Myanmar to China as the oil and gas pipelines. The current status of the project is unclear since the MOU lapsed in 2014 and there have been conflicting reports about whether the project has been cancelled or not.

CHINA NATIONAL PETROLEUM CORPORATION (CNPC)

China National Petroleum Corporation (CNPC) is a central SOE founded in 1955 and headquartered in Beijing. CNPC is an integrated energy company and China's largest oil and gas producer and supplier²¹. The company engages in both onshore and offshore hydrocarbon exploration and production operations worldwide, and owns and operates extensive networks of pipelines and storage systems. CNPC also markets and trades in crude oil, petroleum and a variety of other materials and products, provides contracting services in engineering construction, and is involved in financial and asset management activities²².

CNPC has been present in Myanmar since 2001 and currently operates two onshore oil and gas development and production projects, one deep-water exploration and development project, while also providing oilfield services and construction of chemicals facilities. In addition, CNPC recently completed the construction of the China-Myanmar oil and gas pipelines and is now responsible for their operation and maintenance.

²¹ (China National Petroleum Corporation (CNPC))

²² (Bloomberg Business, 2015)

MYANMAR-CHINA OIL AND GAS PIPELINES

Construction of the Myanmar-China Oil and Gas Pipelines was first proposed in 2004. In 2008, CNPC signed a 30-year agreement with South Korean conglomerate Daewoo International to import natural gas from offshore blocks A-1 and A-3 in Myanmar. Subsequent agreements made in 2009-10 specified that CNPC's subsidiary Southeast Asia Pipeline Ltd was responsible for designing, constructing, operating and maintaining the oil and gas pipelines.

A US\$2.54 billion investment gave CNPC a 51% share in the ownership of both pipelines. Myanmar Oil and Gas Enterprise (MOGE) controls the remaining 49% share in the oil pipeline, while the following companies share ownership of the gas pipeline: Daewoo International (25%), Oil and Natural Gas Corporation Videsh (India, 8%), Myanmar Oil and Gas Enterprise (Myanmar, 8%) Korean Gas Corporation (South Korea, 4%).

Construction of the pipelines began in 2010, with the gas pipeline becoming operational at the end of 2014 and the oil pipeline operational as of early 2015. Both pipelines follow the same course through Myanmar, starting on the west coast at Kyaukryu and entering China at Ruili in Yunnan Province. The oil pipeline is designed to transport 22 million tons of oil per year, while the gas pipeline is designed to transport 10-13 billion cubic meters of gas per year.

KYAUKPYU DEEP SEA PORT

As part of the Myanmar-China Oil and Gas Pipelines project, CNPC also financed construction of a deep-sea port on Maday Island, off Kyaukryu. The port and accompanying infrastructure, which includes storage facilities, is designed to allow 300,000 tonne tankers to dock and unload oil for transportation through the pipeline. Construction of the port was completed in 2014 and it was officially opened in 2015, with the first tanker unloading crude oil shipped from the Middle East²³.

Specific information about development of the port could not be located, including the total cost and other parties involved, although one report suggests the port was developed in a joint venture between CNPC and the Ministry of Energy²⁴.

CITIC GROUP CORPORATION

CITIC Group Corporation is a central government SOE based in Beijing. Together with its subsidiaries, CITIC operates across six segments: Finance, Real Estate and Infrastructure, Engineering Contracting, Resources and Energy, Manufacturing, and Other Services²⁵.

²³ (China National Petroleum Corporation (CNPC), 2015)

²⁴ (Consult-Myanmar, 2013)

CITIC Construction Company Ltd. is one such subsidiary. Also based in Beijing, it operates as a construction and contracting company²⁶.

KYAUKPYU ECONOMIC AND TECHNOLOGY ZONE

In Myanmar, CITIC Group has expressed strong interest in developing the Kyaukpyu Economic and Technology Zone. The SEZ on Ramree Island is where CNPC has constructed a deep sea port and is the start point for the Burma-China oil and gas pipelines.

CITIC Group has proposed a conceptual plan which consists of a petrochemical industrial zone, rail-road complex, logistics centre, export processing industries, multi-purpose terminals and residential areas covering 120 Km² of land and 70 Km² of waterways²⁷. According to a feasibility study by CITIC Construction Company, the zone will require an initial investment of US\$ 8.3 billion and a total US\$ 89.2 billion over 35 years²⁸.

In 2009, Xi Jinping, the vice-president of China at the time, signed the agreement on cooperation between Myanmar's Ministry of National Planning and Economic Development and CITIC Group for development of the Kyaukpyu Economic and Technological Development Zone²⁹. It is also reported that its subsidiary CITIC Construction Company Limited has made agreements to cooperate on the project with the Htoo Company, which is owned by military crony Tay Za³⁰.

At the time of writing it remains unclear as to whether CITIC Group and its subsidiary companies will be awarded the contract to develop the area. The Myanmar Government has not yet announced which companies will be awarded the contract for constructing the SEZ, a decision that has already been delayed by several months³¹.

CHINA RAILWAY ENGINEERING CORPORATION (CREC)

China Railway Engineering Corporation (CREC) is a central government state-owned enterprise under the direct supervision of SASAC and headquartered in Beijing. It operates as a holding company and through its various subsidiaries provides services including surveying, construction, design solutions, installation, manufacturing, R&D, technical consulting, capital management, international trade, property management, and railway development in China and worldwide³².

²⁵ (Bloomberg Business, 2015)

²⁶ (Bloomberg Business, 2015)

²⁷ (Bangkok Post, 2013)

²⁸ (Arakan Oil Watch, December 2012)

²⁹ (Bangkok Post, 2013)

³⁰ (Arakan Oil Watch, December 2012)

³¹ (Myanmar Property Insider.com, 2015)

³² (Bloomberg Business, 2015)

MYANMAR-CHINA RAILWAY

An MOU was signed between CREC and the Myanmar Railway Ministry in April 2011 to construct a 1,200km railway connecting China's Yunnan province with Myanmar's Rakhine Western coast, following the same route as the China-Myanmar oil and gas pipelines and costing US\$20 billion. The agreement was for a build-operate-transfer (BOT) with a period up to 50 years. The MOU was subject to further feasibility studies being completed and agreements on specific terms, and stipulated that construction should begin on the project within three years.

In July 2014, conflicting reports quoted the Director of Myanmar's Ministry of Rail Transportation as saying that the project had been "cancelled" after over three years of inaction on the 2011 agreement, while China's Ambassador to Myanmar and state mouthpiece the China Daily said China had not abandoned the project³³.

At the time of writing, the status of the project remained unclear and no statement from CREC could be identified.

SPECIALIZED SOE SUBSIDIARIES PROVIDING ENGINEERING AND OTHER CONTRACTING SERVICES

As with other sectors, several SOEs and their subsidiary companies were identified as having engaged in providing contracting services to other developers as part of infrastructure projects in Myanmar.

China National Heavy Machinery Corporation (CHMC) and China CAMC Engineering Co., Ltd. (CAMCE) are both subsidiaries of central SOE China National Machinery Industry Corporation (SINOMACH). Between them, the companies have been involved as EPC contractors in a range of infrastructure projects in Myanmar since 1999.

In addition, provincial SOE Yunnan Construction Engineering Group (YCEG) signed an MOU with a local company in 2010 to provide EPC contracting services as part of a road reconstruction project.

YUNNAN CONSTRUCTION ENGINEERING GROUP (YCEG)

Yunnan Construction Engineering Group Co. Ltd. (YCEG) is a provincial government SOE headquartered in Kunming, Yunnan province.

The company provides construction services for infrastructure projects including roads, bridges, municipal buildings, hydropower plants, railways, airports, ports, and others. It also

³³ (Asia Times, 2014)

provides services such as research and design, and the supply of construction labour and building materials³⁴.

In October 2010, YCEG and Myanmar's Yuzana Group Company signed an MOU to reconstruct the 312km Myitkyina–Pangsaung section of the Stilwell Road, linking Myitkyina in Kachin State to the Pangsau Pass on the Arunachal Pradesh border. YCEG's role in the project is an EPC contractor and the total cost of the project is reported to be CNY3.3 billion³⁵. An Asian Development Bank Institute report from December 2014 indicates that little progress has been made since the MOU was signed, due to funding constraints and political instability in the Kachin state which are hampering the construction process³⁶.

SINOMACH, CHMC AND CAMCE

Central government SOE SINOMACH and its subsidiary CHMC were introduced in the mining section of this report, along with CHMC's involvement as an EPC contract in development of the Tigyt coal mine. Tigyt coal-fired power station neighbours the mine and was the first coal-fired power station in Myanmar with an installed capacity of 2x60MW. As general EPC contractor, CHMC was responsible for design & engineering, equipment supply, inspection on civil works, installation & erection instruction³⁷.

China CAMC Engineering Co., Ltd. (CAMCE) is another subsidiary of SINOMACH. The company was established in 2001 and is based in Beijing³⁸. CAMCE is engaged in contracting EPC projects in the industrial, agriculture, water, power, communication and engineering sectors globally³⁹.

In Myanmar, CAMCE completed several EPC projects between 1999 and 2012 including the construction of bridges, a shipyard, cement plant, sugar mill and a textile factory in various locations. The company is currently involved in a project to build a rice mill in Nyaung Toun township in the Ayeyarwaddy delta region. In February 2015 it was reported that CAMCE had established the Myanmar Rice Milling Company (MRMC) in a joint venture with the Myanmar Millers Association. The cost of the project is estimated between \$5 and \$7 million and the mill is expected to begin operations in early 2017, at which point it will have a capacity to produce 200 tonnes of high-quality rice per day. A spokesman from MRMC was also quoted as saying that negotiations are underway to build additional mills in Letpantan and Zeegon townships in Bago region⁴⁰.

³⁴ (Bloomberg Business, 2015)

³⁵ (AidData)

³⁶ (Asian Development Bank Institute, December 2014)

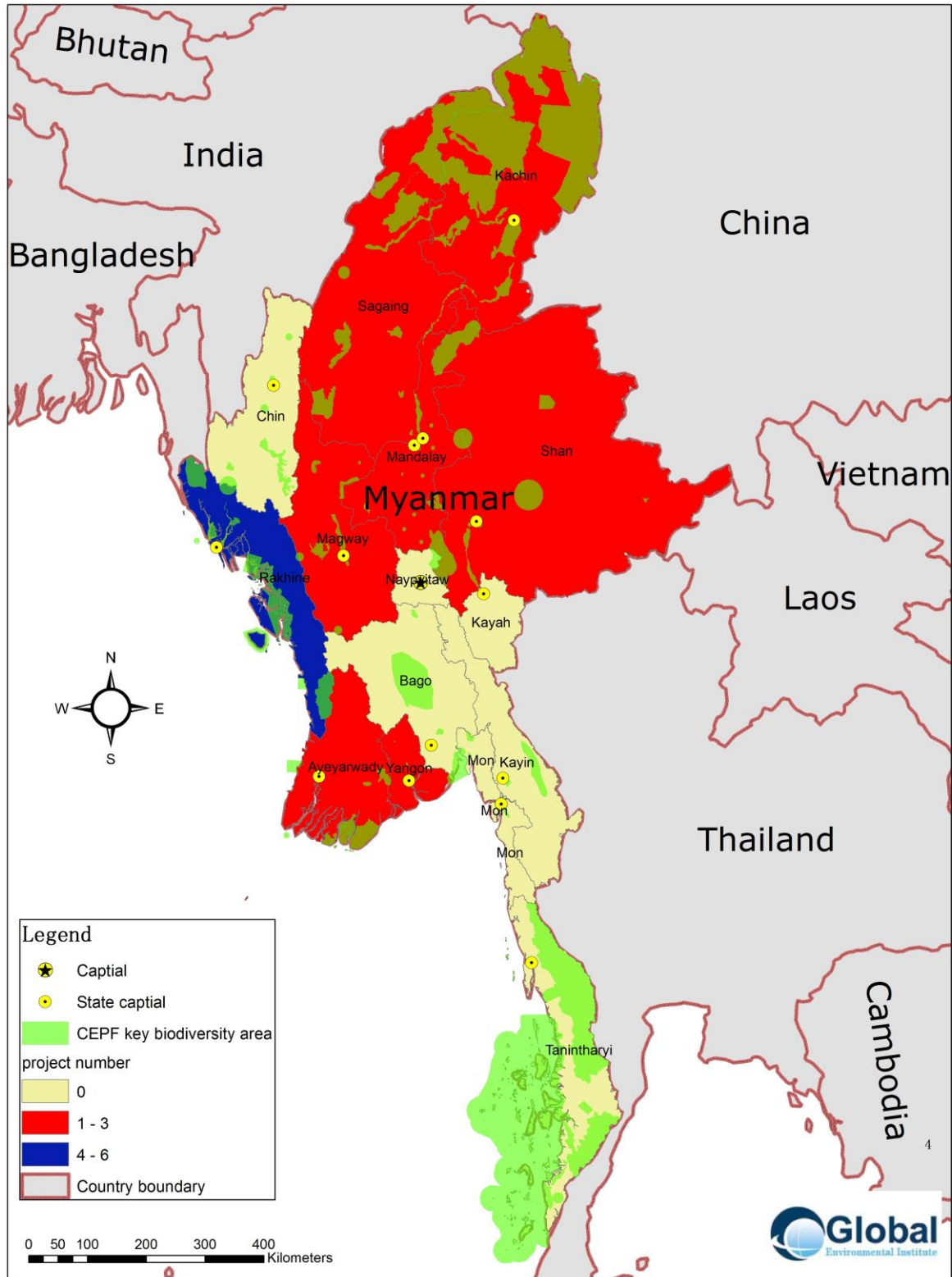
³⁷ (China National Heavy Machinery Corporation)

³⁸ (China CAMC Engineering Co., Ltd)

³⁹ (Bloomberg Business, 2015)

⁴⁰ (Consult-Myanmar, 2015)

FIGURE 6 NUMBER AND DISTRIBUTION OF INFRASTRUCTURE PROJECTS WITH CHINESE CAPITALS



TOURISM

None tourism development projects are identified during the research. During the visit, we learned some information about a few hotel investments, mainly in Yangon city and Ngapali beach, but more detailed information requires further digging-in. It is also unclear whether these investments are under the cover of Myanmar local companies.

SUMMARY OF FINDINGS, RECOMMENDATIONS & NEXT STEPS

As Myanmar and Laos are neighbouring countries both sharing borders with China's Yunnan Province, the general Chinese investment pattern in Myanmar is very similar to what we found in Laos in a previous scoping study. Large-scale hydropower and infrastructure projects are dominated by big SOEs, with a few provincial SOEs and private companies contracted to provide equipment and services, which is actually reflection of the dynamics of the two sectors within China. Sectoral patterns of mining and agriculture are that large SOEs invest limited number of large-scale projects while small and medium-scale private companies invest much more small projects that are hard to identify and trace.

Tailored potential next steps could be developed based on the characteristics of different sectors and findings from conversations with Chinese enterprises during the Myanmar visit. Specific suggestions are as follows,

- A majority of Chinese SOEs investing in Myanmar are very much aware of the importance of environmental and social safeguarding conducts during their investment, but they lack effective approaches and capacities as to how to carry out related works on the ground. In-depth case studies on good practices of environmental and social conducts by their international counterparts in similar sectors to share with Chinese SOEs, experience-sharing dialogues between Chinese and foreign enterprises on related topics, and practice manuals and capacity buildings for SOEs through the platform of Chinese Embassy in Myanmar and/or Chinese CoC in Myanmar, are possible future steps to consider;
- Private companies are difficult to trace, therefore engagement through relevant CoCs, such as Yunnan Association of Small and Medium Enterprises (SMEs) and Yunnan Service Center for SMEs, will be an effective choice. Also, some private companies mention that when it comes to environmental and social compliance, they usually rely on their local partner companies as to knowledge and responses, so perhaps more engagement with Myanmar domestic companies, as well as provision of relevant information to Chinese private companies, can also be an approach;
- Chinese policy banks are a major driver of Chinese investments in Myanmar, especially large-scale development projects. Although there are foreign/strategic policy considerations behind loan decisions, efforts can still be made in terms of promoting the incorporation of better environmental and social safeguarding policies during the loan approval process, such as by learning experiences from international counterparts, quantifying environmental and social risks of candidate projects, etc.

SUGGESTIONS ON FUTURE ENGAGEMENT WITH CHINESE COMPANIES

From the scoping study we found Chinese companies in Myanmar are generally more cautious than those in Laos regarding the idea of working with NGOs. The difference is very likely caused by the complexity and sensitivity of Myanmar's political situation and the constant anti-Chinese investment mind-set among the general public since the Myitsone Dam suspension. Worrying about the unfavourable political context, plus the scepticism and distrust of NGOs stemming from ideologies in China, Chinese companies in Myanmar, particularly SOEs, are still in very early stage of interaction with NGOs. However, we have seen some breakthroughs recently, such as Wanbao and CPI's openness and willingness to meet with NGOs, CNPC's intention to meet with Myanmar NGOs and their dialogue initiatives with the Myanmar Centre for Responsible Business (MCRB) and Earth Rights International (ERI), as well as CITIC's integration of GEI's community development approaches into their bidding proposal of Kyaukpyu SEZ.

With increasing awareness among Chinese companies on the importance of sound environmental and social practices when investing overseas, the key issue had been shifted from making companies and governments aware of the issue, to providing practical solutions/examples of how to achieve environmental and social friendly investment behaviours. In this stage, there are undoubtedly lots of potential needs and hence a large gap in terms of corporate-NGO collaborations. During our discussions with a couple of Chinese companies during field visit to Yangon, we learned the following major obstacles that prevent them from potential collaborations with NGOs,

i) **Trust**

Chinese companies are not familiar with the NGO sector in general, not to mention the NGO sector in Myanmar, such as who is doing what, what is the theory of change of each organization, how good they are and their backgrounds. Therefore they have no idea of who may be suitable to collaborate and also feel insecure about the possibilities of been undermined by some NGOs who turns out to have certain political pursuits;

ii) **Funding**

- Willingness to pay. Some companies concern that NGOs have overhead and operating costs that would need to be charged from their corporate social responsibility (CSR) program budget, while for companies if they do CSR by their own, their staffing costs can be paid directly through staff salaries instead of occupying the CSR budget, which the company believes could have more actual budget utilized for on-the-ground work. Overall we think this concern is more related to doubts about what valuable inputs NGOs could offer to companies;
- Policy constraint. We also learned that China's State Assets Supervision and Administration Commission of the State Council (SASAC), which is the governing body of CSOEs and SOEs, has a regulation that limits the utilization of company's CSR funding of

¥50,000 (about US\$7,600) – expenses over this amount will need to be submitted to SASAC for approval.

Based on the identified obstacles, our proposed suggestions of start-up activities as an approach to initiate potential collaboration with Chinese companies include,

- i) Develop a handbook/directory on NGOs in Myanmar tailored for interested private sector companies. The handbook/directory should include international and local NGOs in Myanmar particular working in environmental and social related fields, such as environment, conservation, livelihoods development, health and education at community level, as a guidebook and reference for companies to be more familiar with the sector and NGO “who’s who” in Myanmar, hence improve understanding;
- ii) Study on international best practices in terms of how to ensure environmental and social friendly overseas investments, summarize findings into practical suggestions tailored for Chinese companies, and hold knowledge/experience sharing activities to introduce these practices and suggestions;
- iii) Pilot cooperative/co-fund projects, which mean that NGO(s) sponsor their own salaries and travel costs while the company sponsor its own. The pilots aim to gain trusts and explore/solicit further collaborations and can range from improving companies’ internal environmental and social safeguarding systems and capacities, to community-based conservation and livelihoods development projects.