



Going Global, Going Green

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GOING GLOBAL, GOING GREEN – China Investment, Trade and Environment

By Pan Jihua and John M. Forgach

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The China Council for International Cooperation on Environment and Development (CCICED) is a high-level, non-profit, international advisory body established with the approval of the Chinese Government in 1992. The main functions of the CCICED are: exchanging and disseminating successful international experiences in the field of environment and development; studying key environment and development issues in China; advancing forward-looking, strategic, and precautionary policy recommendations to the leaders of the Chinese government and policy-makers at all levels; and supporting and facilitating the implementation of sustainable development strategies, and the development of a resource-saving and environmentally friendly society in China. This book summarizes the work of the CCICED Task Force on Investment, Trade, and Environment. The two authors, who served as Chinese and International co-chairs, were supported by 10 Task Force members, all serving in their personal capacity, plus a number of researchers and two very helpful coordinators. In addition, there were cooperating teams in both Indonesia and Africa. All of these contributors are acknowledged in the text. The work was carried out during 2010 and 2011, with a final report submitted to the CCICED in November 2011. Key recommendations were submitted to the government of China in December 2011. The authors wish to thank the CCICED Secretariat and its International Support Office, the Chief Advisors to CCICED, Prof. Shen Guofang and Dr. Arthur Hanson, for their input and advice, and the members of the CCICED for their interest and help at various stages. Several individuals associated with the IISD participated in the work. IISD wishes to highlight the product since it is significant to its own mission, and to furthering long-standing cooperation with CCICED on trade and environment issues.



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Background

Significant progress has been made in achieving sustainable development in China, but there are still many challenges ahead. In this study we examine the impact of international investment and trade on the environment and analyze how China could leverage its international trade and investment activities to advance a “green shift” of the economy.

The China Council for International Cooperation on Environment and Development (CCICED) has carried out numerous related studies over the years, including research into the illegal trade of endangered species in China; China’s application for accession to the World Trade Organization (WTO) and its impact on the environment; international environmental certification standards; environment-related non-tariff trade barriers; and an environmental analysis of the value chain of certain commodities.

However, as the country increases its global presence, the nature of its trade is evolving. China must carefully measure how it can mitigate the current and potential environmental impacts of this changing landscape. China must also manage a rapidly growing volume of goods traded and produced through its investment activities. The impacts on the environment are continuously changing, and the role of these activities vis-à-vis sustainable development is becoming more complex to understand by the day.

The rules of the game must also be constantly examined; the non-stop review of regulations and their environmental provisions has made compliance more challenging. It is important to pay close attention to this rule-making process as some of the new measures could lead to new rounds of green protectionism. Following these changing policy dynamics is essential for a country like China, which is not only a latecomer to the business of international investment and trade but has become one of the major players in international trade and investment. In such a dynamic context, China must rapidly identify the changing opportunities to implement new trading and investment policies that will help accelerate its shift towards the green development goals it has established for itself.

As energy and natural resources become scarce and expensive, it is imperative that China make use of its strategic position as a large emerging economy in transition to engage in the green transformation process. This engagement will help the country achieve clean, sustainable, and competitive economic development. As it engages in the process of “going global,” China must embrace its responsibilities as a leading player and become a proactive actor in promoting its environmental programs both at home and abroad.

China’s policies for absorbing foreign direct investment (FDI) have started to change. However, a much greater research effort is needed to understand the principles, measures, and effects of its actions in terms of hosting FDI and making foreign investments (outward direct investment – ODI). The process has already started as China has taken some actions to regulate ODI, and some Chinese firms operating abroad are adopting

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voluntary corporate social responsibility (CSR)¹ measures that conform to international investment standards. Nevertheless there is still much to do. China should carefully study existing international practices in order to select, improve, adapt, and adopt those that will help the country excel in environmental stewardship.

The Task Force explored the green shift in FDI in China, China's ODI, and China's international trade. In terms of FDI and the environment, the main issue is determining what sort of investment should be encouraged and what policy measures should be adopted to ensure that FDI contributes to the green shift and sustainable development. With respect to ODI, the main question revolves around what policies China should develop to strengthen its CSR and environmental performance, and improve the reputation of its overseas enterprises and the country itself. In an effort to arrive at reliable conclusions and sound recommendations, the Task Force endeavoured to obtain first-hand information and materials, carrying out field trips in countries where China's ODI and trade are more concentrated, specifically Indonesia, South Africa, and Zambia.

Over and above the need to manage domestic policies on the subject, China should evaluate rules and standards relating to international investment, trade, and the environment and help redesign them as necessary to promote a green transformation. China should not only safeguard its own economic and environmental interests, but through active engagement and leadership, the country should contribute to the improvement of global governance. How to balance self-interest with global needs is an important question for China to resolve. With the promotion of globalization and China's continuous emergence as a major economic power, the country will assume ever larger responsibilities and face growing pressure from the international community. Therefore, China should become proactive and help develop the international rules on investment, trade, and environment. It should voice its position on behalf of the interests of developing countries, and work towards playing a role in the development of the latter. In this sense, the Task Force has focused on studying how and where China can participate in the making of international rules, as it tries to promote better international cooperation.

This research project seeks to describe the current state of Chinese international trade and investment activities, and understand how they will affect the drive toward its sustainable development and green shift goals. The study aims to provide realistic and user-friendly recommendations that can be implemented to accelerate and expand the positive contribution of investment and trade to the environment while the economy evolves. In this process, the Task Force also explored how China could cooperate with trading partners and investment rivals to promote bilateral green shift opportunities. Finally, the Task Force focused on how China could carry out multilateral cooperation with the international community in the fields of investment and trade, helping establish and improve relevant systems and mechanisms to promote a global green shift.

The Investment, Trade, and Environment Task Force, formally launched in June 2010, held four plenary working meetings, three Chinese member meetings, and two overseas field trips. It participated in the November 2010 CCICED Annual General Meeting

¹ Canada's Department of Foreign Affairs and International Trade defines corporate social responsibility (CSR) "as the way companies integrate social, environmental, and economic concerns into their values and operations in a transparent and accountable manner."

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where it submitted an interim report; and participated in three CCICED Secretariat and Chief Advisors Joint Working Meetings and reported on the progress of the project. After 18 months of research and writing by the Chinese and overseas teams, the project report was submitted to the 2011 CCICED Annual General Meeting in the form of research reports and policy recommendations.

This document is a shortened version of our original report. To read the complete report, please visit <http://www.cciced.net/enciced/>.

Acronyms and abbreviations

ASEAN	Association of Southeast Asian Nations
CBRC	China Banking Regulatory Commission
CEC	Commission for Environmental Cooperation
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CNOOC	China National Offshore Oil Corporation
CNPC	China National Petroleum Corporation (Group)
CO ₂	Carbon Dioxide
CSR	Corporate Social Responsibility
EKC	Environmental Kuznets Curve
EU	European Union
EXIM Bank	China's Export-Import Bank
FDI	Foreign Direct Investment
GATT	General Agreement on Tariffs and Trade
GDP	Gross Domestic Product
G8	Group of eight leading world economies
GHGs	Greenhouse Gases
LNG	Liquefied Natural Gas
M&A	Mergers and Acquisitions
MEP	Ministry of Environmental Protection of the PRC
MIIT	Ministry of Industry, Information, and Technology of the PRC
MOFCOM	Ministry of Commerce of the PRC
MT	Metric Ton
MW	Megawatt
NAFTA	North American Free Trade Agreement
NDRC	National Development and Reform Commission
NGO	Non-Governmental Organization
ODI	Outward Direct Investment
OECD	Organisation for Economic Co-operation and Development
PRC	The Peoples' Republic of China
SASAC	State-owned Assets Supervision and Administration Commission
SFA	State Forestry Administration of PRC
SMEs	Small and Medium-sized Enterprises
SO ₂	Sulphur Dioxide
SOE	State-owned Enterprise
TRIMs	Trade Related Investment Measures
UNCTAD	United Nations Conference on Trade and Development
UNEP	United Nations Environment Programme
USD	United States Dollar
U.S. EPA	United States Environmental Protection Agency
WRI	World Resources Institute
WTO	World Trade Organization

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Section 1 The Relationship among Investment, Trade, and the Environment: Our Framework of Analysis

1.1 Background

China has achieved much in the 30 years that have passed since the onset of major reforms. In 2010, China became the second largest economy in the world as its gross domestic product (GDP) soared to USD 5.9 trillion. That figure has been growing at a rate of 10% per year. At the same time, though, China's per capita GDP was only USD 4,382 in 2010, 95th in the world. The accelerated development of the Chinese economy, coupled with the intensity and speed of its reform process, has allowed international investment and trade to become important means towards promoting the development of the country. At the same time, they have facilitated China's involvement in economic globalization. By the end of 2009, China had approved over 660,000 foreign investments totaling USD 997.4 billion, the highest cumulative figure among developing countries over a 17-year period. Even in 2008 and 2009, when the world was swept by the financial crisis, the size of foreign direct investment in China dropped only slightly. China's FDI in 2009 was USD 230 billion, seven times its 2003 levels when the "going global" strategy was launched. The total import and export volume in China's foreign trade in 2009 amounted to USD 2.2 trillion, including an export volume of USD 1.2 trillion (equivalent to 10% of global trade export volume). Such an amount of exports placed it first among exporting nations, even ahead of traditional exporters like Germany. At the same time, it imported USD 1.0 trillion, achieving a trade surplus of USD 196 billion.

RECOMMENDATION: China needs to take proactive positions regarding environment and development that will: (1) ensure that those investing within China operate at the highest standards of CSR; (2) secure goodwill and the right to operate in countries abroad for Chinese ventures, based on the quality and style of investment and benefits for local people; and (3) seek bilateral, regional, and international trade, environment, and other agreements that take into account Chinese interests and concerns for a green economy, and indeed, for the transition to ecological civilization. China should aim to be an open and declared advocate in developing and promoting international green transformation.

See Section 6 for more discussion about this recommendation.

With globalization and increasingly serious global environmental problems, sustainable development and human survival itself have been confronted with increasingly stringent challenges. Problems such as pollution, climate change, and energy shortages are now at the forefront worldwide. Traditional energy-consumption and industrial-development patterns are no longer viable. As the role of international investment and trade becomes more important, the analysis of the investment, trade, and environment nexus also becomes imperative.

Because of their nature, investment and trade interact with each other and impact the environment in similar ways. The relationships are multi-dimensional and very complex.

Trade can have positive impacts on the environment, but it can—and often does—also lead to environmental degradation. The difference lies in how well established the governance rules are around trade. The same applies to FDI: on the one hand, it may increase the host country’s pollution levels when it flows from countries or regions with strict environmental regulations to countries or regions with more lenient environmental regulation, thus causing the transfer of polluting industries and increasing the level of pollution in the host country; on the other hand, the advanced technologies brought by FDI to the host country may often improve the efficiency and recycling of resources, thereby leading to reduced emissions and pollution in the host country.

With expanding globalization, investment and trade will often overlap and interact as cause and effect. Trade-oriented investments are closely related to the target resources and market strategies of a host country. While investment in a coal-mining operation can be made with the highest regard for social and environmental conditions, the actual commodity, when traded, will transfer pollution. The analysis of the interaction of investment, trade, and environment is just starting, but it is clear that international investment and trade are connected at multiple points in the industrial and consumption value chains. They interact with resource supply, production efficiency, emission levels, market share, consumption options, and related emission levels. They are crucial to energy security and to development, and are therefore very influential in defining their status and importance.

1.2 Environmental Impacts of International Trade

The impact of international trade on the environment and society is comprehensively reflected through scale, structure, and technology effects. The scale effect means that larger-scale trade activities lead to more serious environmental degradation; the structure effect means that the in-depth development of trade activities promotes the upgrading and restructuring of industrial structures, thus exerting positive impacts on the environment; and the technology effect means that the specialized professional division of labour, advanced technology, and management experience introduced through trade, cause the reduction of pollutant per unit of output, thereby gradually improving environmental quality.

The environmental impact of international trade can also be viewed from the long- and short-term consequences it brings. In the long term, environmental pollution caused by international trade takes on the inverted U form; in the short term, as trading rivals are at different stages of development, the three effects—technology, structure, and scale—are reciprocal and the impact of international trade on the environment and social development differs for each party. These effects are further expanded into several other hypotheses, such as the Environmental Kuznets Curve (EKC) hypothesis, the “race-to-the-bottom” hypothesis, and the “pollution haven” hypothesis.

China and other developing countries have entered a critical period of industrialization and global green shift, generating much debate about the impact of international trade on the environment. Some have said that China is practicing “neo-colonialism,” robbing resources, occupying markets, and slowing global progress towards sustainable development. Others claim that China uses developing countries in Africa and

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Southeast Asia as “pollution havens” to transfer emissions by taking advantage of the lower local environmental standards and loose enforcement conditions. This causes host countries to “race-to-the-bottom” as they lessen environmental standards to attract foreign investment; a process that stifles sustainable development in the host country and, indeed, globally.

Whether true or not, such accusations are often expressed by more developed countries that are competing for markets and resources with China and are disturbed by its rising influence and appetite. Whatever the case, the social and environmental issues that are revealed are certainly worth closer examination. In a context of growing international globalization and trade liberalization, it is likely that the traditional laws of economics seeking optimization of resources will stimulate the transfers of industries among countries at varying technological levels and developmental stages. Research shows that industrial transfer has indeed occurred in international economic and trade development in the past, but hypotheses such as “pollution haven” and “race-to-the-bottom” do not always hold true.

Indeed, industrial transfer can be the result of rising domestic production costs related to the adoption of stricter pollution standards in a developed country. Such industrialized countries have, through imports and investments, transferred pollution-intensive and resource- and energy-intensive industries to other countries, giving rise to the effect of “pollution havens.” H.D. Robinson² revealed that the United States tended to import more pollution-intensive products, thereby replacing the domestic pollution-intensive industries in the exporting country. Mani and Wheeler³ discovered that the output ratio of polluting and clean industries in OECD countries is continuously dropping, while the import-export ratio of polluting industries is rising year by year; on the other side of the coin, the output ratio of polluting and clean industries of developing countries in Latin America and Asia is gradually increasing, while the import-export ratio of polluting industries is dropping. Low and Yeats⁴ have pointed out that in the course of global industrial transfer, as developed countries trade with developing countries, the concentration of pollution intensity in developing countries is higher.

Industrial transfer will not necessarily have only negative impacts on the environment and society of the host country. The scale effect might aggravate environmental deterioration. However, when the change in product structure is a shift from pollution-intensive to cleaner products, or clean production technology is adopted, environmental conditions will be improved after trade is liberalized. When income reaches a certain level, and when the promoting role of the technology effect and the structure effect is prevailing, the environmental and social impact of international trade could be positive.

Certainly when the scale effect prevails in trade, its impact can be quite negative. The air pollution level of countries like China, Mexico, and Brazil has worsened while they are all “going global.”⁵ In countries with low environmental-protection standards

² Robinson, H. D. (1988). “International Pollution Abatement: The Impact on the Balance of Trade.” *Canadian Journal of Economics*, 21, pp.187–199.

³ Mani, M., Wheeler, D. (1998). In search of pollution havens? Dirty industry in the world economy: 1960–1995. *Journal of Environment and Development* 7(3): 215–247.

⁴ Low P. and A. Yeats (1992). Do “Dirty” Industries Migrate? *World Bank Discussion Papers*.

⁵ D.Wheeler. Racing to the Bottom? Foreign investment and air pollution in developing countries [J]. *Journal of Environment and Development*, 2001, 10 (3):225-245.

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and weak law enforcement, international trade exerts huge competitive pressure on the host country. Indeed, tremendous environmental and social problems prevail in those cases.^{6, 7, 8} The environmental and social impacts of international investment and trade vary from case to case, and each example should be studied on its own terms.

Whatever the case, developing countries need in general to engage in a green shift and adopt strict environmental regulations governing their international trade. In some countries, there is a cause-and-effect relationship between strict environmental regulation and improved international competitiveness. Environmental regulations often increase the costs of production at first, but usually they will ultimately benefit the progress of business due to the gains in efficiencies, reduced waste, better safety and quality, and lower energy consumption.

1.3 Environmental Impacts of International Investment

The impacts of international investment and international trade on the environment and society can be quite similar. Large-scale international trade has promoted the transnational transfer of industries, thereby creating a new context for international investment. This, in turn, opens up a country's overseas resources and market space, and supports domestic economic development. In fact, international investment is more direct and complicated than international trade in terms of its environmental and social impacts. The academic circles have classified social and environmental impacts of international investment as follows: the halo effect, the regulation effect, the scale effect, the structure effect, and the technology effect. Each effect is a double-edged sword, in that it can be simultaneously good and bad for the host country's environment. Likewise, different investment subjects can also cause different environmental consequences. These cases are described in Table 1.1.

⁶ D.Wheeler. Racing to the Bottom? Foreign investment and air pollution in developing countries [J]. *Journal of Environment and Development*, 2001, 10 (3):225-245.

⁷ Daniel C. Esty and Damien Geradin (1997). Market Access, Competitiveness, and Harmonization: Environmental Protection in Regional Trade Agreements. *Harv. Envtl. L. Rev.* 21

⁸ Daniel C. Esty and Damien Geradin (1997). Market Access, Competitiveness, and Harmonization: Environmental Protection in Regional Trade Agreements. *Harv. Envtl. L. Rev.* 21

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Table 1.1 Effects of International Investment

Definition of effect	Positive effects	Negative effects
<p><u>Halo Effect</u></p> <p>Foreign-invested enterprises that adopt more environmentally friendly behaviours and use better environmental technologies than the host country.</p>	<ol style="list-style-type: none"> 1. Promotes the economic restructuring of the host country. 2. Enhances the public's environmental awareness. 	<p>Risks concealing the double standard.</p>
<p><u>Regulation Effect</u></p> <p>"Investment-attracting" behaviour of the host government seeking FDI with strong environmental and CSR values.</p>	<p>Well-funded foreign enterprises can enhance the regional economy when environmental regulations pose challenges.</p>	<p>Increases pollution and emissions in regions with loose environmental regulations.</p>
<p><u>Scale Effect</u></p> <p>Impact on the environment when FDI expands the scope of business activities in the host country.</p>	<ol style="list-style-type: none"> 1. Foreign-funded enterprises that value sustainable development bring advanced environment and development concepts, consistent with a society's desire to strengthen environmental protection. 2. Introducing transnational corporations with excellent abilities and perspectives on management and sustainable development helps host countries accelerate their own transitions. 	<p>In the event of rapid growth or significant decline, many medium and small foreign-funded enterprises will have trouble keeping up with the obligations in environmental regulations.</p>
<p><u>Structure Effect</u></p> <p>Changes taking place in different departments of the host country caused by FDI, thereby changing the economic structure.</p>	<p>Depending on existing levels of pollution in the host country, foreign investment can inspire upgrades to a host country's industrial structure.</p>	<ol style="list-style-type: none"> 1. It could become increasingly difficult to control pollution due to an imbalance of investment in different industries and regions. 2. Foreign investment in China is mainly composed of small and medium enterprises, and the positive scale effect is lessened.
<p><u>Technology Effect</u></p> <p>The phenomenon that foreign investment increases the rate of technology upgrading, dissemination, and transfer.</p>	<ol style="list-style-type: none"> 1. Transnational corporations with advanced technologies promote the deployment of environmental protection technologies. 2. The entry of transnational corporations with advanced technologies helps improve technology at the host country's own enterprises. 	

1.4 Main Contents of Research

China's economic development has entered a critical period of green shift. This is occurring while the world is undergoing a severe economic crisis, which can lead to new investment opportunities as development gaps can be resolved through new and more sustainable solutions. This can be an important period for China and other developing countries to explore strategic and unprecedented opportunities.

Green shift is a comprehensive concept that encompasses a low-carbon, environmentally friendly, recycling economy. China's Twelfth Five-Year Plan has pointed out that the country's green shift represents the evolution from an unbalanced, uncoordinated, and unsustainable economic development pattern, to a more balanced, coordinated, and sustainable approach. At the same time, the green shift aims to reduce and eliminate the resource and environmental constraints of economic growth. It marks a transition from the traditional economic development pattern to a more intensive one. Investment, trade, and the environment are of critical importance in realizing the green shift to a balanced, coordinated, and sustainable economic development. Properly designed and utilized, trade and investment will drive and support the green shift; poorly designed, they could become a source of imbalance, chaos, and lack of sustainability.

China's rapid economic development poses serious environmental concerns. In 2010, China's carbon dioxide emissions were 8.33 billion MT, accounting for 25% of the world's total, which is more than any other country^{9,10}; the amount of primary energy consumption was 3.25 billion MT of standard coal equivalent, with an average annual increase rate of 8.8%, ranking it number one in the world.¹¹ At the same time, China's fossil fuel resources are characterized by a lack of petroleum, small amounts of gas, and a wealth of coal. The currently estimated reserve and production ratio of petroleum is 11.3 years; natural gas, 32.3 years; and coal, 41 years. The proven reserves will increase, but not infinitely. Resource-intensive, energy-intensive, and pollution-intensive products comprise a very large proportion of China's exports. This reality has brought about a net loss to China's environment as a large amount of embedded carbon dioxide (CO₂) is transferred overseas through international trade. According to the Tyndall Centre for Climate Change Research (2007), the net export of embedded CO₂ in products traded by China is 1.1 billion MT/year. A quarter of greenhouse gas emissions in China, including CO₂, are used for export. The current economic model in China, which exchanges resources for markets and environment for growth, must be reviewed. The drive towards a green shift should be actively and seriously pursued.

China's economic and trade cooperation with other developing countries is still in its infancy and can be further improved with regulations and other measures that support effective environmental stewardship. At this stage, China and other developing countries have the advantage of being relative latecomers to high levels of international trade and investment. Proper trade and investment approaches can not only promote China's green shift but also play an important and positive role in the green shift of host and partner countries. Effective environmental regulations relating to international investment and trade can become important drivers for a global green shift, a worldwide transition to sustainable development. Given the size of China's economy, its technological expertise, and the nature of the timing, China is in a position to lead on the issue.

The TF has focused on studying the green shift of FDI in China, China's ODI, and China's international trade, and CSR. The main questions affecting FDI in China are

⁹ Nina Chestney. China's CO₂ emissions rose 10 pct in 2010-BP data. London, June 8, Reuters: <http://in.reuters.com/article/2011/06/08/energy-bp-emissions-idINLDE75716Y20110608?feedType=RSS&feedName=everything&virtualBrandChannel=11709>

¹⁰ BP Annual Statistical Review of World Energy 2011

¹¹ National Bureau of PRC. Statistical Bulletin of National Economy and Social Development in the Year 2010. February 28, 2011.

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what sorts of investment should be encouraged and what policy measures should be adopted to ensure that FDI contributes to the green shift and sustainable development. As to ODI, the main question is about what policies China should develop to strengthen corporate social and environmental responsibility, improve the country's reputation, and enhance the image of China's overseas enterprises. In terms of international trade, the main questions are about what policies China should adopt to accelerate the shift to sustainable trade. In order to better understand these questions, the TF selected Indonesia, South Africa, and Zambia for first-hand examination. These were chosen based on locations where China's ODI and trade were more concentrated, and where the TF had access to local partner organizations and reliable local data.

Another important element of this research is to study how China should be involved in making and adapting international rules to promote a green shift. The relationship among investment, trade, and the environment, to a very large extent, depends on the formulation of domestic policy, but it also requires good quality international guidance and regulations. Strong domestic policies and international rules can complement each other. As China engages in the global governance process and participates actively in developing international environmental rules, it should always keep in mind that it is still a developing economy that must actively safeguard the interests of its own economic development and environment. How to balance the interests between the two will be a major challenge. Despite China's status as a major developing power, there are still considerable development hurdles at home, the solutions for which are not always understood abroad. This is a real challenge that requires China to act consistently at home and abroad when it comes to environmental governance. This is why China must take more initiative in participating in international rule-making processes on investment, trade, and environment. It must ensure its space next to the developing world while preserving its interests and relations among more advanced trading partners.

Section 2 The Environmental Impact of Foreign Direct Investment (FDI)

Attracting foreign capital has become an important way for China to participate in economic globalization. As one of the key sources of funding fixed assets in China, FDI promotes—in varying degrees—economic development; the expansion of employment opportunities; the improvement of employment quality; and the increase of government revenues. At the same time, foreign enterprises also enjoy the benefits of China's rapid development. According to the survey report published by the U.S.-China Business Council in 2011, nearly 90% of American companies say that their business performance in China meets or exceeds global levels¹².

But FDI can also be considered a double-edged sword for host countries like China. The large-scale influx of FDI into sectors such as manufacturing, natural resources, and infrastructure construction, will heighten environmental pressures on the country. The major objectives of this section are:

¹² Europe China Economic & Trade Review, January 2011: www.europe1china.com

- (1) To review the sustainability of China's policies for attracting foreign investment during the three decades of reform;
- (2) To analyze ways to guide foreign investment flows so that they positively and truly promote a green shift; and
- (3) To study the enhancement of the halo effect and the "spillover effect" of foreign investment, in an effort to build the capacity of Chinese enterprises in terms of environmental management and environmentally friendly technology, and help China improve the market system in support of sustainable development.

RECOMMENDATION: China should use FDI to help promote its green transformation and sustainable development by ensuring a more balanced sectoral and regional distribution of FDI, with environmental concerns dealt with in a consistent manner.

See Section 6 for more discussion about this recommendation.

2.1 Definition of FDI and its Current Status in China

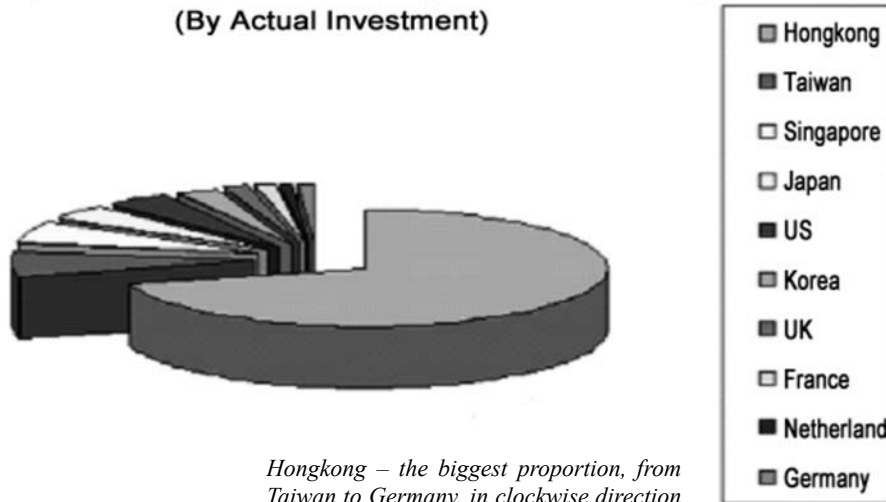
FDI, according to the definition in China's National Yearbook, refers to investment by foreign enterprises and economic organizations or individuals (including overseas Chinese residents of Hong Kong, Macao, and Taiwan, and Chinese enterprises registered overseas) to open solely foreign-funded enterprises; run Chinese-foreign equity joint ventures; participate in cooperative joint ventures or co-develop resources with any enterprises or economic organizations within the territory of China in the form of spot exchange, real object, or technology (including re-investment of income from foreign investment); as well as the actions of any enterprise borrowing funds from overseas within the total amount of project investment approved by relevant government authorities.¹³ Currently, foreign investment in China has the following prominent characteristics:

i. FDI in China comes from diverse sources. More than 170 countries invest in China. According to the actual accumulated investment numbers (see Figure 2.1), half of the FDI is from Hong Kong, Macao, and Taiwan; a quarter is from Europe, the U.S. and Japan; about one-tenth is from Southeast Asian countries; and the rest is from tax havens. The actual investment from Hong Kong, Macao, and Taiwan has reached USD 74.8 billion, which represents 70.77% of the total foreign investment in China. In 2010, 1,688 enterprises (an increase of 6.97% over 2009) from 27 EU countries established their operations in China with an actual investment of USD 6.6 billion (an increase of 10.71% over 2009). Also in 2010, 1,576 U.S. enterprises (a modest decrease of 0.76% compared to 2009) established their operations in China with an actual investment of USD 4.1 billion (an increase of 13.31% over 2009).

¹³Source: *China's National Yearbook 2009*, National Statistical Bureau

Figure 2.1 Top 10 Country Sources of FDI in China, January to December, 2010.

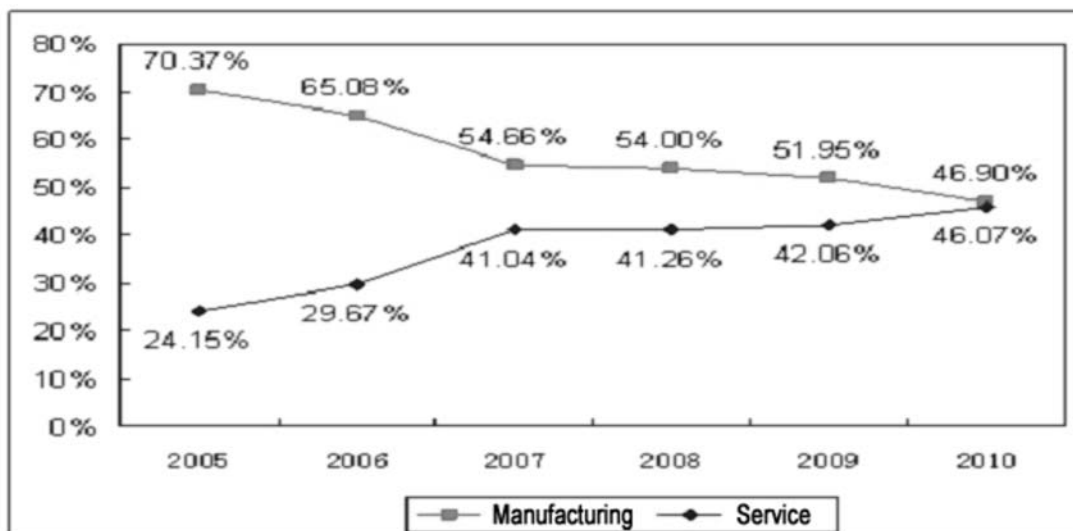
**Top Ten FDI Countries and Regions in China during Jan - Dec 2010
(By Actual Investment)**



Source: MOFCOM.

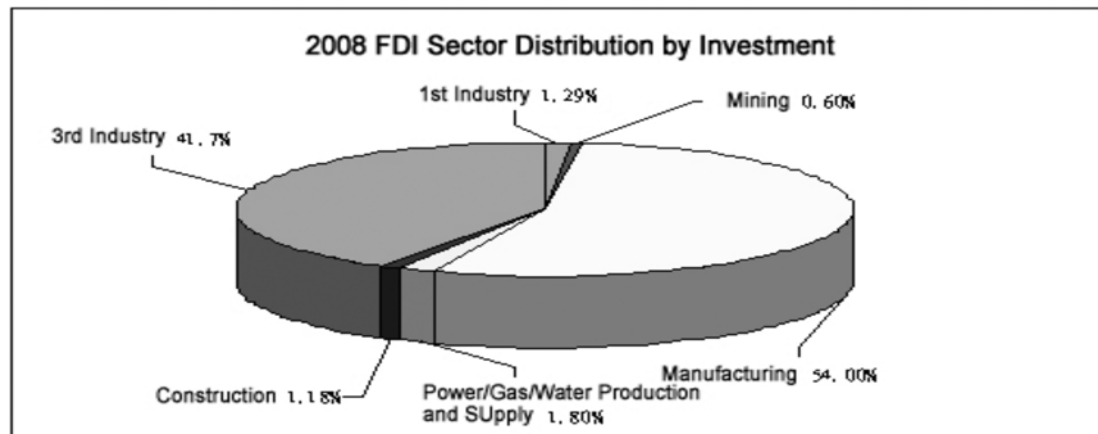
The proportion of FDI in the manufacturing sector when measured against total FDI in China has shown a downward trend since 2005, while the proportion of FDI in the service sector has been increasing. FDI in the two sectors was roughly equal in China in 2010 (see Figure 2.2).

Figure 2.2 Proportion of FDI in the Manufacturing and Service Sectors in China, 2005–2010.



Source: China's National Yearbook, National Statistical Bureau, statistics from MOFCOM.

Figure 2.3 FDI by Sector, 2008.



Source: China's National Yearbook 2009, National Statistical Bureau.

ii. FDI in China is diversified in method of investment. The proportion of joint ventures is 40%; the proportion of wholly-owned foreign enterprises is 40%. Sino-foreign cooperative enterprises represent 17% of FDI and the rest is composed of cooperative developments, shareholding arrangements, etc.

iii. The geographical distribution of FDI in China is very unbalanced. FDI scale and benefits in the eastern coastal area are much larger than those in other areas in China. The investment environment in the eastern coastal area—Bohai Economic Rim (including Shandong Peninsula, Liaodong Peninsula, Tianjin, and Beijing) centred around the Jingjintang Region; the Yangtze River Delta (including Zhejiang, Shanghai, Jiansu, etc.) centred around Shanghai; and the Pearl River Delta (including Guangdong) centred by Guangzhou—is comparatively sound due to policies of reform. These areas have attracted more than 80% of FDI in China. FDI is gradually moving into middle and western areas with an improving investment environment and market-driven forces attracting FDI to the areas.

2.2 Social and Environmental Impacts of China's FDI

Depending on the period, China's FDI acceptance policies, and the nature of foreign investment, the growth of FDI in the country can be divided into four stages:

i. Initial Stage (1979–1985)

Development features

- The Law of the People's Republic of China on Chinese-Foreign Equity Joint Ventures marked the legalization of foreign investment;
- Foreign investments in China were mainly exploratory;
- Investment was mainly concentrated on four special economic zones (Shenzhen, Zhuhai, Shantou, and Xiamen), and national foreign investment had not yet expanded broadly.

Environmental impacts

- Foreign investment in China had not expanded into full swing. Total investment was on a small scale, thus the impacts on the environment were limited.

ii. Rapid Development Stage (1986–1995)

Development features

- Accelerated the legislative work related to foreign investment, and improved the climate for foreign investment;
- Under the multiple super-national treatment stimulation, foreign investment grew rapidly.

Environmental impacts

- Guided by a series of preferential policies, such as “market for technology,” a large number of foreign investments entered manufacturing, chemical, and other pollution-intensive industries. Because the investment structure presented no limits and foreign investment continued to increase, it led to large transfers of pollution-intensive industries to China, with varying degrees of impact on the environment.

iii. Adjustment and Improvement Stage (1996–2005)

Development features

- Guiding policies on foreign investment emerged: Interim Provisions on Guiding Foreign Investment Direction; the twice-amended Catalogue for the Guidance of Foreign Investment Industries; and the amended Catalogue of Priority Industries for Foreign Investment in the Central-Western Region;
- The average scale of foreign investment continued to expand;
- The industrial structure of foreign investment was further adjusted with foreign investment in high-tech, infrastructure, and other sectors increasing substantially.

Environmental impacts

- The environmental impacts of foreign investment attracted more and more attention, and some large multinational corporations began to pay attention to internal environmental management, but the demonstration effect to domestic enterprises was limited. Due to the continuous expansion of foreign investment, the effects were still primarily negative.

iv. Sustainable, Coordinated, and Stable Development Stage (2006–present)

Development features

- In 2007 the Enterprise Income Tax Law of the People’s Republic of China was formally enacted, merging the two income tax regimes for domestic and foreign enterprise, thereby levelling the playing field for foreign investors;
- There is stronger policy guidance regarding what industries and regions will be promoted for more foreign investment;
- There are initiatives to promote various forms of domestic and foreign technical cooperation and joint innovation;

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- There is improvement in foreign investment projects vis-à-vis energy and water consumption; occupation of land; and other access standards, demonstrating an evolving focus on the sustainability of foreign investment.

Environmental impacts

- With sustainability becoming a mainstream focus of development, and with China's strict restrictions on the entry of low-level, high-consumption, and pollution-intensive foreign investment projects, the environmental impacts of foreign investment are gradually demonstrating a positive side.¹⁴

2.3 International Comparisons

2.3.1 FDI in Brazil, India, China, and the United States

Brazil's welcoming of FDI occurred several decades before China's, and therefore Brazil faced sustainable development challenges much earlier. Under the guidance of the government, the structural transformation of FDI in Brazil is basically complete. FDI in Brazil is mainly concentrated in low-polluting industries such as service, energy, communication, finance, and transportation.

India's national conditions are similar to those of China, and its national development strategy is also very much like China's. However, compared with India, China features greater government intervention in the economy, therefore, the Chinese government has an advantage over India's in terms of creating the conditions to attract foreign investment in the manufacturing sector. Meanwhile, the service industry, which is also labour-intensive, sees strong growth in India. The different policy orientations of these three developing countries have led to different distributions of FDI throughout their respective economies, and different degrees of environmental impact.

By comparison, the investment policies of the United States place more emphasis on establishing a long-term stable investment environment. The government aims to provide foreign investors with a fair, transparent, and liberal investment environment and excellent infrastructure, featuring a limited and predictable policy system and efficient and high-quality government services. Investors must observe various legal provisions in the United States, including its environmental standards and environment-related legal provisions. The high degree of market orientation also forces enterprises to attach importance to the sustainability of investment; otherwise they will be eliminated by the market. In contrast, China's investment-attracting policies are mainly aimed at gaining significant short-term benefits against the backdrop of local governments' blind pursuit of GDP. Some of the policies were even launched at the cost of national assets

RECOMMENDATION: Ensure, as a matter of principle and legal framework, that FDI into China and China's ODI should be held to a high standard of corporate social responsibility.

See Section 6 for more discussion about this recommendation.

¹⁴ ZHOU Guomei, LI Xia, et al. Topic Report 2 of this Task Force

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and environmental destruction. The relative disconnect between investment laws and the environment, lack of relevant and up-to-date project management expertise, and weak regulation over foreign-funded enterprises are important causes of unreasonable FDI structure and serious environmental destruction in China.

2.4 Opportunities and Challenges Facing Foreign Investment

Since the outbreak of the financial crisis, China has succeeded in maintaining a stable investment climate, providing a relatively safe harbour for FDI. As the government encourages further FDI, specifically towards the central and western regions of China, it can use environmentally-based incentives to better distribute these new investments. This approach can help China address its continuous need for new FDI, related technologies, and ecologically sound initiatives.

While China remains a most attractive host country destination for FDI, foreign investment is also increasingly confronted with a series of new and changing concerns. The various challenges faced by the Chinese economy are compounded by external environmental and economic changing conditions. Operating costs in China are rising. With industrial structural adjustment in China, the international competition for FDI will be further intensified. With the further improvements and the maturing of China's market mechanisms, various "super-national treatments" that foreign-funded enterprises currently enjoy will end (some have already ended), thereby placing higher demands on foreign-funded enterprises.

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Case Study: Royal Dutch Shell

Shell's sustainable development report is an important channel for its active disclosure of environmental information. Compared with the environmental information disclosed by Shell China, the reports of Shell's American and Dutch subsidiaries, though imperfect, cover a wider range of issues, and provide much more in-depth information, including Shell's efforts in air and water preservation and energy utility; the environmental impact of Shell's operation; safe production, etc. The reports also articulate the company's social responsibility initiatives. The contents of the Shell China report, on the other hand, are simpler, without global considerations or descriptions of technological innovation and applications from the perspective of global energy use. As specific data are not required by China—the host country in this case—the Shell China report lacks detailed information in terms of environmental performance and therefore, on a comparative basis, its environmental performance measures are superficial.

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2.5 Conclusion

Since China started to accept FDI three decades ago, the flow of foreign capital has had positive and negative impacts on China's environment and development. It is hard to say on balance whether the net contribution of FDI is positive in relation to the environment. In any case, rapidly absorbing large amounts of new investment in pollution intensive industries has made China the "world's factory," confronting it with very serious environmental challenges. As China has become an important destination for transnational corporations, it has been increasingly exposed to some of their new thinking, raising awareness about the importance of environmental protection; stimulating concern among the public; and introducing corporate social/environmental responsibility policies into the investment deployment process.

The uneven distribution of foreign investment in industries and regions has increased the

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difficulty in regulating pollution. The environmental advantage of foreign investment in sensitive industries is weakened. Take the chemical industry, for example. In the last five years, the pollution associated with investment from FDI in this sector has been increasing, and the continuous increase of foreign investment in the chemical industry, to some extent, does not meet China’s environment and development policy orientation of “energy conservation, emissions reduction, and green development.”¹⁵

Foreign investment will continue to be an important driving force in the Chinese economy, but we should not blindly overestimate the influence of foreign investment on Chinese enterprises. In fact, FDI cannot truly foster domestic enterprises, and the re-invigoration of national industries in China must rely on longer-term, domestic efforts. Foreign investment should provide important support for preventing the constant inflow of old, inefficient technology while optimizing the economic growth structure. Voluntary environmental measures, as a new approach to environmental management, are still in their very early days in China. Foreign investment’s “spillover effect” can be used to effectively promote the development and progress of voluntary environmental measures in China.

Section 3 Environmental and Social Impacts of Chinese ODI on Host Countries

With the rapid growth of China’s outward direct investment (ODI), the country’s enterprises have become more visible on the world stage, but so have their considerable environmental and social impacts on host countries. With the increased awareness of environmental protection in host countries, governance of natural resources, and increased attention to corporate social responsibility by the international community, China’s ODI needs to concern itself with environmental issues and the potential social benefits to host countries.

This section analyzes and discusses how to treat China’s image, including perceptions of its ODI by media and other parties; whether Chinese overseas enterprises only comply with lower environmental standards in host countries; whether a large number of medium-sized and small Chinese overseas enterprises pollute the local environment of the host countries; and how well Chinese overseas enterprises have performed vis-à-vis minimum wage standards, medical care, welfare measures, and local employment.

RECOMMENDATION: China should focus its ODI not only to play a significant role in meeting China’s Twelfth FYP targets, but also to promote host country green development and transformation, in line with objectives defined by the host nations, the Millennium Development Goals, and other relevant international sustainable development objectives. China should articulate and expand its policy guidance for enterprises that are “going global,” so that its ODI is consistent with China’s green development vision.

See Section 6 for more discussion about this recommendation.

¹⁵ ZHOU Guomei, LI Xia, et al. Topic Report 2 of this Task Force

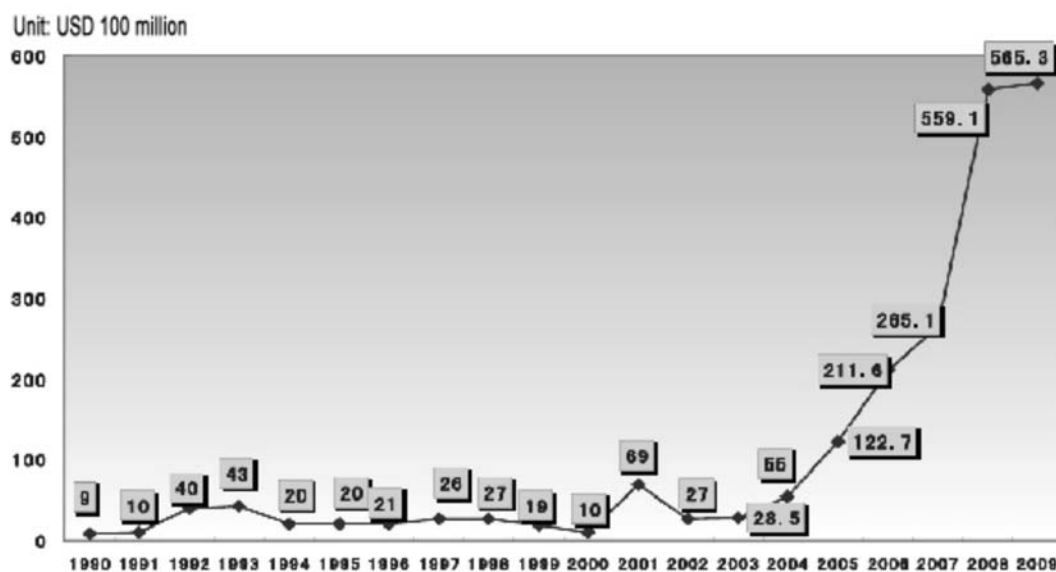
3.1 The Current State of China's ODI and Future Trends

3.1.1 Current State of China's ODI

With a diverse and growing economy, the volume of China's ODI has been increasing rapidly since the 1990s. The "going global" strategy of 2002 has been a major driving force for the increase in ODI.

China's volume of ODI increased from USD 33 to 230 billion during 2003–2009, approximately a seven-fold increase. By the end of 2009, 12,000 domestic Chinese investors had created 13,000 directly-invested enterprises in 177 countries around the world, totaling USD 245.75 billion in investments. These were broken down into USD 76.92 billion in equity investment (31.3% of the total), USD 81.62 billion in reinvested earnings (33.2% of the total), and USD 87.21 billion in other types of investment (35.5% of the total). The total assets of Chinese enterprises operating overseas exceeded USD 1 trillion by the end of 2009 (Figure 3.1).

Figure 3.1 Rapid Growth of China's ODI.



Note: Figures of China's ODI from 1990 to 2001 are from UNCTAD's World Investment Report; figures from 2002 to 2009 are from MOFCOM.

Source: UNCTAD and MOFCOM.

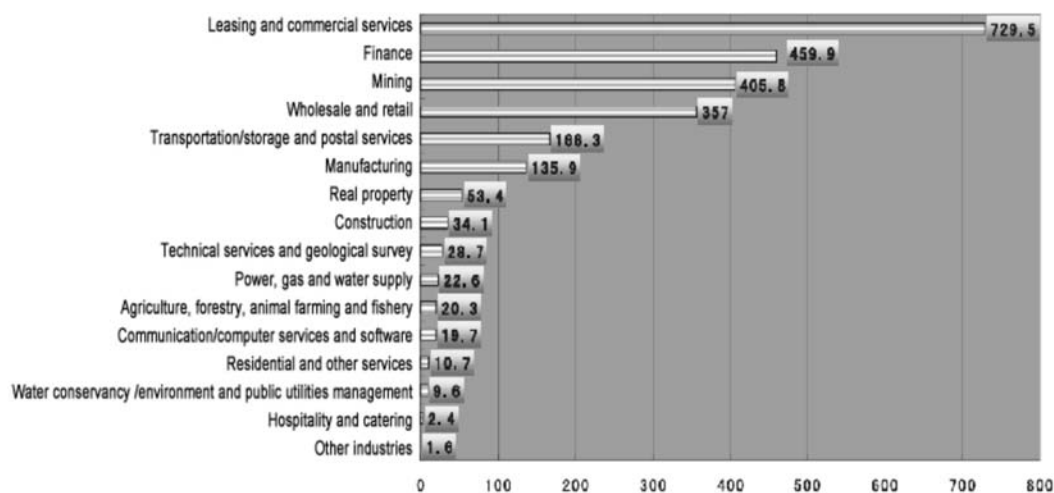
Despite the recent rapid growth of China's ODI and the fact that it ranked fifth in the world (first among developing countries) in 2009, the flow and volume of China's ODI respectively accounted for merely 5.1% and 1.3%¹⁶ of the 2009 world total.

¹⁶ UNCTAD World Investment Report 2010

3.1.2 China's ODI Structure

Contrary to many assumptions about China's ODI being concentrated on energy and mining, the sectoral distribution of China's ODI is actually reasonably balanced (Figure 3.2). Leasing and commercial services, and the finance sector each represent a higher percentage of Chinese ODI than mining, which accounts for a mere 16.5%. The manufacturing sector ranks even lower at 5.5%. This is in clear contrast with the characteristics of China's domestic economic structure.

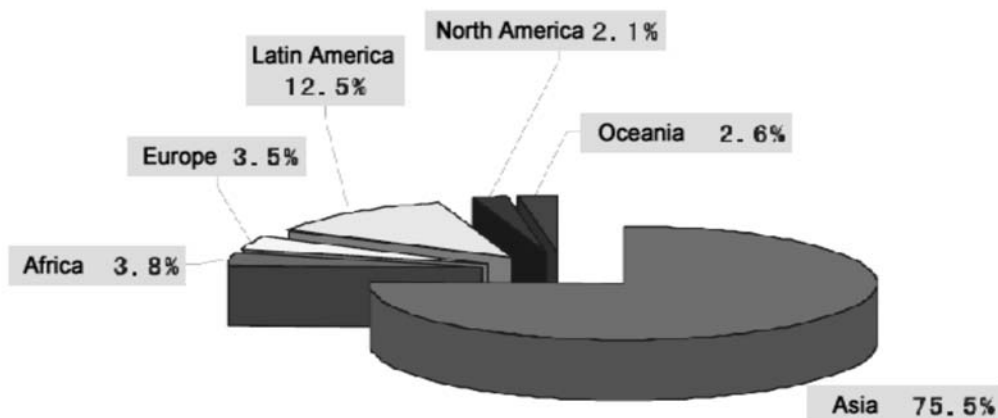
Figure 3.2 Industrial Distribution of ODI Volume of China by the end of 2009.



Source: 2009 Statistical Bulletin of China's Outward Foreign Direct Investment, MOFCOM.

Heavily concentrated in Asia, followed by Latin America and Africa, the geographic distribution of Chinese ODI is highly uneven. By the end of 2009, the investment volume in Asia registered at USD 185.5 billion, accounting for 75.5% of the total volume and mainly concentrated in Hong Kong, Macao, Japan, South Korea, and Southeast Asian countries; the investment volume in Latin America was USD 30.6 billion, accounting for 12.5% of the total and mainly concentrated in the British Virgin Islands, the Cayman Islands, Brazil, and Peru; the investment volume in Africa was USD 9.33 billion, accounting for 3.8% of the total and mainly concentrated in South Africa, Nigeria, and Zambia (Figure 3.3).

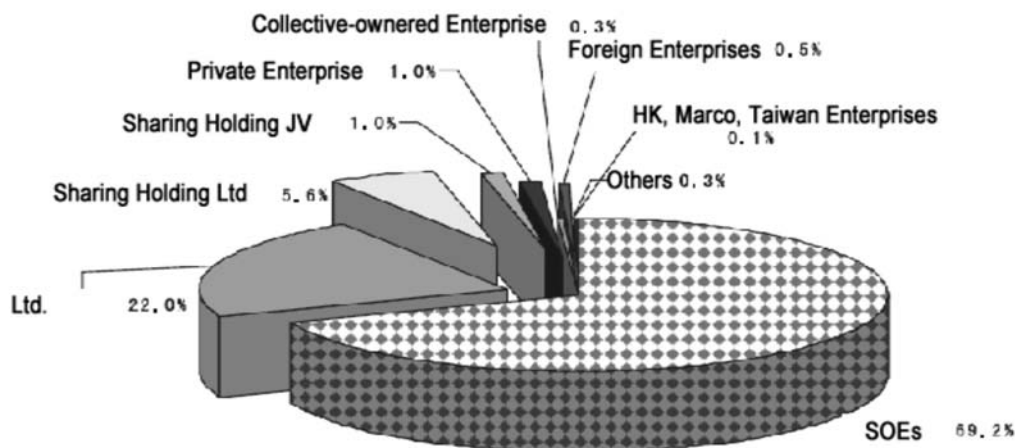
Figure 3.3 Regional Distribution of China's ODI.



Source: 2009 Statistical Bulletin of China's Outward Foreign Direct Investment, MOFCOM.

From an ownership perspective, state-owned enterprises (SOEs) account for the largest proportion at 69.2% of China's total ODI, followed by limited liability companies and shareholding limited companies, accounting for 22.0% and 5.5% respectively; while privately-owned enterprises account for a mere 1.0% (Figure 3.4).

Figure 3.4 Non-financial Volume of China's ODI at the end of 2009, by Registration Type of Domestic Investors.



Source: 2009 Statistical Bulletin of China's Outward Foreign Direct Investment, MOFCOM.

3.1.3 Future Trends in Chinese ODI

China's ODI is gradually becoming more diversified as the number of technology-intensive projects continues to increase. China's ODI facilitates the export of merchandise related to its domestic production, while trade related to ODI plays a significant role in the growth of foreign trade. According to a UN survey in 2010, China ranks second in the world in global investment potential (UNCTAD, 2010a).¹⁷ China's confidence in

¹⁷ Yin-Wong Cheung, XingWang Qian, Shu Yu, China's Outward Direct Investment in Africa

ODI was not dampened by the global economic crisis. In 2009, its non-financial ODI reached USD 43.3 billion with significant annual growth. The Ministry of Commerce predicts that China's ODI for 2010 will have totaled USD 60 billion. Most of the ODI flows to Asia, Latin America, and Africa and is focused on design and manufacturing, sales, and the retail and trade sectors. Mining and resource-related sectors are becoming the new focus of investment by Chinese enterprises.

As growth in ODI increases, so too do complaints of environmental and social impacts.

3.2 Social and Environmental Impacts of China's ODI

3.2.1 Social Impacts and Challenges of China's ODI

China's ODI has created a large number of job opportunities for host countries, but there is still room for improvement in the employment structure it provides. In Cambodia and Vietnam, investment by Chinese investors in manufacturing is concentrated on labour-intensive manufacturing. In Cambodia, the 27 Chinese manufacturers surveyed have a total of 26,439 employees, 98% of whom are Cambodian. In Vietnam, the 33 Chinese enterprises surveyed have provided a total of 10,020 jobs, 95% of which are held by Vietnamese.¹⁸ The labour structure within an enterprise may vary according to the level of technical intensity. In Cambodia, local employees account for less than 30% of the intermediate and senior positions as most of the senior executives are Chinese. This situation can be attributed to Chinese investors' belief that local candidates are lacking in skills and experience. Therefore, the clothing industry and Asian enterprises have come to a consensus that Chinese nationals should constitute a large proportion of supervisors. However, communication difficulties and cultural differences between these Chinese nationals and local Cambodian workers sometimes lead to labour unrest and strikes, and Chinese supervisors cannot easily solve these problems. The case in Vietnam is the opposite, as 63% of supervisory positions are held by Vietnamese. The major difference between Chinese enterprises operating in Cambodia and Vietnam is the gap of education level between these two countries. In Vietnam, Chinese enterprises would rather employ Vietnamese than expensive overseas Chinese as executives as it costs less to train their Vietnamese employees for these executive positions.

Governments of many countries require Chinese enterprises to provide a certain proportion of employment opportunities for local workers. For example, the host country of the national stadium project in Costa Rica demanded that the project be completed within one year and that no Chinese workers should be involved. In the end, only Chinese workers were employed and the stadium was finished in two years.¹⁹

The cultural challenges faced by Chinese enterprises pose a major barrier to their development. Chinese enterprises investing overseas are faced with an unknown environment featuring totally different commercial practices, not to mention management, financial, and cultural rules that differ from those on China's mainland in

¹⁸ EU-China Civil Society Forum, *The Impact of Chinese Outward Investment*, Published on 2 March, 2011, Viewed on October 13, 2011:

http://www.eu-china.net/.../11-03-02_Impact%20of%20chinese%20outward%20investment.pdf

¹⁹ Older Entry, *Costa Rica Insight*, viewed on 13 Oct, 2011, <http://costaricainsights.wordpress.com/page/2/>

green field investment as well as mergers and acquisitions (M&A). For example, studies of M&A of Chinese enterprises in Germany show that the most important factors in managing overseas acquisitions are staff integration and narrowing the cultural gap between Chinese investors and the corporate protocols in Germany.²⁰

In Zambia, many of the local complaints from community and labour representatives centred around misunderstandings and social clashes occurring between Chinese and local people due to a lack of dialogue and cultural exchange. These seemingly superficial crises often led to deep resentment, xenophobia, and hysterical media accounts that appeared to be based on misperception and a lack of communication. In order to improve the performance of an acquisition, Chinese enterprises must make a special effort to better integrate with their host community to prevent and resolve cultural differences; and create links with the local society, its stakeholders, its government, and NGO representatives, as well as the environment, labour, and regulatory officials of host countries.

The performance of ODI may vary greatly depending on circumstances, and even well-planned direct investment projects may be confronted with unexpected difficulties due to differences in culture and management practices. For example, TCL found itself in a very difficult situation after its acquisition of Alcatel in France due to difficulties in managing local staff; Shougang Group was challenged by strikes and conflicts between investors and labour in South America; Shanghai Automobile Industrial Corporation (SAIC) also had similar experiences after its acquisition of Ssangyong Automobile in South Korea in 2004 and failed in its negotiation with the labour union on wages.

Likewise, during the TF field trip to Indonesia, the team visited the Pertamina-PetroChina joint oil desulfurization unit in Bojonegoro, East Java. While the company had serious accidents in the past, management was proud to show that it had reduced its accident rate to zero since the arrival of the Chinese partner. Nevertheless, they had suffered a lot of complaints from the field as Chinese drilling rig equipment had no safety notices in either English or Bahasa Indonesia (Indonesia's official language). A small detail considering the size of the investment, but it led to false allegations that the equipment was not safe and performed below par. The local media amplified these issues creating the false image that Chinese drilling rigs were of low quality and PetroChina's drilling teams were not concerned with worker safety.

China's ODI enterprises suffer from a lack of expertise, experience, and preparation. Poor confidence and inadequate experience in cross-border investment in a strictly regulated environment with complicated market administration have proven the lack of necessary expertise of Chinese enterprises. Examples include the joint venture of SAIC and Ssangyong Automobile in South Korea and the recycled steel plate project operated by Baosteel in Brazil. However, although increasing globalization has exposed the limited expertise of Chinese enterprises in large-scale western-style acquisitions, many destinations of Chinese ODI—especially Africa and Asia—still feature weak organizational structures, flawed intellectual property rights protection, government intervention, and different corporate management systems. Western multinationals are comfortable operating in stable markets with transparent regulations, while their

²⁰ Kay, Li Kuen Andrew, *International Exhibition Organizers in China and Their Performance*, The Hong Kong Polytechnic University, Published in June 2007, <http://www.cpexhibition.com/introd/Kay%20DBA.pdf>

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Chinese counterparts are better equipped to operate in more complicated and unclear regulatory frameworks. This could be considered one of the unique advantages that has helped China develop innovative and country specific relationships with African countries. Its business expansion in that continent has become a strong example of its “going global” strategy.

China is still suffering from the negative effects of its ambiguous definition of property rights, a lack of a clearly defined regulatory mechanism for the private sector, flawed corporate governance, and inadequate experience in international business. Private enterprises in China are relatively weak in seizing ODI opportunities. Their senior management need to be trained to enhance corporate governance in line with international practices. In countries with mature institutional systems, the costs of contracts and other legal supports are relatively low, making them effective in building relationships, yet Chinese enterprises need more time to adopt them.

Their global presence will inspire changes in Chinese enterprises, especially those who have entered developed countries and compete in high-end product markets. How should Chinese enterprises establish their own identity on a global scale, designing suitable business models adapted to the realities of different countries while enhancing corporate governance both at home and abroad? How should Chinese enterprises improve the quality of their products and services as well as corporate governance while competing for market share and developing an institutional system in China? What modern governance system is suitable for the trajectory of development in China? These questions will exert profound influence on the development of Chinese enterprises for the foreseeable future.

3.2.2 Environmental Impacts and Major Challenges of China’s ODI

Environmental Impact on Forests and Biodiversity

Research into the environmental impacts of China’s ODI considers the exploitation of natural resources and the degradation of biodiversity. For example, China’s investments in Southeast Asia and Africa are concentrated in environmentally sensitive sectors (e.g., petroleum and gas extraction, mining, hydropower, and forestry) and infrastructure projects (e.g., highways, railways, electric-power, and transmission lines). The Kunming-Bangkok Highway, an important corridor for trade and investment and a facilitator of interaction between China and Southeast Asian countries, is significant for economic prosperity and development. However, environmentalists believe the highway has damaged local biodiversity. A Chinese enterprise built a rubber plantation in the “Golden Triangle,” to help Burma and Laos replace the cultivation of cash crops and illegal logging in an opium-based economy, as the governments try to eradicate drug abuse and poverty. However, similar allegations of local biodiversity damage have also been levelled against the Chinese. There is clearly a need to study how to better assess those projects.

China is the second largest importer of wood products in the world. Chinese logging companies have expanded around Southeast Asia, West Africa, and in the Amazon region. Approximately one-third of such imports is intended for processing and re-

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export to G8 countries. Exports from Africa to China have been rising quickly, and it is estimated that 70% of these exports are from Gabon and Equatorial Guinea. Russia has also become an increasingly important source of timber to China. Illegal logging and certification are of great concern to the international community.²¹

During the TF visit to the East Kalimantan region of Indonesia, the team assessed the impacts of China's growing trade in coal and palm oil; China is Indonesia's second buyer of palm oil. Increasing demand for the oil, coal and the lucrative nature of the international market, combined with weak public governance at the domestic level promote illegal logging, deforestation, and the rapid conversion of forest land into coal mining and palm oil plantations in Indonesia. This type of coal and palm oil operation has caused massive ecological damage and adverse socio-economic impacts to the region and to local communities. Yet, China is more interested in importing the raw natural resources for domestic processing, while leaving the responsibility of the upstream impacts of this business, such as illegal logging and degraded forests, entirely in the hands of the host country.

Challenges in Environmental Standards Compliance

A pre-project evaluation of environmental impact, the implementation of environmental measures during a project, and environmental assessment after completion are required for all projects funded or financed by the China Export-Import Bank.²² China's environmental standards are compared with those of the host country, and the higher standards are adopted.

Research conducted by the CCICED team in Zambia found that the energy consumption of copper production per MT in Luanshaya Copper Mines—in which China Nonferrous Metal Mining (Group) Co. is investing—is 186 MTce with the application of the most advanced technology and equipment from Australia. At the same time, the energy consumption of copper production per MTce is 260 MT of standard coal equivalent at China-Yunnan Copper Co., Ltd. and Jiangxi Copper Co., Ltd. This case shows that environmental standards adopted by the enterprise in Africa appear superior to the standards applied in China.

Many well-known Chinese enterprises, managing environmental concerns, have taken the initiative to adopt ISO14000 environmental standards and the ISO26000 guiding principles of social responsibility. However, problems in compliance with environmental standards may exist with some medium-sized and smaller enterprises (SMEs) due to their limited environmental awareness, economic strength or other reasons. While some developing countries in Asia, Africa, and Latin America are developing stronger environmental awareness, with environmental standards that are increasingly aligned with the international mainstream, the environmental behaviour of Chinese SMEs still often lags behind such mainstream levels. Whether the companies are large, medium, or small-sized, they are representing Chinese interests and respect for the environment

²¹ Prof. Sun Siheng, State Forestry Administration, *A Guide on Sustainable Management and Utilization of Overseas Forest by Chinese Enterprises*, Published on September 8, 2010

²² China Intelligent Online, *China Environmental Protection Industry Overview*, Published on 2008, Viewed on October 13, 2011, <http://www.slideshare.net/chinaintel/china-environmental-protection-industry-report-2008>

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should be part of their way of doing business. This should be the case regardless of whether or not the Chinese government provides foreign aid, capacity development, or other assistance to the developing host country.

3.3 Related Roles Played by Major Stakeholders in Reducing the Social and Environmental Impacts of ODI

3.3.1 China's ODI Enterprises

When it comes to the adoption of modern social and environmental approaches to their ODI activities, Chinese enterprises still appear to be 15–20 years behind their western counterparts. This is perhaps due to the more active role of influential NGOs in the west. At present, some Chinese enterprises are making a considerable effort to invest in environmental enhancement and projects to advance social well-being, yet there is a major gap in capacity and roles between state-owned and private enterprises. Generally speaking, the social and environmental performance of large state-owned enterprises is somewhat better. Considering that over 70% of Chinese ODI comes from large state-owned enterprises and only 1% from medium- and small-sized enterprises, it is easy to conclude that the overall environmental and social impact of Chinese ODI is largely in the hands of the government.

In recent years, China has actively promoted policies that stress the adoption of social and environmental commitments by FDI and ODI enterprises. For example, in 2007, China's import and export bank (EXIM Bank) promulgated the Guiding Opinions on the Environment and Social Evaluations of EXIM Bank Loan Projects. That same year, the China Banking Regulatory Commission printed and distributed Opinions on Consolidating the Corporate Social Responsibilities of the Banking Industry and Financial Institutions, requiring that large-scale banks abide by the 10 basic principles of CSR advanced by the UN Global Compact. The Commission also asked these banks to prepare CSR reports to articulate their activities. In 2007, the Ministry of Environmental Protection, together with the People's Bank of China and the China Banking Regulatory Commission issued documents that established China's Green Credit Policy. The International Finance Corporation (IFC) Performance Standards and the Equator Principles were identified as international guidance documents that Chinese banks can refer to in their implementation of the Green Credit Policy.

In addition, in order to encourage the enterprises to engage in CSR activities, in December 2007, the state-owned Assets Supervision and Administration Commission of the State Council distributed the Guiding Opinions on the Exercising of Corporate Social Responsibilities by State-owned Enterprises, and proposed that as Chinese enterprises "go global," they should help host countries modernize and implement their environmental regulations. The international trend towards more environmental considerations in international agreements is quite clear and China should be fully engaged in contributing to its development.

3.3.2 Central and Local Governments of Host Countries: Sharing Responsibility for Regulation and Enforcement

Chinese enterprises generally abide by the laws and regulations of the host countries in which they invest, hence it is the central and local governments of the host countries that should play the major role in regulation. A Canadian governmental official, while analyzing the positive and negative impacts of China's investment in the mining sector of Canada, said that China-based overseas investors are beginning to learn to abide by local laws and regulations with no apparent difference from other industrialized countries.²³ In the bidding efforts for investment in Rio Tinto in February 2009, the president of Chinalco endorsed the sustainable development pledge of Rio Tinto.²⁴ In Indonesia, the local Regent of Bojonegoro, East Java, told the TF team visiting PetroChina's oil exploration operations that they were taking voluntary actions in relocating schools and communities as well as financing mobile libraries for the local populations (together with EXXON-Mobil) in order to spare them from the pollution and dangers of living in close proximity to oil desulfurization plants and crude oil production wells. These actions were very much appreciated and widely recognized by the local communities.

On the other hand, there are reports of Chinese enterprises, especially small private enterprises, turning a blind eye to environmental requirements or bribing local officials. An increasing number of NGOs and civil society organizations criticize Chinese enterprises for failing to comply with local laws and regulations. The solution requires, in part, the application of a transparent and accountable system to the public in the host country and improvement in the administrative capacity of host governments to enforce their laws and regulations.

3.3.3 Central and Local Governments of China: Sharing Responsibility for the Environment

As China positions itself to become a major global player, central and local governments are beginning to require Chinese enterprises to improve their environmental performance and enhance their social contribution in an effort to safeguard China's image and promote sustainable global investment and business. Progress in policy-making, legislation, and standardization in China is an important driving force for Chinese enterprises to meet environmental and social goals. In particular, the Chinese government requires enterprises to conduct clean production auditing on a regular basis, which effectively improves their environmental performance. And Chinese enterprises, state-owned and private, are actively engaged in improving their governance and ameliorating their environmental and social impacts at the urging of government. A positive example is that China's Forestry Administration issued *A Guide on Sustainable Overseas Forests Management and Utilization by Chinese Enterprises* to provide guidance on investment and operations of China's ODI in host countries in consideration of sustainable development, environmental protection, and CSR.

²³ Prof. Sun Siheng, State Forestry Administration, *A Guide on Sustainable Management and Utilization of Overseas Forest by Chinese Enterprises*, Published on September 8, 2010

²⁴ UNCTAD, *World Investment Report 2009*, Published in 2009, United Nation Publication, ISBN 978-92-1-112775-1, http://www.unctad.org/en/docs/wir2009_en.pdf

3.3.4 Non-Governmental Organizations

Non-governmental organizations may monitor ODI and ensure that these investments will not exert a negative impact on local environment and society. Of all Chinese ODI activities, two major areas are of particular concern: natural resources, such as coal, wood, petroleum, natural gas, etc.; and construction projects, such as building highways, hydro-dams, water supply reservoirs, electric-power and distribution systems, public housing, etc. Both types of investment have important social and environmental impacts. Therefore, enterprises must exert the utmost diligence in avoiding such impacts, compensate for any damage by restoring and rehabilitating damaged sites, and offer additional compensatory facilities such as new schools and hospitals that can somewhat mitigate impacts. These proactive steps in a “going global” project are likely to be acknowledged by the beneficiaries of such investments and lead to a more positive perception of China by the residents of the host country. Local stakeholder organizations and international NGOs may play a role monitoring such actions and controlling malevolent or corrupt and defamatory media campaigns against Chinese interests.

3.3.5 Media

The strong and committed environmental governance efforts of some Chinese enterprises involved in ODI projects have produced quite visible positive results as Chinese enterprises assume greater CSR initiatives. For example, the China International Marine Containers (Group) Ltd. has adopted the UN Global Compact Environment Statement; China National Petroleum, Sinopec, and CNOOC have adopted a series of rigorous environmental protection standards; and the Industrial Bank of China has become the first Chinese bank to adopt the Equator Principles. Yet international media tend to focus mostly on criticizing the environmental performance of China’s outward investments, which raises suspicions about the country’s strategy of “going global.” Furthermore, there is little coverage about Chinese ODI in the Chinese media, and even less coverage about the environmental and social impacts of such investments. An improved Chinese media focus on the efforts made by Chinese enterprises to minimize their negative environmental impacts will help create a more accurate image of Chinese ODI and help reduce the negative perceptions transmitted by the international media.

3.4 Examples of the Positive Contributions of Chinese ODI

3.4.1 China’s ODI in the Natural Resource Sector

The investment by Chinese state-owned enterprises in the natural resource mining and petroleum sectors of some South American countries has had significant impacts on local societies, economies, and their environment. At first, those impacts tended to be negative, but as the firms adjusted their CSR strategies and policies, positive impacts began to gradually manifest themselves. Andes Petroleum Ecuador Ltd., a joint venture of CNPC and SINOPEC, for instance, is a symbol of China’s cooperation with the central government of Ecuador. The company plays an active role in the alleviation of tensions between the local government and its residents. Shougang Hierro Peru S.A.A. has also reversed its early negative impact on the social development of the

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Peruvian community where it operates by deciding to adopt a proactive approach to addressing local social issues it used to ignore.²⁵ In Indonesia, on the other hand, the TF team witnessed considerable environmental degradation related to surface coal mining activities in East Kalimantan intended to supply Chinese trade. Over 24% of imported coal in China in 2009 was from Indonesia, and Kalimantan accounts for a majority of coal production in Indonesia. In 2005, East Kalimantan's share was 51.7% and South Kalimantan was 41.2%. Significant production increases in recent years have occurred to supply the export market at more than 75% of national coal production. Most of that goes to China, which is blamed for the resulting environmental damage to Indonesia.

3.4.2 China's ODI in the New Energy Sector

China's ODI enjoys great opportunity in the new energy sector. In Africa and developing countries elsewhere, Chinese low-carbon technologies and products are particularly competitive with advantages ranging from low costs, limited infrastructure requirements, low emissions, and high economic returns. Compared with advanced technologies and products in western countries, Chinese companies are better equipped to facilitate green development and the required economic shift in developing countries. Installing a Chinese low-carbon solar water heater is one-third the cost of installing an average water heater. Likewise the extensive palm oil plantations being stimulated by China's appetite for vegetable oils could also provide a unique resource for renewable energy through biodiesel applications. The TF team visited a small, privately-owned Chinese steam boiler and electric turbine producer on the outskirts of Jakarta (ZUG POWER GROUP, PT. ZUG Industry Indonesia). The firm was anxious to receive some form of incentive to produce small off-grid power plants that would use their equipment and supply renewable energy to isolated communities. The new energy resource sector will become an increasingly important target for Chinese ODI.

3.4.3 China's ODI in the Infrastructure Sector

The cost for Chinese enterprises to invest in the infrastructure sector is up to 50% less than it is for their European and American competitors. At present, Chinese investors are interested in water storage projects, especially hydro-dam construction projects in Southeast Asia and the Middle East, including the Stung Cheay Areng Dam on Cheay Areng River in Cambodia, the Shweili Dam Project in Myanmar, the Aswan Dam Project in Egypt, and others. Although dams and water reservoirs will generate agricultural benefits, they also create an impact on the local environment and society. It should be noted that the investor and property owner of dam projects are usually the host country governments rather than Chinese enterprises, which are mainly involved in construction and finance. For those mid- and small-scale hydropower projects with a capacity below 60 MW, Chinese investors are the key players as developed countries have decided not to explore this market. As a result, Chinese project builders are often the target of media and NGO criticism when in fact the responsibility for the project is mostly in the hands of the host countries, and only very rarely in those of the Chinese investors and contractors.

²⁵ Julie Jiang & Jonathan Sinton, *Overseas Investments by Chinese Oil Company*, International Energy Agency, Published in February 2011, <http://www.iea.org>

3.4.4 China's ODI in the Forestry and Agriculture Sector

Old-growth forest exploration causes loss of native forest-related biodiversity and promotes the disappearance of local culture. A Chinese enterprise built agro-forestry projects in the “Golden Triangle,” an area on the boundary between Thailand, Burma, and Laos, to help replace the opium-based economy with cash crops and commercial timber. This ODI project is killing two birds with one stone, as it aims to control the drug flow into China while cracking down on drug abuse in the host country. There are approximately 40 Chinese enterprises (including eight major rubber companies) operating in Northern Laos under the guidance of anti-drug policies.

A positive management model in forestry will also promote the healthy development of the forest ecological system. For instance, a Chinese enterprise in British Columbia, Canada, has harvested mature and post-mature forests in compliance with the law regarding reforestation, thereby meeting governmental standards.²⁶ Managers of Chinese enterprises have gradually grasped the complex nature of the forest ecological system, and the activities of Chinese enterprises have also triggered extensive interest among local residents in the forestry sector. Take another Chinese enterprise in Russia for example. After purchasing the Far East Forest Company in Russia, it managed the firm's logging activities through sustainable harvesting methods which reduced the amount of waste wood logged annually; and recycled low-value wood for sawdust and chips for pulp/paper making, thereby enhancing the efficiency rate of the resources. Similarly, two Chinese enterprises have located their headquarters respectively in Indonesia and Brazil and built overseas factories to process wood into pulp. Lands for cultivation of the timber supplies are secondary, low-return, and infertile forestlands where the wood coverage is below 20 m³ per acre. These enterprises conscientiously fulfill their pledge to protect biodiversity in high conservation value forests as in all typical forest ecosystems.

3.4.5 Field Trip Research in Indonesia, South Africa, and Zambia

In order to get first-hand information, the Task Force carried out field trips to Indonesia, South Africa, and Zambia. In general, China's ODI seemed to be greatly appreciated by local governments. It is also welcomed as an opportunity to help achieve local sustainable development targets. Both the scope of trade and investment as well as its rapid pace of development have accelerated greatly in recent years, placing new challenges before China's ODI ambitions.

In Indonesia, China's ODI enterprises have demonstrated some very good practices, which have led to the construction of new schools, new housing developments, hospitals, and road infrastructure. However, when compared with other ODI, China's investments are generally less well accepted than western investments. They often rank lower than even Indian and Japanese investments. One of the reasons seemed to be that Chinese investors rarely invest downstream into the markets when they are exploring for minerals or oil, for instance. They will extract the resources and ship them away. Indian investors, for example, are more inclined to build fertilizer plants or LNG bottled

²⁶ Prof. Sun Siheng, State Forestry Administration, *A Guide on Sustainable Management and Utilization of Overseas Forest by Chinese Enterprises*, Published on 8 September 8, 2010

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gas distribution networks downstream from a natural gas plant or refinery. Indian investors integrate more into the economy and society. SMEs' improper practices are generally responsible for damaging the reputation of China's ODI, although certainly problems are not restricted to SMEs. The lack of communication by some Chinese ODI enterprises, large and small, and their tendency to live in an isolated way inside the host communities are further reasons why some have difficulty in gaining acceptance and admiration. The case of Indonesia was somewhat different as the team observed many instances where Indonesians, Indonesian-Chinese and Chinese overseas entrepreneurs share common cultural roots, cuisine, and living habits, which did, in fact, facilitate dialogue.

In South Africa and Zambia, the image of China's ODI also aroused a lot of concerns. The Task Force team visiting South Africa read about media stories denouncing the behaviour of bad "Chinese" investors. Indeed, it was later discovered that they were Asians, but not Chinese. China is far away from Africa and so the lack of cultural communication led to many misperceptions and caused needless stress. Most of China's ODI enterprises are state-owned enterprises running under a top-down management system. While they do not develop sufficient connections with other local powerful organizations, such as the labour unions, other stakeholder groups, or NGOs, they pay greater attention to maintaining good and strong relations with local government representatives. The lack of communication with these local community and social organizations is one of the great hurdles faced by China's ODI enterprises. China's ODI enterprises should be better equipped to overcome such hurdles before going global.

3.5 Conclusion

China's investment process should not be purely profit-driven; it should also aim to improve local employment rates, promote local sustainable development, and protect the local environment while still respecting the host country's cultural traditions and social norms. Besides improving the quality of products and services exported, China should pay more attention to job creation, enhancement of local benefits, and protection of the local environment, community, and wildlife. Some major Chinese enterprises are very much aware of the environmental and social impacts on investment destinations while some medium- and small-sized enterprises still fail to address such issues due to lack of attention, limited resources, and poor capacity.

Thus based on case studies and on the literature available on China's ODI, we see that good environmental and social performance as well as environmentally damaging behaviours indeed co-exist in China's ODI. The reduction of negative environmental and social impacts of China's trade and investment must rely upon joint efforts of China and host countries. It is therefore important to enhance the sense of social responsibility of overseas enterprises through education and training, and to design with the appropriate authorities legitimate guiding principles for overseas environmental protection and social responsibility so that sustainable development would be ensured in the communities where Chinese ODI is absorbed.

Section 4 International Trade and the Green Shift

4.1 International Trade: Current Conditions and Future Trends

4.1.1 The Current State of International Trade

China has performed very well in international trade since the process of reform began over 30 years ago. Total trade volume has risen to number one in the world, increasing from USD 20.64 billion in 1978 to USD 2.97 trillion in 2010,²⁷ representing an average annual growth rate of 16.8%. The export volume increased from USD 9.75 billion in 1978 to USD 1.58 trillion in 2010, at an average annual growth rate of 17.23%; the import volume increased from USD 10.89 billion in 1978 to USD 1.39 trillion in 2010, at an average annual growth rate of 16.37%. The gap between imports and exports was USD -1.14 billion in 1978 and USD 183.1 billion in 2010 (Figure 4.1). Nearly half of China's economic activity is related directly to international trade (49.45% in 2010).²⁸

The nature of China's international trade is fluid as it moves continually toward optimal performance. Chinese foreign trade has shifted from primary product exports to the export of light industry and textile products, to the export of mechanical and electrical products, and is currently shifting towards high-tech products. In 2010, the export of mechanical and electrical products by China accounted for 58.9% of the country's total export volume, 3.1 percentage points higher than in 2005.²⁹

The proportion of primary products exported relative to other types of products has been dropping, from 50% in 1980 to 5.18% in 2010. Since 2002, the proportion of primary products in total imports has been rising, from 16.7% in 2002 to 31% in 2010 (Figure 4.2).

The nature of international trade in China has also changed. In the early years of reform, China's imports and exports mainly comprised general trade. Processing trade (the trade of raw materials and components that will be used in the production of finished goods) has been rapidly expanding since then, exceeding the growth of general trade (Figure 4.3). For example, general trade exports accounted for 94.5% of total exports in 1981, and general trade imports accounted for 92.5% of total imports. After 1981, the proportion of general trade in total trade gradually declined and by 1993, general trade accounted for 47% of total exports, and 36.6% of total imports.

RECOMMENDATION: China should align its trade, energy, and environmental policies in order to send consistent signals about its use of market mechanisms and economic policies to promote energy savings and emission reductions.

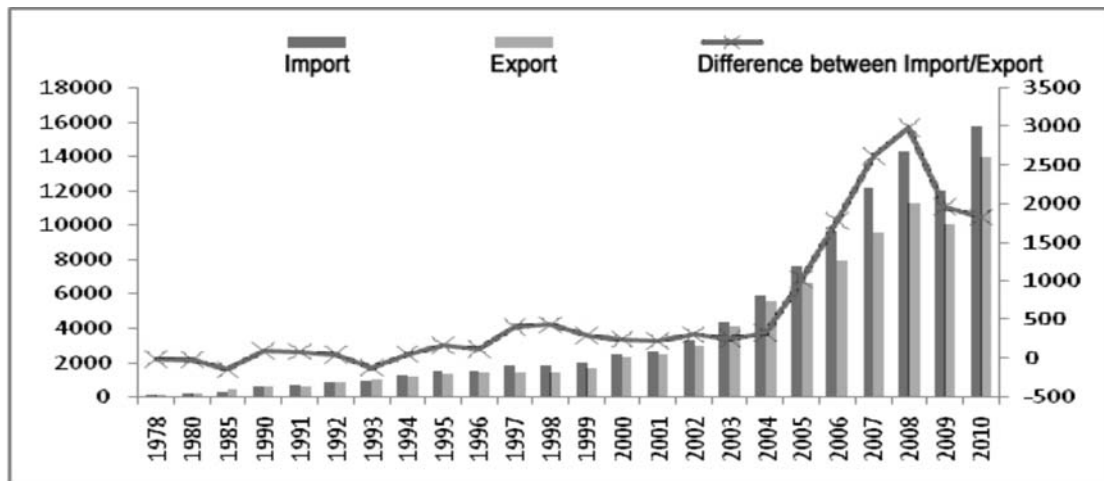
See Section 6 for more discussion about this recommendation.

²⁷ Source of data: *Statistical Abstract of China in 2011*

²⁸ Source of data: *Statistical Abstract of China in 2011*

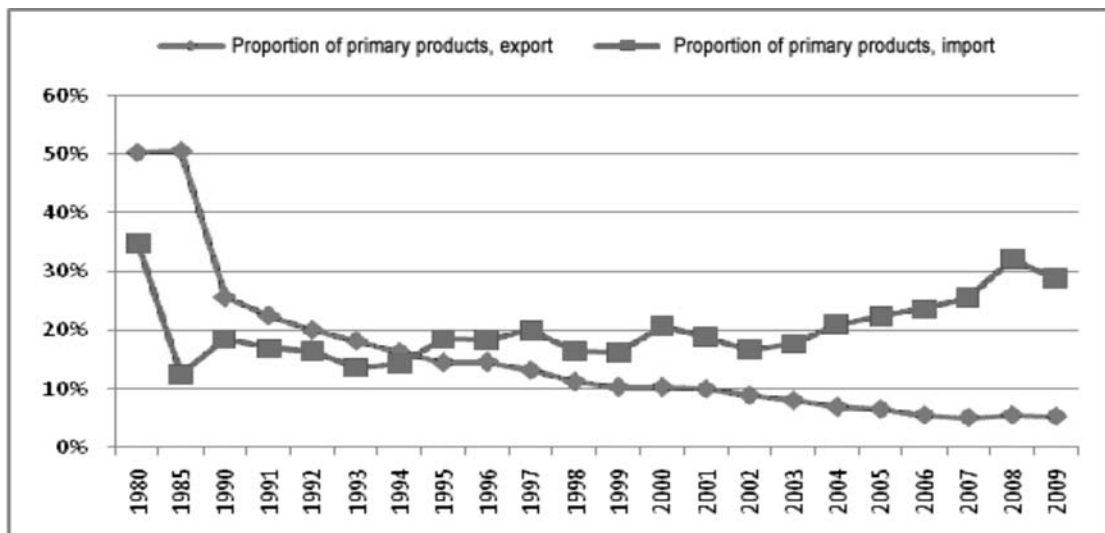
²⁹ Source of data: *Statistical Abstract of China in 2011*

Figure 4.1 China's Exports, Imports, and Trade Surplus (USD 100 million).



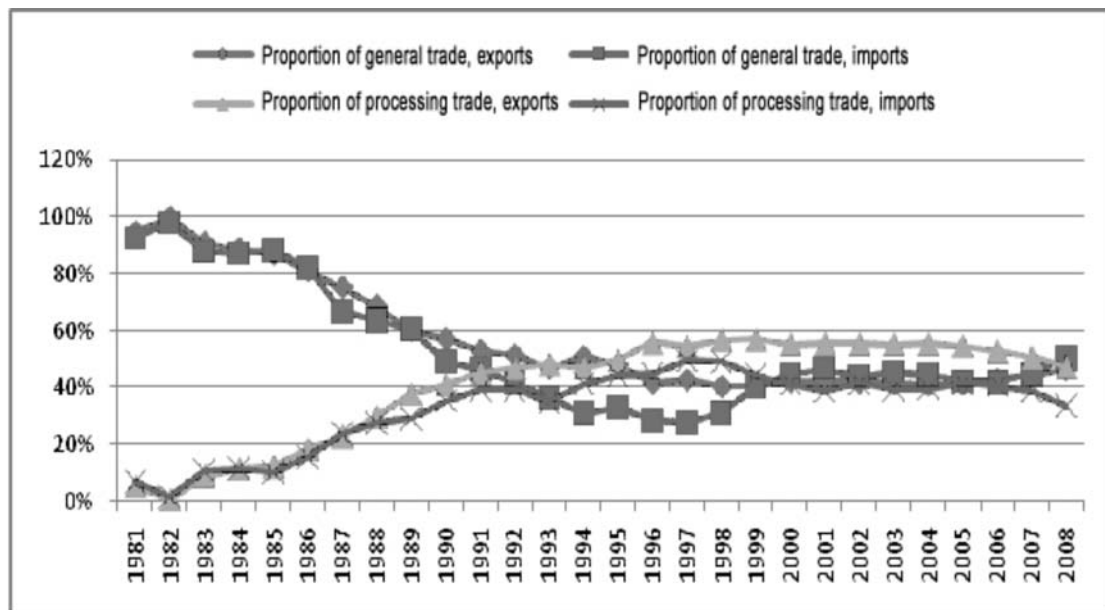
Source: China Statistical Yearbook 2010 and Statistical Abstract of China in 2011.

Figure 4.2 Proportion of Primary Products in Import and Export.



Source: Statistical Yearbooks.

Figure 4.3 Proportion of General and Processing Trade.



Source: China Statistical Yearbooks.

4.1.2 Environmental Implications for Chinese Foreign Trade during the Twelfth Five-Year Plan

During the period of the Twelfth Five-Year Plan (2011–2015), China’s foreign relations will become increasingly complicated and will be confronted with multiple and changing challenges. Environmental matters will be an important element, but by no means the only issue. Climate change poses new challenges for economic development and trade expansion in China. On one hand, a commitment to energy conservation and emission reductions must take into account China’s ability to develop; on the other hand, border measures such as carbon tariffs that developed countries may adopt could directly affect China’s export competitiveness, which, in turn, would affect China’s attractiveness for export-oriented foreign investment.

During the period of the Twelfth Five-Year Plan, China will enjoy obvious advantages in terms of production scale and large domestic market and it should remain as a global manufacturing centre even with rising labour costs, environmental pressures, and the rise of other developing economies. It can be presumed that China will seek various ways to sustain its strong foreign trade and economic performance. Some of the more significant ways are to:

- Maintain a reasonable rhythm and scale of foreign trade development, aiming to keep the growth rate higher than the average growth rate of GDP.
- Enhance the international competitiveness of its service sector to realize the benefits of coordinating the development of manufacturing exports and service exports.
- Develop emerging markets and achieve export diversity within them, while maintaining a foothold in developed markets.
- Address trade frictions as one way to create an excellent trading environment.

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- Upgrade its position in the global supply chain and improve its import and export product structure.
 - Enhance its competitiveness in the trade-related service industry to extend its presence in the value chain.
 - Rationalize the foreign trade system, by further improving policy measures such as tariffs, export rebates, and policy finance.
 - Advance the sustainability of foreign trade through environmental protection.

There are a number of ways to bring trade and environmental matters into the Twelfth Five-Year Plan period. China could:

- Continue to restrict the export of goods that consume too much energy, create high levels of pollution, or consume too many resources.
- Address the challenges created by climate change problems and transcend technical trade barriers. China's import and export activities are better than domestic production activities on the whole in terms of energy consumption and carbon dioxide emissions.
- Step up efforts to import, where necessary, and to export, greater quantities of environmentally friendly technologies, equipment, and services.
- Promote and strengthen international cooperation in developing environmental technologies.
- Rationalize resource and energy prices, strengthen environmental protection and ensure that the prices of exported products fully reflect the costs of resources and energy, and fully account for environmental impacts.

Of course many of these ideas have been either introduced or thought about in previous years. The point now is that the challenges are very likely to be more significant in the years ahead and the need for addressing trade-related environmental matters more urgent.

4.2 Changes to the Trade Structure: An Environmental Perspective

The relationship between trade and environment is multi-dimensional and complicated. It is generally thought that the environmental impact of international trade on the environment and on society is comprehensively reflected through scale effects, structure effects, and technology effects. These effects could result either in improvement or deterioration of the environment. However, the important factor is whether a sound market and effective management are present. To analyze the impact of foreign trade on China's environment, this report refers to the input and output tables of 34 departments in 2002 and 2007 and energy consumption data of relevant departments. According to their energy consumption intensity, industries were classified into high-energy consuming industries, medium-energy consuming industries, and low-energy consuming industries, and we further analyze import and export structures and their changes according to the intensity of energy consumption.

From Table 4.1, it can be seen that in 2007 the export volume of products of high-energy consumption was USD 197.2 billion, accounting for 16.21%; the export volume of products of medium-energy consuming industries was USD 275.6 billion, accounting

for 22.66%; the export volume of products of low-energy consuming industries was USD 743.9 billion, accounting for 61.14%. Relative to 2002, the proportion of products of high-energy and low-energy consuming industries in total exports increased, while the proportion of products of medium-energy consuming industries in total exports decreased.

Table 4.1 Distribution of Exports and Energy Consumption in 2002 and 2007 (USD 100 million).

Sector	2002		2007	
	Export volume	Proportion (%)	Export volume	Proportion (%)
High-energy consuming industries	487.65	15.05	1,971.68	16.21
Medium-energy consuming industries	908.42	28.03	2,756.50	22.66
Low-energy consuming industries	1,844.70	56.92	7,438.70	61.14
Total	3,240.78	100.00	12,166.88	100.00

Data Source: Input-Output Tables of China in 2002 and 2007, calculated by Li Shantong and the team for topic 1 of the Task Force

From Table 4.2, we can see that in 2007, the import volume of products of high-energy consuming industries was USD 283.2 billion, accounting for 29.70%; the import volume of products of medium-energy consuming industries was USD 171.4 billion, accounting for 17.97%; and the import volume of products of low-energy consuming industries was USD 499.1 billion, accounting for 52.33%. Relative to 2002, the proportion of imports of products of high- and medium-energy consuming industries both rose to some extent while the proportion of products of low-energy consuming industries decreased.

Table 4.2 Distribution of Imports and Energy Consumption in 2002 and 2007 (USD 100 million).

Sector	2002		2007	
	Import volume	Proportion (%)	Import volume	Proportion (%)
High-energy consuming industries	811.50	27.81	2,831.71	29.69
Medium-energy consuming industries	512.05	17.55	1,714.08	17.97
Low-energy consuming industries	1,594.77	54.65	4,990.28	52.33
Total	2,918.33	100.00	9,536.08	100.00

Data Source: Input-Output Tables of China in 2002 and 2007, calculated by Li Shantong and the team for topic 1 of the Task Force

Over the period from 2002 to 2007, one can observe a clear shift in the export mix from low-tech to high-tech products. While low-tech products have grown in absolute terms, they have decreased in relative terms. The proportion of natural resources (coal, oil, and gas) in total exports has fallen from 0.8% to 0.3% of exports, from 2002 to 2007. The same applies to traditional industries such as textiles, which fell from a 10% share

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of exports to 9% during the same period. Meanwhile the share of high-tech equipment (communication and computers) has gone from 19% to 25% (2002–07).

On the imports side, we see a slower shift. During the same period, coal related products, oil, and gas have increased their share of imports from 0.12% to 0.26% and 4.3% to 8.4% respectively. At the same time textile products decreased their share of imports from 4.6% to 1.7%. The import share of communications, computer, and other electronic equipment increased, meanwhile, from 21% in 2002 to 23.4% in 2007. From the above, we can see that the import shares of resources and high-tech products are rising, while the import proportion of traditional products is falling.

4.3 Analysis of Embedded Pollutants in International Trade

International trade has opened up global markets for China, allowing for a more extensive and effective allocation of resources and promoting the development of the domestic economy. At the same time, all stages of the export process can consume resources (energy) and emit pollutants, causing a huge impact on energy and environment of different countries, a matter that has increasingly drawn people’s attention. The pollutants discharged during the processing, manufacturing, and transportation of goods are termed “embedded pollutants.” Obviously, “embedded pollutants” are more significant than the pollutants emitted in the final consumption of a product. For example, the emission of embedded sulfur dioxide (SO₂) refers to all SO₂ emitted during the whole process of upstream processing, manufacturing, and transportation of a product, and the embedded SO₂ is larger than the SO₂ emitted in the final consumption of a product. In this report, an input-output model of multiple countries (regions) is used to estimate embedded CO₂ and SO₂.

4.3.1 Analysis of Embedded CO₂ in International Trade

4.3.1.1 Embedded CO₂ in Chinese Trade in 2007 and 2002

International trade numbers hold large embedded CO₂ volumes. In 2007 the total embedded CO₂ in the trade surplus was 1.4 billion MT or the equivalent of 23% of China’s total CO₂ emissions. This corresponds to an increase of 200% over the 2002 embedded surplus number. Taking the export numbers, the situation is even more alarming as CO₂ emissions embedded in 2007 exports accounted for 33.26% of the same year’s CO₂ emissions. Looked at it from another angle, embedded CO₂ in exports is equivalent to 3.29 times that of embedded CO₂ in imports.

The situation is just as acute if looked at from the standpoint of CO₂ intensity measures. The embedded CO₂ intensity in exports is 18.10 times greater than the CO₂ intensity embedded in imports. From an emission intensity measure, the embedded CO₂ emissions intensity per USD 10,000 in exports is 16.31 MT, and the embedded CO₂ emissions of every USD 10,000 in imports is only 6.33 MT. That is to say, embedded CO₂ emissions intensity in exports is 2.58 times more than the embedded CO₂ emissions intensity in imports.

Table 4.3 Embedded CO₂ in Chinese Trade in 2007 and 2002 (million MT)

Year	Embedded CO ₂ in exports	Embedded CO ₂ in imports	Surplus
2007	1,984.3	603.2	1,381.1
2002	770.5	149.4	621

Data Source: Input-Output Tables of China in 2002 and 2007, calculated by Li Shantong and the team for topic 1 of the Task Force

4.3.1.2 Sectoral Analysis of China's Exported Embedded CO₂

We calculated the exported embedded CO₂ emissions of various sectors and arrived at the embedded CO₂ contribution of China's total exports. In terms of exports in 2007, the top four sectors in terms of volume were: communications, computer, and other electronic equipment (25.32%); machinery equipment and instrument manufacturing (22.08%); the textile and garment industry (15.58%); and the chemical industry (8.5%). These are also the top four sectors in embedded CO₂, accounting for 63.18% of the embedded CO₂ for all exports in 2007: machinery equipment and instrument manufacturing (24.73%); communications, computer, and other electronic equipment (16.10%); the textile and garment industry (11.34%); and the chemical industry (11%).

The sectors for which there was a rise between 2002 and 2007 in their proportion of total embedded CO₂ included: metal smelting and calendaring processing; metal products; machinery equipment and instrument manufacturing; communication, computer, and other electronic equipment; and transportation equipment manufacturing. The proportions of other sectors all dropped to some extent from 2002 to 2007, mainly because of the increased export volume of the above-mentioned sectors. The same applies to the levels of embedded SO₂ in trade.

4.3.2 Analysis of Embedded SO₂ in International Trade

4.3.2.1 China's Imported and Exported Embedded SO₂ in 2007 and 2002

The embedded SO₂ emission in China's 2007 trade surplus was 674.5 million MT, equivalent to 31.52% of total SO₂ emissions in the same year. If one looks only at exports, SO₂ emissions embedded in exports accounted for 33.36% of total SO₂ emissions in 2007.

In terms of SO₂ intensity measures, the situation is just as serious. The emission intensity of embedded SO₂ for every USD 10,000 in exports is 0.0587 MT, and the embedded SO₂ emission intensity for every USD 10,000 in imports is only 0.0041 MT. That is to say that embedded SO₂ emissions intensity in exports is 14.19 times greater than the embedded SO₂ intensity in imports.

Table 4.4 Embedded SO₂ in Chinese Trade in 2007 and 2002 (million MT).

Year	Exported embedded SO ₂	Imported embedded SO ₂	Surplus
2007	713.98	39.44	674.54
2002	334.95	10.96	323.99

Data Source: Input-Output Tables of China in 2002 and 2007, calculated by LI Shantong and the team for topic 1 of the Task Force

4.3.2.2 A Sectoral Analysis of China's Exported Embedded SO₂

Using the calculation formula of embedded SO₂, we can calculate the embedded SO₂ emissions of exports in various sectors in order to arrive at the embedded SO₂ contribution of China's total exports.

The top five sectors in terms of export volume in 2007 were: communications, computer, and other electronic equipment (25.32%); machinery equipment and instrument manufacturing (22.08%); the textile and garment industry (15.58%); the chemical industry (8.5%); and the metal products industry (5.5%), which were also the five leading exporters of embedded SO₂, accounting for 71.66% of the embedded SO₂ in all 2007 exports. The proportion of embedded SO₂ breaks down as follows: machinery equipment and instrument manufacturing (22.23%); communications, computer, and other electronic equipment (16.17%); the textile and garment industry (12.89%); the chemical industry (12.69%); and the metal products industry (7.68%).

The sectors for which the proportion of embedded SO₂ in total embedded SO₂ rose from 2002 to 2007 were: metal smelting and calendaring processing; metal products; machinery equipment and instrument manufacturing; communication, computer, and other electronic equipment; and transportation equipment manufacturing. The proportions of other sectors all dropped to some extent from 2002 to 2007, mainly because of the increased export volume of the above-mentioned sectors.

4.4 Conclusion

In recent years, China's import and export volumes have been increasing substantially, reaching USD 2.97 trillion in 2010, and the total volume of imports and exports has soared to number one in the world. International market share has obviously improved, the market space for foreign trade will be more extensive, and product structure will continue to be optimized. In 2010, the export of mechanical and electrical products in China accounted for 58.9% of total Chinese exports, equivalent to a rise of 3.1 percentage points over 2005; in 2009, high-tech products accounted for 31.36% of the China's total exports, equivalent to a rise of 2.7 percentage points over 2005. A major shift has occurred in import and export trade patterns, with processing trade expanding rapidly, exceeding the growth of general trade.

Up until 2007, the proportion of high-energy consuming industries increased to some extent. The export volumes of products of high-energy consuming industries and medium-energy consuming industries accounted for 16.21% and 22.66% respectively.

Relative to 2002, not only did the export volume of high-energy consuming industries increase, but so did the proportion of high-energy consuming industries against total exports, from 15.95% to 16.21%. The import volume of products of high-energy consuming industries and medium-energy consuming industries accounted for 29.70% and 17.97% respectively. Relative to 2002, not only did the import volume of high-energy consuming industries increase but so did the proportion of high-energy consuming industries against total imports, from 27.81% to 29.69%.

Though there is a large surplus in China's foreign trade; it is often based on high-energy inputs and high-pollution products, which account for a substantial proportion of embedded energy and emissions in the exported products. Energy efficiency in China is low, so a large amount of energy is embedded in exported products and a large amount of pollutants remain in China, thereby increasing pressure on China to address energy conservation and environmental protection.

This research adopted the computational general equilibrium (CGE) model to analyze how environmental policy is used to optimize industrial structure, investment, and trade structure, as well as the impact on the environment. The simulation results show that environmentally friendly economic policies will cause some reduction of trade, but the impact on exports will be greater than the impact on imports. Mainly the energy sector and energy-intensive manufacturing industries will be negatively affected by such policies, thus shifting trade to a lower-carbon reality.

Section 5 China's Participation in International Rule-Making to Promote Environmental Protection

5.1 The Development of Relevant International Rules

Domestic policies and international rules regulating trade and investment generally complement each other. In the international arena there are a number of bilateral and multilateral agreements that regulate international investments activities, as well as international trade agreements negotiated under the WTO or free trade agreements (FTAs) that govern the international exchange of goods and services. On the environmental side, international relations are governed by specific environmental protocols, conventions, and agreements.

China is no longer just a passive member of the international rule-making process; it is gradually adopting a major position in these processes, whether or not it wishes to be. This is a reality of being such an important player. As it takes part, China faces the challenge of safeguarding its own interests while contributing to the improvement of global governance in general.

China also faces a growing number of trade disputes, with a substantial number related to environmental protection. For example, the export of Chinese energy-saving lights generated high anti-dumping duties levied by the EU, and subsidies directed towards alternative energy development were subject to the anti-subsidy investigations of the U.S.³⁰

³⁰ Xinhua News: The Case of Chinese Exported Energy-saving Bulbs Reflects Conflicts of Anti-dumping Policy

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Likewise, China's heavy restrictions on the exports of coke resources were opposed through EU and U.S. lawsuits,³¹ despite the self-sacrificing nature of these restrictions.

5.2 Environment Provisions in International Investment Agreements

5.2.1 An Overview of Global Investment Governance

While transnational investments are developing rapidly, the global governance framework of agreements and regulations to govern them is lacking in general. The total annual amount of FDI should reach USD 1.3 to 1.5 trillion in 2011.³² However, currently in the field of international investments, there exists no single multilateral legal framework. The current transnational investment governance system is based on a multitude of bilateral and regional international investment agreements (IIAs). The number of IIAs has increased rapidly during the past 20 years, especially during the 1990s. China has endorsed 230 international investment agreements of which 125 are bilateral trade agreements.³³

5.2.2 Environmental Provisions in International Investments Rules

The incorporation of environmental issues into intergovernmental investment agreements is a new trend. Article 3 of the WTO's Trade-Related Investment Measures (TRIMs) requires that all the exemption articles in the text of the 1994 General Agreement on Tariffs and Trade (GATT) shall apply to TRIMs. This means that the general exemptions of Article 20 of GATT are also binding on the environmental issues in international investment.³⁴

The most important agreement-based environmental initiatives took place under the North American Free Trade Agreement (NAFTA) framework, launched in 1993. Since then, despite disagreements on allocation of funding resources and the use of the CEC (NAFTA Commission on Environmental Cooperation), the three main NAFTA member countries—the U.S., Canada, and Mexico—have all generally become active advocates for the incorporation of environmental provisions into bilateral trade agreements. Some European countries, such as Finland, Sweden, Luxembourg, and Belgium, are now also participating in this trend.

The major modes of incorporating environmental provisions into FTAs and bilateral trade agreements include: preamble clause; special environmental provisions; environmental exceptions and exemption articles; articles of dispute resolution procedures; and articles addressing the relationship between investment agreements and environmental agreements. In general, the environmental provisions revolve around disclaimer articles allowing members to make exceptions for environmental and health reasons; articles prohibiting members from loosening environment standards in order to stimulate

Inside of EU, August 31, 2007.

³¹ New York Times: "US to Investigate China's Clean Energy Subsidies," October 15, 2010. <http://www.nytimes.com/>.

³² Financial Times: "US lodges WTO case against China," June 23, 2009, <http://www.ft.com/>

³³ UNCTAD. (2010). *World Investment Report 2010: Investing in a low-carbon economy*. New York and Geneva: United Nations. July 2010.

³⁴ UNCTAD. (2010). *World Investment Report 2010: Investing in a low-carbon economy*. New York and Geneva: United Nations. July 2010.

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FDI; articles demanding that members respect host country environmental rules and regulations, and so forth.

5.2.3 Environmentally Relevant International Investment Rules: China's Participation

The incorporation of bilateral environmental provisions into trade agreements is a practice that has been actively promoted over the past decade by the U.S. and other developed countries. This may become an important trend that China should follow as it negotiates its own new agreements. Many older IIAs do not include articles that coordinate the relationship between international investment and the environment. By comparison, the China-New Zealand, China-Chile, China-Pakistan FTAs already include environmental protection as an integral part of the agreements.

RECOMMENDATION: China should play a more active role in rule-making in relation to international, regional, and bilateral trade and investment arrangements in order to help promote green transformation. In addition to various legally-binding standards and agreements, this might include creation of a *Green China Consensus* on various voluntary standards where industrial and service industries and associations need to reconcile international and Chinese interests in establishing green certification systems.

See Section 6 for more discussion about this recommendation.

5.3 Environmental Provisions in International Trade Rules

5.3.1 Overview of International Trade Rules and International Environmental Rules

The goal of international trade rules is to enhance the liberalization of economic activities. In contrast, the goal of environmental management rules often seems to be to restrict aspects of economic activities. While the two are fundamentally different they can influence each other significantly. Special effort is required to reconcile and combine the objectives within common agreements.

The environmental provisions in the existing international trade rules are basically those of the WTO. Most of the other regional trade agreements (RTAs) and FTAs—with a few exceptions, such as NAFTA—generally have no independent environmental provisions. Except for the three FTAs mentioned above (New Zealand, Chile, and Pakistan), China has already endorsed bilateral and multilateral FTAs with more than 30 countries, in which trade has not been linked with environmental issues. In most cases environmental cooperation usually appears as the appendices of FTA protocols.

At the same time, the multitude of international environmental conventions does not completely exclude trade development, and some of them have actually established “trade and environment commissions,” specified by Specific Trade Obligations (STOs). They regard trade as an important means of implementing environmental conventions. For example, in the CITES Conventions, such trade measures as banning the trade of elephant tusks have been adopted.

5.3.2 Environmental Provisions in GATT and Other Trade Agreements

Environment related agreements made outside GATT include: (1) the Agreement on Technical Barriers to Trade (TBT); (2) the Agreement on the Application of Sanitary and Phytosanitary Measures (SPS); (3) the Agreement on Subsidies and Countervailing Measures (ASCM); (4) the Agreement on Agriculture (URAA); (5) the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS); and (6) the General Agreement on Trade in Services (GATS).

5.3.3 Possible Environmental Provisions in Future WTO Agreements

In 1995, at the beginning of WTO's existence, the Committee on Trade and Environment (CTE) was established under the General Council and discussions were conducted on environmental issues. Today, environment remains a major topic in the WTO's Doha Round. It includes (sections 31 and 32 of the The Doha Ministerial Declaration): the relationship between the WTO multilateral trade rules and multilateral environmental agreement (MEAs); reducing or abolishing the tariff and non-tariff barriers of trade in environmental goods and services; the impacts of environmental measures on market access; trade and environmental issues in the negotiations of intellectual property agreements; and eco-labelling.

5.3.4 WTO Rules on Environmental Products: China's Active Role

China should play an active role in making international rules in terms of its WTO based environmental interests. The current WTO-CTE's environmental goods and services (EGS) negotiations are driven by trade interests rather than environmental ones. They are based on national agendas, and therefore lack a global perspective and are quite poor in terms of any coordination with multilateral environmental agreements (MEAs). They lack an integral awareness of China's national and departmental interests, suggesting that the country's environmental interests have not been sufficiently considered. Hence, it is suggested that China should better prepare its international negotiations strategies to gain environmental benefits alongside its trade and industrial development interests.

In light of the diversity and complexity of China's economic development and the urgency of environmental needs, it is necessary to discard the too simplified dichotomy of international trade for developing countries and developed countries. The environmental goods and services listed by this study reflect China's economic benefits (industrial benefits and trade benefits); environmental benefits; and social benefits. China is especially competitive in all three categories of environmental products, and will become more competitive over time. There are also interesting alignments of interests to be explored with other developing countries.

5.4 Climate Change, International Investment, Trade, and China's Involvement

5.4.1 International Climate Process and System

Global climate change has been a fixture in international headlines in recent years, but still the challenge of construing of a fair and effective international climate change response after 2012—the end of the Kyoto Protocol commitment period—is still far from resolved. The international climate system involves a wide range of processes, frameworks, and mechanisms characterized by statements, laws, agreements, decisions, and standards. Some are legally binding; others are voluntary. Some countries have attached great importance to the commitments made at various international climate meetings, and have indeed change domestic policy to reflect them.

It is obvious that climate change would have implications for international investment, trade, and indeed the global economy. Climate change could alter the comparative advantages of some countries, and climate policies adopted by some countries could potentially alter the scale, flow, and direction of international investment and trade. On the other hand, certain international investment and trade policies could enhance international climate actions, but might also impede them. During the course of the global shift to green economy, there will certainly be unavoidable friction surrounding the relationship between climate change and investment policy. This calls for the thoughtful coordination of the international climate system with international investment and trade rules.

5.4.2 Climate Change and International Investments

The climate change system depends on financial resources that it doesn't have in order to be properly implemented. This chronic lack of funding has deepened the distance between developed nations, which promote market-based mechanisms, and developing nations, which typically promote public funding sources. More recently, developed countries have pledged to provide USD 30 billion during the start-up phase (2010–2012) as well as a long-term goal of raising annually USD 100 billion by 2020 and the establishment of a “world green fund.” So far, none of these pledges have been honoured and the international carbon markets have also not yet been formed. So climate related investments are still being implemented more on a voluntary basis than on a mandatory basis. Currently, there are no direct provisions to standardize international low-carbon investment. The incorporation of such international investment policies into the international climate system presents an opportunity for future development.

5.4.3 Climate Change and International Trade

The impacts of climate policies on international trade are of great concern to the international community as they can lead to serious competitiveness issues and trade frictions around subsidies, carbon tariffs, the liberalization of low-carbon products, and other contentious issues.

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Based on the United Nations Framework Convention on Climate Change’s (UNFCCC) principle of “common but differentiated responsibilities,” developed countries and developing countries should assume different emissions reduction obligations. In terms of carbon leakage and competitiveness, developed countries in Europe and America have proposed to address the developing countries’ competitive advantages in international trade and that increased emissions be compensated through carbon tariffs and other offsetting measures. These include the EU’s decision to incorporate aviation emissions into the EU’s trading system (EU-ETS) in 2012, a unilateral action that has caused great dispute in the international community and which will seriously affect China’s aviation industry. The legitimacy of carbon tariffs under the WTO remains undetermined. Developed and developing countries have different positions, and there exist different opinions even within the EU. This could all lead to potential conflict at the intersection of the international climate system and international trade rules.

5.4.4 China’s Status, Role, and Strategic Choices

As it evolves from being a recipient to a contributing country in the climate regime, China is the largest stakeholder in the debate. China has considered enhancing South-South cooperation on climate change by providing funds through bilateral channels. China’s FDI is increasing rapidly while the state vigorously strengthens energy-saving programs, emissions reduction measures, and policies to promote low-carbon development and investment.

China’s image as the “world’s factory” cannot be altered overnight. The net export of embedded carbon emissions in Chinese trade still accounts for about one-fifth of China’s total carbon emissions. Internationally, most of the comments about carbon tariffs are directed at China as many believe that China has been reluctant to adopt “effective” climate policies. To strengthen its economy, bolster its image, and advance a global green shift, China must participate actively in the development of a viable international climate system and should attach great importance to the interaction of international rules on climate change, international investment, and trade.

Section 6 Policy Recommendations: Ideas for a Greener Future

6.1 Overview

China now has the second largest GDP in the world but still faces many social and environmental hurdles typical of emerging economies, both domestically and internationally. Its economic transition offers many opportunities for growth and positive transformation. China has chosen to address its environment and development challenges head-on, thus opening the potential to secure its own sustainable future and to contribute to global sustainability. Investment and trade need to be at the forefront in meeting these challenges.

China is the world’s largest buyer of many internationally traded commodities as well as the main exporter of a number of manufactured essential goods. China’s integration with the global economy is demonstrated by the increase in its investments abroad, in

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Latin America, Africa, and the ASEAN Region, among others. China is thus exposed to growing public scrutiny and constant examination about its actions and policies affecting its business interests both at home and abroad. As a global player, it is also tied to its international commitments, general engagements, alliances, and integrated domestic development plans.

Domestically, China is adopting policies and encouraging voluntary measures that will drive it towards a green economy and lower carbon emissions. The Government of China is imposing stricter environmental conditions on industrial and other sectors during the Twelfth Five-Year Plan (2011–2015). There are implications for the activities funded via foreign direct investment (FDI). And since Chinese outward direct investment (ODI) is expanding rapidly, some structural adjustments in its trade and foreign investments policies will be needed to address environment and development matters related to topics such as accessing, processing, and transporting natural resources; infrastructure development in other countries; and manufacturing or other industrial activities carried out abroad.

Environment and trade continues to be a difficult subject with a constant need to monitor and address impacts of trade agreements on the environment; and to ensure international environmental agreements do not create competitiveness or other barriers to trade. With the rise of bilateral and regional trading agreements signed by China, there are additional opportunities to ensure that trade is carried out with due regard for environment and development both within China and within the countries with which it conducts trade.

The Investment, Trade, and Environment Task Force (TF) has examined various aspects of China’s FDI and ODI; considered corporate social responsibility (CSR) on the part of Chinese firms operating domestically and abroad; and examined some current aspects of trade and environment policies. The TF members carried out interviews and observed relationships involving Chinese investments in two regions: Southern Africa and Southeast Asia (Indonesia). The resulting recommendations are intended to be pragmatic measures that could help China to fulfill its commitment towards achieving healthy and sustainable development within China and to provide sustainable benefits for other countries in the process.

In addition to the specific topics covered below, the TF wishes to make an overarching policy recommendation (Section 6.2) concerning the shift in trade and investment circumstances in which China finds itself.

6.2 Environment and Development Policy for China during its Investment and Trade Transition

China’s actions on trade, FDI, and ODI affect the economy and ecology globally and within other countries in an ever-increasing fashion. China can ill-afford a passive attitude in dealing with other countries and the global community if it is to achieve optimal and sustainable patterns of development, including mitigation of the current problems of excessive damage to its own environment. The future of China’s “international brand” will have to be green for the country to thrive.

Therefore:

China needs to take proactive positions regarding environment and development that will: (1) ensure that those investing within China operate at the highest standards of CSR; (2) secure goodwill and the right to operate in countries abroad for Chinese ventures, based on the quality and style of investment and benefits for local people; and (3) seek bilateral, regional, and international trade, environment, and other agreements that take into account Chinese interests and concerns for a green economy, and indeed, for the transition to ecological civilization. China should aim to be an open and declared advocate in developing and promoting international green transformation.

The positive attitudes and action China has shown towards the environment, especially during the Eleventh and now the Twelfth Five-Year Plan (FYP), position the country and its businesses very well. However, it will require a concerted effort to capitalize fully on the opportunities, including addressing significant perception issues—and the stakes are high. China should hold both its FDI and its ODI to consistent, high standards of performance. It is essential not to behave one way at home and another abroad.

6.3 Policy Recommendations on Investment and Environment Relationships

The approach suggested here aims to upgrade the quality of China's FDI (Section 1) and ODI (Section 2), and to create symmetry between them where possible so that China's aspirations and requirements for inclusive growth are met while its international brand is enhanced. Since much of the effort will be undertaken by enterprises operating domestically and/or internationally, voluntary efforts need to be fostered and enabled. Thus Section 3 deals with CSR policy needs.

1. Foreign Direct Investment (FDI) into China

China should use FDI to help promote China's green transformation and sustainable development by ensuring a more balanced sector and regional distribution of FDI, with environmental concerns dealt with in a consistent manner.

More specifically, China should:

(1) Update and modernize its investment policies to attract desirable FDI into key sectors, such as high-tech, environmentally friendly, and other strategic emerging industries, thus helping China meet its Twelfth FYP environmental targets.

This means shifting from the current emphasis on scale and speed of foreign investments towards quality. To hasten this shift, China should adopt fiscal, taxation, and financial incentive policies, consistent with the Decision on Accelerating the Fostering and Development of Strategic Emerging Industries of the State Council, October 2010. Such incentives can also be introduced to attract FDI to the western region and inland cities away from the coastal areas as long as they lead to appropriate environmental safeguards in these other areas.

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(2) Draw on the environmental experience of FDI source countries, especially those countries requiring compliance with high environmental standards of their own, to modernize and further upgrade China’s legal framework on FDI.

Under such a legal framework, both foreign and domestic industries operating in China should minimally be subject to identical Chinese environmental protection and enforcement rules, regardless of whether the investors are foreign or domestic.

(3) Encourage all enterprises to invest in green products and services where possible, and to promote the greening of market supply chains across sectors.

The existing Catalogue for Guidance of Foreign Investment Industries should be revised to create incentives for greener investments. The Chinese environmental impact assessment requirements should be applied equally to, and be enforced for all investment activities in China, whether carried out by foreign or domestic companies.

(4) Evaluate local government performance by using indicators that place greater emphasis on the quality of FDI, particularly with regard to environmental performance and technological progress.

2. China’s Outward Direct Investment (ODI)

China should focus its ODI not only to play a significant role in meeting China’s Twelfth FYP targets, but also to promote host country green development and transformation, in line with objectives defined by the host nations, the Millennium Development Goals, and other relevant international sustainable development objectives. China should articulate and expand its policy guidance for enterprises that are “going global,” so that its ODI is consistent with China’s green development vision.

China’s ODI is generally welcome worldwide. Yet this ODI is often subject to criticism especially if it is perceived to be ill-prepared and badly introduced. An ODI approach based on green development can be designed to allow China to maintain its economic growth path, while ensuring that its overseas commercial activities are socially responsible and environmentally sustainable, with strong benefits for the local population and economy in the host country. China’s SOEs (state-owned enterprises) can lead the way in demonstrating this positive behaviour.

More specifically, China should:

(1) Prepare Chinese enterprises engaged in “going global” to take a proactive role in green development of host countries and in properly addressing environmental and social impacts.

There is always scope for improving the sustainability performance of business, and China should encourage its ODI along this path, while systematically improving its communication of good practice to overcome stereotypes and prejudices. China’s ODI is likely to play a major positive role in the green transformation of host countries, especially other developing nations.

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China's ODI should work towards a better integration with host country societies and should seek alignment of interests with local stakeholders, improving the products and services offered to host countries, and placing greater emphasis on environmental stewardship and sustainable development. Such actions will require better investor preparedness, implementation on the ground, and communication. Transparency will help protect Chinese investment interests through better relationships with local stakeholders, their business community, and citizen representatives. These steps will support the broader imperative of securing host countries' trust, if done properly.

(2) Establish new platforms for ongoing dialogue on implementation issues between China and countries with which it is creating trade and investment relationships.

This need, articulated by various representatives of each of the three countries visited by the Task Force, should facilitate communication and mutual understanding of needs, objectives, and concerns around the impacts of Chinese trading and investment activities abroad. Preferably, these platforms should be agile and flexible, created alongside or outside the traditional and more formal international venues, such as the Forum on China-Africa Cooperation (FOCAC) and the ASEAN Plus One Forum. The dialogue platforms should facilitate unencumbered two-way communication on a broad range of topics of interest to the countries. The dialogue channels should help build understanding, enhance business exchanges, and facilitate resolution of environmental, educational, social, and other concerns related to ties with China. They should be accessible to citizens in the ODI host countries. They are urgently needed to address the various development hurdles around the adoption of new environmental standards that could be seen as trade and investment barriers if not disclosed and discussed in advance.

(3) Address the negative perceptions sometimes associated with China's ODI and trading activities abroad.

There are many possible reasons for such perceptions, including some rooted in substance and others in a variety of motivations. Certainly improving the existing situation is important. However the TF found that even where good examples of initiatives undertaken by Chinese enterprises exist, the host country's general public is totally unaware of these cases. All they knew and spoke of were the cheap and low quality products made in China, which were unfairly flooding their domestic markets, among other issues. While some of this negative image and perception of Chinese products in those countries can be countered by better information and communication campaigns, true success will require integrated strategies on the part of governments working with Chinese enterprises.

These strategies should change some aspects of Chinese corporate behaviour, provide incentives for marketing and exporting better quality products and services to developing countries, and other changes noted in the previous recommendations. It will be necessary to involve governmental agencies as well as China's embassies, educational institutions, business associations, and non-governmental organizations. China can learn from precedents set by other countries and from the experience of some multinational enterprises that have satisfactory sustainable development records.

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(4) Create an evaluation methodology that enables a better monitoring of its ODI enterprises, both large SOEs and SMEs, particularly with respect to their activities abroad, perhaps with regular rating of ODI enterprises in accordance with their CSR performance.

Such a common framework can build on, enhance, and align the relevant work of several public bodies in developing ODI-related environmental and social guidelines, notably MOFCOM, NDRC, SASAC, MEP, SFA, and the CBRC. The host country and China could evaluate and rate the ODI enterprises in accordance with their CSR performance. Such information could be made publicly available both domestically and to host countries. Those rated high on CSR performance might be provided incentives like tax breaks, preferential finance, or customs clearance access.

Evaluation should be based on a commonly-held information base generated by MEP, Customs, Industry and Commerce Administrative Agencies, Taxation Agency, CBRC, Chinese embassies, and consulates, and could potentially include credible civil society organizations in both China and hosting countries. China should start to exercise such oversight starting with its SOEs that are “going global.” Reciprocity by other governments overseeing their own outward investors could be developed using the proposed dialogue platforms described above.

(5) Require under Chinese law that Chinese SMEs “going global” legalize their status in host countries. Also, ensure their access to capacity building for appropriately-designed operations abroad.

Chinese SMEs should be required to register with their local consulate or embassy any changes in business sector activities they have undertaken once they have moved abroad. This will help meet China’s expectation for their actions abroad especially if backed up by regular monitoring.

(6) Strengthen, align with green development, and clarify internationally the basis on which the Chinese government and its financial sector are willing to provide concessionary finance to host country governments or enterprises as part of China’s trade and investment promotion, and to improve the efficiency of these activities.

This will demand consistency across its policy banks, joint stock banks, other lending institutions, and state-directed investment funds and vehicles.

3. Promote Corporate Social Responsibility (CSR) for Enterprises Engaged in FDI or ODI

As a global player, China needs to work together with the international community and enterprises to guide FDI and ODI for the promotion of green transformation under non-discrimination principles.

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China therefore should:

(1) Ensure, as a matter of principle and legal framework, that FDI into China and China's ODI should be held to a high standard of corporate social responsibility.

If the investing or host country is a developing nation with environmental laws and standards that are below internationally advanced ones, the FDI and China's ODI enterprises should at least meet Chinese law and standards.

(2) Establish a new Guideline on Corporate Social Responsibility that makes China's own standards consistent with internationally-recognized CSR elements.

This guideline should address some areas of environmental, social, or sustainability performance that are not currently subject to Chinese oversight, and those areas currently regulated at levels below internationally recognized standards. The guideline should encourage good performance, with disclosure of environmental and social information by headquarters domestically and in host countries.

(3) Create Sustainable Development Funding Mechanisms to mitigate the impact of China's natural resource procurement activities, particularly when they result in depletion of non-renewable mineral, oil and gas, natural forest, and other biological resources, either domestically or abroad.

There are a number of such funds in the world, some of which have served to offer alternative development options to the populations affected by these extractive activities. Others have just created a savings account instrument to be used by future generations, when these resources will have been depleted. Such funds must be structured jointly between the host state, its local community, and the investor with strong stakeholder participation. They can be capitalized through payment of royalties levied on the resources that are being explored and should be managed by third-party professionals as independent trust accounts, which must be accountable to the public and other related stakeholders, not just to the host government. The lessons learned from resource-depleted sites indicate that part of the proceeds from resource exploration must be reserved for on-site ecological restoration, industrial diversification, and local social development.

A number of successful examples may be useful models, such as the Norwegian Investment Fund for Developing Countries (Norfund) or the Alaska Permanent Fund Corporation (APFC). In most cases, these funds help improve the image of the investor as they are managed in full transparency and are subject to the interests of the community. Generally, revenues and dividends should be used to: diversify the economy of communities exposed to resource depletion; finance poverty reduction; and provide housing and education, improved medical services, environmental protection, green transformation, and other aspects of human and social development.

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(4) Create awareness-raising and capacity building on the importance of the investment and environment nexus, whether via FDI or ODI. Chinese central and local governments should provide training for entrepreneurs so that Chinese companies are aware of, and equipped with, the necessary instruments for building image, reducing risk, and implementing CSR activities.

It is very important to encourage information exchange among companies, and to identify and disseminate good CSR practices of foreign investors in China as well as those of Chinese enterprises operating abroad. Training programs can be derived from these activities, and disseminated widely among all companies participating in investment flows both ways. Awareness of CSR among the Chinese public is also needed.

6.4 Policy Recommendations on Trade and Environment (Green Trade)

China should align its trade, energy, and environmental policies in order to send consistent signals about its use of market mechanisms and economic policies to promote energy savings and emission reductions.

Better communication facilities and coordination among relevant ministries are needed to reduce policy conflicts, overlaps, and implementation gaps. This is essential to improve China's trade structure and accelerate the transformation of its economic development model towards sustainable development.

More specifically China should:

(1) Make greater use of market-based policy mechanisms in setting natural resource, environmental services, and energy pricing.

Internalizing environmental costs with appropriate market mechanisms is essential for adjusting the foreign trade structure, as well as implementing energy-saving and emission-reductions targets. The government should accelerate the updating of the pricing mechanism of resources and energy products such as water, electricity, coal, oil, and natural gas. This will help to move the pace of structural reforms of the corresponding sectors, so that the prices of energy and resources reflect the degree of scarcity. Market mechanisms include: accelerating reform and the further establishment of resource taxation; reforming the environmental tax system; examining carbon taxes and carbon trade; and establishing resource compensation funds and sustainable development funds.

(2) Encourage and expand imports to promote a better trade balance.

China's trade surpluses are associated with increasing deficits of natural resources that are embedded in goods traded for consumption outside China. A large trade surplus can cause high embedded energy exports and serious pollution increases within China. The Chinese government should research its relevant policy options, such as lowering tariffs, to encourage the importation of high-energy products, and thereby help reduce domestic production levels. In other words, China could reduce export trade surpluses,

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promote the upgrading of domestic industrial structures, and move towards a real balance in trade, while fulfilling the double objectives of reducing domestic emissions and lowering domestic energy use.

(3) Shift to a more environmentally favourable export structure by offering guidance and policy incentives towards promoting the export of lower energy-consuming and less environmentally-damaging products.

Examples of specific actions on energy-saving and emissions-reduction related to export profiles include: classification of export products on the basis of total energy consumption and pollution emissions (including direct and indirect emissions) in the production processes; promotion of green certification and eco-labelled products; increase of export tax rebate for low energy-consuming and low-pollution products; cancellation of the export tax rebate policy of high-energy and high-pollution products; and implementation of an export tariff policy to high energy-consuming and high-pollution products.

(4) Invest in better national-level accounting and reporting to reduce the environmental impacts of its imports, mainly in terms of reduced energy and carbon intensity.

On the export side, and particularly for commodity exports (mined, harvested, and grown), China should adopt internationally-accepted standards to continuously re-evaluate the risks of resource depletion and environmental degradation related to these exploitation activities. In general, it must manage its export sectors with a stronger focus on their pollution content and encourage environmental supervision of high-pollution export enterprises.

6.5 Policy Recommendations on Rule-Making in Relation to International, Regional, and Bilateral Trade and Investment

China should play a more active role in rule-making in relation to international, regional, and bilateral trade and investment arrangements in order to help promote green transformation. In addition to various legally-binding standards and agreements, this might include creation of a Green China Consensus on various voluntary standards where industrial and service industries and associations need to reconcile international and Chinese interests in establishing green certification systems.

More specifically China should:

(1) Continuously promote the enforcement domestically and internationally of international environmental treaties to which China is a signatory member.

Enforcement of existing agreements is often very weak in many parts of the industrial and developing regions. China should voice its concerns about international transfer of pollutants and wastes through international trade and investment. Such concerns should cover the overall impacts of international environmental treaties on competitiveness, employment, and environment at domestic and international levels.

(2) Take the initiative in including environmental and social clauses while negotiating bilateral or regional trade and investment agreements.

Such recommendations can include flexible and progressive implementation mechanisms, which take into account the development stage of each party, consistent with the trend adopted in these agreements in recent years.

(3) Encourage enterprises and organizations to examine international best practice on green transformation, and to identify and promote best practices in this area, whether inside or outside China. Develop Green China Consensus voluntary standards based on Chinese characteristics and promote these, especially for domestic use and, where appropriate and necessary, for equivalency with international standards. In some instances it should be possible to promote Green China Consensus standards as new international best practices.

Examples include certification for sustainable palm oil imports, aquaculture exports, sustainable mining, and green tourism certification, among many others. Some of the standards will relate to emerging environment and sustainable development technologies arising from China's science and technology investments, for example on battery technology. All such actions will also help improve the global perception of China as an important and dedicated advocate of sustainable development.

China's own standards organization should be tasked to look at international voluntary standards for environmental protection and sustainable development, and gradually help Chinese enterprises adopt or adapt these for domestic use with governance structures appropriate to China's conditions.

(4) Promote South-South-North cooperation within existing frameworks. China should explore the opportunities offered by its singular emerging-to-developed economic status to seek special joint development niches, where it can bridge and align common experiences and expectations of some of its less advanced international commercial partners with those of more advanced partners.

On climate change, for example, China can provide African countries with appropriate and affordable low-carbon technologies such as small hydropower, solar water heating devices, and household biodigesters; European countries can buy emission-reduction credits at a low cost and cooperate with China on advanced technologies.

**Annex 1: Report on the Task Force Field Trip to
Indonesia (February 20–27, 2011) by the CCICED
Task Force on Investment, Trade, and Environment**

1. Introduction

The China Council for International Development on the Environment and Development (CCICED) is a high-level, non-profit, international advisory body established by the Chinese government in 1992 devoted to providing a platform for policy dialogue between China and the international community in the fields of environment and development. The CCICED members are high-profile Chinese and international experts who report directly to the State Council of China; the Council is financially supported by China and many international agencies to conduct policy studies relevant to China's sustainable development. The CCICED established a Task Force on Investment, Trade, and Environment in early 2010 to address the importance and growing environmental challenges of sustainable development, especially on China's trade and investment. The Task Force proposed to examine the environmental and social impacts, technological challenges, as well as economic opportunities and other matters that need to be addressed in terms of China's short- and long-term policies for both incoming and outward foreign investment activities, and their implications for trade.

Among the various exercises of the Task Force, it was decided to undertake fact-finding trips to two developing regions that have trading and investment relations with China in order to gather direct, first-hand information. The ASEAN region is one of the more important and traditional areas for China, and within the ASEAN region, Indonesia is the largest country. Indonesia was the first country the Task Force visited. The second visit was made in June 2011 to South Africa and Zambia (see ANNEX 2 for the African Field Trip report).

The Indonesia field trip was arranged through Mr. Ismid Hadad, a member of the Task Force from Indonesia, with the assistance of the Indonesian Institute for Energy Economics (IIEE). The team visited Indonesia between February 20 and 27, 2011. The goal of the Indonesia visit was to obtain first-hand information about the environmental and social footprints left by China's trade and investment relationship with Indonesia.

The Indonesian Institute for Energy Economics (IIEE) assisted the Task Force in the initial data and information gathering, selection of field site locations, and contacting resource persons and institutions to be visited. It arranged the meetings with all parties in three locations and summarized inputs and report findings during the team's visit to Indonesia.

The general selection criteria used for choosing locations to visit were the magnitude of impacts, and examples that could provide key information on improvement of future policies and strategies. The first step before selecting the sites to be visited was undertaking a desk study on trade and investment between China and Indonesia. Statistical figures indicate that coal, palm oil, forest products, and other natural resources are major export commodities from Indonesia to China. Among the top commodities exported from China to Indonesia are electrical appliances, machinery, power plant components, and agricultural products. Compared to trade figures, data on foreign direct investment (FDI) were less available since Chinese companies prefer to invest their capital through business affiliates from other countries. Among the few foreign direct investment figures, China's oil and gas companies are more visible.

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The Task Force recognized that trade and investment topics covers a wide range of issues. A list of questions was developed to communicate the purpose of the Task Force visit to the parties they will meet in Indonesia. The list can be found under Appendix A.

Based on the statistical data and other secondary sources of information, there were three locations selected for the Task Force to visit in Indonesia and their respective topics are as follows:

- Jakarta and Bogor (West Java): The Task Force discussed policies and issues on trade and investment between the two countries with central government officials, prominent figures, and resource people. A meeting with civil society organizations and private sector representatives was held to obtain the stakeholders' views prior to the site visits. The Task Force also met with a private Chinese company producing electricity generation equipment (ZUG POWER GROUP, PT Zug Industry Indonesia).
- East Java: The Task Force visited the Bojonegoro and Tuban districts of the East Java Province, which are the operational areas of the Tuban Oil Production Sharing Contractors, a consortium of oil and gas companies where PetroChina is one of the partners. There had been some media reports on health, environmental, and social concerns related to the company's operations. That said, PetroChina is among the companies participating in the first multi-stakeholder dialogue promoting transparency in financial transactions. This case highlights the dynamics of FDI by Chinese companies in Indonesia.
- East Kalimantan: The objective of the visit was to review trade impacts on the host country. East Kalimantan is one of the largest forest-based provinces, the largest coal producer, and an important palm oil production area in Indonesia. China is one of the major trading partners for these commodities. While export revenue is significant for Indonesia, there are widespread adverse environmental and social impacts from these activities. The Task Force visited Balikpapan, Samarinda, and its surrounding areas to meet with local government officials, as well as local NGOs and academics working on forest and land-use issues. In addition, the team also visited several coal mining sites and forest areas to see the impact of coal mining and palm oil businesses on the ecosystem.

Figure 1 shows the locations visited by the Task Force. Appendix B presents the overall schedule during the Task Force trip in Indonesia.

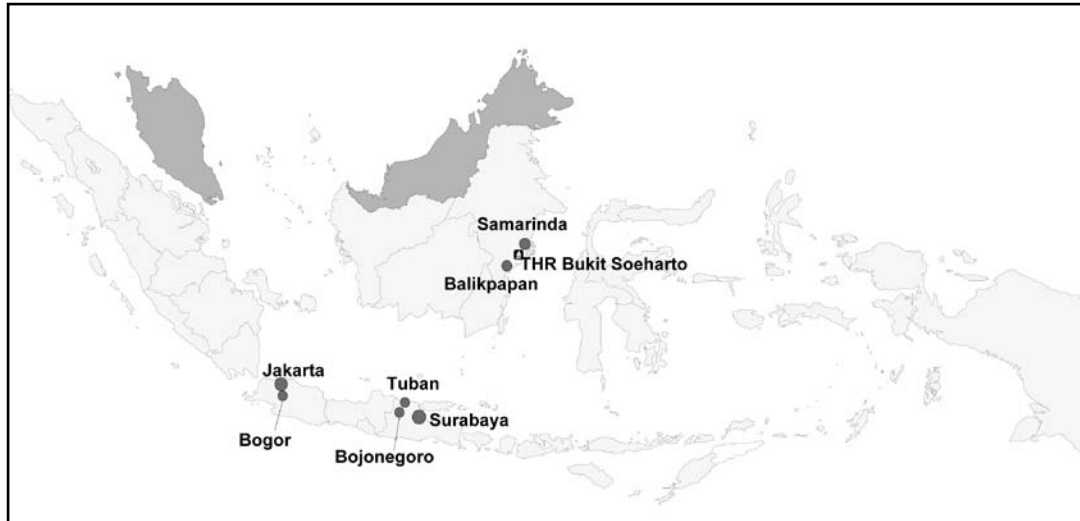


Figure 1. Locations of the Task Force Visit in Indonesia.

Section 2 of this report highlights the trade and investment figures between China and Indonesia. The rest of the chapters present the activities, key inputs, and main findings of the Task Force during their visit to Indonesia. Section 3 briefly reports on meetings in Jakarta and Bogor; Section 4 on the East Java visit; and Section 5 for East Kalimantan trip. We also include the questions and answers discussed in these meetings in Section 6, while general key findings are listed in Section 7. Opportunities and challenges are described in Section 8, while Section 9 lists some of the main conclusions and related recommendations emerging from this trip.

2. China–Indonesia Trade and Investment

In 2010, China reported a trade surplus with Indonesia of USD 2.8 million, while Indonesian statistics documented a trade deficit of USD 5–7 million for the same year. Although China ranks is Indonesia’s second largest export destination, it is also the largest source of imported goods for the Indonesian economy. During 2010, the largest growth areas in imports from China were electronics (+90% over the previous year), toys (+72%), furniture (+54%), textile and textile products (+33%), machinery (+22.2%) and metals (+18%).

The ASEAN-China Free Trade Agreement (ACFTA) that took effect in January 1, 2010, was seen as a contributor to the deterioration of several economic sectors in Indonesia. Although China has enjoyed a trade surplus with Indonesia since 2008, the current situation is deteriorating for Indonesia and generating much anxiety. The public perception is that many Chinese products come at unbeatable low prices, represent a wide variety of choices for the consumer, and can be easily found in all markets. Despite some concerns on quality standards, the low price and high availability make Chinese goods more competitive.

Some manufacturing sectors and various industry groups in Indonesia have complained and demanded the government’s attention to the issue. The government assigned two independent teams to investigate: *Komite Anti Dumping Indonesia (KADI*, Indonesian Anti Dumping Committee); and *Komite Pengamanan Perdagangan Indonesia (KPPI*,

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Indonesian Trade Security Committee). Based on their findings, the Indonesian Ministry of Trade publicly stated that they identified the use of some unfair trade practices. The government of Indonesia has reacted by issuing new policies and demanding the renegotiation of certain clauses of ACFTA (*Kompas Daily*, Tuesday, April 12, 2011).

Nevertheless, it has been also recognized that many Indonesian products cannot compete with Chinese commodities due to inherent issues in the country. Limited infrastructure, and inefficient energy distribution and transport modes lead to a high-cost economy that makes input for production more expensive. Likewise, investing is limited by the difficulties in accessing and high cost of capital markets. Indonesia's competitiveness is further constrained by the use of obsolete and inefficient technologies. Finally, Indonesia is increasingly losing competitiveness for its domestic-market products as it is unable to control the growing illegal trade in many of its traditional fronts.

2.1 Exports from Indonesia to China

Coal Trade:

- China has a high demand for coal. As of 2009, the country became a net coal importer, increasing its volume of imports by over 400% over the previous year. Despite its position as the world's largest coal producer at 2.9 billion tons in 2009, China imported 124 million tons of coal that year. This is equivalent to about 15% of traded coal worldwide.
- In recent years, the average price of Indonesian coal is the lowest among other imported coal supplying the Southeastern China market, and can often beat China's domestic coal price. More than 24% of the coal imported in China during 2009 was from Indonesia (Morse and He, 2010). This condition attracts Chinese businesses to finance coal production in Indonesia.
- Firm demand and financial support from international markets, including Chinese buyers, provide strong incentives for Indonesians to produce more coal. Such incentives also attract unlawful coal mining activities, which appear often to involve government officials and other authorities.

Coal exports from Indonesia to China have increased 10 times from 2006 to 2010 (Indonesian MEMR web site, 2010). However, the statistical discrepancies are quite alarming. In 2009 Indonesian statistics stated that coal exports to China reached 12.7 million tons, while China's recorded imports of coal from Indonesia indicated 30 million tons. This implies that only half the exported volume was recorded by the Indonesian government in 2009. The more recent significant increases in declared export volumes could already reflect an improvement in Indonesia's tracking of its trade activities.

It is worth noting that Chinese companies do not seem to be operating in the upstream coal business in Indonesia. Their presence is clearly evident in the shipping and financing of coal for the export market.

Palm Oil Trade:

- Many palm oil plantations in Indonesia are allegedly linked to massive conversion of natural forest and peat land, as well as unjust displacement of local communities and other negative social impacts that result from the increasing extension of palm oil plantations.
- Even though some palm oil companies are voluntarily participating in the Roundtable for Sustainable Palm Oil (RSPO) scheme, complaints about negative social and environmental impacts of the palm oil industry in Indonesia continue unabated.
- The presence of Chinese companies in the upstream segment (plantation, processing) in the palm oil industry is less apparent. However, China absorbed 14% of all Indonesian palm oil exports in 2010. Further research is required to assess the degree of Chinese involvement in the upstream palm oil industry in Indonesia, as well as its contribution to the negative social-economic-environmental impacts of this industry.

Timber Trade:

- Illegal logging refers to native timber that is illegally harvested from old growth forests and protected areas, transported and bought or sold in violation of national laws. It has been identified as the most damaging activity for the forest ecosystem of Indonesia, especially at the islands of Sumatera and Kalimantan in the 1980–1990s, and more recently in Papua and in other small islands in the eastern part of Indonesia. These illegal logging and timber trade activities led to the worst rate of deforestation and forest degradation in Indonesia. China is the world's largest buyer of hardwoods and is often accused of promoting the illegal timber trade, although there are no figures and statistics to prove these claims.

2.2 Imports from China to Indonesia

The most valuable imported items from China are electrical components for telecommunication, data processing machines, and equipment for power plants. In 2009, Chinese imports dominated each respective category, i.e., 47.8% for electrical components for telecommunications equipment, and 56.7% for data processing machines.

In the same year, power plant equipment from China occupies an even larger share of goods imported by Indonesia for each category:

- 78.1% of imported auxiliary plants for boiler systems
- 58.4% of steam turbines and vapour turbines
- 74.8% of steam or other vapour-generating boilers

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Following are a number of highlights of the importance of power plant components in Indonesia, demonstrating the importance of China as the majority trade partner in this market:

- Importation of power plant equipment is generally due to the competitive price of Chinese products. However, the Indonesian policy of accelerating the development of coal-powered generation – known as the “10,000 MW Crash Program phase I” (CP-1) – also helps explain the current market domination of Chinese-made equipment in the Indonesian market.
 - Decisions on the CP-1 policy were made by the highest state officials of the two countries. The initial plan was to use only equipment made in China, built by Chinese contractors, and financed by export-credit schemes from Chinese banks.
 - However, there were long delays in securing the financing terms which pushed PLN (the state-owned electricity utility) to redirect its cash flow towards investment, and the government to mobilize domestic banks to support the project.
 - Financing difficulties led to long delays in completing the project. Originally expected to conclude by 2009–2010, it is currently only operating at about 20% of capacity.
 - Majority of generation capacity addition of CP-I is in Java.
 - All power plants in CP-1 are owned by PLN. Despite changes in financing sources, the project uses exclusively Chinese-made equipment and employs Chinese contractors.
 - Other concerns about CP-1 include power plant under-performance and environmental impacts due to the absence of greenhouse gas emission handling units in these facilities.
- Many independent power producers (IPPs) in Indonesia also use Chinese-made equipment in their power plants.
- Power plant equipment imported by Indonesia includes refurbished turbines and boilers. There are concerns that China’s policy to improve efficiency and performance of its power plants are transferring the country’s older equipment and its related problems to Indonesia.

2.3 Investment

In the past decade China’s FDI in Indonesia had been increasing gradually. More recently, however, there has been an acceleration as new FDI projects tripled from 37 in 2009 to 113 in 2010. Many attributed this jump in FDI from China to the launch of ACFTA.

Total FDI from China during 2000–2010 was USD 594 million. The largest investments took place in the metals, machinery, and electronics industries followed by food and mining.

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Jakarta received 21.9% of Chinese FDI during 2000–2010, representing 112 investment projects. Other top ranking recipients of Chinese FDI were Banten (17.2%), Lampung (13.5%), and South Sumatera (11.4%) provinces.

FDI placement in East Java amounted to 2.6% from the total. East Kalimantan received an even smaller amount with merely 0.9% of the total investment during 2000–2010.

2.4 Economic, Social, and Environmental Impacts

Mining and extractive industries operating in Indonesia are required to develop and maintain their own road infrastructure, but these regulations have not been respected. Heavy trucks carrying coal, palm oil, and timber with over 20-ton loads use the existing public roads, while the majority of these public roads around Kalimantan are designed for up to eight tons per vehicle. As a result, this activity is damaging the Kalimantan public roads and transportation systems, transferring maintenance costs to the local governments and causing severe negative consequences for the local populations.

Other negative impacts of increased coal mining and transportation:

- Open mining pits have contaminated surface and ground waters, and have led to floods in the surrounding areas.
- Heavy truck traffic has led to frequent accidents involving injuries and fatalities to drivers and passengers of smaller vehicles.
- Damage to public roads has hurt local economies, as the transportation of people and goods become much more difficult, takes longer, and therefore becomes very expensive.
- The spread of coal dust by the roads reportedly causes respiratory and other health problems to local communities.

Other negative impacts of illegal logging (EIA, 2005):

- Loss of Indonesian government revenue due to illegal logging was estimated at USD 3 billion a year.
- Threat to livelihoods of forest communities.
- Threat to the biodiversity of forests.
- Flooding and forest fires endangering ecological security.
- Increased corruption and lawlessness.

3. Jakarta and Bogor Meetings

3.1 Background

Jakarta is the capital city of Indonesia, and also the central point for business and trade. The central government administration of the Republic of Indonesia, and all governmental offices and foreign embassies are found in Jakarta. Policy questions on trade and investment were addressed during the meeting with government officials and prominent resource people in Jakarta. A meeting with two Vice-Ministers was held in Bogor, a city about 60 kilometres south of Jakarta, while they were having a break

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from a cabinet plenary meeting held at the Bogor presidential palace. Many company headquarters and non-governmental organizations' main offices are located in Jakarta as well. The Task Force met and attended working sessions with all of these parties during their stay in Jakarta.

3.2 Activities

The Task Force's first agenda item was an introductory meeting on Sunday, February 20, 2011, with the IIEE Executive Board and its management as well as the support team for the Task Force.

On Monday, February 21, the Task Force met with high-ranking government officials and prominent resource people knowledgeable in economics, development, and environmental policy issues. After lunch, they attended a special session with stakeholders and prominent leaders of some Indonesian non-governmental organizations (NGOs) addressing social, environmental, and governance issues.



TF members met with East Kalimantan government officials and NGOs.



TF members met with the Minister of Trade in Indonesia and Mr. Ismid Hadad at his residence.

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On Friday, February 25, the Task Force had a working session with private sector representatives, business associations, and selected NGOs on various issues related to economic, social, and policy issues involving Indonesia's trade and economic relations with China. The team visited PT Zug Industry, a private medium-sized Chinese commercial manufacturer of electrical turbine and other machinery on Saturday, February 26. Appendix B-1 shows the detailed agenda, and Appendix C-1 shows the list of participants in the meeting series in Jakarta and Bogor.

3.3 Findings

3.3.1 Trade

Remarkable changes in the last 10 years have positioned China as a new engine for global growth. China has also become an important neighbour for Indonesia as it is now among the top 10 trading partners of Indonesia. China's imports from Indonesia are dominated by natural resources, while Indonesia imports electronic components, manufactured goods, and machinery from China.

The two countries are engaged in numerous bilateral and multilateral agreements such as the ASEAN-China Free Trade Agreement (ACFTA). Indonesia and China have agreed to look for sectors negatively affected by ACFTA and to work together in addressing these issues together. The aim is to narrow the gap caused by asymmetrical trading conditions. For example, low-price toys and textiles from China reach Indonesia easily and lead to business shut-downs and related unemployment in Indonesia. On the other hand, Indonesian companies have limited access to China due to import quotas there, which suggests an unfair trading relationship.

3.3.2 Investment

The majority of China's current investment in Indonesia takes place in the form of portfolio equity investments as opposed to direct investments in operating or manufacturing industries. Chinese investors act mostly at the corporate level rather than at the field level. Most Chinese investments also tend to be informal in nature or placed through overseas partners. Offshore tax-free havens are often the domicile of these investments, therefore there is little transparency. The preferred sectors for investment are typically in manufacturing. Nevertheless, in terms of investment size, both China and Indonesia have relatively small holdings, particularly when compared to the values exchanged in the commercial trading business. Indonesian Investment Coordinating Agency (BKPM) data for 2010 ranks China as the 15th largest investor in Indonesia.

In the past, Indonesia seems to have given preference to trade over investment. That was very practical for China, which preferred to import raw and unprocessed natural resources for its domestic processing facilities. That way it left the responsibilities for the upstream impacts of this business entirely to the host country. As China becomes a more important global player, its trading partners expect it to accept more responsibility.

For example, Indonesia, as a major producer and exporter of palm oil and coal in the world, faces increasing challenges to overcome forest resource depletion and degradation

related to these activities. On the other hand, China would need the equivalent of nine times its land mass to plant soybeans in a volume that would substitute for the quantities of Indonesian palm oil it imports. For industries in the southeastern part of China, Indonesian coal has been among the most competitive compared to domestic supply. Sustainable palm oil production and coal mining would need significant changes in management, institutional capacity improvements, new technology, and other additional investments. Ultimately, addressing sustainability concerns in production and trade will have a more positive effect for China and Indonesia. Investment to and from both countries is expected to raise awareness of such social and environmental issues.

3.3.3 South-South Collaboration

Despite the recent history of politically motivated animosities toward Chinese communities in Indonesia, Chinese companies operating in Indonesia have little difficulty in integrating their respective cultural differences in the host country. Moreover, there is a growing confidence generated by the identification of alignments of interests based on mutual experiences as developing countries facing similar liberation histories and development hurdles. These are two southern hemisphere economic giants share many characteristics, including: adaptable Asian cultures, great complementarity, and moving simultaneously toward their respective positions as global growth locomotives.



Guan Temple in Tuban, East Java.



Sculpture of Chinese characters in Guan Temple, Tuban, East Java.

3.3.4 Development Policy and Governance

Discussing trade and investment in Indonesia – as in China or anywhere else – cannot be separated from its broader economic and development policy context. The impact of trade and investment on the environment cannot be disassociated from its governance, social conditions, and law enforcement. All of these also impact the environment. During the Task Force meetings in Jakarta and Bogor, it was apparent that trade, investment, and environment are very much linked to the following policy issues:

Development objectives

The essential task of a government is to serve the needs of its people and improve their well-being. Health, education, and poverty alleviation are major issues for emerging countries. To serve this purpose, trade and investment among countries, including China and Indonesia, need to ensure sustainable benefits for the people.

The Indonesian government adopted four development principles: pro-growth, pro-poor, pro-jobs, and pro-environment. Foreign investments, including those with China, are expected to increase and add value to the Indonesian economy through employment, technology transfer, and sharing experiences. At the same time, they are expected not to pollute the environment nor degrade the natural resource base of the country's economy. Likewise the pressing need to address climate change should not be met at the expense of poor communities.

Low-carbon development

Emerging economies are expected to share similar responsibilities as developed countries when they face the global challenge of managing greenhouse gas emissions. Both individually and together, China and Indonesia must face the challenge of improving natural resource utilization and environmental management.

The government of Indonesia is committed to implementing the Bali Action Plan of the UNFCCC and voluntarily set emission reduction targets at 26% below projected levels with its own national budget, and an additional 15% reduction with international support by the year 2020. These ambitious emission reduction targets make Indonesia the first large developing country to make such a significant voluntary commitment to the global community. These targets will be achieved through the National Action Plan on Climate Change, which has been translated into sectoral development programs and integrated in the mid-term national development planning process and a low-carbon development strategy

The rapid growth of the Indonesian economy has caused emissions to grow rapidly from fossil-fuel combustion in the energy, industry and transportation sectors – even faster than GDP growth in the long run. Nevertheless, the largest share (more than 65%) of Indonesia’s GHG emissions still comes from forest, peat-land, and land-use change. Therefore Indonesia’s current efforts are focused on Reducing Emissions from Deforestation and Forest Degradation (REDD). This could only be done by creating an effective system of REDD Plus (+), which the government is aggressively pursuing. REDD Plus and land use, land-use change, and forestry (LULUCF) programs could play a significant role in reducing Indonesia’s emissions, and a credible measurement, reporting, and verification system (results-based, demonstrable, transparent, verifiable, and estimated consistently over time) is a necessary element of the strategy. At this point, Indonesian emissions are expected to increase from 1.72 to 2.95 GtCO₂e (2000–2020).

Despite this projected increase in emissions, private companies and the lower echelons of the government bureaucracy have not taken up the low-carbon development target in their operations. This is due to the absence of clear rules and comprehensive information from the government of Indonesia. In power sector investment, for instance, Chinese technologies in Indonesia do not support the national emission reduction targets, and the Indonesian government seems to allow such practice which contradicts national policy.

Investment policy

In discussions with government officials, prominent resource people, private business, and NGOs in Jakarta, the Task Force members got the impression that China’s expanded investments in Indonesia are quite welcome and are expected to be realized soon in the economic sectors that could bring added value to the broader community, with technologies that could help support the low-carbon development ambitions of the country. China’s investment in infrastructure and technologies for the development

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of renewable energy resources, and in the agriculture and forestry sectors, are among the examples mentioned and suggested to the Task Force. However, when meeting with Indonesia's investment authorities, there seemed to be an expectation that China's investments in Indonesia should be directed instead to a large and capital-intensive infrastructure projects such as building the Membramo hydro-dam and related electric power generation facilities on the island of Papua. This raises questions about Indonesia's preferred investment policies vis-à-vis its current pro-growth, pro-poor, pro-jobs, and pro-environment development strategy.

Sustainability standards

China is a member of the International Council on Mining and Metals (ICMM), an organization that brings together 18 mining and metal companies as well as 30 national and regional mining associations and global commodity associations to address sustainable development challenges faced by the industry. ICMM applies high standards and prudent financial investment policies for the financial sector.

Although China's trade and investment with more developed countries seem to comply with their more sophisticated standards, some observations indicate this is not the case in countries with weak governance and high poverty levels such as Indonesia. In Indonesia, China has been perceived to participate in providing financial support for the illegal trade of coal, minerals, and timber, as well as supplying low-quality products and relocating unsustainable businesses from the motherland.

Developed countries have their own rules and standards for products and environmental quality. Developing countries find it difficult to catch up with the internationally recognized sustainable development standards introduced by European countries. Both China and Indonesia are under pressure to improve the management of coal utilization and land use respectively. As a response, China started to improve the environmental performance of its industries, while Indonesia initiated its own Indonesia Sustainable Palm Oil (ISPO) standard.

Certified products can increase production costs for companies, but they also increase their relative value in the market and often open profitable new markets, such as those in the European Union. Product and process certification programs should facilitate businesses in obtaining incentives and faster movement through the bureaucracy. The ISPO certificate, for instance, should become a marketing leverage instrument. However, like other certifications, ISPO does not automatically increase the price and market a product. The Chinese government should consider the adoption of policies that promote the purchase of certified products.

Cooperation, dialogue, and public response

China and Indonesia need to work together to seek common approaches to overcome some of the global challenges they face as global players. Strong cooperation is needed at all levels in the government, industry, academia, and the general public. They often face similar hurdles and should share their experiences, technologies, and strategies for

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sustainable development whenever possible. This approach requires continuous efforts and dialogue, generating focused programs that are relevant to both countries.

For instance, while currently no institutions are working on the subject of border tariffs, a joint approach to address this challenge would certainly be very useful. A form of South-South dialogue with a flexible agenda and a permanent platform may be needed to help facilitate this improved contact. Such dialogue should not be limited to government participants only. It must also include businesses and a broader selection of stakeholders. This dialogue is in line with China's new proactive approach in the global climate change negotiations, as well as the Indonesian initiatives to engage finance and trade ministers during global climate change negotiations at the Fifteenth Conference of the Parties (COP15) at Bali in 2007.

4. Visit to East Java

4.1 Background

East Java is a large province in terms of population and the second richest economy on the island of Java. It has a population of over 38 million people (2009) growing at +0.55% per annum. It occupies a total land area of over 47,000 km² and a total maritime territory of about 111,000 km², including 229 separate islands. The East Java province is divided into 29 districts and nine major cities, of which Surabaya, the second biggest city in Indonesia, is the capital city of the province.

The dominant sectors in East Java's economy are trade, oil and gas, manufacturing, hotel and restaurant services, and agriculture. The province's gross domestic regional product (GDRP) reached Rp 321 trillion in 2009, up 5% from the year before. Appendix D illustrates the map and economic indicators of this province, and brief information about the sites the Task Force visited.

East Java was of interest to the Task Force because it is rich in natural resources, particularly oil and gas, and hosts FDI in crude oil production by JOB Petro China (*PetroChina's Joint venture operations with Pertamina in the Tuban and Bojonegoro Regencies*). Furthermore, oil production is located onshore and can therefore offer many interesting and accessible illustrations of how FDI impacts the environment as well as the human and social conditions. It is a living example of how a large Chinese state-owned company has coped and plans to cope with managing the impact of its presence.

4.2 Team and Activities

The TF team visiting East Java was composed of:

- Mr. John Forgach, TF International Co-chair
- Mr. Yansheng Zhang, TF Chinese Team Member
- Prof. Ying Chen, TF Chinese Coordinator
- Ms. Huihui Zhang, TF International Coordinator

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The team visited East Java for three days from February 22 to 24. It held meetings at the regional offices of a local NGO, met extensively with local government officials, and visited some of the desulphurization oil and gas installations of PetroChina. The team met with many local stakeholders in Bojonegoro, met with regents and governments officials in Tuban and Bojonegoro, held several meetings with provincial government officials, and visited BP Migas regional offices in Surabaya, the capital city of East Java province. Appendix B-2 shows the detailed agenda, and Appendix C-2 shows the list of participants in these meetings.

4.3 Findings

PetroChina's Social and Environmental Challenges

During introductory meetings with local and international NGOs in Jakarta the days before visiting East Java, the Task Force had heard that PetroChina was facing many social and environmental hurdles in developing its exploration and production activities in the region. The principal issues were summarized as follows:

- a) Human and social challenges:* The Task Force was told that PetroChina faced, for instance, opposition from local farmers who complained about the heat and noise and luminosity effects of the gas flares around the desulphurization units operated by the Chinese oil company. We were informed that local farmers were deeply disturbed by the flares, that their crop yields within a one mile radius of the flares had diminished by up to two-thirds, that they were suffering from illness and health effects (due to the spread of ammonia gases from the flare stacks), and that the noise and bright light were disturbing the husbandry activities of local shepherds, especially at night.
- b) Health and security challenges:* We were told that the firm was conducting onshore oil exploration without much concern for potential risks (explosions, air contamination with production gases such as H₂S and methane, or leakage of toxic fuels as well as contaminated production water at the site) for local communities living close to the oil wells. We were also told that the firm had little concern for the security of its own employees, mainly rig operators (mostly subcontractors) as the Chinese rigs were of poorer quality and exploration equipment had safety instructions printed only in Chinese, which was not understandable for Indonesian workers.
- c) Environmental pollution at the production site:* We were told that the oil company only desulphurized about 80% of its gas production as it cleaned merely the portion used by the plant to run its own system. In other words, the claim was that the company was flaring non-desulphurized gas straight into the atmosphere, emitting highly toxic H₂S gas in the process. We were also told that the firm conducted a very dirty and noisy flaring operation with little concern for its impact on the environment. A common complaint was that they were disposing of solid desulphurization residues without much concern for the disposal sites. We were also told that the firm barely complied with the environmental regulations, “did not read them,” and adopted short cuts when facing environmental requirements “in order to gain time” in production and exploration. The common habit in Indonesia was still to “fix after the fact rather than pre-empt.”

d) *Human resources management and training:* The team was told that PetroChina was “slow in replacing personnel” and overworked its teams, leaving little spare time for community engagement and other social interaction. It did not offer sufficient on-the-job training opportunities, nor were there enough executive position exchanges within the group. Another common complaint was that PetroChina’s presence and activity did not create many opportunities for low-skilled jobs, which have great impact on the neighbouring community. The crude oil, once processed, was shipped off to China and the gas continued to be flared (i.e., wasted) instead of helping produce more jobs in the community.

e) *Contribution to the country’s economy and local community:* As a producer and exporter of crude oil, PetroChina does not contribute much to the local communities. A common complaint was that while it made, from time to time, monetary contributions and services to the local communities, it did not offer permanent job opportunities and therefore did not help the local economy. The local people felt that they suffered the environmental and safety degradation risks of PetroChina’s presence but did not benefit from any direct compensation in the form of economic or other benefits. They fared poorly, for instance, against Indian investments, which they claimed, were more vertically integrated into the local economy, exploring downstream opportunities such as the production and distribution of fertilizers from gas, electricity from gas, transportation and other household applications derived from NLG, etc.

PetroChina Facilities and Work Area

The team visited the industrial sites in Tuban and Bojonegoro, where the JOB Pertamina –PetroChina conducts its crude oil and NLG desulphurization activities. Tuban is an impressive and large site surrounded by rice paddies under full cultivation. Along the main road and the plant’s access road one can see many houses, orchards surrounded by healthy banana and other fruit trees, schools, grocery stores, pharmacies, temples, storage barns, garages, and other urban type housing immediately adjacent to the high fences of the oil/gas operation. Many of the houses and stores were new and many were under construction. One could see the high gas flares alight in the distance.



Crops grow next to JOB Pertamina–PetroChina desulphurization site, Tuban, East Java.



JOB Pertamina–PetroChina crude oil and gas desulphurization unit, Tuban, East Java.

After passing through the appropriate security checks at the main entrance gates, which were quite thorough (they kept our passports and identity papers which were returned when we exited the premises), the team changed to diesel-powered vehicles (their gasoline-powered vehicles could not be used inside the desulphurization plant area). The process was carried out in a very polite but firm manner.

The team was received by the full top management group of the company, including their Environmental and Safety Manager. Everyone was fluent in English. Before the meeting started, the team was given very detailed safety briefings and instructions for evacuation in case of fire or explosion. They were informed that this plant was a very sensitive installation handling extremely delicate and volatile/explosive products and that they needed to observe the safety rules with great care.

Before they started the actual tour of the plant they were given another round of instructions about security and health by the Fire and Health Security Site Managers. The team was told that they had to stay in the vehicles and not use flash photography. Emergency exit procedures and shelters were shown to them. The briefing was thorough and carried out very professionally. The head Safety Manager was an Indonesian engineer employed directly by PetroChina.



TF members and the Safety team at JOB Pertamina–PetroChina desulphurization unit, Tuban.

Having worked in the oil industry for many years, Mr. Forgach, one of the TF team members, is personally quite familiar with desulphurization units in the southern U.S., Africa, and Latin America. He comments that these are indeed very sensitive crude oil and gas processing units, which require the utmost care and safety precautions in their operations. They need several layers of safety measures with double or triple redundancies. Their maintenance is very demanding as they deal with highly corrosive and toxic materials.

From what the team observed during its tour, *JOB Pertamina–PetroChina* has a first class safety record (the curve on the accidents chart has moved to zero since PetroChina became a partner in the operation) and demonstrated a high degree of diligence in their safety measures. The plant is clean, there are no leaks, all the equipment is well-maintained, pipes are freshly painted, and instruction signs are well positioned and in top shape. There were no signs of neglect or poor maintenance. Safety pumps, generators, water hoses, and fire-fighting equipment were kept in top shape, the electronic monitoring systems in the control room are staffed 24/7 by well-qualified engineers and everything appeared to be in absolutely top working order.

The team talked quite openly and freely with the senior management before the site tour. The management had prepared a PowerPoint presentation, but the group ended up discussing issues openly throughout the presentation. The JOB has a “blue” Indonesian environment rating and is working towards the “green” level. They are aware of the

problems caused by the flares and dispute the claims that they reduce agricultural productivity or create direct health hazards to the surrounding communities. They refute completely the assertion that H₂S gas is flared into the atmosphere. In fact, the sulphur filtering system is monitored constantly so that any amount of gas with even 15 ppm of sulphur is recycled again through the unit so that it is totally clean. They use a zero tolerance approach for H₂S emissions.



TF members meeting with the management of JOB PetroChina–Pertamina at the Tuban plant.

They admitted the problems with the unusual luminosity caused by the flares at night, which can be very disturbing. They have compensated the community, helped them financially, and have started installing new closed-end flares and heat exchangers that reduce the noise, heat, and luminosity to a small fraction of the former ones. These units cost USD 1.0 million each and they plan to install more such units. The team passed right under the high flare stacks, which were in full power. There were birds flying around them and the sheep and cattle were in the pastures, right on the other side of the high fences, with their owners right next to the flares. No one seemed very bothered, at least during the day.



Flares and heat-sound exchangers at JOB PetroChina–Pertamina desulphurization unit.

In fact, PetroChina would like very much not to have to burn all this precious gas. It is a valuable commodity. The firm has been patiently waiting for almost three years to get connected to a LNG gas pipeline which has been awarded to PT Gasuma Corporindo, which has been unable so far to close the financial package to finance the pipeline. It seems like the situation continues to be frozen as the Bojonegoro regency is blocking any further licenses for new oil exploration wells until the gas flaring problem has been resolved. The Bojonegoro regency would prefer to see the gas used to produce electricity and fertilizers for the region rather than being flared or exported. PetroChina appears to be doubly prejudiced in this quagmire as it cannot pursue its drilling program, and is being blamed for flaring the gas that it wishes to sell but cannot because the firm that has been awarded the renewed licence for the pipeline construction is unable to deliver.



TF meeting at Energy and Mineral Resource Agency, Surubaya, East Java.

While the team waited to meet the Regent of Bojonegoro, he was delayed because he was attending a public library inauguration ceremony for children of his community, which was co-sponsored by PetroChina and ExxonMobil Corp. He stated openly to the TF team that he was very pleased with PetroChina's presence in the area and that the firm was often unjustly blamed for community actions over which they had no control. He said that PetroChina had voluntarily offered to build a new school for children who were located close to their new exploration fields. They put the funding at the disposal of the community but nothing has been done over the past year-and-a-half because the community cannot decide where to relocate the school. The Regent added that he felt PetroChina could be much more present in the community if they invested (or brought investors) into downstream business that was related to their oil business. He suggested that they could use a larger refinery, build a fertilizer plant and a gas powered electric utility, as well as other related distribution businesses.

With respect to the oil exploration activities, the Regent confirmed that PetroChina is now being blocked by his regency (Bojonegoro), as it will not issue new drilling permits until the natural gas and flaring issues are duly resolved. There seemed to be some disagreement between the licencing authorities and the regency in this respect. Whatever the case may be, it appears that PetroChina is unfairly blamed for a situation over which it has little control and runs contrary to its interests.



TF meeting with H.E. the Regent of Bojonegoro and his team, Bojonegoro, East Java.

The oil fields that are targeted for exploration are relatively sure bets with an 80% success rate (according to PetroChina's management) and the crude oil is of high quality. While the company is doubling its offshore pipeline to the loading port, it is unable to increase production in the same proportion. This is hurting performance and frustrating management.

Welcoming China as an Investor

During the trip, the TF team was quite impressed by the friendly and supportive welcome it received from all levels of the population. It is clear that Indonesians in East Javan admire China and are proud of their Chinese roots and ancestry. In Tuban, the team was received most graciously by the Regent, Mrs. Haeny Relawati Rini Widyastuti, and her full cabinet at the Government Palace. During the lunch banquet, the team members were introduced to several Indonesian and local culinary delicacies, which are often strongly influenced by Chinese recipes, and she explained to us how important it was to emphasize the deep cultural roots that exist between these two large Asian Nations. In fact, she requested that some of her cabinet officials accompany the team to a giant Chinese cultural and entertainment centre recently built right on the public sidewalk next to the Tuban shoreline. After lunch, the team was introduced to the various investment opportunities available in the booming economy of Tuban, through a PowerPoint presentation that was narrated and explained by the Regent herself. Again, there was a clearly manifested interest in seeing more Chinese investment in Tuban. The Regent was aware of the TF program and brought up some of the community issues that exist with PetroChina's operations in Tuban. She also insisted that if PetroChina and/or other Chinese state firms invested in downstream operations, creating more low-skill employment opportunities, the community problems around PetroChina's presence would be very much compensated for.



H. E. Mrs. Haeny Relawati Rini Widyastuti, Regent of Tuban, honoured the CCICED TF delegation with symbol of the Regency of Tuban, East Java.



H.E. the Regent of Tuban welcoming the TF delegation at Regency Government Palace.



Group pictures of TF delegates, IIEE representatives, Regent of Tuban and her cabinet.



Tuban Regent's Palace cabinet meeting and presentation with TF delegation.

This warm and friendly attitude toward China was also very much present at the closing meeting discussions at the East Java provincial Government Energy and Mineral Resource Agency in Surabaya. Ms. Dewi J. Putriatni, the head of the agency, told the TF team quite clearly that they were looking forward to much closer and intense business relations with China. She further explained that they felt comfortable dealing with a partner that had similar historical roots and had experienced the same “South-South” emerging markets issues as they did, rather than the traditional North American and European investors, whose approach to business was not well-adapted to Indonesia’s customs and was often more arrogant.

During the field trip, the team encountered many NGO representatives at the different meetings. Right at that start of the visit it stopped by WHALI’s regional office in Surabaya and met with the local representatives. In general, the impression was that the NGOs were not very well-equipped in the field and had a very minor presence in the TF discussions. The level of involvement with local firms and government agencies seemed more junior and not very effective. It is clear that the NGO representatives who the team met in Jakarta were much better prepared and informed. The team felt that this weaker NGO presence in the field was a handicap for progress on all the governance implementation and community dialogue needs. This point was brought up and reinforced in many of the discussions with the regents and PetroChina management. A stronger and better equipped NGO presence would surely improve the dialogue with the community.

5. Visit to East Kalimantan

5.1 Background

East Kalimantan is one of the largest provinces of Indonesia with a geographic area of about 218,000 km². Located in Indonesia’s largest island of Kalimantan, the province has 10 districts and four major cities with a total population of only 3.1 million people (2009), but its population grows on average 2.3% per annum. Samarinda is the capital city in the inland of East Kalimantan, and Balikpapan is the industrial and port city in the coastal area of the province.

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The dominant sectors in East Kalimantan's economy are mining, forestry, and manufacturing. Coal, liquefied natural gas, palm oil, timber, and other forest products are its major traded commodities. The province's gross domestic regional product (GDRP) was Rp 281.5 trillion in 2009 with 2.32% economic growth in the same year. Appendix E illustrates the map and economic indicators of this province.

East Kalimantan is the largest producer of coal and among the top five producers of palm oil in Indonesia. While it still has large forested areas, the province faces a continuous problem of illegal logging, illegal timber trading, land conversion, forest reduction, and intense environmental degradation. The massive scale of coal mining, palm oil plantation, and logging activities have also damaged public roads and created various economic and social problems for the local communities. High demand for coal and palm oil from the international markets provide strong incentives for illegal trade and illegal businesses, often times involving the very authorities responsible for law enforcement.

However, in 2009 the newly elected Governor Awang Farouk Ishak declared East Kalimantan as a "green province" and launched a new policy framework for sustainable development and reduction of greenhouse gas emissions in the province, called the "Kaltim Green Program." These initiatives acknowledge the urgency of actions needed to combat illegal logging and to reduce emissions from deforestation and forest degradation through five activities: (1) carry out low-carbon emission development; (2) integrate sustainable development targets for the region; (3) analyze and reform current development policies accordingly; (4) reduce the ecological and climate-change-related threats such as landslides, flooding, droughts, forest fires, and the degradation of terrestrial and water ecosystems in East Kalimantan; and (5) support national mitigation efforts in cooperation with local universities, civil society, and international institutions.

The Task Force team that visited East Kalimantan province wanted to have the opportunity to meet and discuss the above policy issues and their implementation with provincial government officials across related sectors, local university experts, and local NGOs. The team also wanted to see how extended was China's involvement in trading and investment activities there, as well as the socio-economic and environmental impacts that may arise from those activities. The team also intended to probe the possibility of sustainable development relationship opportunities. The main subjects explored were all related to coal, timber/forestry products, and palm oil industries.

5.2 Team and Activities

The TF team that visited East Kalimantan was composed of:

- Mr. Ismid Hadad, TF International Team Member
- Dr. Arthur Hanson, International Chief Advisor, CCICED
- Ms. Haiying Li, Project Manager, CCICED
- Mr. Laihui Xie, TF Chinese Researcher

It visited East Kalimantan for three days, from February 22 to 24. Activities in the first day included intensive discussions with leaders of five local NGOs, and the next morning with the local academics and university experts. The afternoon of the second

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day was devoted to six hours of intensive meetings and open dialogue at the Governor's office with practically all key provincial government officials in the mining, forestry, plantation, agriculture, oil and gas energy, trade, manufacturing industry, investment, and environment officers in attendance. The provincial government of East Kalimantan also made a presentation about the province's development plan, Kaltim's Green Program, and the investment plan especially in the two newly built integrated industrial and port areas of East Kalimantan. Both university experts and all related government officials have provided the team with written documents and statistical data on trade and investment, as well as information on overall development and environmental conditions in the province.

On the last day, the team enjoyed a full-day field trip visiting two coal mining sites in the city of Samarinda, and in the afternoon also went to see degraded (due to mining) and rehabilitated forest sites at the Bukit Soeharto protected areas. In the two different coal mining locations in Samarinda, the mining operators did not apply good mining practices as required by the government. Both mining operators were not only conducting open pit mining, which contaminates the local environment, but also transported their raw coal by using heavy trucks, which again damaged the public roads, and generated many complaints by local communities.

The trip to Bukit Suharto also involved two different site visits. One was a forest research area with many varieties of plant species managed by the University of Mulawarman, and the other a large degraded former forest land area, which was used for illegal coal mining and then for illegal plantations. Although these illegal activities had been stopped by the government, there were still some excavators dredging and trucks transporting the coal in that protected area of Bukit Suharto. Appendix B-3 presents the detailed agenda, while Appendix C-3 shows the list of participants in the meeting series held by the Task Force in the East Kalimantan trip.





Open pit surface coal mining in two separate locations in East Kalimantan.

5.3 Findings

East-Kalimantan's development pathways

The East Kalimantan province of Indonesia has achieved a record of development progress largely driven by the exploitation of the province's abundant natural resources. The pumping, cutting, mining, and processing of East Kalimantan's oil, gas, timber, coal, and other mineral deposits accounted for more than two-thirds of the regional GDP.

Economic development remains an imperative for East Kalimantan, because almost 10% of the 3.1 million people living in the rich province are still below the poverty line. Decentralization has increased the accountability and pressure on the district and provincial governments to pursue economic growth and increase local revenues often at the expense of making wider gaps between the richer modern sectors and the poor rural communities.

Oil and gas have been mainstays of East Kalimantan's economy since the 1980s, but as its production rates decline in the province's mature fields, its contribution to GDP also declines from 80% to currently 50% of the economy, and will continue to fall in the future. Fortunately, the province's economic growth has been supplemented by the rapid development of new economic sectors: forest woods/timber, coal mining, palm oil, and services.

Under a business-as-usual growth scenario, East Kalimantan's economy will grow moderately at 3% per annum, as new growth from forestry, coal mining, and palm oil will be partially offset by the continued decline of the oil and gas sector. But this resource-intensive exploration development strategy has led to sizeable CO₂ emissions, with 250 MtCO₂ expected to be emitted in 2020 alone, making East Kalimantan the third largest emitter among Indonesia's provinces.



Palm oil tree plantation in East Kalimantan.

Since 2009 East Kalimantan is changing its development strategy. The government is committed to green growth, moving onto a climate-friendly development policy. The provincial growth strategy tries to reconcile growth with climate change mitigation by focusing on: 1) a “greening program” involving the entire community of the province with the obligation to plant five trees per person reaching the target of 17.5 million trees planted in a year; 2) reducing the carbon footprint of its current economic sectors; 3) applying REDD Plus as a new policy framework that can help reduce emissions and increase GDP; 4) moving to higher value-added activities such as processing wood industries (instead of just cutting raw logs), and developing new low-carbon downstream industries such as pulp and paper mills and crude palm oil (CPO) refineries; and 5) making adaptation efforts to prepare the economic infrastructure to be more resilient to climate change.

Achieving a different, low-carbon, climate-friendly development pathway will require substantial changes to East Kalimantan’s economic structure, land-use planning, and government policies. The above low-carbon development strategy is to ensure that the people do not achieve reduced emissions at the cost of reduced growth. Therefore additional financing and capital will be needed to underwrite the considerable investments associated with the transition to the green growth pathway. Some of that financing will likely be provided by domestic government, some by the private sector, and others are expected from international donor agencies and development partners, including China.

The new development pathway of East Kalimantan faces many challenges, but it also provides a new platform and generates several new opportunities for its stakeholders and development partners such as China. The aim is to develop a more productive partnership with the resource-rich province, which expects China to move from a short-term trade relationship to a strategic long-term investment and development cooperation relationship, which will support sustainable development in both China and Indonesia.

Socio-economic and Environmental Impacts of Chinese Trade and Investment:

- Low-priced technology and a variety of consumer products from China are easy to find in East Kalimantan. They threaten the continued existence of locally produced goods, such as textiles, food, and electronics. Technology from China increasingly appears to dominate various aspects of the business networks of the region.
- Coal trade with China is deemed to be a threat. China is the number-one export destination of coal from Indonesia, and 92% of Indonesia's coal exports come from Kalimantan. In the Kutai Kartanegara regency there are 30 large open pit mining holes, which are impossible to close, generated by the activities of huge but irresponsible mining companies. In addition, coal mining also threatens agricultural land; at least 12,000 hectares of agricultural land has been converted into mining until 2010.
- There are too many coal mining operators in East Kalimantan. Some of them are owned and operated by large, duly established national or multinational companies. But the majority are run by small to medium-sized coal mining operators, many of whom are not licensed and do not even have a corporate identity. They are the ones that the government cannot control, who are producing low-grade coal and damaging the environment. While registered, most medium-size mining operators do have duly awarded operating licenses, but are unable to access sufficient funding to buy and use modern equipment, apply good mining practices or, more importantly, restore abandoned sites when the coal is exhausted. For the Chinese coal buyer or importer, instead of relying on the unpredictable supply of untreated raw coal shipments, it would be in their advantage to provide finance or invest in those smaller local coal operating companies to secure their long-term and stable supply of refined and selected coal from East Kalimantan.
- The crude palm oil (CPO) industry has a significant impact on the environment in East Kalimantan, primarily due to forest conversion for the establishment of palm oil plantations and the damage caused to the road infrastructure carrying the CPO from inland centres to the seaports. Some plantation operators even violated the High Conservation Value Forest (HCVF) areas as they expand their palm oil stands indiscriminately. China is expected to avoid purchasing CPO produced by companies violating environmental regulations and damaging the environment.
- China is expected to help introduce and implement environmentally friendly technology and operating standards. Chinese investors should not take advantage of the relatively weaker law enforcement capacity of local governments but should instead work proactively toward helping to safeguard the environment.
- Chinese trade and investment activities in East Kalimantan should not violate the principles of sustainable development. An ideal approach for Chinese investment in East Kalimantan should include serious research and development (R&D) activity and technology transfers, which should be aimed at a more strategic, longer-term, and sustainable development relationship with local partners.

Opportunities Offered by the Local Host Government:

- East Kalimantan plantations produced several commodities: rubber, cocoa, pepper, coconut, cassava, and palm oil. Among these commodities, palm oil has the highest demand and leads, therefore, in export share. There are about 3.345 million hectares of land provided by the local government for 196 palm oil plantation companies. Of these, 35 firms are the result of FDI, covering 385,178 hectares of plantation area. The East Kalimantan government encouraged investors to invest in CPO factories. There are about 30 CPO factory units currently in the program, 20 already operating and another 10 still under construction. These palm oil products are mainly exported to or through Singapore and Malaysia.
- For the development of this palm oil industry, the provincial government of East Kalimantan has adopted a new sustainable development policy to be followed by new investors. Palm oil plantations cannot be developed on primary forest and peat-lands, and should not open the watershed and not penetrate into High Conservation Value Forest (HCVF). They are not allowed to lead to new land clearing by the burning of trees. Management should use certified seed, follow the system of “Good Agriculture Product,” and the processing activities should be in line with “Good Manufacturing Product Standards.” In addition, palm oil companies are expected to apply internationally accepted standards of RSPO (Roundtable for Sustainable Palm Oil) or use Indonesian Sustainable Palm Oil (ISPO) standards.
- The government of East Kalimantan also has a master plan to develop two large infrastructure projects, one of them is the “Maloy Special Economic Zone” at East Kutai Regency, which is built as an integrated industrial area supported by international river/seaport, expected to be the main port for palm oil export from East Kalimantan. The other is the “Kariangau Industrial Area” at the coastal area of Balikpapan, built as the main basis of economic activities to support the non-oil and gas industrial area near the Balikpapan harbour. There is also a coal-generated power plant to be built to support development of the new industrial areas. China and other foreign investors have been invited to participate in the development of those infrastructure projects.
- China imports 50% of its total needs of cassava from overseas, including Indonesia. According to a study conducted by a Chinese research agency, East Kalimantan soil has been identified as a very suitable area to grow cassava. The local government has agreed to provide about 50 hectares of dry land for planting cassava, if Chinese potential investors are interested to invest in East Kalimantan.



TF members during East Kalimantan field trip.

6. Key Findings of the Field Trip

6.1 Questions Asked by the Task Force Team

During the interviews, the general themes and issues discussed were summarized by the TF Team into four main questions:

- Is China's trade and investment a challenge, an opportunity – or both?
- What are the impacts of China's trade and investment on Indonesia's environment and society?
- What kind of standards (environmental, developmental, governance) does Indonesia prefer: western standards, Chinese standards, Indonesian standards, or new jointly-developed standard?
- Who are the key actors that should be engaged for improved Chinese and Indonesian cooperation models?

6.2 Answers Given to the TF team:

6.2.1 China's Trade and Investment: Challenge, Opportunity, or Both?

The rapid growth of China's market, capital and technology will drive the development of the ASEAN region. However, in terms of trade and investment, China can expect both competition and cooperation. Competition is a natural condition. The real challenge is to develop cooperation. The main space for China and Indonesia to explore their cooperation opportunities will be found in global governance reform (cooperation at the G20 level), regionalization (ACFTA), and comprehensive economic and technology cooperation.

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The discussions revealed in general that Indonesia’s government officials, both at the central and regional levels, as well as local entrepreneurs, corporate executives, and academics saw that trade and investment development between China and Indonesia as an opportunity for both countries.

As for foreign trade, China is now carrying out the initiatives to stabilize exports, expand imports, and reduce its trade surplus. This will likely increase imports from Indonesia. In recent years, China’s import demand has become an important factor in Indonesia’s economic growth.

As for outward direct investment, up to the end of 2010, China’s official foreign exchange reserves amounted to USD 2.85 trillion, while foreign financial assets totalled nearly USD 4 trillion. China is carrying out a “going global” strategy to expand outward direct investment. This will be an opportunity for Indonesia’s agriculture, manufacturing, and service development, as well as for employment and increased tax revenues.

In terms of domestic development, from 2011, China is engaging on an expansion strategy for its domestic consumer demand strategy combined with an accelerated urbanization strategy and a low-carbon development strategy. Taken together these measures can boost comprehensive cooperation between China and Indonesia, including urban-rural cooperation, regional cooperation, and industry cooperation. They should increase the opportunities for green development, inclusive development, balanced development, and comprehensive economic and technology cooperation.

Notwithstanding the above, the TF teams encountered some dissenting views, mostly from the NGO community, which argued that China’s trade and investment is a threat for Indonesia’s environment, resources, energy, and community development. They used the following arguments:

- As a fast-emerging major economy, China will bring new challenges and threats to the domestic and offshore environment of Indonesia’s development.
- China’s foreign trade can have adverse influences through uneven product quality standards, specific commodity or product demand exhaustion, and uncontrolled local production/exploration and environmental deterioration.
- China’s trade and investment may cause cultural and developmental shocks to the traditional agriculture methods of the host society, community, and region.
- China’s mining and extractive activities can cause threats to local environments and resources. As examples, they cited zinc and manganese mining in native permanent protection zones. Even if there were an agreement at some governmental level allowing mining in such zones, the local communities were not consulted and have therefore opposed such activities.

Both China and Indonesia are taking on responsibilities to create cleaner, low-carbon development processes, hence environmental concerns are expected to be embedded in the development policies and measures of each country. Both countries have to deal with the problems of land conversion and sustainable management of forestry, as well as the social and environmental impacts of extractive industries, especially coal, oil, and gas. Developing and applying more appropriate instruments and environmentally

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friendly technologies are required to face these challenges. Both countries share similar and common concerns and should take advantage of their respective strengths to address these common concerns together.

6.2.2 Impacts of China's Trade and Investment on Indonesia's Environment and Society

In terms of trade

Remarkable changes in the last 10 years have positioned China as a new engine for global growth. China has also become an important neighbour for Indonesia as it is now among the top 10 trading partners of Indonesia. China's imports from Indonesia are dominated by natural resources, while Indonesia imports electronic components, manufactured goods, and machinery from China.

The two countries are engaged in numerous bilateral and multilateral agreements such as the ASEAN-China Free Trade Agreement (ACFTA). Indonesia and China have agreed to look for sectors negatively affected by ACFTA and to work together in addressing these issues together. The aim is to narrow the gap caused by asymmetrical trading conditions. For example, low-price toys and textiles from China reach Indonesia easily and lead to business shut-downs and related unemployment in Indonesia. On the other hand, Indonesian companies have limited access to China due to import quotas there, which suggests an unfair trading relationship.

In terms of investment

The majority of current Chinese investment in Indonesia are based on equity participation with reduced management and operational functions. In terms of relative size, investment volumes are heavily overshadowed by trade volumes.

From the receiving end, in general, Indonesia has appeared to have a preference for trade instead of fully sustainable forms of investment. It has been suggested that Chinese businesses are often more interested in importing raw materials and resources for their domestic processing facilities, thereby leaving the responsibility for the upstream impacts of such business entirely for the host country. In the case of Indonesia the capacity to adequately handle environmental and societal impacts is still limited. As China continues to increase its appetite for natural resources, its trading partners expect to see it taking more responsibilities in addressing such matters.

For example, Indonesia is a major producer and exporter of palm oil and coal, but faces growing challenges to control the negative impact of such activities on preserving native forest resources and limiting the site degradation related to these activities. For industries in southeast China, Indonesian coal has been among the most competitive resources as compared to domestic supplies. In order to become more sustainable and environmentally acceptable, Indonesian palm oil production and coal mining demand significant changes in the way the business is managed, institutional capacity improvements, new technology, and major new investments. Addressing such

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sustainability concerns in trade would positively affect both China and Indonesia. Both FDI and ODI must now include CSR and environmental considerations in order to benefit the two countries and improve relations between them.

During the meetings with the Vice-Minister of Indonesia's Department of the Environment, it became apparent that there were many opportunities for China and Indonesia to work on win-win joint investment solutions, which would ensure good returns while preserving the environment. When it comes to the production of energy, whether in the traditional fossil fuels sector or the newer biomass and other renewable energies, the two countries could adopt new commonly developed technologies, explore new ideas jointly, and create new co-management and new sustainable protection systems that would boost joint-development opportunities. Points that came up in these discussions include:

- China's investment in Indonesia should provide not only good export returns but produce local durable community benefits, increase local job opportunities, both for skilled and unskilled labour, boost tax revenues, encourage local sustainable development, and help conserve the environment as well as local and traditional cultural values.
- Compared with investment programs of the World Bank and the ADB in Indonesia, the environmental, natural protection, and social responsibility standards of China's investment appear to be lower. That can be problematic for the environment as programs that are difficult to be implemented according to ADB environmental and social standards have been successfully taken over by Chinese enterprises. This is the case for China's numerous and often controversial hydro-dam construction projects throughout Southeast Asia.
- China's enterprises that invest in Indonesia should stimulate and support some of the social and public interest programs that are demanded by the local communities impacted by Chinese ODI. These include, for instance, the improvement or construction of new and better hospital facilities, better schools, and enhanced involvement with local community affairs. Such demands were consistent in all the TF visits.
- There should be a concerted effort to promote more interaction between the people and/or local stakeholder group representatives to take part in the environment assessment of China's investment. That will help reduce conflicts between local government and the impacted communities. This was evident in the oil and gas sector, where PetroChina struggles to accommodate its community impacts as it expands its oil exploration activities.
- China's trade and investment development in Indonesia sometimes places undue competitive pressure on local enterprises and farmers.
- China's enterprises should adopt pre-emptive strategies to manage environmental concerns rather than the traditional Indonesian post-accident remedies approach.
- Trade and investment development are imbalanced between China and Indonesia. For example, China is already the most important trade partner of Indonesia, but the scale of China's ODI in Indonesia is still small. Indeed, China is currently the 15th largest investment partner of Indonesia. There are still many obstacles to growth of ODI in Indonesia. Things like work permits are almost impossible to obtain and capacity building of local unskilled labour still leave a lot to be desired.

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- In the TF meetings it became clear that China's large enterprises, mostly SOEs, attached more importance to complying with and implementing environmental and social standards, than the smaller and privately held Chinese enterprises.

6.2.3 Choice of Standards

What kind of standards (environmental, developmental, governance) does Indonesia prefer: western standards, Chinese standards, Indonesian standards or new jointly-developed standards? Overall, the problem of standards is a governance issue that has both national and international components. For example, in the case of palm oil, a prolonged process to develop a voluntary international standard has been underway since 2004 via the Roundtable for Sustainable Palm Oil (RSPO). This standard can be used in certification processes by producers and investors, traders, and manufacturers and food companies using palm oil. Now Indonesia is in the process of introducing a mandatory standard for palm oil for its producers. And China will need to make some decisions about whether to accept a range of standards, or whether to develop its own, based on Chinese needs.

Although China trade and investment arrangements with developed countries often comply with standards such as the ICMM, to which it has adhered, some observations indicate this is not the case in countries with weak governance and high poverty such as Indonesia. In Indonesia, Chinese interests have often been perceived to participate in providing financial supports for illegal trade of coal, minerals, and wood; exporting low-quality products; and relocating unsustainable businesses. Nevertheless, both China and Indonesia are under pressure to improve the management of coal utilization and land-use respectively. China started to improve environmental performance of its industries, while Indonesia is initiating its own Indonesia Sustainable Palm Oil (ISPO) standard.

During the TF meetings, there were repeated comments made about the unsustainable practices employed in China's lumber, palm oil, mining, food and illicit fishing trade (China's mainland and Hong Kong SAR are the biggest buyers). They suggest that China should make a stronger effort to enforce the laws and promote the adoption of international standards and authentication systems, such as ICMM, FSC, MSC, Equator Principles, and ISO. That is particularly important in the case of trade with developing countries where environment and social standards are somewhat lower. China should at least abide by its own standards.

At this stage, China's trade and investment activities in Indonesia use technology, environment, and social responsibility standards that are commonly available in the developing phase of its own economy. Generally speaking, EU and U.S. enterprises seem to adopt stricter standards. For example, in the case of China and U.S. oil and gas business in Indonesia, China's enterprises appear to be somewhat behind their American counterparts in some of the crucial pollution emissions abatement, dust reduction, noise elimination equipment, and technology standards, but China's investments are generally more competitive cost-wise. Conversely, in the dam construction area, China is picking up projects that have been turned down by the World Bank and the ADB, making it a controversial albeit competitive player with greater responsibilities overall.

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There were many comments made about the quality of Chinese products. Some products and technology have high quality standard, others not. For example, China's solar energy program in Indonesia is unsuccessful, mostly because product quality is low. Unfortunately many Indonesian importers prefer the lower priced and lower quality products rather than the higher priced and better performing products. In any case, the complaints about poor after-sale services and low stocks or non-existence of spare parts were very common. China's enterprises should set up or organize after-sale office networks in Indonesia, and prepare themselves for continued technical assistance through local service networks providing complete local repairs and dependable stocks of spare parts.

As China moves towards low-carbon development it should strengthen cooperation with Indonesia, seek alignment of interests in order to complete the low-carbon economy transformation, and develop technology, equipment, management, and service systems that would be adapted to their mutual development phase.

6.2.4 Key Cooperation Actors

Who are the key actors that should be engaged for improved Chinese and Indonesian cooperation models? China and Indonesia need to identify and develop synergies that can help them work together towards aligning their environmental and sustainability needs. Both nations will face increasing responsibilities and challenges in terms of the efficient use of their natural resources and markets. Strong cooperation is needed at all levels in government, businesses, academia, and the general public. Enduring changes in perspectives require continuous efforts and focused programs in both countries.

As an example, border tariffs are a real threat to development and a drain on resources as they protect markets and generate inefficiencies. Yet they are a reality that is just around the corner. Both countries need to address this issue, but currently there are no institutions clearly assigned to work on this subject. A form of South-South dialogue with a flexible format may be required to canvass these issues. Such a dialogue should not be limited to government participants only. It also must include businesses and a broader base of stakeholders. This dialogue is in line with China's recent efforts in the global climate change negotiation (e.g., in the Tianjin Conference in 2010), as well as the Indonesian initiatives to engage finance and trade ministers during global climate change negotiations at the Fifteenth Conference of Parties (COP15) in 2007.

China should establish multiple channels to get overseas feedback information about China's outward investment and trade. Institutions including business offices and the economic departments of China's overseas embassies, China Council for the Promotion of International Trade, and so on, should take the responsibility for collecting overseas information and criticism in order to increase awareness of its actions and react appropriately and in a timely manner.

China should establish institutional facilities responsible for harmonizing outward investment and evaluating environmental conditions, host country social characteristics, and economic and poverty-reduction influence opportunities for local societies affected by Chinese ODI and trade, so that it can better participate in the life of these societies

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and a fully integrated member of the community. For this to be effective, it will have to consider promoting and establishing international capacity building programs and international training, discussion venues, information and statistics exchange programs, social and cooperative aid facilities, as well as cultural exchange events. All elements in society must be stimulated to participate in such an effort as ultimately it ends up reflecting the image of Chinese society as a whole.

7. China–Indonesia Trade and Investment: Opportunities and Challenges

China and Indonesia have many things in common – concerns, needs, potential, and development goals – therefore together they could offer a leading complementary role in the development of more environmental friendly and low-carbon economic growth for the ASEAN region. However, while economic and environmental cooperation between the two biggest emerging economies of East and Southeast Asia has lots of potential and presents many opportunities, it also faces a number of significant constraints and challenges that need to be addressed and resolved in the near future.

7.1 Key Opportunities Identified by the TF Team

7.1.1 Forestry and REDD Partnership

Since more than 60% of the country’s total GHG emissions come from land-use changes in forestry and peat-land, Indonesia has placed a high priority in its policy to reduce emissions from deforestation and forest degradation (REDD) in the forestry, peat, and agricultural/plantation sectors. This will require large investments and massive low-cost abatement technologies in implementing sustainable forest management, biodiversity conservation, water-resources management, and re-wetting of degraded peat-land, as well as reforestation.

This could be a golden opportunity for China to play a more positive role, not only to counter the perception in some views of China as a current driving market force behind illegal logging and forest destruction in Indonesia, but especially to use China’s advanced financial and technological resources to launch a new platform for a mutually beneficial cooperation with Indonesia in the promising area of sustainable forest management, rehabilitation of degraded peat-lands, reforestation programs, and implementation of REDD Plus Partnership.

China’s financial institutions such as its Development Bank, Export-Import Bank, and China Investment Corporation could step forward to provide specific development aid as well as South-South economic cooperation and technology development in addressing Indonesia’s priorities of poverty alleviation and low-carbon economic growth in the forestry and agricultural sectors.

If China and Indonesia could be successful in joint efforts to mitigate GHG emissions from the large forestry sector in Indonesia, this would make a very significant

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contribution not only for increasing economic growth and people's welfare in both countries, but also help to conserve the world's biological wealth and to reduce global GHG emissions.

7.1.2 Palm Oil

Indonesia currently is ranked second as producer and supplier of palm oil in the world market and China is also ranked as the second largest importer of Chinese palm oil. However, increasing demand for and the lucrative nature of the palm oil business in the international market, combined with weak public governance at the domestic level, have provided strong incentives for the practice of illegal logging, deforestation, and forest land conversion into palm oil plantations in Indonesia. This type of palm oil operation has caused massive ecological damage and adverse social-economic impacts to various parts of the country and to local communities. At the same time, there is a perception that China is more interested in importing raw natural resources for its domestic processing facilities, while leaving the responsibility of the upstream impacts of this business, such as illegal logging and degraded forests, entirely in the hands of the host country.

However, international consumers and the world markets are now preferring and demanding palm oil products that are not produced from natural forest area and/or from unsustainable forest and land management. Environmental and social awareness of international communities is increasing, and they want to buy products which are proven and certified as environmentally safe and friendly products. The Indonesian government is fully aware of this issue and currently is making several policies and progressive steps towards the development of internationally recognized standards and criteria for sustainable production and trade of palm oil in the country and its relations with international partners. And, as China emerges as a new economic giant, its trading partners expect to see that China accepts more responsibility, such as the introduction of certified sustainable palm oil standards as an import requirement.

Expanded cooperation on palm oil could be a priority area for China-Indonesia economic cooperation in the near future, since the two countries have mutual interests in the growth of palm oil businesses. China could bring environmentally friendly technologies and operating standards. Sustainability should be a key priority for both countries. They should establish a common platform for the development of sustainable palm-oil plantations, production and trade in the future. It should start by having an agreement on the use of mutually agreed standard and criteria of sustainable palm oil production and trade, institutional capacity improvements, and based on that China could embark upon increasing investments in various aspects of palm-oil business ventures in Indonesia. There are opportunities within the processing business and export infrastructure. For example, the use of Chinese technology to convert waste biomass to electrical power locally rather than shipping the waste as far away as Europe to be burned in power generators abroad. And in East Kalimantan, there is a search for capital to build advanced port and road infrastructure along with processing facilities that will provide value added products rather than simply exporting raw palm oil to countries such as China and India.

7.1.3 Renewable and Clean Energy

Indonesia's commitment to reduce its GHG emissions by 26% from its own resources and up to 41% with international support by 2020 is such a huge challenge that it cannot be met even by creating an effective system for REDD Plus, but will have to be combined with efforts to rapidly reduce growing emissions in the energy, transportation, industrial, and urban sectors. To fulfill the above challenges, the government of Indonesia has designed a national action plan to reduce GHG emissions from related development sectors, of which the energy sector will contribute a reduction of 5.30% of the national target in 2020, or approximately 30 million tonnes of CO₂ equivalent. In addition to meeting GHG emissions reduction targets, the energy sector has an equally important function to secure the domestic energy supply (energy security). With an average growth of 7% per year and a high dependency to volatile fossil fuel energy supplies, particularly oil, the Indonesian energy sector must shift its energy management paradigm, from the existing supply side to demand-side management. For that purpose, the policy priority is to focus on energy efficiency in order to reduce growth of energy demand and to meet that demand with clean energy technology and more sustainable energy sources, such as renewable energy.

Therefore, Indonesia will have to ramp up its efforts in developing abundant renewable energy resources available in various areas of the country including geothermal, small hydro power, biomass and biogas (bio-energy), wind, and solar energy. These so far remain untapped and under-developed due to the high capital cost and lack of appropriate technologies to be applied in a developing country such as Indonesia. Recently, the Indonesian Ministry of Energy and Mineral Resources launched an integrated clean energy initiative called "Reducing Emission from Fossil Fuel Burning (REFF-Burn)." The initiative is to answer the twin challenges of energy security and environmental sustainability through clean energy development programs that could supply more energy with lower carbon emissions ("more energy, less carbon").

Again, this is another big area of opportunity for China to export its green development model to a large developing country such as Indonesia by fostering a more integrated program of bilateral economic and technology cooperation in the development and application of renewable energy resources as well as in clean energy technologies.

In the area of developing renewable energy resources, China could focus on development cooperation in micro and small hydro electric power generation and in bio-energy such as biomass, biogas, and waste-to-energy sources, using the abundance of such resources in the rural areas, and could directly contribute to the welfare of low-income rural communities in Indonesia, as well as help to reduce emissions from methane gases in the agricultural sector.

Of course for a larger scale of investment program, China could embark on the development of Indonesia's rich geothermal resources which are available practically in all major islands of Indonesia, except Kalimantan. Since the location of those geothermal resources are often in the forest or protected areas, its exploration and operation technologies should use non-destructive impacts to the local environment.

In the area of cleaner fossil fuel energy technologies, China and Indonesia, two countries

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with plentiful coal resources, should work closely together in the development and utilization of clean coal technologies. In addition, China could also help Indonesia with flared gas reduction technology and could cooperate on the development of carbon capture and storage (CCS) technology.

7.1.4 Infrastructure Development

Improving the conditions and the enhanced development of peat-land, forestry, and plantation sectors, as well as developing renewable energy resources in Indonesia, would require and will create huge demand for capital investment in infrastructure, such as roads and bridges, railways, sea and river transports, seaports, etc., which would be beneficial in strengthening trade and economic linkages between the two countries and enhancing local economic and social development in the regions. In this case, China could consider providing technical assistance and foreign aid which would then be followed by investments in the related infrastructure needs. Since infrastructure financing is still a major constraint for Indonesia's development, China's public banks such as China Development Bank and China Export-Import Bank could also take a lead role in financing large-scale infrastructure investment projects. Of course these new infrastructure investment schemes should take environment and social safeguard standards very seriously, ensuring local participation and sustainable development in the long run.

There are many other opportunities for closer economic cooperation between Indonesia and China that could produce environmental benefits. However, if only one or two or even a combination of the four opportunities mentioned above could be given priority by both countries as a focus for their common future of sustainable development, there would be major contributions not only for meeting their own objectives but also for demonstrating to others the value of these new forms of partnerships for the good of people and the planet.

7.2 Current Constraints and Key Challenges

7.2.1 Perception and Image of China: Cheap but Low Quality Products

During the last six years Indonesian consumer markets have been increasingly flooded by a massive inflow of consumer goods and products made in China. They have become attractive and very popular, primarily because the products are cheap and can be easily found everywhere in the country. However, many electronics, motorcycles, machinery, and technical components made in China are known to have low prices with questionable quality. For small items, the implication is a very short product lifetime. For large projects, especially those funded by foreign loans, a compromised product quality benefits China's businesses at the expense of the Indonesian economy. This is a serious issue in relation with procurement regulations for projects funded by the budget of the government of Indonesia, which applies a least-cost principle but without performance standards.

7.2.2 Creating Unfair Relations with Local Industries

Low prices of Chinese-made products create tough, sometimes unfair competition for Indonesian-made products. This has even caused some local industries to be put out of business. This problem is exacerbated by the application of ACFTA since January 2010. Dialogue between the two governments are underway to address this issue, however, the likely compromise seems to be only a postponement of the problem or would primarily benefit large industries, leaving the Indonesian small and medium enterprise complaints unresolved. While low-price toys, textiles, and motorbikes from China reach the Indonesian market easily, the Indonesian companies have very limited access to the Chinese market due to import quotas. These asymmetrical conditions at various economic sectors in both countries could create much bigger economic and political problems if left unaddressed.

7.2.3 Trading Partner for Unprocessed Natural Resources

China now is among the top 15 trade partners of Indonesia, while current and future trend lines suggest that it will soon become at least one of the top five trading partners. However, while Indonesia imports from China electronic components and machinery, Chinese imports from Indonesia are dominated by unprocessed natural resources, such as coal, timber, palm oil, etc.

The strong demand from China and some other countries for natural resources such as coal and timber, leads to rampant illegal activities in the forestry business as well as negative environmental and social impacts. While the problems in Kalimantan are not generally caused directly by Chinese company operations, however, China is recorded as the leading export destination of coal from Indonesia, and 92% of Indonesia's coal exports come from Kalimantan. And it is these coal mining operations that have contributed so much to forest degradation and threaten agricultural lands in Kalimantan, Sumatra, Papua, and other islands in Indonesia. So even though the driving force comes from China's high demand for natural resources, China's role in the coal and palm oil business in Indonesia is mainly as a trader and not as investor or contractor. Thus they could easily escape from the responsibility of reclamation and reforestation of the damaged former coal mine fields. The same operational mode also applies to palm oil, where many forests were converted into plantations. There is only a small number of mainland-Chinese-owned plantations. China's purchases of crude palm oil from Indonesia are often made through local, Singapore, or Malaysian intermediaries.

7.2.4 Limited Interest in Investment

The above pattern and the practices of Chinese economic operations in/with Indonesia indicate that Chinese businesses still prefer short-term economic gains rather than long-term investment and long-lasting economic and social benefits.

7.2.5 Governance Issues

While emerging country governments are faced with many urgent demands from their populations, they cannot ignore social and environmental governance issues as their

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absence only worsens the long-term sustainable growth prospects of their economies. Health, education, and poverty alleviation are major issues for emerging countries. To serve this purpose, trade and investment among countries, including China and Indonesia, need to ensure sustainable benefits for the people and their environmental conditions. Unfortunately, these governance requirements are still absent in many cases.

8. Conclusions

8.1 Cooperation at All Levels

There are opportunities for China to strengthen its functioning economic links with Indonesia, as well as in developing joint efforts to overcome global economic and environmental challenges, and for both countries to enhance how they carry out their respective responsibilities. However, currently there are several trade barriers and investment constraints that need to be addressed seriously and systematically by both countries. For that, more intensive dialogue and strong cooperation are needed at all levels in government, industry, academia, and the general public. Changing perspectives requires a common platform, continuous efforts, and focused programs and targets in both countries.

8.2 Start an Immediate Dialogue on Border Tariffs

Many challenges involving border tariffs need to be addressed, but no institutions are currently working on this area. A form of South-South dialogue with a flexible format may be required to canvass these issues. Such dialogue should not be limited to government participants only. It must also include businesses and wider stakeholders. This dialogue is in line with China's new proactive approach in the global climate change negotiation, as well as the Indonesian initiatives to engage finance and trade ministers during global climate change negotiations at the Fifteenth Conference of Parties (COP15) in 2007.

8.3 Sustainability Standards

Developed countries have their own rules and standards for products and environmental quality. Developing countries find it difficult to catch up with the sustainable development standards. Both China and Indonesia are under pressure to improve the management of coal utilization, forests, and land-use respectively. As a response, China started to improve environmental performance of its industries, while Indonesia initiated its own Indonesia Sustainable Palm Oil (ISPO) standard. In the near future, both countries should initiate bilateral arrangement to develop their mutually agreed sustainability standards for palm oil production and trade first, to be followed by other products and other sectoral program agreements.

8.4 Beyond Trade and Investment

Low-carbon development strategies that have been adopted by both China and Indonesia provide a new momentum and wider opportunities for both countries in having closer

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development cooperation beyond trade and investment. Indonesia's commitment and current priority to push economic growth, reduce poverty, and reduce GHG emissions in the peat-land, forestry, and plantation sectors – combined with efforts to increase energy efficiency and development of renewable energy resources – should be considered by China as a new opportunity to reform its development and international economic cooperation policies to address such opportunities offered by Indonesia by adopting South-South cooperation pursuing a common goal of low-carbon development. Such development opportunities in the forestry, palm-oil and renewable energy could improve China's economic and social capital by providing technical assistance, foreign aid, and development cooperation with Indonesia. In addition, China's Development Bank and EXIM Bank could also play a more active role in development project financing as well as long-term capital investment in infrastructure and large-scale development operations in Indonesia.

9. Recommendations

- Explore the venues and opportunities for **more and better-quality communications**: between national level governments, local governments, NGOs, companies (learning, to hear complaints), communities (e.g., with schools), bilingual, trilingual instructions for exported equipment.
- **Engage and focus in trust building**: monitor equipment quality, after-sale service, spare parts stocks, product warranties, and general compliance of working contracts.
- Use the new proposed **communication platforms** to openly discuss and explore policy reform, law enforcement measures, and trade and investment regulatory policies.
- Openly face and address the issues related to business **corruption** and the informal economy on all sides.
- Engage in proactive initiatives for **capacity building** to implement the new environmental and CSR policies. Focus on domestic, offshore, local, and international capacity building.
- Launch a proactive and permanent initiative to **address the external perception of China's actions**. This will involve a constant and committed re-education process involving all ministries and official institutions of the government, embassies, customs, tourism and commercial services industries, academic and multilateral agencies, as well as cultural and institutional promotion bodies.
- **Promote and help implement a positive agenda for a low-carbon economy instead of imposing punitive and growth-inhibiting carbon taxes or border tariffs**.
- **Promote, engage, and stimulate product and process certification measures** on agriculture products (palm oil), marine and timber products, as well as mining resources.
- Encourage and facilitate Chinese **downstream investment that generates low-skilled labour job opportunities**.



Group picture of Indonesia field trip team: TF members, representatives from IIEE, and Indonesian industrial association and NGOs.

Appendix A: Internal Guidelines for Questions to be Addressed During the Indonesia Field Trip

The following questions provide a starting point for discussions with various people in Indonesia, including senior decision-makers and political and business leaders; NGOs; international organization representatives; local officials; and academics and other experts.

The questions are grouped, with the last group specifically oriented towards Chinese matters. Obviously not all questions would be asked to everyone. Nor is the list of questions exhaustive.

Overview questions on investment, trade and environment issues – to policy-makers, officials, others:

- What are the key elements required for satisfactory investment, trade and sustainable development relationships, as viewed from an Indonesian perspective?
- What are the main Indonesian policies at national and local levels intended to promote sustainable approaches to FDI and trade?
- How are these policies enforced and what incentives are in place to help?
- Does the Indonesia Investment Coordinating Board (BKPM) provide guidelines and monitoring of FDI to ensure adequate environment and development practices?
- Are there Indonesian bilateral or other arrangements with specific countries or groupings of countries (ASEAN, EU, etc.) that provide a basis for best environmental practices for trade and investment?
- Which sectors are the most important at the present time in terms of improving sustainability? Are there specific sustainability initiatives that can be helped by participation of international organizations, or by investment from other countries such as China?
- Have specific enterprises (Indonesian, joint ventures with Chinese enterprises or those of other countries, etc.) oriented to export markets developed model facilities or approaches that might be considered “best practices” or at least “better practices” on environment and development?
- Which international agreements (investment, trade, environment) have been the most successful in helping Indonesia address its sustainable development interests, and how have these been related to environmental improvements in the country’s trading and investment arrangements?
- In the coming years will Indonesia likely continue to press for improved environmental performance in the various sectors where FDI and trade are important issues? If so, which sectors and issues are likely to be the most significant?
- Do you fear border tariffs and protective market measures or do these represent further trading opportunities?

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Environmental/sustainability certification questions – to government officials, private enterprises, NGOs, and others:

- What are the main environmental or sustainability certification systems being implemented in Indonesia now, or planned for the near future (including both international and Indonesian systems)?
- What are the key drivers for certification, and over what time frame (present, three-to-five years, longer-term)?
- Where are the key markets for certified products? Is there a Chinese market for certified sustainable products in particular sectors or types of enterprises? If yes, does that represent an opportunity for market share expansion? If yes, can you get better prices on certified products? Is the margin better?

For enterprises and traders:

- If markets for certified sustainable products are identified, can you impose demands on your suppliers for producing such products or will they shift to the competition?
- To what extent can you transfer the increased costs of certified products to your clients?
- Have you identified any trends in demand for sustainable products? Are you interested in promoting expansion of these markets?
- Do you feel there are increased financial facilities? Lower interest rates and fiscal incentives? For financing trade in sustainable products? Would you increase your business in this if there were incentives?
- Are traceability and segregated logistics requirement for certified sustainable products a problem for shipping these goods?
- Do you feel vulnerable entering certified sustainable markets?

FDI and ODI questions – to investors and private enterprises, as well as officials:

- What do you feel are the most important measurement, monitoring, and certification systems for determining whether investments are sustainable/environmentally friendly?
- Have you identified demand for sustainable investments?
- Would you cancel an investment plan if you were challenged in its sustainability?
- Do you feel there is a strategic advantage in using sustainability as an investment argument to gain market share either within Indonesia or abroad?
- What types and levels of increased costs or benefits do you see in making certified sustainable investments?
- Do you obtain any fiscal or financial advantage from using sustainable investment approaches?
- Have you identified any implementation advantages from going sustainable or have you found it more challenging/costly?
- Do you feel that you can invest in sustainable approaches without further training of your human resources or do you need better prepared staff? Are you willing to train your staff to be able to adopt sustainable investment policies?
- Is it harder to identify investment partners if you want to go sustainable?

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- Do you believe sustainable investments, even at increased costs, are justifiable?
 - Do you follow your own sustainability principles or simply obey the law?
 - Do you feel it is right to be proactive in promoting sustainability or do you feel that is not your responsibility?
 - Are you interested in the social and environmental impact of your investment on the host location or do you feel that is none of your business?
 - If you feel it is your business, would you participate in local social and environmental initiatives to improve the impact?
 - Do you feel, as an investor, that you should participate in the environment and socio-economic aspects of your area of impact?
 - Is it important to build political alliances with local leaders for the advancement of FDI projects?
 - Do you believe that corporate governance of FDI enterprises should influence host country habits and businesses. Should FDI firms influence the improvement of corporate governance and transparency of local corporate governance rules? Or should they not interfere in the life of host country rules?

Issues related directly to Chinese investment and trade:

- What are the key ways in which Chinese investment and trade have shifted over the past half decade, and what are some of the trends important for environment and development in the future?
- Do you feel China is any different from other large investors in its investment approach? If so, what are the implications for environment and development?
- How is Chinese investment materially improving sustainable development and environmental situations in Indonesia at the present time? And how could these improvements become enhanced through wider adoption on the part of FDI?
- What are the key challenges of Chinese FDI to environment and development in Indonesia? How significant are these in relation to other challenges or impacts at the present time, or perhaps in the future?
- Are there significant opportunities for environment and development improvements within Indonesia as a consequence Chinese investment and trade?
- What do you suggest should change in China's FDI methods to address the challenges and opportunities?
- To what extent should these improvements be made in the context of Chinese investments, and to what extent should they be mediated via other international mechanisms such as those related to the IFC/World Bank, Equator Principles, etc.?
- Do you believe that a higher degree of transparency and better internal corporate governance of investment, joint ventures or other corporate arrangements would help to address challenges or to realize opportunities for environmental improvement? Or do you believe you need external controls including both market-based instruments, and government regulation to meet challenges?
- What are some of the main ways in which Chinese FDI is good for your nation? Besides GDP increase, what other benefits do you believe it brings?
- Do you feel you can influence the behaviour of Chinese FDI in your country? If yes, what are the main drivers and bodies (e.g., NGOs, government, general public and consumers, media, other groups?)

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- Do you feel China adopts reciprocal rules in trade and FDI?
 - Are there ways in which China might improve its overseas investment sustainability performance either via international rules, or Chinese laws?
 - Are there other high environmental performance approaches of investment that might be instructive for Chinese investors to learn from? Do you believe China's FDI is any more polluting than others? Do you feel Chinese investors are concerned by their potential environmental footprint or are they are oblivious to these issues?

Appendix B-1: Agenda – Visit to Jakarta East Kalimantan, East Java

AGENDA
CCICED TASK FORCE on INVESTMENT, TRADE and the ENVIRONMENT
VISIT to INDONESIA : Jakarta, East Kalimantan, East Java
20-27 February 2011

Day/Date	Time	Subject & Participants	Place
Saturday, 19 Feb		Check in at the Grand Mahakam Hotel, Jakarta All Task Force Indonesia Participants	Hotel Gran Mahakam, Jakarta Jakarta
Sunday, 20 Feb	18.30 - 21.30	Wellcoming Dinner Meeting by IIEE & CCICED: -Background information & overview of ITE problems , challenges & opportunities in Indonesia - Presentation & Discussion on Agenda Program visit in Indonesia IIEE : Subroto, John Karamoy & Ami Indriyanto and All Task Force participants	Hotel Gran Mahakam, Jakarta
Monday, 21 Feb	08.00 - 10.00	Breakfast Meeting : Session I : Task Force Consultation meeting with Senior Resource Persons : Dr. Umar Said (PERTAMINA/IIEE) and Prof. Rachmat Witoelar (National Climate Change Council)	Hotel Gran Mahakam, Jakarta
	10.00-12.00	Session II : Task Force Consultation meeting with NGO Leaders : WWF Indonesia, WALHI (National Environmental Forum), Institute for Essential Services Reform (IESR), and Revenue Watch Institute	Hotel Gran Mahakam, Jakarta
	14.00 - 16.00	Task Force Consultation Meeting with Mr. Imam H. Abu Ismoyo, Deputy Minister for Environmental Governance	Ministry of the Environment office in Jakarta
	17.30 -19.00	Task Force Consultation Meeting with Mr. Mahendra Siregar (Vice Minister of Trade) and Dr.Bayu Krisnamurthi (Vice	Hotel Salak, Bogor
	19.30	Dinner at the Bogor Botanical Garden Restaurant	Botanical Garden, Bogor
Tuesday, 22 Feb	TF 1	Task Force Field Trip to Surabaya and Tuban	East Java
	TF 2	Task Force Field Trip to Balikpapan and Samarinda	East Kalimantan
Wednesday, 23 Feb	TF 1	Task Force Field Trip to Tuban Regency	East Java
	TF 2	Task Force Field Trip to Samarinda area	East Kalimantan
Thursday, 24 Feb	TF 1	Task Force Field Trip to Bojonegoro regency & Surabaya	East Java
	TF 2	Task Force Field trip to Samarinda, Bukit Suharto, Balikpapan	East Kalimantan
Friday, 25 Feb	10.00-11.30	Task Force Consultation Meeting with Mr.Gita Wiryawan, Chairman of Investment Coordinating Board (BKPM)	BKPM Office, Jakarta
	13.00-17.30	Task Force Roundtable Discussion with Multistakeholders: Private Sector, Business Association, and NGOs	Hotel Gran Mahakam, Jakarta
Saturday, 26 Feb	08.00-10.30	CCICED Task Force & IIEE Debriefing : Structure & main content of Indonesia visit draft Report	Hotel Gran Mahakam, Jakarta
	11.30-15.00	Task Force visit to PT. Zug Industry Indonesia, Chinese Company producing biomass & coal fired turbine & boiler for power generator	Jl. Rawa Melati, Tegal Alur, West Jakarta
	16.00 - 17.00	Task Force & IIEE Concluding Session	Hotel Gran Mahakam, Jakarta
Sunday, 27 Feb		Task Force member departure from Jakarta	

Appendix B-2: Agenda – Visit to East Java

AGENDA
CCICED TASK FORCE ON INVESTMENT, TRADE & ENVIRONMENT
East Java Field Trip, February 22–24, 2011

Date	Tme	Subjects	Place
Thursday, 22 Feb	06.00	Departure from Jakarta to Surabaya by Garuda Indonesia	Soekarno Hatta Airport, Jakarta
	07.20	Arrival at Surabaya, East Java	Juanda Airport, Surabaya
	09.00 - 10.30	Discussion with WALHI (Environmental NGO Forum)	WALHI Office in Surabaya
	12.00	Lunch	
	13.30 - 16.30	Travel from Surabaya to Tuban by car	Surabaya - Tuban, East Java
	17.00	Check in at Hotel Mustika, Tuban	Hotel Mustika, Tuban
Wednesday 23 Feb	09.00 - 11.30	Task Force Field Trip to JOB PERTAMINA - PETRO-CHINA of East Java (PPEJ) operation	JOB PPEJ's office in - Tuban
	12.00	Lunch time	
	13.30 - 16.00	Task Force Discussion with the Regency Government of Tuban	Regency Government of Tuban Office
	16.30	Back to Hotel Mustika	Hotel Mustika, Tuban
Thursday, 24 Feb	06.30	Check out from Hotel Mustika to go to Bojonegoro	Tuban - Bojonegoro
	08.30 - 10.30	Task Force Dialogue with Local NGOs and other stakeholders	Griya Dharma Kusuma Hotel, Bojonegoro
	11.00 - 13.00	Task Force Meeting with the Government of Bojonegoro Regency Officials	Bojonegoro Regency Government Office
	13.00	Lunch	
	14.00 - 17.00	Leave Bojonegoro to Surabaya by car	Bojonegoro - Surabaya
	17.00 - 18.00	Task Force Discussion with the Mining and Energy Officers of the East Java Provincial Government	Mining and Energy Office of East Java Province in Surabaya
	20.00	Departure from Surabaya to Jakarta	Juanda Airport, Surabaya
	21.20	Arrival at Jakarta	Soekarno-Hatta Airport , Jakarta

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Appendix B-3: Agenda – Visit of East Kalimantan

AGENDA
CCICED TASK FORCE on INVESTMENT, TRADE & ENVIRONMENT
East Kalimantan Field Trip, 22-24 February 2011

Date	Tme	Subject	Place
Thursday, 22 Feb	05.45	Departure Jakarta to Balikpapan by Garuda Indonesia	Soekarno Hatta Airport &
	08.50	Arrival in Balikpapan, East Kalimantan	Sepinggan Airport, Balikpapan
	09.30 - 12.30	From Balikpapan to Samarinda by car	East Kalimantan Province
	13.00	Check in at Swissbell Hotel and Lunch	Swissbell Borneo Hotel, Samarinda
	14.30 - 17.00	Task Force Discussions with Local NGOs	Swissbell Borneo Hotel, Samarinda
Wednesday 23 Feb	09.00 - 11.30	Task Force Discussion with Experts from University of Mulawarman	Swissbell Borneo Hotel, Samarinda
	12.00	Lunch time	
	13.30 - 17.30	Task Force Discussions with Sectoral Agencies and Provincial Government of East Kalimantan and Municipal Authorities of Samarinda	Governor's Office in Samarinda
Thursday, 24 Feb	08.00- 11.30	Field Trip to Coal Mining operation near Samarinda	Samarinda area
	12.30	Lunch time and Check out from hotel	Swissbell Borneo Hotel
	13.30 - 17.00	Field trip to Palm Oil & Bukit Suharto - forestry protected area	Bukit Suharto area, East Kalimantan
	19.30	Departure from Balikpapan to Jakarta by Garuda Indonesia	Sepinggan Airport , Balikpapan - Jakarta
	21.30	Arrival in Jakarta	Sukarno-Hatta Airport & Hoel Gran Makam, Jakarta

Appendix C-1: List of Indonesian Participants in Jakarta

CHINA COUNCIL for INTERNATIONAL COOPERATION on
ENVIRONMENT, and DEVELOPMENT (CCICED)

TASK FORCE on INVESTMENT, TRADE & ENVIRONMENT INDONESIA FIELD VISIT, 20 to 27 FEBRUARY 2011

1. LIST OF INDONESIAN PARTICIPANTS - in JAKARTA

No.	Name	Position	Institution/Organization	Category
1	Subroto	Chairman of the Board	Indonesian Institute for Energy Economics (IIEE)	Host Country Partner
2	John S. Karamoy	Member of the Board	Indonesian Institute for Energy Economics (IIEE)	Host Country Partner
3	Asclepias R.S Indriyanto	Executive Director	Indonesia Institute for Energy Economics (IIEE)	Host Country Partner
4	Umar Said	Commissioner	PERTAMINA – National Oil & Gas Company	Host Country Partner
5	Rachmat Witoelar	Executive Chairman	Indonesia's National Council on Climate Change (DNPI)	Government
6	Mahendra Siregar	Vice Minister	Ministry of Trade	Government
7	Bayu Krisnamurthi	Vice Minister	Ministry of Agriculture	Government
8	Gita Wiryawan	Chairman	Investment Coordinating Board (BKPM)	Government
9	Indra Darmawan	Director for Investment Regulation	Investment Coordinating Board (BKPM)	Government
10	Hana A. Makarim	Executive Assistant to the Chairman	Investment Coordinating Board (BKPM)	Government
11	Imam H. Abu Ismoyo	Deputy Minister for Environmental Governance	Ministry of Environment	Government
12	Laksmi Widyajayanti	Director of Environmental Impact Assessment	Ministry of Environment	Government
13	Dicky E. Hindarto	Head of Carbon Trade Division	National Council on Climate Change (DNPI)	Government
14	Franky Welirang	Chief Executive Officer (CEO)	PT. INDOFOOD Sukses Makmur	Business/ Private Sector
15	Timotheus Lesmana	Director for Sustainability	PT. SINAR MAS Group/ APP Indonesia	Business/Private Sector
16	Herman K. Kasih	Deputy Chairman for Government Relations	APBI-ICMA (Indonesian Coal Mining Association)	Business/Private Sector
17	Bogan Tanardi	Chairman for Investment Affairs	Indonesia China Business Council (ICBC)	Business/Private Sector
18	Soegiono Darmatjpto	Executive Assistant	PT. BOGASARI Flour Mills/INDOFOOD Group	Business/Private Sector
19	Henkie Leo	CEO	PT. ZUG Industry Indonesia	Business/ Private Sector
20	Fu Jian Ren	Senior Engineer/ Manager of Boiler Production	PT. ZUG Industry Indonesia	Business/Private Sector
21	Nazir Foead	Director	WWF-Indonesia	NGO
22	Chandra Kirana	Regional Representative	Revenue Watch Institute	NGO
23	Fabby Tumiwa	Executive Director	Institute for Essential Services Reform (IESR)	NGO
24	Pius Ginting	Advocacy& Campaign Coordinator	WALHI (Indonesia's Environmental Forum)	NGO
25	Bobby A.T.Wattimena	Executive Director	Pelangi Foundation	NGO

Appendix C-2: List of Indonesian Participants in Tuban and Bojonegoro

CHINA COUNCIL for INTERNATIONAL COOPERATION on
ENVIRONMENT, and DEVELOPMENT (CCICED)

TASK FORCE on INVESTMENT, TRADE & ENVIRONMENT INDONESIA FIELD VISIT, 20 to 27 FEBRUARY 2011

1. LIST OF INDONESIAN PARTICIPANTS - in TUBAN & BOJONEGORO - EAST JAVA

No.	Name	Position	Institution/Organization	Category
1	Bambang Catur	Advocacy Coordinator	WALHI – Indonesian Environmental Forum (NGO), Surabaya – East Java	NGO
2	Mustofirin Zahri	Research Coordinator	Bojonegoro Institute (NGO), Bojonegoro – East Java	NGO
3	A. Basith Syarwani	Field Administration Superintendant	JOB PERTAMINA –PETRO-CHINA Tuban – East Java	Business
4	Budi Wiryono	Contracting and Maintenance Superintendant/Operation Manager	JOB PERTAMINA - PetroChina East Java Tuban – East java	Business
5	Haeny Relawati Rini Widyastuti	Regent (Bupati)	Tuban Regency Government– East Java	Government
6	Heri Sisworo	Regent Secretary (SEKDA)	Tuban Regency Government– East Java	Government
7	Suyoto	Regent (Bupati)	Bojonegoro Regency Government, East Java	Government
8	Dewi J. Putriatni	Head of Energy and Mineral Resources Dept.		Government
9	Budi Arman	Representative of BP-MIGAS for East Java, Papua and Maluku	BP-MIGAS Regional Office in Surabaya – East Java	Government
10	Bambang Irawan	Head of Environmental Supervision and Law Enforcement	Environmental Management Office of Tuban Regency– East Jawa	Government
11	Fajar Yudhi Hartanto	Head of Natural Resources Department	Bojonegoro Regency Government Office – East Java	Government
12	Musaffa	Head of Environmental Management Office	Bojonegoro Regency Government Office – East Java	Government
13	Himawan Zaldi	Head of Economic Dept.	BAPPEDA – Development Planning Agency of Tuban Regency Government – East Java	Government
14	Warno Harisasono	Head of Investment Board	Provincial Investment Board of East Java, Surabaya – East Java	Government
15	Indra Wiragana	Head of Environment Management Agency	Environment Management Agency of East Java Province, Surabaya – East Java	Government

Appendix C-3: List of Indonesian Participants in Samarinda

CHINA COUNCIL for INTERNATIONAL COOPERATION on
ENVIRONMENT, and DEVELOPMENT (CCICED)

TASK FORCE on INVESTMENT, TRADE & ENVIRONMENT INDONESIA FIELD VISIT, 20 to 27 FEBRUARY 2011

1. LIST OF INDONESIAN PARTICIPANTS - in SAMARINDA - EAST KALIMANTAN

No.	Name	Position	Institution/Organization	Category
1	Carolus Tuah	Coordinator	Pokja – 30 – NGO on Advocacy for Good Governance	NGO
2	Satria Iman Pribadi	Director	KWPLH- Balikpapan <i>(Environmental Education for Nature Conservation Area)</i>	NGO
3	Niel Makinuddin	Program Manager	The Nature Conservancy (TNC), East Kalimantan	NGO
4	Kahat Al Bahri	Campaign Manager	JATAM – Mining Advocacy Network	NGO
5	Mustofa Agung Sardjono	Professor, Director	Center for Social Forestry (CSF), University of Mulawarman	University/Academic
6	Deddy Hadriyanto	Director	Center for Climate Change Studies (C3S), University of Mulawarman	University/Academic
7	Rusmadi MS	Director	Development Planning Agency of East Kalimantan Province	Government
8	Abu Helmi	Head of Economic Bureau	Governor Office of East Kalimantan Province	Government
9	Vinsentius Y Tarukan	Dept. of Mining & Energy	Provincial Government of East Kalimantan	Government
10	Head of Forestry Department		Provincial Government of East Kalimantan	Government
11	Head of Plantation Department		Provincial Government of East Kalimantan	Government
12	Head of Investment & Trade Department		Provincial Government of East Kalimantan	Government
13	Deputy Head for Forestry & Plantation Planning		Development Planning Agency of Samarinda Municipal Government	Government
14	Head of Environmental Management Office		Provincial Government of East Kalimantan	Government
15	Maslan Tanzi	Chairman	Indonesia – China Friendship Association, Samarinda Chapter	Business/ Sector
16	Hasan Basri	Vice Chairman	Indonesia – China Friendship Association, Samarinda Chapter	Business/ Sector

Appendix D: Additional Notes on East Java Site Visit



Figure D-1. Map of East Java

Table D.1. Economic Profile of East Java.

No	Indicator	2007	2008	2009
1	Manpower (people)	18,751,421	1,888,227	19,305,056
	• Unemployment	1,366,503	1,296,313	1,033,512
2	GDRP (Rp trillion)	288	305	321
3	Economic growth (%)	6.11	5.90	5.01
4	Dominant sectors (%)			
	• Agriculture	17.44	16.57	15.65
	• Mining and quarrying	1.96	2.17	2.21
	• Manufacturing industry	27.55	28.49	25.96
	• Electricity, gas, and water supply	1.73	1.91	13.60
	• Construction	3.47	3.34	3.21
	• Trade, hotel, and restaurant	29.08	29.36	29.91
	• Transport and communication	5.66	5.32	7.10
	• Financial, ownership and business services	4.94	4.60	5.42
	• Service	8.17	8.15	9.17
5	Income per capita (million Rp)	14,07	16.01	18.45
6	• Export (million USD)	11,019	10,515	11,017
	• Import (million USD)	11,147	17,846	11,267
7	Inflation rate (%)	2.99	2.65	1.72

Sources: East Java Provincial Government and Statistics of East Java Province.

Tuban PSC and JOB Pertamina–PetroChina East Java

The Tuban block is located onshore at East Java Province. It covers an area of approximately 7,391 km² when it was awarded to Trend East Java Limited on February 29, 1988, under a Joint Operating Body (JOB) with Pertamina.

The joint operation of the block has been changed several times due to mergers and acquisition. In April 2002, PetroChina took over the operatorship following acquisition of Devon Energy's Indonesian Assets. A month earlier, PT Medco Energi Internasional Tbk completed the acquisition of a 25% interest in the block from EEX Corporation.

From 1990 to 1993, six exploration wells were drilled, all of which were dry except for Gondang-1 discovery wells, which flowed 779 BPD of oil and 4.41 MMCFD of gas. In 1994, a sidetrack to exploration well Mudi-1 was drilled, which led to the discovery of the Mudi field. In 1995, Pertamina gave preliminary approval of a plan of development (PoD) for Mudi Field. Oil production from the Mudi Field began in December 1997 with production reaching a peak of 22,000 BPD in 1998.

Other exploration successes on the Tuban block include the Sukowati-1 wildcat drilled in August 2001 and tested 7,697 BPD of oil and 5.08 MMCFD of gas. Sukowati field is located approximately 10 km southwest of Mudi Field.

In July 2004, the JOB received approval for the phase 1 of Sukowati field development from BPMIGAS. This was followed by an initial production of 7,000 BPD in August 2004. The Sukowati field, however, overlaps into the adjacent Cepu block, which is operated by ExxonMobil Corp. and Pertamina. In September 2004, ExxonMobil and JOB concluded a provisional production sharing deal for the field on an 80:20 basis in favour of ExxonMobil.

In October 2007, the JOB signed a GSA with PT Gasuma Corporindo for a gas supply totaling 13.14 TBTU over a six-year period starting in 2008. Gasuma will use the gas supply for electricity in East Java. The agreement amended in July 2009 in order to increase the volume contracted to 37.23 TBTU for a period of six years starting in 2009.

In July 2008, Medco Energi sold a 25% participating interest in the Tuban JOB to PT Pertamina Hulu Energi and PT Pertamina Gas, for a net price of approximately USD 38 million.

In August 2009, oil production from the Tuban block reached 40,000 BPD. Output is expected to reach a level of 60,000 BPD by about 2015.

China Sonangol International Holding Limited invested in PT Surya Raya Energy (SER) as a partner of PT Asri Dharma Sejahtera (local enterprise of Bojonegoro's government) to fund 4.5% participating interest – about U.S. \$ 200 million – which was the share of the Bojonegoro's authority. China Sonangol has gradually withdrawn their capital from January 2009 to April 23, 2009.

Production

- In 2009, the Tuban block produced 3,306,671 barrels of oil and 3,204,278 MSCF of natural gas (mostly flared).
- Oil produced from Mudi field is transported through a 36.5 km onshore pipeline and an 18.6 km offshore pipeline to FSO Cinta Natomas located offshore in the Java Sea. Meanwhile, oil from Sukowati field will be piped to Mudi CPA (central processing area). Oil produced from Tuban block is currently sold to China Oil.
- Gas Production from the Lengowangi oil field is transported via a 4.7 km 10-inch pipeline to PT Petro Kimia Gresik.

Issues

One of the wells, Sukowati 05, repeatedly experienced problems such as:

- H₂S (Hydrogen Sulphur) poisoning at 2006, 2008, and 2010, which affected hundreds of people from three villages around the well. At the beginning of 2011, JOB Pertamina–PetroChina East Java gave compensation to 1,772 residents of Sambiroto Village to compensate the gas kick incident of January 2010.
- Right after the gas kick incident in January 2010, hot water appeared over the top of Joint Operating Body Pertamina–PetroChina East Java (JOB PPEJ) oil and gas pipe, overside the Pakah-Plumpang road.

Early in December 2010, Campurejo's Villagers insisted that the Joint Operating Body (JOB) Pertamina–PetroChina East Java halt the drilling plan of a new oil well in Field A until their demands were fulfilled. The demand signed by BUMDes Business Unit representative, Imam Sutikno, requested: (i) compensation, and (ii) involvement of 159 local labourers to work in various areas such as procurement of catering, laundry, diesel fuel, waste handling, safety equipment, and other needs.

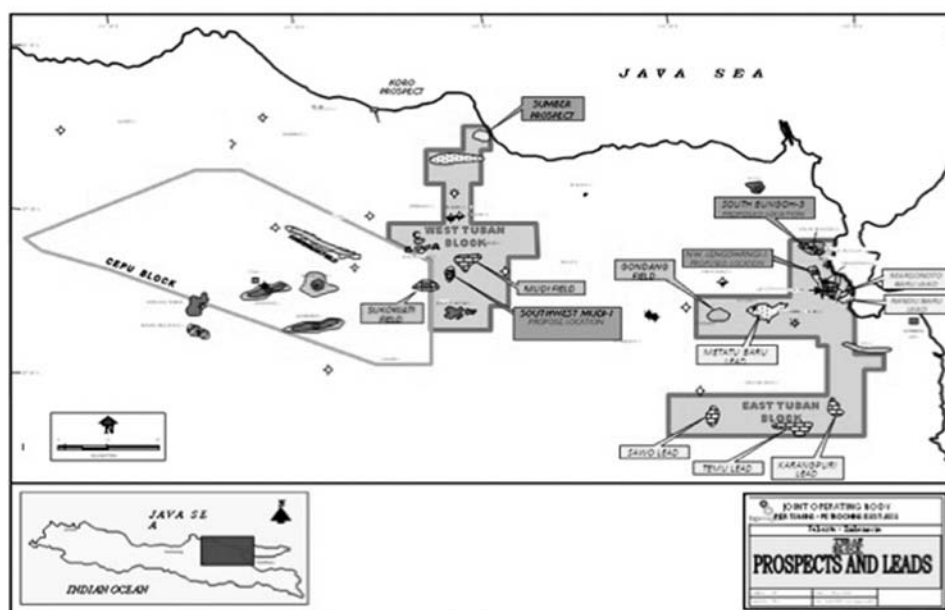


Figure D-2. Working Area of JOB Pertamina–PetroChina East Java

Appendix E: Additional Notes on East Kalimantan Site Visit

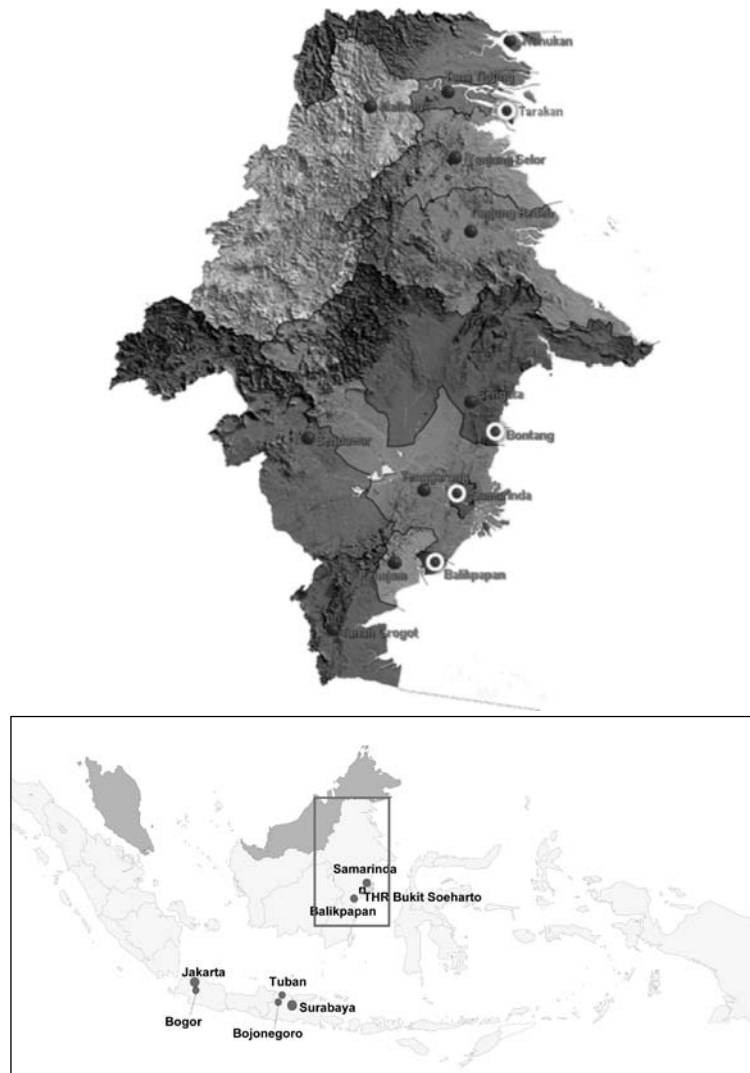


Figure E-1. Map of East Kalimantan Province.

Government policies

Referring to the mandate of the law on climate change, there must be at least 30% green open space in East Kalimantan. Businesses are required to have at least 10% green open space. To support reforestation, the provincial government launched the “Kaltim Green” program which obligates the entire community of the province to plant five trees per person (OMFIT, One Man Five Trees). At least 17.5 million trees are expected to be planted in a year.

In the mining sector, coal businesses are required to perform “Good Mining Practice.” Therefore, coal companies are required to perform the reclamation and reforestation of the former mine field. If it (the reclamation and reforestation) are not possible, then the provincial government through the relevant agencies will find a suitable alternative activity.

Under the Act of Mineral and Coal (Mining Law) No. 4/2009, Small Mining Concession (KP), which is less than 5,000 hectares, should not be given a licence to operate. However, the problem in East Kalimantan is that there are already too many mining permits, including small KP, published since 2001 by the regents and mayors.

Table E-1. Economic Indicators of East Kalimantan Province

No	Indicator	2008	2009
1.	Manpower	1.249.488 people	1.460.996 people
	• Unemployment	142.506 people (11.41 %)	158.224 people (10.82%)
2.	GDRP	Rp. 315.02 trillion	Rp. 281.44 trillion
3.	Economic growth	4.82 %	2.32 %
4.	Dominant sectors		
	• Mining	45.83%	41.62%
	• Manufacturing	34.25%	34.80%
	• Trade, hotel, and restaurant	5.74%	6.54%
	• Agriculture	4.97%	5.63%
5.	Income per capita	Rp. 38.85 million	Rp. 23.58 million
6.	• Export	\$26.31 billion	\$ 22.32 billion
	• Import	\$ 5.232 billion	\$ 5.75 billion
7.	Inflation rate	13.06 %	4.31 %

Source: East Kalimantan Provincial Government

Plantation

Commodities from the plantations in East Kalimantan are cocoa, rubber, pepper, palm oil, and coconut. Of the five commodities, which is becoming the trend lately is the palm oil and rubber.

The entire palm area locations that have been issued by the authority of the East Kalimantan area is 3.345 million hectares for 196 companies, with 877,000 hectares are certified as Rights to Cultivate (HGU). Of 196 companies, 35 are FDI, representing 385,178 hectares of plantation area.

East Kalimantan currently has 30 CPO factory units: 20 units have been operating, while the other 10 units were under construction. The main export destinations are Singapore and Malaysia. Role of India and China in trade does not appear directly because the two countries usually purchase CPO through Singapore.

There are some important things to consider in developing palm oil plantations in East Kalimantan, namely the spatial plan area which does not allow the planting of palm oil in peat-lands and primary forest. Management of palm oil plantations should follow the system of “Good Agricultural Product,” and the palm oil processing activities should be in-line with the “Good Manufacturing Product” standard. In addition, palm oil companies also have to apply the standards of the Roundtable for Sustainable Palm Oil (RSPO) or Indonesian Sustainable Palm Oil (ISPO).¹

¹ ISPO is the palm oil plantation development standards created by the government of Indonesia as a substitute for the RSPO, which is often considered detrimental to the interests of Indonesia as a major producer of palm oil. However, there are things that are adopted by the ISPO from the RSPO including a commitment to long-term economic and financial planning, a commitment to transparency, development of new estates in charge, and a commitment abide by the rules and laws.

East Kalimantan does not allow burning in land-clearing activities. Other requirements include implementing a zero-waste, avoid the watershed and the High Conservation Value Forest (HCVF), and must use certified seed.

The government of East Kalimantan also denied the allegation of international NGOs concerning palm plantation on peat-land. The Governor stated that, as a matter of fact, there is no peat-land in East Kalimantan province.

Forestry

The main reference in forest management in East Kalimantan is the Ministry of Forestry Decree No. 79/2001 regarding the designation of forest area and waters in the East Kalimantan Province. The function of the forest area under the decree is conservation, forest protection, limited production, and the permanent production forest (see Table E-2).

The priority of forestry is the development of multifunctional forest, instead of generating economic value. Prevailing regulations on forest management in East Kalimantan among others are:

- Former IUPHHK–HA (Business Licence Utilization of Forest Wood – Natural Forest),² including unproductive forest land, will be returned to HTI (Industrial Plantation Forest) with fast-growing plants.
- KBK (Cultivation Area Forestry) may be used to plant rubber, which was previously not allowed.

However, potential problems in forest management in East Kalimantan arise from the fact that coal mining area, especially in forest areas, has not been mapped in the regional spatial plan. Therefore it is very likely that mining areas within KBNK (Non-Cultivation Area Forestry) will be considered as a conservation area.

Table E-2. Forest Area Classification.

A. Forest conservation area		
1. Nature reserve	173,272	Hectares
2. National park	1,930,076	Hectares
3. Nature tourism	61,850	Hectares
B. Protected forest	2,751,702	Hectares
C. Limited production forest	4,612,965	Hectares
D. Permanent production forest	5,121,688	Hectares
Total	14,651,553	Hectares

Source: Forestry Ministerial decree No. 79/2001

² Business license granted to use forest products in the form of timber in natural forests through the activities of harvesting or logging, enrichment, maintenance, and marketing (formerly known as Forest Management Rights – HPH).

Environment

The Environment Office of East Kalimantan implements the “PROPER”³ method to conduct environmental monitoring, similar to the method used by the central government. It directly supervises environmental compliance of the companies concerning environmental destruction, pollution, or negligence in the reclamation activities. The provincial Environment Office gave awards to the best companies in environmental management.

To raise awareness at the community level, the government provides environmental education in schools, and educates people on managing waste disposal better.

³ PROPER stands for *Program Penilaian Peringkat Kinerja Perusahaan dalam Pengelolaan Lingkungan Hidup*, or Corporate Performance Rating Program in Environmental Management.

**Annex 2: Report on the Task Force Field Trip to
South Africa and Zambia (June 12–19, 2011) by
the CCICED Task Force on Investment, Trade, and
Environment**

1. Introduction

Established by the Chinese government in 1992, the China Council for International Development on the Environment and Development (CCICED) is a high-level, non-profit, international advisory body devoted to providing a platform for policy dialogue between China and the international community. The CCICED's members are high-profile Chinese and international experts who report directly to the State Council of China. The Council is financially supported by China and many international agencies to conduct policy studies relevant to China's sustainable development. The CCICED established a Task Force on Investment, Trade, and Environment in early 2010 to address the importance of sustainable development and the increasing environmental challenges faced by China, especially in the areas of trade and investment. The Task Force proposed to examine the environmental and social impacts, technological challenges as well as economic opportunities and other factors that need to be addressed in terms of China's short- and long-term policies for incoming and outward foreign investments, and the implications for trade.

Among the various exercises of the Task Force (TF), it was decided to undertake fact-finding trips to two developing regions with trade and investment relations with China in order to gather direct, first-hand information. Given the rapidly expanding global presence of China in all regions of the planet, it was necessary to make some hard choices about where to visit. The TF decided to go to Africa because of the growing importance of that region as both a target for ODI and a supplier of raw materials and natural resources to China. There are other important regions doing the same—Latin America, for example—but relations with Africa go back a long way and have deeper roots. China and many African nations also share similar recent histories of political liberation movements, which establish strong alignments of interests between them. Finally, some African countries in which China invests are still ill-prepared to host aggressive ODI and trading activities, which can become predatory in nature. The TF selected South Africa as one of the better prepared African countries absorbing Chinese investments, and Zambia, as one of the more vulnerable African countries, rich in natural resources but poor in institutional governance and law enforcement. The other country visited by the TF is Indonesia (see Annex 1 for the Indonesia Field Trip report).

The African trip was arranged with the help of Mr. Valli Moosa, a member of the CCICED and of the Task Force team. As a former South Africa's former Environment Minister, Mr. Moosa was instrumental in arranging important high-level meetings in Pretoria, Johannesburg, and Newcastle. He also encouraged high-level local experts to join the roundtable meetings from Cape Town and other SA locations. The invitations and meetings were coordinated with the assistance of Mr. Saliem Fakir from WWF-SA, who personally accompanied the delegation on its site visits. The South African leg of the field trip was designed, supervised, and coordinated by Reid Consulting, who dedicated great efforts to successfully carry out the program with very short notice. The Zambian leg of the field trip was also coordinated with the help of Reid Consulting, but meetings, schedules, and logistics were set up by the Centre for Energy, Environment, and Engineering Zambia Limited, a Zambia-based consulting firm led by Professor Francis Yamba.

2. The Field trip Preparations and Arrangements

2.1 Task Force Team Participating on the Field Trip

The following TF team members participated in the field trip:

- Jiahua Pan, Director and Researcher, Institute for Urban Development and Environmental Studies, Chinese Academy of Social Sciences
- John M. Forgach, McKluskey Fellow, Yale University Graduate School of Forestry & Environmental Studies, Chairman of ForestRe Ltd, U.K.
- Guomei Zhou, Deputy Director, China – ASEAN Environmental Cooperation Center
- David Runnalls, Former President of the International Institute for Sustainable Development; Distinguished Fellow, Centre for International Governance Innovation; Acting Director, Sustainable Prosperity
- Valli Moosa, South African Member of the CCICED and Former South African Minister of Environmental Affairs and Tourism
- Li Lin, Deputy Representative at the World Wildlife Fund (WWF) China
- Jianping Zhang, Director and Research Fellow, Institute for International Economics Research, National Development and Reform Commission
- Zhe Liu, PhD, Institute for Urban Development and Environmental Studies, Chinese Academy of Social Sciences
- Huihui Zhang, Project Manager, International Institute for Sustainable Development

2.2 Design of the Travel and Meetings Program

The essential design of the program was a combination of roundtables and site visits in each country. The roundtable discussions in South Africa were organized with particular stakeholder groupings. One session was comprised of academics, analysts, researchers, and representatives of non-profit organizations. These stakeholders typically study and analyze the problem/issue at hand and neither directly influence, nor are directly affected by, Chinese trade and investment. The second group of stakeholders comprised those who influence or are influenced by Chinese trade and investment and thus included representatives of organized labour, the private, and public sectors. Both roundtable discussions were held in Johannesburg as many of these relevant participants were based in Gauteng, with the exception of two participants who came in from Cape Town to participate in the roundtable discussions.

In Zambia, roundtable discussions were held in Lusaka and Kitwe and were attended by a similar profile of people as the South African roundtable discussions. However, the participants were deliberately not divided up as it was believed that a single forum with stakeholders from many backgrounds would achieve greater transparency. The Kitwe roundtable in the Copper Belt Region had a more local flavour as the participants included municipal officials and people directly engaged in the extractive industries.

The site visits in Zambia reflected the nature of Chinese investment in Zambia, which is mainly in the extractive industries, particularly in copper mining and smelting. The

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picture is a little different in South Africa which imports a great deal of textiles, clothing, and footwear. To illustrate the trading relationship, the Task Force was taken to a popular trading area dominated by Chinese imports. The changing nature of Chinese investment to support South Africa’s environmental goals was demonstrated through a site visit to a Chinese-owned polyethylene terephthalate (PET) recycling plant, which is one of only two such plants in the country. A meeting was also scheduled between the owners of Chinese clothing plants in Newcastle to discuss labour-related concerns around legislative compliance. The site visit to Newcastle was guided by the municipality’s Local Economic Development Manager, Ferdie Alberts.

In addition to the roundtable discussions in South Africa, a couple of separate meetings were scheduled with key individuals who were unable to participate in the roundtable discussions. These have been documented in Section 3. Unique to Zambia was a meeting at the Chinese Embassy.

2.3 Identifying Local Participants

Identifying the appropriate participants for the roundtable discussions in South Africa was difficult because there are very few people who understand all the issues at hand, namely trade and investment and their environmental and social impacts. This was exacerbated by the absence of national environmental officials who were in Bonn for COP17 discussions. Furthermore, social impacts are more of a focus in South Africa because Chinese investment in South Africa does not mirror other African countries in the sense that it has not penetrated the extractive and construction industries as it has in other countries in Southern Africa, where the lack of environmental compliance can have serious consequences. Some of the delegates were concerned that the focus on social impacts was too great as they felt that their mandate was to focus mainly on the environmental issues. Another challenge in relation to South Africa is that the analysts (including researchers, academics, etc.) do not have a uniquely South African perspective, and tend to study Chinese investment and trade from a Southern African and or continental perspective. This is positive in the sense that they were able to shed light on the regional and continental status, and negative in the sense that it did not help deepen the understanding of the South Africa-China situation.

There is a major “Chinese capital” in South Africa as all of the major Chinese financial institutions have offices in Johannesburg. Unfortunately there was no positive response from any of these institutions to attend the TF meetings despite the high number of avenues pursued to access potential participants.

2.4 The Embassies

It was difficult to engage the Chinese embassies in both South Africa and Zambia. There was no official communication channel between CCICED and the embassies, which were not able to act upon the organizer’s requests for meetings. In South Africa, once an official communication had been issued to the embassy, there was failure to act upon the communication. This appeared to be an internal challenge as the embassy could not decide whether this request was a political or commercial issue. There was no distribution of information within the embassy. It was later established that the request

would have been handled more efficiently if the organizers had worked through the Johannesburg Consulate. In Zambia, an official letter was sent to the Embassy at the eleventh hour and an impromptu meeting was scheduled on the day of the Task Force’s arrival in Lusaka. The Task Force was fortunate enough to be received by the Economic Counsellor and his secretary.

3. Visit to South Africa

The South African leg of the trip started on Sunday, June 12, with an induction meeting and orientation tour. The second day, Monday, June 13, was also spent in South Africa. The following three days were then spent in Zambia. The delegation then spent Friday, June 17, and Saturday, June 18, in Newcastle and Johannesburg respectively.

3.1 Country Profile

Factor	Data												
Population	49,320,500 million, mid-year 2010												
Nominal GDP – IMF 2010	USD 363 billion, 29 th largest economy												
Official unemployment	24%, fourth quarter 2010												
Size	1,221,037 km ²												
Languages	11 official languages												
Capital	Cape Town (Legislative); Pretoria (Administrative); Bloemfontein (Judicial)												
Currency	ZA Rand												
Main industries	Mining, automobile assembly, metal working, machinery, textiles, iron and steel, chemicals, fertilizers, foodstuffs, and commercial ship repairs												
Main export partners by values in ZA Rand	<table border="0"> <tr> <td>United States</td> <td>52,865,427,627</td> </tr> <tr> <td>Japan</td> <td>49,471,760,915</td> </tr> <tr> <td>Germany</td> <td>35,893,923,442</td> </tr> <tr> <td>United Kingdom</td> <td>34,466,295,464</td> </tr> <tr> <td>China (PRC)</td> <td>29,303,383,133</td> </tr> <tr> <td>Netherlands</td> <td>20,276,226,064</td> </tr> </table>	United States	52,865,427,627	Japan	49,471,760,915	Germany	35,893,923,442	United Kingdom	34,466,295,464	China (PRC)	29,303,383,133	Netherlands	20,276,226,064
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Main import partners by value in ZA Rand	<table border="0"> <tr> <td>Germany</td> <td>65,516,371,203</td> </tr> <tr> <td>China (PRC)</td> <td>60,264,271,984z</td> </tr> <tr> <td>United States</td> <td>43,032,525,041</td> </tr> <tr> <td>Japan</td> <td>36,928,685,550</td> </tr> <tr> <td>United Kingdom</td> <td>27,075,312,636</td> </tr> <tr> <td>France</td> <td>18,803,108,951</td> </tr> </table>	Germany	65,516,371,203	China (PRC)	60,264,271,984z	United States	43,032,525,041	Japan	36,928,685,550	United Kingdom	27,075,312,636	France	18,803,108,951
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Source: Statistics South Africa

3.2 Orientation

The South African leg of the Task Force visit kicked off with the first delegation arriving in South Africa on Saturday, June 11, 2011, from Brazil and Canada, with most of the

Chinese team arriving on Saturday evening and the last two delegates arriving on Sunday, June 12, 2011.

As part of the orientation to the South African leg of the trip, the team was taken on a tour of Cyrildene in Johannesburg. The tour comprised a visit to a typical Chinese-owned and managed trading area known as the Oriental City and to the suburb of Cyrildene where the majority of the Johannesburg Chinese community resides. The purpose of the visit was

Most South African-born Chinese are descendants of independent immigrants who arrived in the country from the 1870s onwards. They originated from two areas—about 400 kms apart—in the (Guangdong) province of south China, and could be ethnically distinguished as Cantonese and Moiyeane (or Hakka). They spoke different dialects, practised different customs, and their relations both in their home province and abroad were marked by traditional animosity...despite the fact that outsiders saw them all simply as “Chinese.”

(Color, Confusion and Concessions, The History of the Chinese in South Africa, Melanie Yap and Dianne Leong Man, Hong Kong University press, 1996)



TF delegation visited Sen Li Da, Newcastle.

to look at the financial and cultural impacts of Chinese investment from a local perspective.

Our tour guide for the day was Erwin Pon, Chairman of the Chinese Association of South Africa. He is also the Business Development Director: China Africa Investments for Rand Merchant Bank.

Cyrildene could be considered a typical “China Town” by international standards, and some Chinese delegates remarked that it could have

been compared to the streets of Beijing. What stood out was not only the great sense of cultural unification by Chinese immigrants in the area through their organizational skills in establishing platforms to address disputes and creating dialogue, but also their social and cultural exclusion from the broader Johannesburg community, which leads to cultural misunderstandings, ill-informed perceptions and a lack of communication with the rest of the community. Throughout the week it was these factors that stood out during the roundtable discussions and site visits. This report addresses the direct causes of this breakdown in dialogue, as well as solutions and recommendations to narrow these cultural, social, and economic gaps.

The trip to Cyrildene was the perfect platform to jumpstart the tour with a small taste of China-Africa relations. Cyrildene, albeit small and seemingly insignificant against the landscape of China’s global financial interests, illustrated the understanding and level of tolerance needed by both the host country and its investment partners to create a better investment climate and to share a common dialogue.



TF delegation visited China Town, Johannesburg.

3.3 Meetings

3.3.1 Roundtable Discussions

On Monday, June 13, two sets of roundtable discussions were held at the Radisson Blu Hotel in Johannesburg. The objective was to create different discussion climates based on the portfolio and responsibilities of the attendees. The following participants were carefully selected as key stakeholders in establishing a platform for an open and meaningful dialogue.

Morning session				
Organization	Name	Surname	Position	Email address
Africa Institute of Corporate Citizenship	Douglas	Kativu	Director	douglas@aiccafrica.org
Centre for Chinese Studies	Daouda	Cisse	Research Fellow	dcisse@sun.ac.za
Conservation International	Rowena	Smuts	Researcher	r.smuts@conservation.org
ER Associates	Dean	Button	Research analyst	dean@erassociates.co.za
Frontier Advisory	Hannah	Edinger	Research Manager	hedinger@frontieradvisory.com
Frontier Advisory	Jamie	Robertson	Researcher	jrobertson@frontieradvosry.com
Greenpeace	Ferrial	Adam	Climate Change and Energy Campaigner	ferrial.adam@greenpeace.org
Institute for Global Dialogue	Lesley	Masters	Researcher	lesley@igd.org.za
RBS	Marius	Joubert	Business Development Executive	marius@rbs-sa.com
The EDGE Institute	Stephen	Gelb	Executive Director	sgelb@the-edge.org.za
University of South Africa	Farhana	Paruk	Researcher	farhanaparuk@gmail.com
Wits University	Garth	Shelton	Director: East Asia Project	Garth.shelton@wits.ac.za

Afternoon session				
Organization	Name	Surname	Position	Email address
ASTPM/STEASA	Colin	Shaw	Executive Director	colin@astpm.com
BUSA	Danie	Jordaan	Trade Consultant	djordaan@mweb.co.za
Business Leadership South Africa	Friede	Dowie	Director	fdowie@businessleadership.org.za
Conservation International	Rowena	Smuts	Researcher	r.smuts@conservation.org
COSATU				
Department of Trade and Industry	Philip	Mtsweni	International Trade and Economic Development – NEPAD/AU	PMtsweni@thedti.gov.za
Department of Trade and Industry	Bharti	Daya	International Trade and Economic Development – NEPAD/AU	BDaya@thedti.gov.za
First National Bank	Lisa	Xia		

Afternoon session				
Organization	Name	Surname	Position	Email address
National and Economic Development Institute	Kimani	Ndungu	Researcher	kimani@naledi.org.za
NEPAD Business Foundation	Lynette	Chen	CEO	lynette.chen@thenbf.co.za
Rand Merchant Bank	Tracy	Li	RMB Private Bank, Relationship Manager	tcli@rmbprivatebank.com
RBS	Marius	Joubert	Business Development Executive	marius@rbs-sa.com
University of South Africa	Farhana	Paruk	Researcher	farhanaparuk@gmail.com

3.3.2 One-on-one meetings

The schedule did not allow for all stakeholders to be present, therefore an additional meeting was scheduled with Mr. Tshediso Mantona, Director General: Department of Public Enterprises and former Director General Department of Trade and Industry. The meeting took place at his office in Pretoria and was attended by Prof. Jiahua Pan, Mr. John Forgách, and Miss Lin Li of the Task Force team. Later, a teleconference was also scheduled with Etienne Vlok, Research Manager for the South African Clothing and Textile Workers' Union with the same representatives of the Task Force.

3.4 Site Visit: Newcastle



TF delegation visited Sen Li Da, Newcastle.

Newcastle is a microcosm of the range of social and environmental impacts—positive and negative—associated with Chinese trade and investment. In the first place, one of two PET recycling plants in South Africa is situated in Newcastle. The Sen Li Da Chemical Fiber Company is a vertically integrated plant where the bottles go in one end and fiber comes out

The field visit to Newcastle started with a meeting of the local municipality hosted by Ferdie Alberts, Director of Economic Development, and Councillor Chuan-Yi Liu. Ferdie Alberts is a passionate spokesperson in the community and typically wears many hats during the course of his engagement with both council and business.



the other. The other PET recycling plant in South Africa recycles the PET bottles into a PET chip, which is then turned into fiber at another facility. The Newcastle plant is thus unique in South Africa and represents a R80 million investment. The delegation was most graciously received by Mr. Chen Jian Da, Director, and Frank Fang, Manager, among others. The team took a complete tour of the plant and spent some time with the management to clarify questions and discuss the expansion plans of the group. This type of investment aligns with China's Twelfth Five-Year Plan which promotes foreign investment in high-tech and environmental protection industries. It also supports the objectives of the South African government's newly promulgated Waste Act and National Waste Management Strategy, which seek to reduce the quantity of waste being disposed of to landfill and to stimulate markets for recyclable materials. It is *one of a few* positive social and environmental examples of Chinese FDI in South Africa.

The trip was concluded by a meeting with Alex Liu, Chairman of the Newcastle Chinese Chamber of Commerce, and other members of the Chamber. The purpose of the meeting was to discuss and analyze the allegations that Chinese-owned textile and clothing businesses in the area do not comply with the minimum wage requirements and do not cooperate with labour inspectors.



Group Picture of TF delegate and South African Colleagues.

4. Visit to Zambia

The Task Force spent two-and-a-half days in Zambia, June 14–16, 2011. One day was spent in the capital, Lusaka; half a day in Luanshya; and the balance in Kitwe, situated in the copper belt mining region of the north of the country.

4.1 Country Profile

Factor	Data
Population	12,935,000 million (estimated 2009)
Nominal GDP – IMF 2010	USD 16 billion, 105 th largest economy
Unemployment (estimated)	50%
Size	752,612 km ²
Languages	72 official languages with 13 dialects
Capital	Lusaka
Currency	Kwacha
Main industries	Copper mining and processing, construction, chemicals, fertilizers, foodstuffs, textiles, and horticulture.

Factor	Data	
Main export partners by USD value	Switzerland	1,462,600,000
	South Africa	401,400,000
	China	257,700,000
	Japan	3,700,000
Main import partners by value	South Africa	52.5%
	UAE	8.2%
	China	6.9%

Economy watch, July 13, 2011.

4.2 Meetings

4.2.1 Roundtable Discussions

The first roundtable discussion was held on the morning of Tuesday, June 14, 2011, at the Southern Sun Ridgeway Hotel. It was facilitated by Prof. Francis Yamba, MSc, PhD., FEIZ., R Eng, Managing Director of the Centre for Energy, Environment, and Engineering (Z) Ltd., a well-respected engineer and environmentalist in Lusaka.

Organization	First name	Surname	Position	Contact
Bank of China	Qi	Wang	Assistant General Manager	Qwang.zm@mail.notes.bank-of-china.com
Bank of China	Li	Yiting	Deputy Manager	Executive.zm@mail.notes.bank-of-china.com
CHAMP	Rosanna	Price-Nyendwa	Chief of Party	Rosanna.price-nyendwa@champ.org.zm
Gemstone	Patrick	Lungu		gaing@yahoo.com
Ministry of Labour	Felisian	Ngosa		ngosafelisian@yahoo.com
Times of Zambia	Chila	Namaiko		nams84ch@yahoo.com
University of Zambia	Lungu	Chozi V.		cvlungu@unza.zm
University of Zambia	Don	Nkhuwa		downkuwa@unza.zm
Zambian Wildlife Authority	Christopher	Kaoma, PhD, MSc, BMinSc	Senior lecturer	Christopher.kaoma@zawa.org.zm
ZDA	Paul	Sياما	Investment Promotion Officer	psiamе@zda.org.zm
ZUFIAW	Adomson	Chitembwe		achitembwe@yahoo.co.uk

The second roundtable discussion took place in Kitwe on the morning of June 16, 2011. It comprised the following participants:

Organization	First name	Surname	Position	Contact
CBU	Wilson	Moond		moonows@cbu.ac.zm
Copperbelt Development Foundation	K	Kawano		cdf@cdfoundation.com.zm
Copperbelt Development Foundation	Monole	Malengu		Monole.maenga@cdfoundation.com.zm
Kitwe City Council	Machindu	Kingsley		kingsleyms@yahoo.co.uk
Kitwe City Council	Kamusa			poonkamusa@yahoo.co.uk
MUZ	Joseph	Chewe		Chewe.joseph@mopani.com
NUMAW	Kaluba	Goodwell		goodwellkaluba@yahoo.com
ZCTW	Boniface	Phiri		phirij@yahoo.co.uk

4.2.2 Meeting with the Embassy of the PRC

The Task Force met with the Chinese Embassy in Zambia on Tuesday, June 14. It was an unscheduled visit as the official letter of request to meet was distributed only a day before the Task Force was scheduled to arrive in Zambia. Nonetheless, the Task Force was warmly received by the Economic and Commercial Counsellor of the Embassy, Dr. Wang You. He was very understanding of the communications problems between the CCICED and the embassy, which were due to the last-minute nature of the arrangements for the field trip to Zambia. The delegation reviewed many of the hurdles facing a better integration of China's ODI players in Zambia and the Counsellor confirmed that Chinese entrepreneurs rarely registered with the embassy and were thus unable to seek assistance for their problems in setting up in Zambia. He also said they often ran into problems with local authorities because they entered the country with a specific project in mind and then changed direction, investing in something completely different, without informing the authorities. There were many linguistic and cultural obstacles that continued to hamper the integration of Chinese businesspeople into Zambian society. He clarified that while the media exaggerated Chinese behaviour in business disputes in Zambia, there were indeed cases of differences of opinion that could be better remediated if the embassy was included in the discussions. In any case, he reassured the delegation that they were very interested in collaborating with any new initiatives that would help better integrate Chinese and Zambian interests.

4.3 Zambia Site Visits

The intention of the site visits was to engage with managers and observe operations. Where possible, members of the delegation also interacted with workers but these were informal interactions. This was the case for the first site visit only.

4.3.1 Site Visit 1 - Luanshya Copper Mines PLC, Ndola, Zambia

The first site visit in Zambia was conducted on June 15, 2011, in Luanshya, north west of Ndola at the CNMC Luanshya Copper Mines PLC. This mine had been abandoned for 10 years before the new owners took over in 2006. The mine was first built during the copper boom of 1973 and had subsequently seen a number of different owners before eventually being abandoned. This resulted in high local unemployment rates, a

breakdown in supporting infrastructure, and a disillusioned community.

The delegation was received in the main offices of the mining operation by Robert M. Kamanga, Wang Jingjun, and Li Haiyang, all deputy CEOs of CNMC Luanshya Copper Mines PLC. According to Mr. Venice Kasito (deputy manager) the mine now employs 289 permanent workers. Top management consists of one Chinese for every seven Zambians. Investment in this mine stands at USD 25 million to date. Mr. Kasito feels that the new owners are serious about their investment and also referred to their commitment to social investments. The new investors have funded a hospital for workers and their families, and introduced free schooling as well as a craft school. The mine also sponsors the successful Roan United Luanshya football club.



TF delegation visited Luanshya Copper Mines PLC, Ndola.

We were often reminded that, in relative terms, the Zambian copper belt was still considered “heaven” as a work location, when compared to the mines in neighbouring DR Congo and Zimbabwe. In Zambia the Chinese-owned mines (seven out of a total 50 installations) were rarely in the headlines for accidents or environmental malpractice. According to the Chinese Embassy in Lusaka, the Chinese firms in Zambia started investing there in 1997 and today provide over 20,000 direct jobs. It was reported that two out of the 10 largest taxpayers in the country were Chinese. Besides the large SOE firms, there were at least 300 independent privately held enterprises that had Chinese capital and were contributing to the local economy in agriculture, husbandry, manufacturing, and services industries.

While the team toured the processing facilities it got to speak with many of the blue-collar workers and some of their supervisors. They were all local Zambian residents of Luanshya. The atmosphere was open and friendly. This small sample of people was very satisfied with the new owners’ apparent commitment to improve some of the mining practices. They had spent many years unemployed and were rather desperate about their future prospects in Luanshya, a one-employer location. They mentioned that the ore concentration left in that mine was one of the lowest in the region at just 1–2%. Yet CLM was mining this and even reprocessing the mining slug and tailings, which still had some 1% content in them.

The delegates also toured the huge tailings deposits, which were being properly stored and managed. The water impacted by these tailings was being treated and returned to nature in drinkable condition. Although team members were not experts in the mining business, it seemed as if the operation was being run well and with attention paid to environmental impacts.

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4.3.2 Site Visit 2 – Chambishi CNFMC Copper Smelter, Kalulushi, Zambia

The second site visit was to the Chambishi Copper Smelter Ltd. production unit, northeast of Kitwe. It is set in the township district of Kalulushi in the Copper Belt Province. The smelter is a USD 800 million investment by the China Nonferrous Metals Company.

In May 2011, China Nonferrous Metals Company announced that it had started a USD 250 million expansion program aimed at doubling copper output to 300,000 tons a year by 2012. China's investment in Zambia's copper mining continues to soar. In 2010, output grew by 17% over the previous year to reach a historic record of around 820,000 tons. About 2/3 of the copper produced is exported directly to China and 1/3 is sold in the international markets. One half the sulphuric acid is exported to the DR Congo and the balance sold in the local market. The copper slug from processing, with down to 0.8% residual ore content, is reprocessed through flotation and recovered. Bismuth extract is already fully recovered and cobalt will start to be extracted starting in 2013. The smelter is expected to increase capacity by another 1.0 million tonnes in 2014 as copper ore supplies are programmed to triple. Due to the very sophisticated electronics and control systems (Enfield & Co. technology), this smelter is rated as one of the most advanced plants in the world. It operates at twice the average efficiency levels of the industry.



TF delegation visited Chambishi CNFMC Copper Smelter, Kalulushi.

Although the smelter was busy with its annual maintenance run when we arrived, we were given a detailed technical background on the running of the smelter with a scale model as the basis for the presentation. The demonstration was given by Mr. Fan Wei, Deputy MD of Operations, who took well-deserved pride in the operating efficiency of the mine, the energy efficiencies achieved, and the use of world class technology in the smelter. The Chambesi Copper smelter (CCS) was built in 25 months and completed in February 2009. It has a yearly production capacity of 150,000 tonnes of blister copper and 340,000 tonnes of sulphuric acid. Its operations reached cruising speed in May 2009 and the company has been providing jobs for 1,000 Zambians since 2007. It is a truly impressive, very modern, clean, and well-maintained plant using state-of-the-art technology. It is important to note that despite the fact that this plant was not on our schedule of visits, we were most graciously received and introduced to the facility.

4.3.3 Site Visit 3 – NFCA Copper Mines, Kitwe, Zambia

The last site visit on June 15 was to Non-Ferrous China Africa Mining PLC (NFCA) in Kitwe, which is a 50/50 joint venture between Chinese and Zambian state-owned companies. NFCA has already implemented its exit strategy and has invested USD 5 million in mine site rehabilitation and restoration. It has estimated the lifespan of the

mine to be approximately another 20 years. A further USD 800 million will be invested over this period for maximum extraction. The typical ore content averages 2% in this mine. As a comparison, the average for the country is 10–12%.

As a matter of interest, the mine served as the headquarters for the China-Zambian Investment Promotion Seminar on February 26, 2010. This seminar was sponsored by the China Council for the Promotion of International Trade (CCPIT), China Nonferrous Metal Mining (Group) Ltd., the Ministry of Commerce, Trade and Industry of Zambia, and the Zambia Development Agency (ZDA), and was supported by China-Africa Joint Chamber of Commerce (CAJCC). Over 300 Chinese and Zambian government delegates and entrepreneurs attended the seminar and exchanged ideas and information on investment and cooperation.



TF meeting with the general management of the NFCA Copper Mines, Kitwe, Zambia.

According to the management, this operation has one local manager for every Chinese manager. Their investment rules permit a 10% quota of Chinese among the total labour force. They claim to have only 2% Chinese. The NFCA mines had closed in 1997 with the loss of 4,000 jobs. The Chinese investors re-opened the mines in 2008 and have so far spent over USD 370 million in re-opening the flooded and damaged shafts. They have so far created 2,800 new jobs. In 2007 the current Zambian environmental

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regulations were instituted, requiring mine tailings to be carefully stored and dust levels reduced in the ore concentration processing plants. NFCA has complied diligently with all these regulations.

5. Key Issues and Opportunities

5.1 Key Issues

The general conclusion of the team in the final debriefing meeting was that the trip had been very valuable in terms of fact-finding, as the delegation gained a considerable amount of first-hand information by interacting with stakeholders directly. Many of the first-day meetings in Zambia were “improvised” as airport visa and emigration delays caused serious disruption in the original schedules, forcing Professor Yamba and his team to re-organize appointments and meetings at the very last minute. Furthermore, some of the scheduled meetings in Zambia had not been duly registered by the hosts, resulting in surprise visits and last-minute entrance gate negotiations. As a result, there often was no rehearsal or preparation time for the hosts, thereby leading to very rich and powerful open discussions. In general, the atmosphere of the meetings was warm and hospitable. Both in Zambia and South Africa the delegation hosts received the TF team in a friendly manner, regardless of whether they were Chinese or African. This trip has provided more valuable real first-hand facts than just reading media publications, academic research, or technical reports.

However, due to the limited time frame, the delegation only met with a limited number of Chinese investors and other stakeholders. Also the meetings were not long enough as the schedule was quite heavy and the distances were considerable. So many of the questions raised in these meetings deserve further exploration and discussion. The overall sentiment of the delegates was that both Zambians and Chinese in Zambia were very open and eager to exchange information and ideas. The degree of transparency in communications was quite unique and most encouraging. The only truly negative impression the delegation experienced during the whole trip was with the immigration officials at the airport. Both on the way in and the way out, the Chinese members of the delegation were openly discriminated against and treated with disrespect. That is most astonishing when one considers the amount of investment that Chinese are placing in Zambia and runs totally contrary to the very welcoming reception that the delegation received by Zambian residents throughout the visit.

5.1.1 Chinese Investment: Major Opportunities, But With Challenges

Throughout the visit, it became clear that Chinese investments in both Southern African nations visited, were mostly welcomed. They were seen as opportunities, but with challenges. Both China and Africa in general need to grow sustainably. They are emerging economies with quite similar recent “liberation” histories and South-South alignments of interests. There were many common pathways identified for growth. There was a consensus in the delegation meetings that partnerships between China and Africa are the key to the shared growth. China’s investments into Africa bringing most needed capital, technologies, know-how, equipment, a trained labour force, and increased production in agriculture, can lead to food security, wealth, and better health

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conditions for the population. China, as the more advanced economy is expected also to contribute to consistent guidance in building better institutions in host countries and help address environmental matters, particularly in the high-impact mining and extractive industries.

5.1.2 Revitalized Local Markets and Employment Opportunities

Wherever the Task Force members went, the general observation was that the Chinese investments were most welcome. Chinese investors were seen to be willing to explore low-value properties/businesses in an effort to make them profitable operations. They are very competitive, and they explore efficiencies and market gaps better than other investors. They are reputed to work harder, in other words “until the job is finished” rather than until the work hours end. Chinese are also welcome because they are providing new jobs for locals in places where former investors had abandoned their ventures. This is particularly true in mining but also applies to infrastructure (harbours, roads, and railways); resource production (mineral processing and refining); manufacturing (textiles, clothing, industrial recycling, and home furnishings); and services (mostly health and food). Overall, in Africa, Chinese investors, old and new, appear to be active in the areas where there was less willingness from other investors to invest.

The Oriental City in Johannesburg was an unprofitable property from a previous non-Chinese investor. A few Chinese merchants jointly invested in the property and turned it into a shopping centre holding 200+ shops that sell produced goods from the Far East, of all prices and qualities, mostly from China. These shops hire both Chinese and local South Africans coming from different nationalities, Indian, Lebanese, Angolans, and Zimbabwean and Tanzanian nationals. The shopping centre is now doubling its already impressive capacity. Despite the early hours, it was quite busy with many South African consumers when the delegation visited it.

In Newcastle, the Chinese entrepreneurs engaged in the textile and garment sectors, which are almost sunset sectors in South Africa, as they face competition from both domestic players and from cheap imports from China and other low-labour-cost Asian countries. They provide job opportunities to the communities facing unemployment rates as high as 60%.

South Africa and Zambia are both still in their early development stages. The case is especially true in Zambia. The government agencies in charge of attracting investment into the countries, both at the federal and regional levels, expressed their strong interest in attracting Chinese investments. There were absolutely no public manifestations of discrimination expressed against Chinese investors of any kind. There was always a desire to work together with the investors and improve the dialogue.

In the case of the Zambian economy this is even more evident as the Chinese investors the TF visited have acquired abandoned mines with very low ore concentration (2–3%) and re-opened them. They invested there heavily and brought needed jobs to the local communities. The Luanshya mine was non-operational for four years until the CNMC came and invested in 2007–2008. The Chambishi mine was closed for 10 years due to the poor grading of copper ore, until NFC Africa took it over in 1998. They have

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invested large amounts in updating and reforming the operations. They employ 2,500 people, of whom over 1,000 are native local workers. They also helped support local hospitals, schools, and sports groups. Local authorities, businesses, and communities are grateful for these Chinese who seem to take the investments seriously who seem to be there to stay for the long term. In general, the plants visited seemed clean, modern, and functional. Security was solid and safety measures seemed to be well-managed.

There were of course some contentious issues that came up in the discussions. They revolved mostly around wages and working hours, which are creating friction with local labour unions and trade representatives. Although sometimes seemingly justified, some of these claims were not supported by the workers in general, who did not feel their interests were well-represented by these union representatives. There were other non-wage or non-compensation-related claims, which carried unanimous consent among the various union leaders, such as those related to the creation of compensation funds for mitigation of resource depletion, and environmental initiatives that created more service sector employment opportunities.

5.1.3 Bringing New Technologies and Practices to the Host Countries

CCS brought serious investment and state-of-the-art technologies to Zambia. Their energy efficiency is world class, better than the same equipment operating in China, and better than those operating in Zambia. Their waste heat recovery system was the first in Zambia. The power generated with waste heat can cover 18% of total electricity consumed. They can capture 100% of the sulphur dioxide and produce sulphuric acid for the local market. All waters are recycled in a closed loop system and industrial process emissions were either re-injected or filtered to cut any atmospheric pollutants to zero.

The Sen Li Da Company visited in Newcastle, South Africa, is the first of its kind that is working on recycling the wasted soft drink PET bottles in a fully integrated production cycle. Their efforts have helped clean up PET bottle waste from as far away as Johannesburg. They are thinking of expanding their capacity and investing downstream to integrate their recycling loop even further, covering 100% of all the materials derived from used bottles. The high-quality hollow hull fine fiber that was being produced during the visit was for export to the U.S. for furniture and pillow stuffing among other applications.

5.1.4 Environmental Performance: Equal or Slightly Better Than Their Peers

The Chinese companies visited by the delegation, when asked about their environmental performance, demonstrated a compliance mentality. They mentioned that their investment had to pass Environmental Impact Assessments and a great effort was made to meet all environmental requirements. Some of the environment management personnel we were supposed to meet were not present when we arrived as they were all attending an environmental meeting set up by the Zambian government to discuss the EIA and related issues. The mining companies met by the delegates monitored their effluents and discharges and submitted monthly reports to the local authorities. They invested in dust-collecting equipment to improved operating conditions in the

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ore concentration units to build efficiency in production. The delegation also missed a scheduled meeting with the environmental authorities in Zambia, which were the first on the list, due to the delays caused by immigration officials and their discriminatory treatment of Chinese passport holders upon arrival in Lusaka Airport.

When the delegation discussed environmental performance, most Zambian and South African stakeholders commented that they felt Chinese companies' environmental governance could be much better given their more advanced commitment to the environment and better technologies. The general opinion was that Chinese-invested firms behaved no worse than non-Chinese companies. The majority of the complaints against Chinese investments were centred around labour and product quality issues. Most of the local players recognized that China was coming to Africa with their top technologies, particularly when the investments were made by SOEs. Technologies on energy efficiency, waste heat generation, SO₂ effluents recovery, and dust collection are all the most modern available. The fact that even a small private enterprise, such as Sen Li Da, picks up an abandoned and bankrupt textile plant to convert it to a fully integrated modern PET recycling business, illustrates how Chinese investors can provide win-win solutions to the local economy, producing financial, social, and environmental gains.

5.1.5 Social Performance: Labour Issues are the Centre of Attention

On labour and wages issues, Chinese investments are viewed negatively in most communities. The impressions of Chinese companies are "very very bad." Communities do not distinguish between Chinese state-owned companies or private companies, sometimes not even between real Chinese companies from those owned by interests other Asian countries. In most cases where Taiwan-based Chinese investors were present, they worked side-by-side with mainland Chinese investors and produced healthy Chinese communities without any political or cultural animosities. For the Africans in general, they were unable to distinguish between Chinese interests whether they came from Taiwan or the mainland. In fact, the public and the media often confused Vietnamese, Filipino, Indonesian, Japanese, and Chinese investors, treating them uniformly as "Chinese."

The most negative comments the TF delegation heard throughout the trip originated with the trade and labour union representatives. Whether in South Africa or in Zambia, the issues focused mostly on how Chinese companies did not pay minimum wages, did not respect local labour laws in terms of work hours and holidays, did not employ enough local personnel, and were reluctant to appoint locals to senior management positions. There were no complaints about gender issues as most Chinese services and manufacturing businesses seemed to employ both genders fairly. The labour officials that did not interact directly with Chinese companies complained about Chinese companies not hiring enough local workers, whereas those who dealt directly with Chinese companies never brought up the subject.

Local businessmen near the Chimbishi mine complained that Chinese companies did not purchase or hire their local services directly. When informal talks developed with the plant workers interviewed in Luanshya, it became clear that they themselves did not trust local contractors and preferred to work with the Chinese service companies.

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These local workers unanimously said that they were unwilling to leave employment at the Chinese mining company even if they recognized that the pay might not match what was offered by other mining companies. Some workers openly stated that safety conditions in the Chinese-held mines were not always up to par. When probed for more specific information, people tended to respond in vague and imprecise terms, not very sure of their claims.

The case for Newcastle, South Africa, offered another extreme. The local Chinese Chamber of Commerce is headed by a Hong Kong native South African who was awarded by the South African National Bargaining Council the title of “Worst Employer in 2010.” He was accused of being unwilling to pay his workers the national minimum wage. In his defence, the Chinese Chamber of Commerce said that Chinese companies are paying lower wages than the national minimum, but the minimum set by the bureaucrats in the national capital did not consider local conditions. The Chinese companies providing job opportunities for the communities suffering from extremely high unemployment conditions, can just manage to barely break even, often operating without any profit. The local workers agree with the lower compensation levels, preferring low-paid jobs than unemployment (the latter argument is verified by people from the local authorities and local media).

5.1.6 Sustainability of the Local Economy After a Mine is Closed

The city council of Chambishi, Zambia, raised the issue of sustainability around the mining activities as they face the exhaustion of the mine. They are concerned that when the last traces of copper ore are mined nothing will be left for the future in terms of resources. This was a very important issue for all the communities that depend on the exploration of non-renewable natural resources. They felt that it should be the responsibility of the host national/local government, as well as the investors, to offer some sort of compensation that would enable solutions for the future survival and well-being of the local community.

This demand went well beyond mining site restoration, which is considered a basic requirement not open for discussion or negotiation. The city council officials in Kitwe and Lusaka brought up the need for Chinese investors to launch independent funding mechanisms to be set up by them in partnership with the host state, that would be capitalized through royalties from mining operations and managed separately from tax revenues. These funds would help build up a savings account for the communities to use once the copper resources were exhausted. They would also invest in and help develop alternative, non-mining activities that could prosper and feed the communities. These ideas were inspired by similar financial instruments set up in other regions of Africa by the World Bank around the development of newly discovered oil fields.

5.1.7 Perception vs. Real Issues

Negative perceptions of the behaviour of Chinese investors by the local citizens of the host country are evident and mounting. The delegation left feeling that this is now a clear and growing problem that needs to be addressed urgently. Perceptions and real problems feed off of each other and aggravate each other. They can culminate in real barriers to operate and become obstacles for peaceful development.

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The TF found that there is no real definition on what is a “Chinese investment.” Investments coming from locally born Chinese natives, from newly emigrated Chinese, from Chinese natives of other nationalities, from owners with an Asian face, or all of above are considered “Chinese investment.” And there is not a real understanding of overall Chinese investment in the country. The discussions revolved around very superficial information as there are few statistics about China’s activities in those countries. None of the stakeholders met by the delegations provided any real hard data on how many Chinese companies were in the country, or about the total volume of Chinese investment. These include both the host country government agencies and Chinese embassy in Zambia’s case. A lot of comments were based on “hearsay” and the media fed on this.

When Filipino shop owners are seen as Chinese or when African workers sent by a Chinese contractor are viewed as Chinese, one has to ask what the perceptions are and what the real issues are. The TF found that what they were seeing on the ground differed considerably from what they had learned and read before the trip. Compared to the very negative image of Chinese investments portrayed by the media, the delegation’s experience was quite different. Granted this was but a sample of overall Chinese activity in the region. But still, the roundtable meetings did not confirm the very bad press given to Chinese activities in Zambia and South Africa. Whatever the case, the delegation did not encounter any overwhelming evidence that Chinese investors were behaving badly or that they were behaving very well, for that matter. A lot more investigation would have to be done to reach any valid conclusion on the issue.

What stood out the most from all the roundtable discussions, field trips, and other formal and informal conversations and discussions showed that perceptions were often motivated by xenophobic attitudes fed by the media. They were mostly due to huge communication gaps and clear intolerance from both sides. This is a result of differences in language, traditions, culture, social norms, and in the ways companies operate; and it certainly did not help that anyone with an Asian profile is automatically labelled as Chinese, whether they are Filipino, Indonesian, or Japanese.

As one digs deeper into the perception (or misperception) issues, one might consider the following reasons for their existence:

- **High expectations of Chinese investments:** China is an emerging economy still undergoing a rapid development stage. Chinese investors in Africa are not there on an aid mission “helping,” but are rather “investing for profit” in Africa. It does not offer aid as developed countries do, especially former colonial powers, but instead invests to generate mutual business and economic benefits. This message, however, may not be well received by the host countries. The complaint centres on the feeling that “a long-term ally, with a history of political aid is now changing its attitude as business interests are raised.” This question is quite deeply rooted in many South African and Zambian minds. It came up in the discussions in a number of ways. The higher the expectation was, the deeper the disappointment became.

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- **The way Chinese-led companies operate:** In China, workers are not organized as they are in many other parts of the world. Chinese companies are not accustomed to labour governance discussions and stakeholder dialogues when they are abroad either. They are in a deep learning curve as they start to interact with labour unions, community representatives, local stakeholders, religious groups, and environmental or other NGOs.

The idea of corporate social responsibility for Chinese companies is influenced by what they are used to in China, i.e., a big company is a small society that operates not only a business, but also schools, hospitals, kindergartens, transportation, and even shops. Therefore the CSR concept held by Chinese investors may be different from that of non-Chinese. It is important for them to know who exactly are the main actors involved in the society. One final point that is worth mentioning is the often-misperceived reason why Chinese owners are used to confining their own Chinese workers in their compounds. More often than not, this is a cultural habit that is common in China and in Africa it is further encouraged for security issues. Both are in terms of protecting the stock of goods and the installations as well as safeguarding the well-being of the workers. From an African point of view, this is perceived as slave living conditions and totally unacceptable in terms of workers' rights.

- **Lack of investor preparation prior to moving to Africa:** Stakeholders and Chinese companies often mentioned that the Chinese investors arriving in Africa were generally badly prepared, poorly trained, totally unsupervised, and quite free to do whatever they wanted when they move to Africa. The roles of related ministries, agencies, financial institutions, industry associations, and embassies have all been mentioned as lacking in this respect.
- **Too much top-down, not enough bottom-up relationships:** The most visible and important ODI activities from China are undertaken mostly by SOEs. The negotiations are carried out on the basis of an SOE-to-SOE dialogue. Other times the dialogue is SOE to host government. In any case, these negotiations rarely involve participation with the stakeholders at the grassroots. They are rarely consulted and therefore their real interests are rarely taken into account. The delegation received many complaints about the lack of transparency around Chinese investment decisions in their communities. They blamed their own governments for that as much as the Chinese SOEs.
- **Being a latecomer into already divided markets:** Chinese businesses moving into Africa are more often than not simply occupying spaces that are neglected by earlier players. Most of the very rich and rewarding business opportunities have already been taken. Chinese are tough competitors because they are willing to explore areas that others have chosen to ignore. The playing field is not level. Chinese are involved re-opening abandoned mine facilities, squeezing resources out of sites considered "exhausted" by previous investors, picking up the pieces and investing in sunset industries, and recycling abandoned sites and producing new service industries. This is the reality of Chinese investment and it is not only profitable, it often makes a positive contribution to the host societies.

Unfortunately, Chinese investors are not actively communicating these benefits so only one side of the story is published by the media.

- **Communication gaps:** There seem to be very serious and large communication gaps, a traditional problem with new Chinese emigrants. Language barriers have been mentioned and observed many times. Some of the top managers in Zambia do not speak English, even after 10 years in Zambia. One can only imagine how difficult it is to establish some sort of dialogue and cultural exchange between the communities if they are unable to exercise basic communication. Chinese managers are often unable to speak with their subordinates, thereby requiring unproductive translators and creating much misunderstanding. Another point that came up in the discussions was that Chinese ODI companies did not make any significant effort to participate in local associations, whether industrial, cultural, religious, or even sporting groups. The local community representatives complained a lot about this apparent “distance” that the Chinese maintained in their social relations with the community.

African communities are very sociable by nature. In Africa it is important to partake in social life. The people are generally good humoured and open to celebrations of all kind. They share their goodwill and friendship in festive times. Over the years, African people have developed great events to celebrate their various special cultural moments. So have the Chinese expatriate communities. Yet they do not mingle. Several roundtable participants mentioned the fact that they wished for more cultural exchanges and believe that a better chemistry would be developed between the various communities if they understood better their national days and related celebrations. The Africans in general expressed their frustration at the lack of efforts for better social integration with the Chinese communities. It was pointed out that the traditional good luck dragon sculptures and paintings placed on Chinese homes were wrongly perceived by the local populations as “protective demon snakes” used to scare away unwelcome African visitors.

- **Media issues:** the different media practices used by Chinese and western media to tell their stories is another aggravating factor. Bad stories are common in western media. The Chinese also believe that the truth will ultimately come to the surface on its own. Therefore the final outcome is that negative reporting about Chinese investors is seldom countered by the Chinese subjects of the stories. The tradition in China’s culture is to avoid confrontation and not to respond immediately. In Africa this is considered a sign of submission and ultimately acceptance of guilt. If the aggressive attacks of the media and labour union representatives against Chinese interests are not contested they can result in an increase in poisonous and xenophobic anti-Chinese behaviour, which can unfortunately quickly develop into a much more serious and uncontrollable street reaction against the Asian foreigners.

One of the Johannesburg meetings arranged for the delegation in South Africa (with the KAGISO Media Group) involved a fascinating presentation of a historical perspective of the Sino-African relationship, by Melanie Yap, a

reputed scholar of Sino-African history. It was pointed out that while the first Chinese settlements in South Africa only occurred by the mid-17th century, the first recorded geographical map of Africa was produced in China in 1389. At this same meeting the delegation was presented with an innovative and interesting proposal involving a 24-hour cable TV channel idea that could be aired throughout the world describing the activities of Chinese FDI, ODI, and trade, coupled with documentaries about community issues and cultural programs that could be aired in several local dialects besides Chinese. This would have to be a Chinese-sponsored initiative which would be produced in parallel to the official CCTV channels and would be more targeted towards specific ODI host audiences, which could turn into a strong catalyst in bringing the growing Chinese communities in Africa closer to their hosts.

5.2 Key Opportunities

Based on their interactions with local Chinese and African stakeholders as well as other players in China, the TF delegation observed some positive trends within China that can help address China's ODI challenges.

5.2.1 MOFCOM – Sustainable Forestry Guidelines

Ministry of Commerce and State Forestry Administration had jointly issued two sets of guidelines in 2007 and 2009 to steer Chinese forestry companies' operations overseas with support from NGOs including WWF. The first Guideline for Chinese Companies on Sustainable Overseas Silviculture was issued in 2007. Then again in 2009, the National Guideline for Chinese Companies on Sustainable Overseas Forest Management and Utilization was issued. This marked a historical first of its type in the world as a government directs its companies to pursue sustainable forest management in their overseas operations.

The Guidelines, though not compulsory, set principles and criteria on environmental and social aspects including the definition of High Conservation Value Forest protection. It is considered a signal to Chinese companies, which seek to develop forestry investment opportunities abroad, that the Chinese government attaches importance to the sustainability issues of its overseas Chinese forestry developments and is taking proactive steps to help regulate these operations. This helps the Chinese government pre-empt complaints and queries on illegal timber products imported into China.

The WWF has supported the Chinese government in the introduction of these Guidelines, both for East and West African countries, and has conducted a field test of the Guidelines in Russia. With WWF support, the Guidelines have been translated into the Russian, French, and Portuguese thereby facilitating their acceptance by local agencies in the countries where Chinese companies invest in forestry. A very detailed explanation of the Guidelines in the context of Russia and Africa is being developed by Chinese experts with the support of the WWF.

5.2.2 Company Initiatives

Ten Chinese enterprises made the commitment on sustainable overseas forest management and utilization under the framework set out in the Guidelines on Sustainable Overseas Forest Management and Utilization. These enterprises launched an initiative on sustainable overseas forest management and utilization during a Shanghai meeting in June 22, 2011. Representatives of these 10 Chinese firms signed a declaration committing them to comply with the Guidelines as well as the laws and regulations of the host countries. Their aim is to promote the sustainable management of natural forest resources, the protection of High Conservation Value Forest resources, the conservation of wildlife and maintenance of biodiversity, as well as the protection of local and indigenous communities' rights in host countries.

Guideline demonstration field sites in Xinlin Zabaykalsky, Russia, and COFCO Sunly in Gabon are implementing the Guidelines. They shared their lessons and experiences on overseas forest management with over 70 participants from SFA, Gabon Ministry of Water and Forests, USAID; Chinese enterprises such as COFCO Sunly and Nature Flooring; multinational companies such as IKEA and UPM; and China forest associations and NGOs. The coordinator of the Congo Basin Forest Partnership (CBFP) confirmed that the government of the Democratic Republic of Congo has decided to support the implementation of the Guidelines in their country.

Ms. Zhang Yanhong, Deputy Director-General of Planning and Finance Department, State Forestry Administration (SFA) of China, remarked that the Guidelines enacted by SFA and the Ministry of Finance are designed to help direct Chinese companies to pursue sustainable forest management in their overseas operations. China as an internationally responsible developing country had made, and will continue to make, efforts to mitigate the deforestation and degradation of global forest resources. China is willing to actively cooperate with other countries to jointly promote environmental sustainability and the governance of resource wealth for long-term benefit. These types of proactive initiatives should be extended to other resource-based economic sectors in which China invests, and widely disseminated through a positive information campaign that will help expand and improve the image of the country.

6. Conclusions

6.1 Lack of reliable information: Other than in some specific sectors of South Africa's economy, there is very little reliable information, data, and statistics about Chinese ODI and trade. China is South Africa's most important trading partner and it is now necessary that a serious and reliable database be established. Such numbers can help people better understand the reality of China's role in the local economy and support a better information campaign to reduce the misrepresentations and bad press being produced.

The case for Zambia is even more acute as the country is still just starting to build its institutions and has other more pressing needs to attend to. Nevertheless, a concerted effort to build more transparency and better bottom-up communication will facilitate the improvement of the relations between Chinese investors and local communities.

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The suspicions created by the media around the true intentions of Chinese investors can only be refuted with strong arguments based on real facts. These facts are there but must be assembled, measured, listed, and disclosed. China could help in this process by providing statistical data on its SOE operations in the country but the brunt of the data collection effort must come from third parties, such as the NGO community and multilateral institutions with greater credibility.

6.2 Chinese ODI is welcome: In all meetings held during this trip, it was quite clear that there was great receptivity towards Chinese investments, technology, and services. When these investments are made with an intent to stay for the long term, they are even more welcome. No one complained about Chinese capital coming to restore infrastructure, re-open mines, refurbish plants, convert abandoned sites to new uses, help restore and modernize hospitals, rebuild schools, and build industrial zones. During the trip, the delegates were surprised by the open and warm reception they received from all local people whether in South Africa or Zambia. That contrasted very much with the cold, discriminating and openly hostile attitude of the emigration officials at ports of entry in South Africa and especially Zambia.

6.3 Chinese ODI is very competitive and a real challenge to accommodate: Indeed, new competitors are always disturbing for the status quo. That is particularly true when they are fast, efficient, technically able, well-educated, and hard-working. Meeting the challenges associated with Chinese global investment is a phenomenon that is disrupting many markets, not only African ones. North American, European, and Latin American markets are also reacting to the new Chinese wave of investors, sometimes in unproductive and doomed protective ways, but other times through positive assimilation and constructive integration. The challenge will be very much reduced through cooperation, dialogue, and assimilation. That is the only way forward for both sides; Chinese and the host communities must build the dialogue together. The further apart these communities remain, the harder it will be on their respective societies.

6.4 China must make the first step: As new Chinese investors come into Africa to develop markets for their goods and explore their resources, they must also make the greater effort of extending their hand out to establish social links and cultural integration. They need to learn the language, open up their hearts and minds for a better social interaction, build trust-based common interests, and explore mutual cultural benefits. This goes traditionally against Chinese customs and habits, but their new role as a global player will only be successfully consolidated if they also learn to adapt better to the societies with which they have chosen to interact.

6.5 Learning to interact with foreigners starts at home: Once the new Chinese emigrant has landed in the host country and started up his business there, it is too late to prepare himself for a better social integration. He must be prepared for that at home, before he embarks on his or her foreign assignment. Local institutions in China must be prepared, funded, and trained to offer capacity-building to businessmen, academics, entrepreneurs, technicians, and others who decide to go to Europe or North America. The demands on the individual are much greater when he or she will be operating in environments that lack the institutional and law enforcement framework to operate in

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an equitable and sustainable manner. The TF delegates were constantly reminded in their meetings with African nationals that they expected Chinese investors to behave in an exemplary way when it came to social and environmental conditions, but were most frustrated in their expectations as they either did not understand their new friends or they were refused access to them.

6.6 China must be more involved in providing sustainability alternatives to the communities that are facing the exhaustion of their non-renewable natural resources: This issue was raised in all the discussions throughout the trip, but especially in the Zambian copper belt. The local communities want to know what China is ready to do to help these communities prepare themselves for the future when the mineral resources will be exhausted. Restoring environmentally damaged sites is not the issue. That is a given. The issue is how to build shared growth through the mining operations today. What the host communities want are solutions for alternative resource management; saving funds for future needs fed by revenue shares from current exploration; and alignment of interests between the investors and the stakeholders impacted by these investments. Some Chinese managers were well aware of these demands but were not able to offer solutions. The solutions must come from the investors, the banks providing capital, the host government institutions supervising these activities, and the local populations. The solutions are already in use in other mining and oil exploration sites so they only need a certain stimulus from the top to be designed and implemented. Such solutions would go a long way in mending many of the negative perceptions being disseminated around Chinese ODI.

7. Recommendations

The following recommendations are made on the basis of the findings and conclusions from the African trip:

7.1 Improve the quality and frequency of communications: Better communication with stakeholders is necessary to improve transparency and avoid misperception. It is imperative for the Chinese investors to be open and transparent with regard to corporate social responsibility issues. Skills must be well-developed to work together with the media, non-governmental organizations, trade unions, employees, local communities, consultancies, R & D institutions, and the like, in addition to government authorities in the host countries.

7.1.1 The media are in general critical of newcomers and later comers. Some media with stereotyped way of thinking can intentionally misinterpret good performance. The Chinese Chambers of Commerce and other pertinent trade associations should be encouraged and take proactive measures to fight against misperceptions and misinterpretations in an open and transparent manner.

7.1.2 As NGOs, trade unions, employees, and local communities are more independent and vocal than they are at home in China, they must be recognized as positive actors for sustainable and responsible investments. Both human and financial resources must be allocated to work together with such non-governmental entities rather than simply ignoring their concerns.

7.1.3 Chinese government (diplomatic, regulatory, and political), financial, and other institutions (media, R & D) should also take their respective share of responsibility to attain better communication levels. In particular, political, regulatory, and diplomatic actors should establish platforms for bilateral, multilateral, and stakeholder dialogues on issues related to perceptions, immigration/visas, rules, and CSR performance.

7.2 Invest in capacity-building: Stakeholders in host countries must be educated in order to participate fully and constructively in the life of the community. The investment recipient countries are non-Chinese speaking and, in general, lack the skills for technical and management positions. In this regard,

7.2.1 Both the Chinese government and investors should set up and increase student internships, scholarships, and technical training facilities for African students, company employees, and government officials. This should take place in Chinese educational establishments and Chinese company environments, such that they would be better equipped with necessary skills and understanding of the Chinese culture and language.

7.2.2 Training and research centres can be jointly established with local universities, research institutions, and Confucius Institutes.

7.3 Promotion of green investment by playing a leadership role. As a latecomer and large player, there are high expectations for Chinese investments, not only from the recipient country but from the global community as well. China has been taking a leading role in many aspects and, in the longer run, China has to bear its full slate of responsibilities:

7.3.1 Setting the rules and standards that are compatible with sustainability requirements at global level. The latecomers advantage in terms of advanced technologies and the institutions must be used to offset the latecomers disadvantages such as a lower grade of resources and higher expectations.

7.3.2 Providing guidelines and user-friendly information that all Chinese investors are able to access and follow.

7.3.3 Enforcing the implementation of rules and standards through regulatory measures for financial institutions and state-owned companies.

7.3.4 Setting up a sustainability fund. As minerals are depleted, part of the royalties must be set aside for ecological restoration and economic prosperity after the depletion of mines. This fund should be set up and managed jointly with host governments and local communities.

7.4 Capacity-building at home: Better preparedness is required from ODI players and traders at all institutional levels for the full integration into the host country society, business, and government.

7.4.1 Comprehensive and systematic understanding of legal, cultural, institutional, environmental, and regulatory environments before investment decisions are made.

7.4.2 Language-ready. Senior management and technical staff must be able to use local languages for communication. All the guidelines, company rules and manuals, and labels for equipments from China must be translated into local languages. Local technical and management staff must be trained for understanding of all the company rules and regulations.

7.4.3 Technological preparedness. In-depth feasibility studies must be well-grounded with regard to the technologies for employment, financial flows, and other constraints such as physical and institutional infrastructure.

7.5 Coordination with domestic and international green transformation. China's investment in Africa serves both green transformation for the host country and China's sustainability and global sustainable development aims.

7.5.1 Chinese government and companies should learn from and import host country institutions, technologies, and other experiences for promotion of green transformation at home in addition to raw materials and product.

7.5.2 Work together with other countries toward multilateral win-win investments. One example is investment in Africa with appropriate Chinese green technologies: solar water heating, small hydro, and rural household biogas digesters, for low-carbon development in Africa, with developed countries buying the resulting emission reduction credits.

7.5.3 Regulation and coordination for Chinese companies is also required to avoid inequitable competition among Chinese companies. Chinese enterprises and informal investors must be screened and registered with Chinese consulates before investments are carried out in the host country, so that those unqualified investors are excluded.

Appendix A-1 Itinerary for Field Trip to South Africa and Zambia

Roundtable Discussion on the Environmental and Social Impacts of Chinese Trade and Investments in Africa and South Africa, June 11–13, 2011

Date	Time	Venue	Programme (am session)	Facilitator
Sat 11 th June 2011	All day	Radisson Hotel	Free day for all delegates arriving.	
Sun 12 th June 2011	06h00-09h00	Radisson Hotel	Breakfast at the Radisson	
	12h30- 13h45	Radisson Hotel	Debriefing lunch, handing out programme content to delegates and general information session. Session will be facilitated by Mr Saliem Fakir.	Tour itinerary presented by Mr Abdullah Fisher and Programme content presented by Ms Lutske Newton.
	14h30-15h00	Cyriidene	Drive to Bruma Lake	
	15h00-16h00	Bruma Lake	Trip to Cyriidene highlighting Chinese business in Johannesburg. First tour is of Oriental City by This will be a walkabout for all delegates with informal discussions between traders and delegation.	Host: Erwin Pon, Chairman of the Chinese Association of South Africa; Oriental City Tour Guide: Rose Chen, Manager
	16h00-17h00	Cyriidene	Tour of Cyriidene, predominantly Chinese businesses and residents, Johannesburg's so-called Chinatown.	Cyriidene guide: Mr Chan, Chairman of the Cyriidene Chinese Association
	17h00 – 18h30	Cyriidene Restaurant	Chinese meal at the Fortune Garden	
	19h30	Radisson	Free time	
Mon 13 th June 2011	06h00-07h30	Radisson Hotel	Early breakfast	
	08h00-09h00	Conference room	Registration of guests. Stakeholders arrive with teas and coffees being served.	
	09h00-09h15	JSE 2 Conference room	Welcome and introduction	John Forgach
	09h15-09h25	JSE2 Conference room	Round of introductions	
	09h25-09h30	JSE2 Conference room	Setting objectives for round table discussions	
	09h30 – 10h00	JSE2 Conference room	Taking stock of Chinese investment and trade with Africa and South Africa.	Facilitator – Saliem Fakir
	10h00 – 10h30	JSE2 Conference room	Taking stock of the environmental impacts	Facilitator – Saliem Fakir
	10h30 – 10h45	Foyer	Short coffee break	
	10h45 – 11h30	JSE2 Conference room	Taking stock of the social impacts of Chinese investment and trade with Africa and South Africa.	Facilitator – Saliem Fakir
	11h30 – 12h20	JSE2 Conference room	Recommendations for enhancing the sustainability of Chinese investment and trade with Africa and South Africa.	Facilitator – Saliem Fakir
	12h200 – 12h30	JSE2 Conference room	Wrap-up and way forward.	John Forgach
	12h30 – 13h30	Foyer	lunch	

Date	Time	Venue	Programme (pm session)	Facilitator
June 13th	13h30-14h00	Foyer	Registration and tea/coffee	
	14h00 – 14h15	JSE 2 Conference room	Welcome and introduction	John Forgach
	14h15 – 14h25	JSE 2 Conference room	Round of introductions	
	14h25 – 14h30	JSE 2 Conference room	Setting objectives for roundtable discussion.	Facilitator – Saliem Fakir
	14h30 – 15h00	JSE 2 Conference room	Taking stock of Chinese investment and trade with Africa and South Africa	Facilitator – Saliem Fakir
	15h00-15h30	JSE 2 Conference room	Taking stock of the environmental impacts of Chinese investment and trade with Africa and South Africa .	Facilitator – Saliem Fakir
	15h30-16h00	JSE 2 Conference room	Taking stock of the social impacts of Chinese investment and trade with Africa and South Africa.	Facilitator – Saliem Fakir
	16h00-16h30	JSE 2 Conference room	Recommendations for enhancing the sustainability of Chinese investment and trade with Africa and South Africa.	Facilitator – Saliem Fakir
	16h30-17h00	Foyer	Tea/coffee and networking	

Afro-China Dinner and Discussion

18h00-18h30	Cocktails and canapés
	Welcome by Jiahua Pan, Chinese Co-Chair
18h30-19h00	Guest Speaker: Melanie Yap – ‘Caught in-between – the Chinese in South Africa, 1660-1994
	<i>Starter is served</i>
19h20-20h00	Presentation by Urban Brew Studios: Opportunities for enhancing the relationship between the peoples of China and Africa through the media
	<i>Main meal is served</i>
21h00	Word of thanks by John Forgach, International Co-Chair

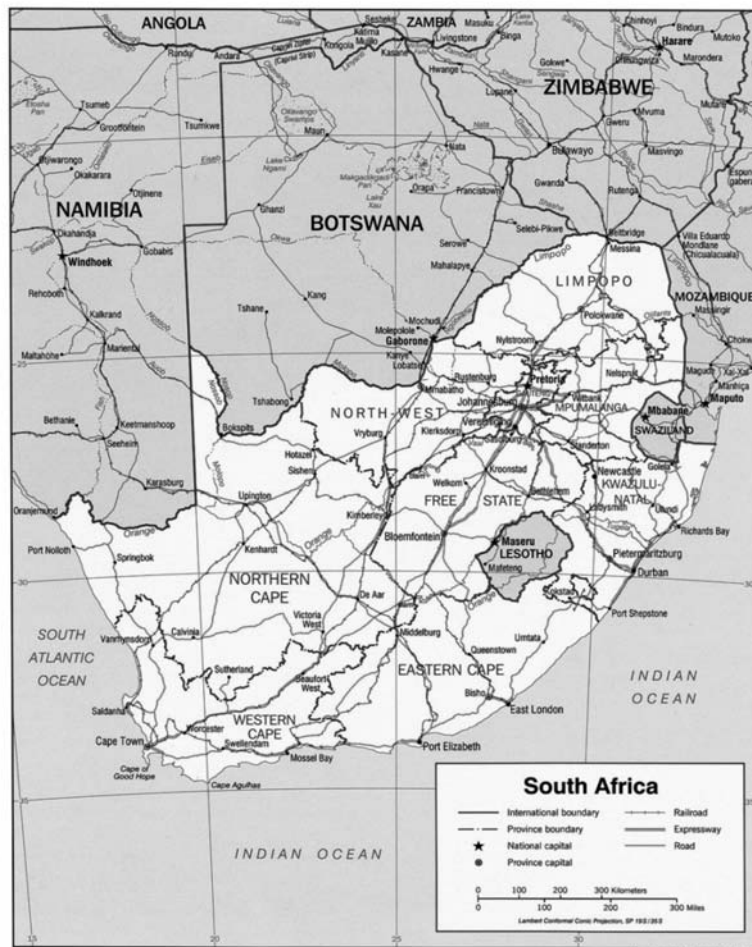
Meetings and Site Visits, June 14–16, 2011

Date	Time	Venue	Programme
Tue 14 th June 2011	10h00-12h30	Southern Sun Ridgwe	First set of talks with Financial Sector, Environmental sector, Policy makers and Trade Unions. Prof Yamba will be facilitating the discussions and will be our host. Approximately 25 people including delegation.
	12h30-14h00	Southern Sun Ridgwe	Lunch at the hotel
	14h30-16h30		Visit to the Chinese Embassy
	16h30-18h00	Lusaka airport	Departure to Lusaka airport
	18h00-18h45	Lusaka airport	Flight to Ndola. Please take small carry-on bag as there are no overhead compartments, it's a short, warm, bumpy ride.
	18h45	Ndola	Arrive in Ndola. This is a small airport so no check points.
	18h45-19h00	Ndola	Transport to Mukuba Hotel. This is a three star hotel with basic rooms but clean and comfortable. The hotel is five minutes from the airport.
	19h00-19h30	Ndola	Quick change to get ready for dinner.
	19h45	Michael Angelo restaurant	Dinner in town
	21h00	Mukuba Hotel	Return to Mukuba Hotel
Wed 15 th June 2011	06h00-08h30	Mukuba Hotel	Breakfast
	08h30-11h30	Luanshya	Drive to Luanshya, site visit.
	11h30-12h00	Kitwe	Drive to Kitwe
	12h00-14h00	Sherbourne Lodge	Check into the Sherbourne Lodge and have lunch at the lodge.
	14h00	Kitwe	Drive to Kitwe mines
	14h20-16h30	Kitwe	Site visit
	16h30	Sherbourne Lodge	Return to lodge
	16h30-onwards	Sherbourne lodge	Free evening.
Thurs 16 th June 2011	06h00-08h00	Sherbourne lodge	Breakfast
	08h00-11h00	Sherbourne conference room	Stakeholder meeting in Kitwe.
	11h00 to 13h00	Kitwe	Check out of lodge and drive to airport.
	13h00-15h30	Kitwe airport	Direct flight to O.R. Tambo, Johannesburg
	16h00	O.R. Tambo	Delegates collected from airport
	16h30	Radisson	Check into hotel and free for evening
			<i>Please note that 16 June is a public holiday in South Africa. It is known as Youth Day and commemorates those youth that died during the Sowetan uprisings in 1976 whilst protesting against Afrikaans being used as the medium of instruction in schools.</i>

Field visit to Newcastle, KwaZulu-Natal

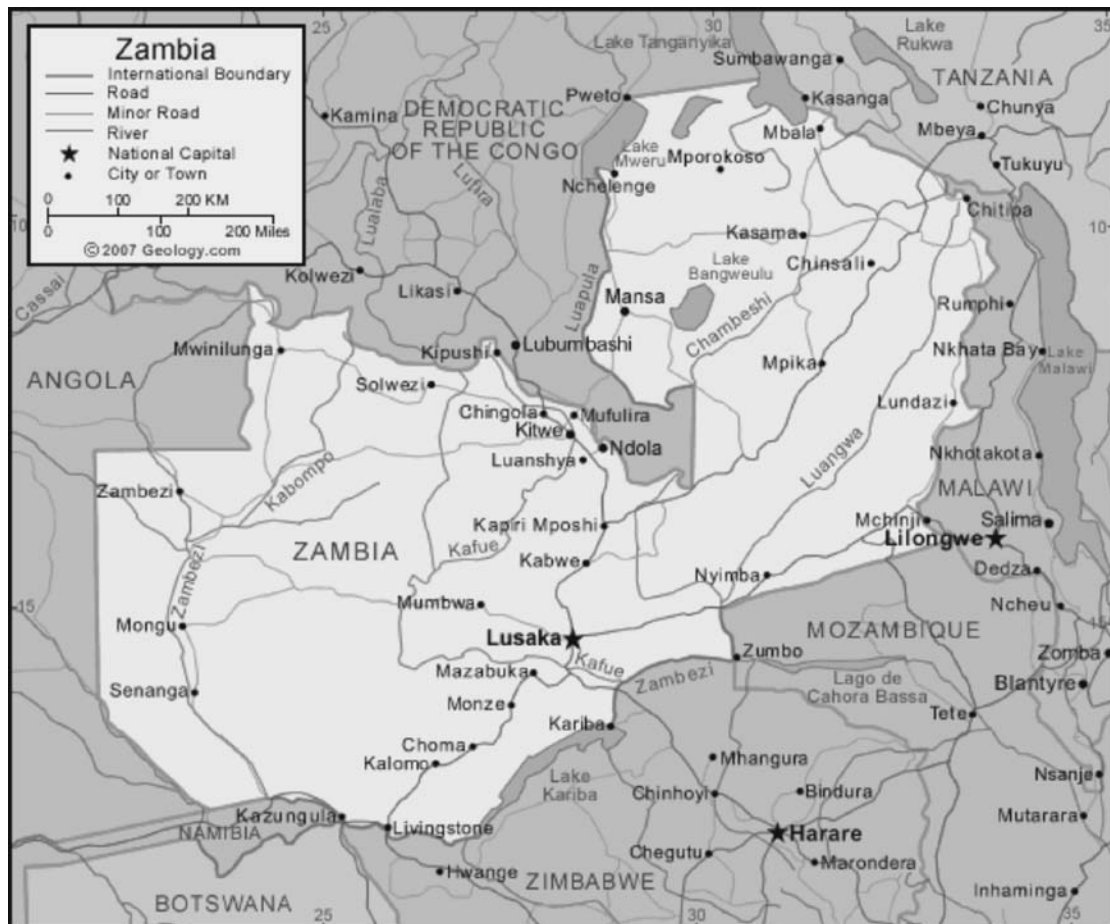
Date	Time	Venue	Programme
Friday 17 th June 2011	07h00	Radisson Foyer	Full delegation departs for Newcastle. This will be by road in a 13 seater Toyota Quantum. It's a 3 hour drive and refreshments will be arranged for the trip.
	10h00	Newcastle	Arrive in Newcastle
	11h00	11h30	Meeting with the Newcastle Local Municipality, Ferdie Alberts, Director: Economic Development, Newcastle Municipality
	11h30 -13h30	Site visit	Site visit: Sen li Da Chemical Fibre Company: Frank Fang, Manager
	13h30 -15h00	Restaurant	Lunch
	15h30-17h00	Offices	Meeting with Newcastle Chinese Chamber of Commerce: Alex Liu, Chairman
	17h00	Tramanto Hotel	Check into hotel
	19h00 -21h00	Tramanto Hotel	Dinner
Sat 18 th June 2011	06h00-09h30	Tramanto Hotel	Depart for Johannesburg
	10h00-12h00	Radisson Hotel	Debriefing

Appendix B-1 Maps of South Africa



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Appendix B-2 Maps of Zambia



Appendix C-1 Final Schedule of Meetings in South Africa and Zambia

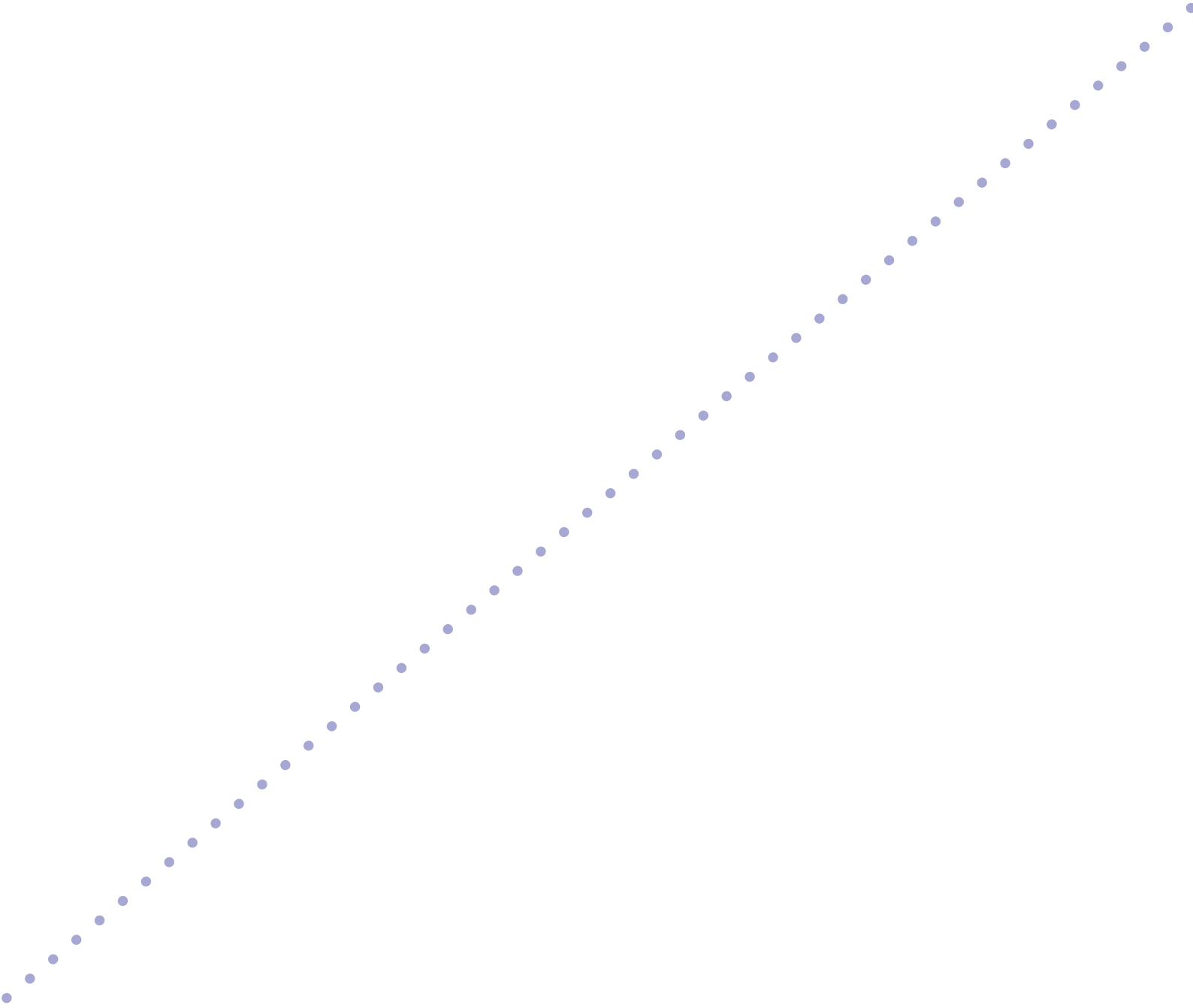
Time	Venue	Activity	Facilitator
<i>Sunday, June 12, 2011</i>			
12h30- 13h45	Radisson Hotel	Debriefing lunch, handing out programme content to delegates and general information session. Session will be facilitated by Mr Saliem Fakir.	Tour itinerary presented by Abdullah Fisher and programme content presented by Lutske Newton.
15h00-16h00	Bruma Lake	Trip to Cyrildene highlighting Chinese business in Johannesburg. First tour is of Oriental City. This will be a walkabout for all delegates with informal discussions between traders and delegation.	Host: Erwin Pon, Chairman of the Chinese Association of South Africa; Oriental City Tour Guide: Rose Chen, Manager
16h00-17h00	Cyrildene	Tour of Cyrildene, predominantly Chinese businesses and residents, Johannesburg's so-called Chinatown.	Cyrildene guide: Mr Chan, Chairman of the Cyrildene Chinese Association
17h00 – 18h30	Cyrildene Restaurant	Chinese meal at the Fortune Garden.	
<i>Monday, June 13, 2011</i>			
09h00-12h30	Sandton	Roundtable discussion with analysts, researchers, NGOs, and academics.	Facilitator: Saliem Fakir
13h00-14h00	Pretoria	Meeting with Mr. Tshediso Mantona, Director General, Department of Public Enterprises, and former Director General, Department of Trade and Industry.	John Forgach, Lin Li, Jiahua Pan, and Lutske Newton
14h00-16h30	Sandton	Roundtable discussion with representatives from organized labour, private sector, and public sector.	Facilitator: Saliem Fakir
16h45-18h00	Sandton	Telephone conference with Etienne Vlok, Head of Research, South African Clothing and Textile Workers' Union.	John Forgach, Jiahua Pan, Jianping Zhang, Saliem Fakir, and Lutske Newton
18h00-21h00	Sandton	Afro-China Dinner and Discussion with two guest speakers: Melanie Yap on the history of the Chinese in South Africa; and Gordon Metz on the role of the media in enhancing the relationship between Africa and China.	Master of Ceremony: Valli Moosa
<i>Tuesday, June 14, 2011</i>			
10h00-12h30	Lusaka, Zambia	Roundtable discussion with representatives of the financial sector and the environmental sector, policy-makers, and trade unions.	Facilitator: Prof. Yamba
14h00-16h00	Lusaka, Zambia	Meeting with the Chinese Ambassador of Zambia.	
<i>Wednesday, June 15, 2011</i>			
09h30-13h30	Luanshya	Site visit to CNMC Luanshya Copper Mines PLC mine in Luanshya including a visit to the tailings.	Facilitator: Prof. Yamba
14h00-16h30	Kitwe	Site visit to the Chambisi copper smelter.	Facilitator: Prof. Yamba
17h00-18h30	Kitwe	Site visit to Nonferrous China Africa Mining PLC.	Facilitator: Prof. Yamba
<i>Thursday, June 16, 2011</i>			
08h00-10h00	Kitwe	Roundtable discussion in Kitwe with representatives of organized labour, municipal officials, and academics.	Facilitator: Prof. Yamba
<i>Friday, June 17, 2011</i>			
11h30-12h30	Newcastle, South Africa	Meeting with Ferdie Alberts, Director, Economic Development, Newcastle Local Municipality.	Facilitator: Saliem Fakir
12h30-15h00	Newcastle, South Africa	Site visit: Sen Li Da Chemical Fibre Company.	Facilitator: Saliem Fakir
17h00-19h00	Newcastle, South Africa	Meeting with Alex Liu, Chairman, Newcastle Chinese Chamber of Commerce..	Facilitator: Saliem Fakir

The field trip ended with a comprehensive debriefing, which helped analyze individual delegates' impressions and findings and formulate an approach to the preparation of this field trip report.

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