



TAMING THE DRAGON

HOW CORPORATE GIANTS IN CHINA CAN BE EMPLOYED TO FURTHER ENVIRONMENTAL RISK MANAGEMENT

By

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Abstract

Industrial compliance with environmental, health, and safety (EHS) laws and regulations is essential to the prevention of further environmental degradation in China. In order to ensure compliance, every industrial factory must have an internal environmental risk management system. A major obstacle in achieving this goal is the lack of governmental and internal industrial enforcement of environmental standards. To identify how management systems can be encouraged and standards enforced, the authors of this article have spoken with professionals at financial institutions, multinational corporations (MNC), NGOs, international organizations, and other connected associations. Based upon this research and a series of case studies, the following have been determined to be the most promising solutions: government regulation, including governmental incentives; corporate enforcement of standards within supply chains; collaboration between government, corporations, NGOs, and international organizations; and training of environmental managers. This article will discuss how to encourage Chinese industries and corporations to implement EHS risk management systems, and how to encourage corporations to play an authoritative role in ensuring that these systems are executed and utilized throughout their supply chains.

Since financial institutions and MNCs have similar supply chains, this article analyzes the system through which environmental risk of financial institutions is regulated in China, under the Green Credit Policy (GCP), and in turn applies this analysis to corporations.

I. Introduction

Environmental degradation in China has reached a critical point. The international community has begun to put pressure on the Chinese government to take steps toward remediation and prevention of future harm to the environment. The Chinese government has as well, recognized the severity of the situation, and in response, created one of the world's most comprehensive systems of environmental laws and regulations. Enforcement of those laws, however, is inadequate, due in part but not limited to: corruption, lack of man power, lack of funding, vague drafting of regulations, cultural barriers, and the immense population and land area of the country. In an effort to remedy lack of enforcement, the Chinese government has targeted specific sectors, requiring internal implementation of environmental risk prevention mechanisms. With help from the International Finance Corporation (IFC), the Chinese government has regulated the financial sector. The Green Credit Policy (GCP) requires all banks and financial institutions to internally implement systems for environmental risk management of loans and project finance. Currently, the Chinese government has also proposed, but not implemented, an administrative rule pertaining to internal environmental management of major industrial sources. Although this would require similar internal environmental risk management systems as the GCP, enforcement within industrial sources will face different challenges. While internal implementation within financial institutions can be monitored through loan and project finance statistics, industrial environmental risk management monitoring is much more complex.

There are a much larger number of industrial sources in China than financial institutions and ensuring that internal systems are functioning properly will require increased monitoring resources and infrastructure. In order for this or a similar regulation to succeed, the Chinese government will need to take collaborative measures to ensure implementation. With an enormous presence in China and the international community, corporations must play a role in enforcement. The Chinese government can and must employ corporations as collaborative partners to ensure internal implementation of EHS management systems within Chinese industries.

II. The Enforcement Problem

Unlike in the United States where the U.S. Government is able to, in part, play the role of a third party inspector for compliance with environmental laws and regulations, in China, lack of allocated manpower and financial resources prevents the government from conducting adequate inspections. EHS law is highly regulated in China, but enforcement is very low.¹ Lack of enforcement is due largely to EHS not being a government priority; and this leads to a lack of resources and infrastructure.² China's large population makes it difficult for inspectors to reach every company on a consistent basis; penalty application is challenging to identify and apply; superficial numbers in monitoring reports often go unchecked;³ and enforcement often varies

¹ Interview with Peixiang Peggy Long, GE Power & Water, Water & Process Technologies, EHS Product Stewardship Manager-AP, in Beijing, China (Dec. 27, 2010).

² Telephone Interview with Qin Zhigang, EHS Director, North Asia, GE Corporate (Dec. 14, 2010). There have been only about 30 years of industrial legislation in China and while it is easy for the government to learn and legislate it is difficult to implement and enforce. *Id.* Often, the drive to meet specific provincial economic growth goals outweighs the need to comply with EHS laws and regulations.

³ *Id.*

drastically between local, provincial, and central governments.⁴ Consequentially, companies are not very motivated to comply with the law. In order for enforcement to be effective, the Chinese government must invest more money in resources and infrastructure and encourage local competition for compliance.⁵

III. Corporations in China

As of March 2009, there were over 9,717,700 enterprises (including their branches and affiliations) in China.⁶ Domestic enterprises accounted for 9,283,800, including 6,642,700 private companies, and foreign-invested enterprises accounted for 433,900.⁷ Experts expect that the number of MNCs that operate in China will only increase now that China is a member of the World Trade Organization.⁸

Traditionally, only those factories that emitted pollutants directly would be compelled to bear environmental responsibility; but with the development of societies, economies, and the global community, other institutions are now being held responsible for their actions—including banks, corporations, and multinational corporations (MNC). Localization has increased the influence of MNCs on China's environment. Since the market status of China drastically improved, MNCs doing business in China have adjusted their business strategies to include local

⁴ Peixiang Peggy Long, *supra* note 1.

⁵ Qin Zhigang, *supra* note 2.

⁶ State Administration for Industry and Commerce of PRC (SAIC), National Development Report for Market Players (First Quarter of 2009), http://www.saic.gov.cn/zwgk/tjzl/zhtj/bgt/200905/t20090511_47153.html.

⁷ *Id.*

⁸ Adam Briggs, *China's Pollution Victims: Still Seeking a Dependable Remedy*, 18 Geo. Int'l Envtl. L. Rev. 305, 320 (Winter, 2006); China was admitted into the World Trade Organization on Dec. 11, 2001. See World Trade Organization, China, Member Information, http://www.wto.org/english/thewto_e/countries_e/china_e.htm (last visited March 15, 2011).

products.⁹ Localization involves many sectors including research, production development, management, and marketing.¹⁰ “Through more active localization, multinational corporations can make full use of local operating resources, reduce production costs, achieve more market penetration opportunities, and control the market in a more comprehensive way.”¹¹ With such a large influence in China, it is in the government’s best interest to monitor and control how the actions of MNCs and domestic corporations affect the country and the industries they interact with.

The influence of MNCs on China’s environmental protection is certainly not purely harmful; in fact, MNCs have motivation to lobby for enforcement of environmental laws and regulations.¹² “Investment plays a role in improving China’s environmental practices” and “many [MNCs] choose the most environmentally sound technologies and undertake thorough environmental impact assessment voluntarily.”¹³ Almost all MNC’s and corporations consider their reputation one of their most important assets; they want to sell themselves to China and the global market, and therefore they comply with environmental laws and regulations.¹⁴ However, “while all [MNCs] are motivated in part by protecting their reputations, they also have a purely economic incentive to lobby China’s government for stricter environmental enforcement against their less-scrutinized Chinese competitors.”¹⁵ Foreign investors in China often complain that they cannot compete with local enterprises because the local enterprises do not comply with

⁹ Prof. Zhang Wei & Daragh Moller, *Localization: How Multinational Corporations Survive and Develop in China*, Beijing this Month (June 15, 2004), <http://www.btmbeijing.com/contents/en/business/2004-06/coverstory/localization>.

¹⁰ *Id.*

¹¹ *Id.*

¹² Adam Briggs, *China’s Pollution Victims: Still Seeking a Dependable Remedy*, 18 *Geo. Int’l Envtl. L. Rev.* 305, 319 (Winter, 2006).

¹³ *Id.*

¹⁴ Telephone Interview with Colleen Connor, Manager and Counsel, GE Water and Process Technologies, General Electric Company (Dec. 9, 2010).

¹⁵ Briggs, *supra* note 12.

environmental laws and no one enforces them.¹⁶ Presently, it is relatively much more expensive for foreigners to “do business in China and compete.”¹⁷ Additionally, MNCs have incentive to comply with environmental laws to please their stakeholders.¹⁸ “[T]o the extent that a business can increase its positive impacts (value-creation) or decrease its negative impacts, it will increase its value propositions, its competitive advantage in the market, and better manage its risk.”¹⁹

IV. Corporate Supply Chains

Corporations often contract with industrial facilities for parts or materials and therefore they are linked through a supply chain. When one company purchases parts or materials for manufacturing from another facility, that facility is part of their supply chain. To what degree corporations are responsible for their supply chain’s compliance with laws and regulations is a controversial issue; the fact, however, that they dramatically influence their supply chains is undisputed. The level of EHS that corporations and companies require of their suppliers dictates how much the supplier feels they must be in compliance to continue business. Additionally, the price at which corporations and companies purchase the products from their suppliers indicates how much environmental risk can be calculated into the sale. Since an increasing amount of corporations and MNCs contract with Chinese industrial facilities and considering their large presence in China, corporations are an underutilized tool for enforcing compliance with EHS laws and regulations within their supply chains.

¹⁶ *Id.* at 320.

¹⁷ *Id.*

¹⁸ “Stakeholders are any person or interest group, including governments, upon which the business has an impact or that has the power to impact the business.” Mark A. Buchanan, *Social Contract, Corporate Social Responsibility, Counsel and the ISO 2600 Guidance on Social Responsibility*, 52 *Advoc.* 17, 17 (October 2009).

¹⁹ *Id.*



V. Apple Case Study

To illustrate the affect corporations have on the EHS management of their suppliers the following is a case study of Apple Inc.'s presence in China. Apple has recently been cited as one of the most harmful MNCs in China. In a new report, issued as a collaborative work by several Chinese NGOs, Apple was criticized for many EHS violations, lack of transparency, and utter lack of accountability for its supply chain.²⁰ Apple's website states, "Apple is committed to ensuring that working conditions in Apple's supply chain are safe, that workers are treated with respect and dignity, and that manufacturing processes are environmentally responsible," in practice however, it seems that Apple does not follow through with these promises.²¹

Apple does not have any large-scale manufacturing facilities of its own and therefore, almost all Apple products are manufactured through its suppliers.²² Due to lack of transparency, Apple has made it nearly impossible to identify what facilities are actually its suppliers. Additionally, the corporation refuses in most instances to take responsibility for the actions of any of its known suppliers.²³ Although Apple has a legitimate claim to secrecy surrounding its research and development, when it comes to EHS, "these problems are not related to the creation of original technology and materials and given that they affect other people, they should not be treated as commercial secrets."²⁴ When confronted, it stated, "Apple has a long standing practice

²⁰ Friends of Nature, IPE & Green Beagle, *The Other Side of Apple* (Jan. 20, 2011) [hereinafter Apple].

²¹ Apple, *supra* note 20, at 5.

²² *Id.* at 23.

²³ *Id.* at 19; *see id.* at 20-21 ("In 2010, a coalition of 34 Chinese environmental protection organizations communicated on multiple occasions with 29 IT brands in order to promote solutions to pollution problems within the IT industry. During this nine month process, both foreign and Chinese organizations, as well as the poisoned workers, experienced firsthand Apple's ability to evade and deflect questions.").

²⁴ *Id.* at 23.

of not disclosing our supply base.”²⁵ It is hard not to suspect that Apple uses this secrecy “to avoid undertaking its environmental and social responsibilities.”²⁶

In the recently issued report, *The Other Side of Apple*, Apple’s suppliers were cited for many EHS violations including: lack of reporting and compliance with laws and regulations, use of dangerous chemicals paired with inadequate occupational protective gear, hazardous waste material run off, general pollution, negative affects on local communities due to pollutant emission levels, violation of privacy, violation of work hours, and suicides due to labor violations.²⁷ One example occurred in 2008 at Lian Jian Technology. This factory supplies touch screens to Apple and one day began using the chemical n-hexane to clean the touch screens. The supplier violated the *Law on the Prevention and Control of Occupational Disease* “by not alerting authorities or notifying its employees before they began using a toxic chemical. They also did not supply appropriate protection equipment to their workers.”²⁸ As a result, many of their employees were severally poisoned and hospitalized.²⁹

Considering that Apple does not manufacture most of its products at its own facilities, it is nearly impossible not to hold it responsible for the actions of its suppliers. Since Apple outsources most of its manufacturing processes, it “creates fierce competition among the enterprises, placing Apple in a strong position as a large buyer. If Apple’s purchasing only considered quality and price and not social responsibility, they would actually put pressure on the supply chain, making them sacrifice the environment, health, and worker standards to reduce

²⁵ *Id.*

²⁶ *Id.*

²⁷ *Id.* at 5-18.

²⁸ *Id.* at 8.

²⁹ *Id.*



costs and to win Apple's business."³⁰ Apple's products have become such a "hot commodity" that its power to set pricing could be said to deter suppliers from being socially responsible.³¹

The economist Lang Xianping explains as follows:

In the first half of 2006, Apple sales were 8.5 billion, an increase of 61%, and more than 10 billion dollars in revenue. Apple made so much money, now I ask you, how much did Foxconn³² make? With every Apple product Foxconn earns 4 US dollars, and Apple takes the other 99%. What does this 4 US dollars include? It covers electricity expenses, equipment expenses, and the cost of materials. Labor costs are calculated by Apple according to where Foxconn is situated – in Shenzhen, the minimum amount of payment is multiplied by each product's maximum working hours. Foxconn's decisions such as labor costs, raw materials, and manufacturing processes all involve decisions made by Apple.³³

Since Apple refuses to take responsibility for its supplier's actions or disclose information regarding its relationships with suppliers, it is easy to speculate that it could be taking "advantage of the lack of transparency in globalized sourcing . . . [in order] to externalize costs on the environment, the workers and the communities to maximize its super profits."³⁴

In order to illustrate the severity of Apple's violations, *The Other Side of Apple* report compared Apple to other international brands and to other IT brands operating in China.³⁵ In 2007, the Green Choice Alliance got together with MNCs to conduct independent investigations

³⁰ *Id.* at 29.

³¹ *Id.*

³² "From January to May 2009 Apple's largest supplier in China, Foxconn, had incidents whereby 12 employees successively jumped from buildings over a period of less than six months. . . . Random checks of 5,044 Foxconn workers by the Shenzhen Human Resources and Social Security Bureau showed that 72.5% of workers worked overtime exceeding the limit, with each worker working 28.01 more hours than the legal overtime limit." *Id.* at 15–16.

³³ *Id.*

³⁴ *Id.*

³⁵ See *Id.* at 24 ("March 22nd, 2007, twenty-one Chinese environmental protection groups jointly launched the Green Choice Alliance (GCA) and developed a green choice supply chain management system. The GCA works together with multinational companies to undertake independent investigations of their Chinese suppliers, as well as encourage these suppliers to make corrective measures and disclose corporate information. Nike, GE, Wal-Mart, Esquel, Unilever and a number of large enterprises are currently working together with the GCA, using the NGO's 'China Pollution Map Database' to strengthen the environmental management of their supply chain.")

of their Chinese suppliers and encourage them to take measures to correct EHS violations and disclose information.³⁶ Many of the MNCs have already taken action to remedy the issues found during the investigations, including Walmart, Nike, Esquel, GE, and Unilever.³⁷ Notably, GE has “already pushed 15 companies to issue statements and make improvements”; conducted “several rounds of communications with the NGOs to review third party audit standards and to discuss how its internal audit team could use the NGOs database to identify violations”; and plans to “check the NGO database before signing a new contract with a supplier.”³⁸ Additionally, thirty-four Chinese NGOs conducted rounds of communication and discussion with twenty-nine IT brands operating in China.³⁹ They found that Apple is not alone in its violations, however “the major difference between Apple and other I.T. brands is that none of the others were as evasive and resistant[; i]nstead, some leading I.T. brands have taken positive steps to promote transformation of suppliers, generating the much-needed motivation for pollution control.”⁴⁰

It is clear from this case study that corporations have a large impact on the actions of their supply chain. The actions of a corporation could, in fact, prevent a supplier from being able to take adequate measures to meet EHS standards. If corporations choose to take responsibility for their supply chain’s compliance with EHS regulations they can play an important role in the future of China’s environment and the health of its people. The following section, a case study of General Electric’s (GE) work in China, illustrates how a corporation’s actions can improve EHS compliance.

³⁶ *Id.* at 24.

³⁷ *Id.* at 24-25.

³⁸ *Id.* at 5.

³⁹ *Id.*

⁴⁰ *Id.* at 26; *see also id.* at 26-28 (providing detailed information on other IT brands).

VI. *GE Case Study*

GE is an MNC that does an exemplary job of complying with and assisting in ensuring that its supply chain is in compliance with China's laws and regulations. Some examples of exemplary work with its suppliers include: consistent and continual audits of suppliers⁴¹; contractual obligation of compliance with suppliers⁴²; training and assistance⁴³; and collaboration with government, NGOs, International Organizations, and other MNCs.⁴⁴ GE states on its website that it is "committed to conducting . . . business in China successfully and ethically, holding our employees, our suppliers and our partners in China to the same rigorous standards we do wherever we do business."⁴⁵

GE has five million shareholders and is one of the most widely held stocks in the world. It is comprised of over 288,000 employees, has been in China for over 100 years, and employs "more than 11,000 people across 53 locations in greater China."⁴⁶ The corporation aims to be a "responsible member of the community" and is currently working with China's National Development and Reform Commission (NDRC) to "drive environmentally sound technologies in China including cleaner-coal power generation, renewable energy, water reuse and desalination, high-efficiency and low-emission aircraft engines and locomotives, energy-efficient lighting and

⁴¹ Telephone Interview with Cheng Ge, Asia EHS Leader, Power & Water, GE Energy (Dec. 19, 2010); Supplier Expectations, GE, <http://www.ge.com/citizenship/our-priorities/our-suppliers/supplier-expectations.html> (last visited March 15, 2011).

⁴² Qin Zhigang, *supra* note 2; Supplier Expectations, *supra* note 41.

⁴³ EHS Training Units Completed, GE, <http://www.ge.com/citizenship/our-priorities/our-people/health-safety/ehs-training-completed.html> (last visited March 15, 2011).

⁴⁴ Telephone Interview with Ellen Proctor, Senior Counsel–Compliance & Regulatory, Asia GE Corporate (Jan. 12, 2011).

⁴⁵ Doing Business in China, General Electric, http://www.ge.com/news/our_viewpoints/china.html (last visited March 15 2011).

⁴⁶ Telephone Interview with Michael Patenaude, Geologist, GE (Nov. 30, 2010); GE, 2009 Citizenship Report: Renewing Responsibilities, 7, *available at* <http://www.ge.com/citizenship/reporting/>.

power distribution.”⁴⁷ All GE suppliers are expected to protect the environment, “not adversely affect the local community[,]” and obey laws that “require them to treat workers fairly, respect freedom of association, prohibit discrimination and harassment, provide safe and healthy working environment, and protect environmental quality.”⁴⁸

Qin Zhigang, EHS Director, North Asia, GE Corporate, explains that the corporation makes it very clear in the supplier’s contractual responsibilities that they must meet local EHS requirements as well as some additional human rights requirements.⁴⁹ GE recognizes that provincial laws are often more stringent than the national laws and therefore suppliers must be in compliance with local laws and regulations.⁵⁰ GE in turn has its own set of requirements to ensure that EHS issues are properly addressed. If a local or national law is unavailable or does not exist, suppliers are required to fulfill the GE requirement.⁵¹ In all situations where there are conflicting requirements, suppliers are required to meet the more stringent one.⁵²

In order for a manufacturer to become a supplier for GE, they must undergo a strict review process to ensure that they are in compliance with or capable of becoming in compliance with all relevant EHS laws and regulations.⁵³ When a manufacturer is being considered, the facility is reviewed based on strict criteria, and if risky operations are identified, the facility is looked at more closely.⁵⁴ A supplier quality engineer (SEQ) conducts an EHS audit of each applicant facility in order to ensure proper compliance with EHS requirements.⁵⁵ In most

⁴⁷ Doing Business in China, *supra* note 45.

⁴⁸ Supplier Expectations, *supra* note 41.

⁴⁹ Qin Zhigang, *supra* note 2; Supplier Expectations, *supra* note 41.

⁵⁰ Cheng Ge, *supra* note 41.

⁵¹ *Id.*

⁵² *Id.*

⁵³ Colleen Connor, *supra* note 14.

⁵⁴ *Id.*

⁵⁵ Cheng GE, *supra* note 41.

situations, if a facility does not fulfill the required standards, they are given an opportunity to remediate the faulty operation.⁵⁶ If the facility is brought into compliance, the facility will be approved as a GE supplier, but will continue to face audits and reassessments on a variable schedule.⁵⁷ In 2009 GE assessed more than 2,600 suppliers and reassessed more than 1,750.⁵⁸ As a result of the assessments, it has required “thousands of suppliers to obtain permits, improve their environmental performance and come into compliance with law.”⁵⁹

The Supplier Responsibility Program, through which suppliers are approved after EHS audits, started in the 1990s but has evolved in the years following. Ellen Proctor, former Director and Counsel of GE’s Environmental, Health, and Safety Division in Asia, noted that it has been an evolutionary path and that there is no one size fits all structure for each supplier.⁶⁰ Although the auditing system has progressed to better handle the challenges of diverse suppliers, the corporation still faces many obstacles including supplier falsification.⁶¹ Recently, when a GE auditor conducted a site visit in China, all of the employees at the site were wearing safety glasses with tags on them. After conducting the audit and noting that all requirements were fulfilled, the auditor feigned leaving the facility and when he ran back in, the glasses were already off and back in a collection box.⁶² Other challenges mentioned by GE employees include: lack of a systematic approach amongst suppliers to ensure sustainable new development, large and complex supply chains, and low levels of training and leadership.⁶³

⁵⁶ Colleen Connor, *supra* note 14.

⁵⁷ Cheng GE, *supra* note 41.

⁵⁸ Supplier Expectations, *supra* note 41.

⁵⁹ *Id.*

⁶⁰ Ellen Proctor, *supra* note 44.

⁶¹ *Id.*

⁶² Michael Patenaude, *supra* note 46.

⁶³ Ellen Proctor, *supra* note 44.

GE has initiated several programs and projects in attempt to remedy these issues. First, GE holds an annual supplier summit that brings together leaders from all of the facilities that are contractual suppliers.⁶⁴ This summit facilitates sharing of information between suppliers, and allows GE to provide training to suppliers.⁶⁵ Additionally, GE brings in government representatives to inform the suppliers of new and proposed regulations.⁶⁶ Second, GE “spends significant time each year training both operations leaders and EHS professionals on how they can be more effective in implementing EHS programs.”⁶⁷ GE has collaborated with NGOs and other organizations to create self-sustaining training programs, most notably the Environmental Health and Safety Academy in Guangzhou.⁶⁸ Third, GE makes an effort to work with the government to share best practices and coordinate supplier requirements.⁶⁹ GE has learned through its work in China that collaboration is an important mechanism and that it is good business to know the regulators and the community in which you operate.⁷⁰

In the future GE hopes to help suppliers find more of a systematic approach to EHS management.⁷¹ In 2006-08, the corporation found that “improvements in the EHS and labor practices of . . . suppliers were most sustainable when they had management systems in place to monitor, measure and improve performance.”⁷² Thus in 2009, GE incorporated into its supplier assessment program, evaluation of suppliers’ management systems, including “whether there was a dedicated staff to oversee EHS and labor compliance.”⁷³ Colleen Connor, EHS Manager

⁶⁴ Colleen Connor, *supra* note 14.

⁶⁵ *Id.*

⁶⁶ *Id.*

⁶⁷ EHS Training Units Completed, *supra* note 41.

⁶⁸ Qin Zhigang, *supra* note 2.

⁶⁹ Cheng GE, *supra* note 41.

⁷⁰ Ellen Proctor, *supra* note 44.

⁷¹ *Id.*

⁷² Supplier Expectations, *supra* note 41.

⁷³ *Id.*

and Counsel for GE Power & Water, explains that GE has a very hands on approach and tries to have reporting through out the supply chain—from EHS manager to plant manager to MNC.⁷⁴ She notes that to whom the EHS mangers report is a very important part of any EHS management system, because the manager must at least report to an authoritative figure in order to implement change throughout the facility. She also noted that it is important to keep “environment” and “health and safety” management together because they are so inextricably interconnected.⁷⁵

By enforcing compliance with EHS laws and regulations throughout its supply chain, GE’s actions not only benefit China and the environment but also its own business. GE has built a valuable reputation for itself in China and has protected itself from environmental risk—including degradation of its own reputation within China and abroad.

Every project and activity a business engages in consists of environmental risk (the possibility of causing damage to the environment or consequences of non-compliance with environmental laws and regulations).⁷⁶ When a corporation’s actions cause serious harm to the environment, they face consequences. First, corporations face fines and mandatory remedial action based on environmental laws imposed by the State (these consequences range from initial sanctions to pollution charges and fines, being required to remedy the harm, or business license/permit revocation). Second, as citizens become increasingly aware of environmental regulations and legal methods for holding businesses accountable for their actions, businesses become more likely to face lawsuits where they may be forced to pay for their environmentally destructive actions. Corporations that assume high environmental risk may face issues of

⁷⁴ Colleen Connor, *supra* note 14.

⁷⁵ *Id.*

⁷⁶ Tang Shuang, *Study on the Principles of Risk Prevention in Environmental Law—dialogue between legal and science*, Higher Education Press, 14 (Aug. 2004).

solvency, bankruptcy, or dissolution; as well as damage to their reputation that could lead to a decrease in consumer interest and difficulty in obtaining qualified employees and national and international support. For corporations, contracting with suppliers that assume high environmental risk means that they will in turn assume high risk, and it is in the corporation's best interest to take all steps necessary to avoid assuming any risks. Consequentially, even if only taking into account the economic benefits, it is clear why ensuring its supply chain is in compliance with EHS requirements is a smart decision for GE or any corporation.

VII. How to Encourage Environmental Risk Management Systems and Employ Corporations to Ensure EHS Compliance within their Supply Chains

To preserve and protect China's environment and the safety of Chinese workers, industrial facilities must comply with EHS laws and regulations. Experts agree that in order to ensure compliance, facilities must implement internal EHS management systems.⁷⁷ As shown through the above case studies, corporations have a large influence over the industrial facilities they work with and the Chinese government therefore should employ corporations as collaborative partners to ensure internal implementation of EHS management systems within Chinese industries.

⁷⁷ While working with industrial facilities, ISC came to the conclusion that a main reason for low levels of compliance with EHS regulations is due to lack of sufficient EHS management. Interview with Matthew Degroot, Senior Program Officer, China, Institute for Sustainable Communities, in Montpelier, Vt. (Oct. 27, 2010). ISC convened a roundtable discussion with their multinational partners in an attempt to discover what the largest barrier is between companies that have proper EHS compliance and those that do not. *Id.* The main conclusion from the roundtable was that each company needed an "internal champion", someone in the company to handle EHS management who not only understands the technical requirements of EHS but also how to manage and why it is sensible to invest in proper EHS compliance. *Id.* In 2006-08, the corporation found that "improvements in the EHS and labor practices of . . . suppliers were most sustainable when they had management systems in place to monitor, measure and improve performance." Supplier Expectations, *supra* note 41.

The questions we hope to answer are: how to encourage Chinese industries and corporations to implement EHS risk management systems, and how to encourage corporations to play an authoritative role in ensuring that these systems are executed and utilized throughout their supply chains. The answers go beyond enactment of law.⁷⁸ In order to answer our questions, this article will first examine how the Chinese government has regulated the financial sector through mandatory environmental management systems for loans and project finance (the Green Credit Policy). And second, we will use analysis of the Green Credit Policy (GCP), case studies, and discussions with professionals to explain five proposed solutions to the lack of industrial EHS regulatory compliance in China: government promulgation of a national policy of mandatory internal EHS management systems in major industrial sources; government incentives; corporations as a hierarchical authority to enforce EHS standards; collaboration between MNCs, government, NGOs, international organizations, and industrial facilities; and training of EHS managers, facilities, and MNCs.

A. Analysis of the Green Credit Policy

The GCP is a regulation issued by the national government that requires Chinese banks and financial institutions to provide businesses and organizations that develop pollution control facilities or engage in ecological protection (through development of energy conservation mechanisms, green manufacturing, eco-agriculture, etc) with low interest rate loans in order to

⁷⁸ Ellen Proctor, *supra* note 44.

support environmental protection measures.⁷⁹ The historical and international source of the GCP is the Equator Principles (EP).

The Equator Principles is a voluntary international regulation,⁸⁰ aimed at developing and managing social and environmental risks related to project finance.⁸¹ Financial institutions that

⁷⁹ He Dexu & Zhang Xuelan, *Some Thoughts about Commercial Banks Carrying Out GCP in China*, Shanghai Finance, 12 (2007) available at, <http://dlib3.edu.cnki.net/kns50/detail.aspx?dbname=CJFD2007&filename=SHJR200712001>. The GCP was initiated when the People's Bank of China issued the *Notices on Implementation of Credit Policy and Promotion of Environmental Protection*, which set forth rules on how financial institutions were to implement national environmental policies. China State Council, *Notices on Implementation of Credit Policy and Promotion of Environmental Protection*, available at <http://www.chinaacc.com/new/63/69/110/1995/2/ad594249401116259919555.htm>. In 2005, the State Council promulgated a series of regulations and policies relating to the idea of the GCP including *the Implementing Scientific Concept of Development for Promoting Environmental Protection*, in which the government proposed the establishment of a comprehensive policy system to support environmental protection—with a green credit policy explicitly listed as one of the means for achieving that goal. China State Council (2005), *Implementing Scientific Concept of Development for Promoting Environmental Protection*, available at http://news.xinhuanet.com/politics/2006-02/14/content_4179931.htm. Additionally, a number of departments and sections of the State Council (such as the People's Bank of China (PBC), the Environmental Protection Administration (now named the Ministry of Environmental Protection) and the China Banking Regulatory Commission), issued administrative rules and policies respectively. The administrative rules and policies can be found at the department's respective websites: www.pbc.gov.cn, www.cbrc.gov.cn, www.zhb.gov.cn. In July 2007, the State Environmental Protection Administration (today named the Ministry of Environmental Protection) (MEP) in collaboration with the People's Bank of China, and the CBRC, issued the *Opinions on Implementing Environmental Protection Policies and Rules and Preventing Credit Risks*, formally establishing the Green Credit Policy system in China. Ministry of Environmental Protection of the People's Republic of China, (2007), *Opinions on Implementing Environmental Protection Policies and Rules and Preventing Credit Risks*, available at http://websearch.mep.gov.cn/info/gw/huanfa/200707/t20070718_106850.htm. The GCP stipulates that “according to the state's environmental, economic and industrial policy, commercial banks, policy banks and other financial institutions should provide loans with low interest rates to support those enterprises or institutions which are developing, producing pollution control facilities or engaging in ecological protection and construction, development and use of energy, production of circular economy, green manufacturing and eco-agricultural, while these financial institutions also should limit the loans and provide loans with high interest rates to new projects of pollution enterprises as punitive measures.” Deng Yuwen, *Building GCP for the Energy Saving*, Shanghai Securities News (7th ed. July 20, 2007), <http://money.163.com/07/0720/02/3JQF2AJG00251RJ2.html>.

⁸⁰ The Equator Principles, available at <http://www.equator-principles.com/principles.shtml>.

⁸¹ Li Ruimin, *What are the Equator Principles*, International Finance, 5 (2007). The Equator Principles are voluntary guidelines that banks and financial institutions choose to sign on to and implement within their organization. About the Equator Principles, 3, http://www.equator-principles.com/documents/About_the_Equator_Principles.pdf. The EPs are a “financial industry benchmark for determining, assessing and managing social & environmental risk in project financing.” The Equator Principles, *supra* note 80. “Project finance is ‘a method of funding in which the lender looks primarily to the revenues generated by a single project, both as the source of repayment and as security for the exposure. This type of financing is usually for large, complex and expensive installations that might include, for example, power plants, chemical processing plants, mines, transportation infrastructure, environment, and telecommunications infrastructure. Project finance may take the form of financing of the construction of a new capital installation, or refinancing of an existing installation, with or without improvements. In such transactions, the lender is usually paid

adopt the EPs do so “in order to ensure that the projects we finance are developed in a manner that is socially responsible and reflect sound environmental management practices.”⁸² Adopting financial institutions do “not provide loans to projects where the borrower will not or is unable to comply with . . . [the] respective social and environmental policies and procedures that implement the Equator Principles.”⁸³

Each adopting financial institution individually implements the EPs, however the implementation is structured and guided through coordinated procedures and continually updated documents on proper operation.⁸⁴ It is in the adopting institution’s best interest to have a certain amount of coherence with other adopting institutions, in order to create a level playing field, to ensure one bank is not viewed as more strict in comparison to another.⁸⁵ Nevertheless, the

solely or almost exclusively out of the money generated by the contracts for the facility’s output, such as the electricity sold by a power plant. The borrower is usually an SPE (Special Purpose Entity) that is not permitted to perform any function other than developing, owning, and operating the installation. The consequence is that repayment depends primarily on the project’s cash flow and on the collateral value of the project’s assets.’ Source: Basel Committee on Banking Supervision, International Convergence of Capital Measurement and Capital Standards (“Basel II”), November 2005. <http://www.bis.org/publ/bcbs118.pdf>.” *Id.* at n.1.

⁸² The Equator Principles, *supra* note 80.

⁸³ *Id.*

⁸⁴ *Id.* (listing guidelines throughout the website on topics such as governance (<http://www.equator-principles.com/abouttheeps.shtml>) and best practices (<http://www.equator-principles.com/bestpractices.shtml>)). The guidelines for procedure are controlled by the EPFIs (adoptin financial institutions)—organized into various committees and led by a steering committee. About the Equator Principles, *supra* note 81, at 11 (“The current EPFI management structure is posted on the website at <http://www.equator-principles.com/mgmt.shtml>”). Each adopting EPFI internally implements the EPs based on the EPFI provided guidelines, the IFC’s “performance standards on social and environmental sustainability,” International Finance Corporation (IFC) “performance standards on social and environmental sustainability, <http://www.ifc.org/ifcext/sustainability.nsf/Content/PerformanceStandards> (last visited Dec. 9, 2010), and the “World Bank Group’s Environmental, Health and Safety general guidelines.” World Bank Group, Environmental, Health and Safety General Guidelines, <http://www.ifc.org/ifcext/sustainability.nsf/Content/EnvironmentalGuidelines> (last visited Dec. 9, 2010). EPFI steps for implementation are as follows: 1) Review and Categorization, 2) Social and Environmental Assessment, 3) Applicable Social and Environmental Standards, 4) Action Plan and Management Systems, 5) Consultation and Disclosure, 6) Grievance Mechanism, 7) Independent Review, 8) Covenants. The “Equator Principles,” 2–5 (July 2006), http://www.equator-principles.com/documents/Equator_Principles.pdf.

⁸⁵ Telephone Interview with Eliza Eubank, Assistant Vice President, Envvtl Risk Mgmt, Citigroup Inc., (Nov. 4, 2010).

procedures and management systems of each adopting institution do vary, as does the level of priority allocated to implementation of the EPs and the overall effectiveness of implementation.⁸⁶

Similar to the Equator Principles, the purpose of the GCP is to increase funding to enterprises and institutions that can promote environmental protection and energy efficiency, and to decrease funding to enterprises and projects that are wasteful of natural resources and harmful to the environment.⁸⁷ The GCP has three main components: first, “strengthening commercial banks’ management of environmental performance; second, “environmental information sharing between the environmental authority and [the] financial sector”; and third, “responsibilities for violation of the policy.”⁸⁸ By improving coordination of environmental protection initiatives, enforcing environmentally conscious granting of credit, and promoting environmental supervision, this rule is intended to increase emission reduction and prevent credit risk.⁸⁹ The GCP not only prohibits financial institutions from granting credit to projects that are not approved through environmental impact assessment or during environmental facility review, but also encourages banks to provide loans to environmentally friendly projects.⁹⁰

⁸⁶ *Id.*

⁸⁷ Yuwen, *supra* note 79. Under the GCP a “credit blacklist” of companies is established and continually updated. Those companies that do not meet the Ministry of Environmental Protection’s (MEP) environmental standards due to high-energy consumption, pollution, or environmental risk, are listed on the “credit blacklist” and banks are prohibited from lending to the companies until “the companies remedy their environmental violations and are cleared from the blacklist.” Adina Matisoff & Michelle Chan, *Friends of the Earth –US, The Green Revolution, Environmental Policies and Practice in China’s Banking Sector*, 9 (Nov. 2008), available at <http://www.banktrack.org/show/pages/publications> (citing Pan Yue, “SEPA Released a Report on the 1st Phase Implementation of China’s Green Credit Policy: Yue Pan Addressed the Barriers for the Green Credit Policy,” unofficial translation from original Chinese press release, Ministry of Foreign Affairs, 1 (Feb 13, 2008). The MEP drafts the “credit blacklist,” and passes it to the Central Bank for inclusion in its credit database and the China Banking Regulatory Commission (CBRC) for incorporation into banking policies and “compliance monitoring activities.” *Id.* at 10.

⁸⁸ Motoko Aizawa & Chaofei Yang, *Green Credit, Green /stimulus, Green Revolution? China’s Mobilization of Banks for Environmental Cleanup*, 19 J. of Env’t Dev. 119, 127 (2010).

⁸⁹ Ministry of Environmental Protection of the People’s Republic of China, (2007), *Opinions on Implementing Environmental Protection Policies and Rules and Preventing Credit Risks*, available at http://websearch.mep.gov.cn/info/gw/huanfa/200707/t20070718_106850.htm.

⁹⁰ *Id.*

The GCP regulation requires each financial institution to internally implement a management system to enforce its requirements.⁹¹ Since the rules of the GCP set more of a guideline than direct requirements, financial institutions must issue their own specific rules and procedures as a first step in operation before actual execution of the regulation.⁹² To assist financial institutions in implementation of the GCP, the China Banking Regulatory Commission (CBRC) issued *Guidance on Credit Issues about Energy Conservation and Emission Reduction*, to advise institutions on how to enact internal regulations.⁹³ These regulations include: work programs for risk response to high-consumption and high-emission enterprises, credit policy and operating rules, and specific procedures and rules regarding energy conservation and emission reduction.⁹⁴ Furthermore, the CBRC encourages the board of trustees of each bank and financial institution to designate specific and professional personnel to be in charge of the implementation of the GCP.⁹⁵ In order to strengthen the application of the GCP, the CBRC conducts periodic on-site compliance audits and asks all financial institutions to issue a quarterly report on their progress of implementing “environmental risk management and loan classification based on

⁹¹ See as example Industrial Bank, Annual Sustainability Report 2009, 69, available at http://www.cib.com.cn/netbank/en/Sustainability/Reports/Social_Responsibility_Report.html (establishing a sustainable finance division, which is responsible for managing social and environmental risks and promoting sustainable finance). The *Opinions on Implementing Environmental Protection Policies and Rules and Preventing Credit Risks* was just the beginning of the Green Credit Policy. Since 2007, a number of detailed rules have been issued by the State Council and its divisions, such as the *Notice on Further Promoting to Achieve the Targets of Energy Conservation and Emission Reduction in the Eleventh Five-Year Plan*, State Council, (2010) 12, and the *Proposals on Further Improving Support for Financial Services on Energy Conservation and Emission Reduction and Backward Production Capacity*. People's Bank of China and China Banking Regulatory Commission, (2010) 170. Since China has yet to achieve its targets for emission reduction and energy conservation, and credit risks related to environmental issues still exist, more regulation is necessary and likely to be promulgated under the GCP.

⁹² *Id.*

⁹³ China Banking Regulatory Commission, (2007), *Guidance on Credit Issues about Energy Conservation and Emission Reduction*, <http://www.cbrc.gov.cn/chinese/home/jsp/docView.jsp?docID=2008012930FCCC1E38353DB3FF2AEC3D4D73B000> (last visited Dec. 8, 2010).

⁹⁴ *Id.*

⁹⁵ *Id.*

environmental impacts.”⁹⁶ Mr. Ye Yanfei, Deputy Director of the Statistic Department at the CBRC, explained that the “CBRC partners with other governmental agencies and a number of international organizations, including IFC and Equator Banks to organize training and workshops allowing banks to exchange experience and gain exposure to international best practices in managing environmental and social risks. CBRC has set up a web-based information system on enterprise environmental performance. Most . . . banks can access . . . this portal and check information about their potential borrowers and even existing clients.”⁹⁷

Due to grave environmental degradation in China, criteria under the GCP must be strict in order to prevent further harm. Since all financial institutions in China are required to comply with the GCP, there is less fear of competition. Mr. Ye Yanfei explains:

[T]he key to successful adoption of a Green Credit Policy is to demonstrate how green lending increases profits and reduces risk, thus generating economic gain to lenders while simultaneously supporting better environmental and social conditions for the greater public. The Green Credit Policy not only responds to China’s demand for curbing pollution and energy consumption, but also appeals to the natural instinct of banks to generate reliable revenues from lending and minimize lending risks to enterprises that do not adhere to environmental regulations or that cause catastrophic incidents.⁹⁸

The GCP has “enroll[ed] the entire banking sector in the effort to improve environmental quality;”⁹⁹ however, it still faces obstacles before it can be a “success.” The main deficiency of the GCP is lack of adequate governmental enforcement. Due to the government’s “assigned high priority to economic development goals that may end up undercutting environmental targets,” little resources have been allocated to enforcing the GCP.¹⁰⁰ This has been accentuated by the

⁹⁶ Business Issues Bulletin, China’s Green Credit Policy, Experience and Lessons for Vietnam (Oct. 30, 2009), available at http://www.ifc.org/ifcext/mekongpsdf.nsf/Content/Business_Issues_Bulletin.

⁹⁷ *Id.*

⁹⁸ *Id.*

⁹⁹ Adina Matisoff & Michelle Chan, *supra* note 87.

¹⁰⁰ *Id.*

recent global economic recession.¹⁰¹ The “lack of disclosure on environmental issues makes it very difficult to analyze the real effectiveness of their policies, but some banks have indeed cut lending to polluting and energy intensive industries.”¹⁰² Thus far, the most successful implementation of China’s green regulations as well as international sustainability norms has been seen in China’s small and medium sized banks. This is likely due in part to having “fewer credit lines to the largest state conglomerates, and hence more capacity to be flexible and innovative.”¹⁰³

Regardless of the challenges the GCP still faces before reaching its potential, enactment of this regulation was a step in the right direction towards achieving increased sustainable development and environmental protection within China. The GCP can and should act as a model for other sectors, including industrial. The GCP has effectively made internal environmental management systems mandatory within an entire sector—including providing guidance and procedure and encouraging the hiring of specialized personnel; it was executed through collaboration of government entities as well as international and domestic related organizations; it provides training for implementing facilities and encourages information sharing; it appeals to the nature of the business to perpetuate existing needs; and through mandatory compliance it has reduced the sectors fear of being less competitive due to implementation of environmental risk mechanisms. Application of the purpose and procedures of the GCP could be effective in other sectors of Chinese society, and eventually could act as a

¹⁰¹ Alexandra Tracy, *Sustainability Versus Stimulus – Which Way for China’s Banks?*, Investment & Pensions Asia, http://www.ipe.com/asia/sustainability-versus-stimulus-which-way-for-china-s-banks_35767.php?categoryid=5788 (last visited Dec. 9, 2010).

¹⁰² *Id.* Lack of transparency of environmental issues refers here to lack of transparency by the national government, not necessarily the individual banks reporting to the national government.

¹⁰³ *Id.*

model to the international community. The industrial sector is one of the most environmentally harmful sectors in Chinese society and should be regulated, as was the financial sector.

Specifically, internal EHS management systems can and should play a critical role for both the financial and industrial sector's pursuits of environmental social responsibility. Experts agree that the industrial sector's low level of compliance with EHS laws and regulations is due in large part to a lack of adequate internal environmental management.¹⁰⁴ Many Chinese industries, however, are opposed to implementing additional environmental management procedures because they fail to see how the immediate benefits will outweigh the costs. Even those that have systems, refuse to update and ensure proper functioning because there is no authoritative oversight to encourage or enforce such application.

Through the GCP, the Chinese government has begun to employ financial institutions as a tool to mitigate environmental risk throughout supply chains. The risk management mechanisms that are mandatory for financial institutions under the GCP could be valuable tools for industrial supply chains as well and could play an important role in encouraging implementation of EHS management systems.

1. The Correlation Between Financial Institutions and Industrial Facilities

Financial institutions and industries are both specialized enterprises and therefore they should address environmental corporate social responsibility similarly. When faced with environmental issues, financial institutions try to reduce credit risk, and thus the Equator Principles and the Green Credit Policy arose. Similarly, industrial facilities take steps to mitigate

¹⁰⁴ See note 77.

operation risk and to comply with laws and regulations, and thus industrial management systems arose.

Financial institutions and corporations in China also have similar supply chains. Financial institutions provide credit to companies that in turn purchase parts, products, or materials from other facilities (the suppliers). Corporations both purchase parts, products, or materials from other facilities and receive credit from financial institutions; corporations and financial institutions, therefore, are often part of the same or similar supply chains. Just as financial institutions and corporations have similar supply chains, they have a similar impact on their supply chains. The level of EHS financial institutions require in order to receive credit dictates how much companies feel they must be in compliance to begin new projects. Thus, both corporations and financial institutions should be employed to enforce and/or encourage EHS compliance throughout their supply chains.

2. Benefits of Implementing Systems Similar to the EPs and the GCP

The reasonable undertaking of social responsibility by companies, including banks, will not only decrease operating costs and increase profits, but will additionally, in the long run, instill upon the enterprises that recognize and address their social and environmental obligations, a competitive advantage over those enterprises that avoid their responsibility. First, enterprises that address their social and environmental obligations will be prepared to handle unexpected risks, and therefore develop more sustainable business practices. Banks that fund projects that take into consideration social and environmental responsibility will in turn face less unexpected risks. Second, both banks and companies that recognize environmental and social responsibility will improve their reputation. A positive reputation is invaluable to banks and institutions alike.

Superficially, investing in environmental protection may initially decrease profits, but it will make an indelible contribution by increasing the value of intangible assets’, such as reputation, that may lead to potential business opportunities. Finally, banks and enterprises concerned with environmental issues will be consistent with international trends in support of sustainable development. This will allow for a broader international platform, and likely more national support as well.

It is important to note that while these systems are beneficial to the implementing companies, they are also significantly beneficial to the surrounding communities and the world. These systems will improve environmental protection immediately and lead companies to look to less harmful operation methods for future business. The next five sections will discuss how to enforce and/or encourage internal EHS management systems within industrial facilities and encourage corporations to play an authoritative role in enforcing EHS laws and regulations.

B. National Policy of Internal EHS Management Systems

In order to initiate mandatory internal management systems within Chinese industries—similar to those required under the GCP—the Chinese government should pass a national law that requires mandatory internal implementation of EHS management systems in all major industrial sources. The government should also require Chinese corporations to ensure that their supply chains are in compliance with EHS laws and regulations. There are many Chinese corporations and companies in China that have similar supply chains to MNCs, and while government incentives may be the only mechanism for encouraging MNCs to participate in their supply chain’s compliance, the Chinese government holds more authority over Chinese corporations and enterprises.

The Ministry of Environmental Protection proposed an administrative rule in 2008 entitled *Notice on Development of Pilot Work for the System of Enterprises' Environmental Supervisor*. If adopted, this rule would establish and develop enterprises' internal environmental management.¹⁰⁵ The goal of the proposed rule is to enhance enterprises' awareness of social and environmental responsibility, regulate enterprises' environmental management, and improve enterprises' environmental behavior.¹⁰⁶ Due to lack of transparency, however, it is unclear when, if ever, this proposed rule will be implemented, or whether further steps have been taken in its development.¹⁰⁷ EHS management systems are not a priority for the Chinese government; nevertheless such systems are essential to the protection of the Chinese people and their environment. The Chinese government should use its authority to regulate and enforce environmental management systems within industrial sources.

A law requiring a mandatory internal EHS management for major industrial sources should be promulgated nationally. The creation of such a law should be a collaborative effort, to ensure that the law addresses all issues necessary to guarantee that EHS management systems function properly and are not just for show. An important aspect of this and all EHS compliance management is data distribution and transparency.¹⁰⁸ First, the law should require that EHS management systems provide for monitoring and reporting to the government and the public. Second, the EHS managers should have authority to implement and correct problems within the

¹⁰⁵ Ministry of Environmental Protection, *Notice on Development of Pilot Work for the System of Enterprises' Environmental Supervisor*, available at http://www.zhb.gov.cn/info/bgw/bwj/200809/t20080923_129268.htm.

¹⁰⁶ *Id.*

¹⁰⁷ Email Interview with Qin Hu, Environmental Defense Fund in China (Dec. 6, 2010 and Dec. 13, 2010); Ministry of Environmental Protection of the People's Republic of China, Department of Environmental Protection Files, http://www.zhb.gov.cn/info/bgw/bwj/200809/t20080923_129268.htm. The authors of this article were unable to find additional information regarding this proposed rule and the possibility of its promulgation or further development.

¹⁰⁸ Ellen Proctor, *supra* note 44.

facility, not just to identify them.¹⁰⁹ The EHS managers must have a clear line of communication with the company owner to ensure that issues are reported and addressed.¹¹⁰ Additionally, the EHS manager and management system should not be independent of the facility.¹¹¹ The EHS manager should guide and train all employees and everyone at the facility should have EHS roles.¹¹² The manager should be responsible for communicating to the facility and its employees the benefits of the system and why the policies he or she implements are important and beneficial to the workers and the facility.¹¹³

Nevertheless, even if the Chinese government passed a law requiring internal EHS management systems in industrial facilities, the issue of enforcement of proper internal implementation would still be a challenge. For this issue, we provide three solutions: MNCs as a hierarchical authority, government incentives for both MNCs and Chinese industries, and collaboration.

C. Corporations as a Hierarchical Authority to Ensure EHS Compliance within their Supply Chains

MNCs and Chinese corporations can and should play the role of a hierarchical authority within their supply chain. Corporations seek good reputation, economic savings, and cooperation of their supply chain. They also face pressure from consumers with high consciousness of environmental protection.¹¹⁴ For these reasons, the ability of a corporation's supply chain to comply with EHS requirements is important to the survival of the corporation. Since

¹⁰⁹ Michael Patenaude, *supra* note 46.

¹¹⁰ *Id.*

¹¹¹ *Id.*

¹¹² *Id.*

¹¹³ *Id.*

¹¹⁴ Qin Hu, *supra* note 107.



corporations enter into contracts with their suppliers, they have the authority to require suppliers to meet certain standards. As Qin Zhigang, EHS Director of North Asia at GE explained, it is a carrot and stick approach. Corporations should refuse to work with companies that do not comply with EHS standards and in order for a facility to earn a contract (the carrot) suppliers should be required to meet governmental standards as well as the corporation's requirements (the stick).¹¹⁵

Vertically integrated factories do exist but not everywhere. Many corporations do not have ongoing relationships with their suppliers and instead choose suppliers based purely on the cheapest product. This however, is not a supply chain; it is instead simply a range of suppliers without long-term relationships. It is beneficial to China and to corporations to foster relationships between enterprises and their suppliers. This can be facilitated through collaborative efforts of corporations, NGOs, and international organizations; it will not, however, progress as quickly or find as much credibility without government influence.

D. Government Incentives

The Government should encourage EHS compliance by offering Chinese industries incentives to comply and MNCs and Chinese corporations incentives to ensure that their supply chains are in compliance. Government incentives should include: tax incentives, less time to wait on applications for permit approval, advanced notice of audits and inspections, subsidized training, and certification and recognition.¹¹⁶ In order for corporations to play an authoritative role within their supply chains and enforce environmental standards, they must foster

¹¹⁵ Qin Zhigang, *supra* note 2.

¹¹⁶ Colleen Connor, *supra* note 14; Ellen Proctor, *supra* note 44; Cheng GE, *supra* note 41; Telephone Interview with Susan Keane, Environmental Analyst, NRDC (Dec. 16, 2010).



relationships with their suppliers. The Chinese government should incentivize the creation of supply chain relationships and encourage corporations to only contract with facilities that will guarantee compliance with EHS laws and regulations.

First, the government should provide tax incentives to corporations that can prove their supply chain is in compliance. Second, if a corporation can show that they are in compliance and that their supply chain is in compliance with all EHS laws and regulations, the government should advance the permit requests of those corporations to the top of the pile; the permit would still undergo the same rigorous review, but it would be more time efficient for the compliant corporation.¹¹⁷ Third, corporations that show compliance should be given advanced warning of government audits and inspections. Again, the audits and inspections would be of the same caliber as noncompliant corporations, those that can show their supply chain is in compliance however would be given advance notice of and possibly fewer audits as time went on.¹¹⁸ Fourth, the Chinese government should work with universities and organizations to subsidize EHS management training.¹¹⁹ Those industries that participate in training should be given priority by corporations for contractual relationships. Finally, corporations and industries that can show compliance should be recognized for their achievements through certification—to positively impact their reputation within China.¹²⁰ Similar to the Voluntary Protection Program (VPP) under the Occupational Health & Safety Administration (OSHA) in the United States, the

¹¹⁷ Colleen Connor, *supra* note 14.

¹¹⁸ *Id.*

¹¹⁹ Cheng GE, *supra* note 41. See section VII.F. (EHS Academy as an example organization.)

¹²⁰ Colleen Connor, *supra* note 14; Ellen Proctor, *supra* note 44.



Chinese government should nationally recognize those facilities that achieve compliance with EHS laws and regulations.¹²¹

Corporations should also implement incentive programs within their supply chains to encourage compliance with EHS standards. Beyond contractual requirements, corporations can create preferred provider lists, blacklists, or gold star certification programs.¹²² If a supplier does well with compliance they should be put on a list as a priority supplier in line to receive the next contract from the corporation. Likewise, if a supplier does not comply, they should be put on a blacklist and denied contracts until they remedy their violations. In addition, corporations should provide certification or gold star recognition for good performance in order to positively impact the supplier's reputation within the community.

E. Collaboration

One of the most important solutions we have identified is collaboration between MNCs, NGOs, International Organizations, and the Government. By working together, the government can capitalize on the resources of MNCs, International Organizations, and NGOs collectively. NGOs and international organizations can help facilitate training and information sharing between MNCs; and MNCs can correlate requirements and inspections to help with issues of competition amongst suppliers, and make the system of compliance less complex for Chinese industries.

The main barriers keeping Chinese industries from complying with EHS laws and regulations and MNCs from ensuring compliance throughout their supply chains are lack of

¹²¹Occupational Health & Safety Administration, Voluntary Protection Program, <http://www.osha.gov/dcsp/vpp/> (last visited March 15, 2011).

¹²² Susan Keane, *supra* note 116.

information, unification, resources, and motivation. All of these things can be facilitated through collaboration. Charles Di Leva, Chief Counsel, Environmental and International Law Unit of the World Bank, recognized that the World Bank and the IFC can and should play a larger role as facilitators.¹²³ The Chinese government should utilize international organizations like the World Bank and the IFC as facilitators to encourage MNC workshops, collaborative research, and unification of standards.

The supply chains of industrial facilities are so long and complex that all willing and interested parties should be utilized to identify problems and unify solutions. When noncompliance is beneficial to a company because it gives them a competitive advantage over those who are in compliance, it is nearly impossible to convince the non-complying company to change their operations. By unifying standards, training, and best practices throughout the industrial sector, competitive pricing could include calculation of environmental risks. Nevertheless there are already many examples of collaborative work in China, and we will not see real change occur until collaboration is coupled with enforcement.

F. Training Systems

Many factory managers and workers do not understand how or why compliance with EHS regulations will improve their factory or their lives. Due to lack of enforcement, in order to achieve EHS compliance in China, it is not enough to ensure compliance through fear of consequences for lack thereof; factories must understand how compliance with EHS standards is good for them and good for their communities. The best way to help factories understand is

¹²³ Telephone Interview with Charles Di Leva, Chief Counsel, Environmental and International Law Unit, The World Bank (Dec. 15, 2010).

through training and information sharing. This article will discuss three training mechanisms as model examples: The Institute for Sustainable Communities and The Environmental Health and Safety Academy, the Natural Resource Defense Council's Clean by Design Project, and Business for Social Responsibility.

The Institute for Sustainable Communities (ISC) is an international NGO that works with communities to address “environmental, economic, and social challenges.”¹²⁴ While working with industrial facilities, ISC came to the conclusion that a main reason for low levels of compliance with EHS regulations is due to lack of sufficient EHS management.¹²⁵ ISC consequentially joined forces with several MNCs (including GE, Walmart, and Citi) and Lingnan College at Sun Yet Sen University to seek a solution to the problem. ISC convened a roundtable discussion with their multinational partners in an attempt to discover what the largest barrier is between companies that have proper EHS compliance and those that do not. The main conclusion from the roundtable was that each company needed an “internal champion”, someone in the company to handle EHS management who not only understands the technical requirements of EHS but also how to manage and why it is sensible to invest in proper EHS compliance.¹²⁶ In response to their research, ISC has partnered with many organizations (including USAID, MEP, Guangdong Economic Trade commission, and Guangdong Environmental Protection Bureau) to assist in the creation and establishment of an affordable EHS Academy in Guangzhou, China.¹²⁷

¹²⁴ Institute for Sustainable Communities, http://www.iscvt.org/who_we_are/ (last visited Dec. 8, 2010). In China, ISC launched the Guangdong Environmental Partnership program in 2007 and “aims to reduce green house gas emissions, improve public health, and increase environmental accountability” by working with industry, government, communities, and schools. Institute for Sustainable Communities, China, http://www.iscvt.org/where_we_work/china/ (last visited Dec. 8, 2010).

¹²⁵ Matthew Degroot, *supra* note 77.

¹²⁶ Matthew Degroot, *supra* note 77.

¹²⁷ The EHS Academy was launched in 2009 for the purpose of boosting “compliance with the Chinese government’s ambitious environmental, health and safety targets and standards for energy use and intensity.” Institute for Sustainable Communities, EHS Academy Flier. The Academy is an organization of its own that

The EHS Academy is unique within China because it is able to provide affordable training—unlike most other training programs which are much more expensive. This ability is due in part to funding from corporations such as GE, Walmart, Honeywell, Citigroup, Sabic, and USAID, and technical support from GE, Addidas Hewlett Packard, Business for Social Responsibility, and the World Resources Institute.¹²⁸ The MNCs that participate in the EHS Academy want to make changes in their own factories and within their supply chains but do not consider themselves experts on the topic so have found it is not cost effective to do it themselves.¹²⁹ The Academy is thus an excellent mechanism through which organizations and companies can work together to foster improvement in EHS management throughout China.

The Academy has created a profession within China—Environmental, Health, and Safety Manager. The Chinese government has approved the creation of the profession and once the textbooks are completed, the Academy will obtain national certification and will hopefully soon be able to allow other schools to teach the profession as well.¹³⁰ After the Academy

continues its partnership with ISC. Tour and Interview at EHS Academy with Wang Xiaohui, Executive Director, Lingnan- ISC Environment, Health and Safety Academy for Chinese Enterprises, Asia Wang, Environmental, Health & Safety Academy Manager, ISC, Sophie Xiong, Deputy Director of China Operation, US-China Green Energy Council, Graduate Student, Sun Yet Sen University & Phyla Lin, Marketing & PR Manager, Lingnan-ISC Environment, Health, and Safety Academy for Chinese Enterprises, in Guangzhou, China (Dec. 30, 2010) [hereinafter EHS Academy]. The Academy has 11 full-time employees and 80 temporary employees including 7–10 government officials and several MNC representatives. *Id.* So far the Academy has trained almost 2000 managers since the launch and certified 300. Matthew Degroot, *supra* note 77. There were 52 people in the first full graduating group and the second group is currently in the program. EHS Academy. The full program is 2–3 years and taught by professionals who undergo training sessions themselves. *Id.* Courses at the academy are offered in English and Chinese, in topics ranging from general environmental law (clean production, emissions management, health and safety, energy) to compliance with EHS laws and regulations. *Id.* The academy has a three-tier system for certification starting with an introduction to EHS management and leading up to courses on regulatory compliance, which is required for certification. Matthew Degroot, *supra* note 77. Participation at the EHS academy is approximately 70% from Chinese industries, 15% from multinational corporations, and 15% from government agencies. *Id.* The Academy staff also conducts off campus training at the request of MNCs and organizations. EHS Academy. The EHS Academy, in partnership with the Chinese government, has obtained provincial certification rights and is in the process of obtaining national certification for those who attend the academy. *Id.* They estimate that national certification could be a possibility within the year. Matthew Degroot, *supra* note 77.

¹²⁸ Matthew Degroot, *supra* note 77.

¹²⁹ EHS Academy, *supra* note 127.

¹³⁰ *Id.*

accomplishes its goal of creating the profession of EHS Manager, their next goal is to work with the government to create a certification process for EHS Management Systems within factories.¹³¹ Wang Xiaohui, Executive Director of the Academy, recognizes that EHS is not as high a priority for the Chinese government as the economy, but he has high hopes for the future and plans to push the government to move beyond talk to action.¹³²

While in China, this author was fortunate to be able to visit the Academy and sit in on a class. The class was engaged, asked lots of questions and interacted throughout with their professor. It was clear that the professor was imparting knowledge to his students not only of how to comply, but also of why it is important to comply in order to protect the environment and benefit their respective companies and organizations. After meeting with the Executive Director of the Academy, the Academy's Marketing Manager, and ISC's Academy Manager, it was clear that the staff is extremely dedicated to their work and that the Academy has a lot of support from MNCs, government, and international organizations.¹³³ Both ISC and the EHS Academy are admirable examples of environmental training in China that can and should be expanded upon.

Our second example, the Natural Resources Defense Council (NRDC), has been working in China to train Chinese industries on how to use best practices to ensure compliance with environmental laws and regulations.¹³⁴ NRDC's Clean by Design project focuses on training

¹³¹ *Id.*

¹³² *Id.* In addition to working towards certification for EHS Management Systems, the Academy hopes to work more in the community to help hospitals, schools, and local businesses. *Id.* The EHS Academy and ISC have received praise for their work in China and ISC and its partners are now working on replicating the academy in Jiangsu ("an industrial province along the Yangtze River Delta"). Institute for Sustainable Communities, EHS Academy Flier. The Clinton Global Initiative, The Clinton Global Initiative, <http://www.clintonglobalinitiative.org/> (last visited Dec. 8, 2010), and President Clinton have publically praised ISC's efforts, and the EHS Academy video was featured at the 2010 Clinton Global Initiative annual meeting. Environment, Health and Safety, Institute for Sustainable Communities, http://www.iscvt.org/where_we_work/china/article/ehs_academy.php (last visited Dec. 8, 2010).

¹³³ EHS Academy, *supra* note 127.

¹³⁴ The NRDC has 7-8 people on their environmental law team in China who work on assisting the building blocks of China's environmental law system and broadening the enforcement base for public interest environmental

Chinese industries on how they can best use environmental practices (such as greening of their buildings) to benefit the industries reputation and financial wherewithal.¹³⁵ The project focuses on the textile industry.¹³⁶

The Clean by Design project started when NRDC experts began considering the idea of how MNCs influence China and how China does not have or does not employ enough human capacity to enforce environmental laws.¹³⁷ NRDC wanted to identify what makes compliance with environmental laws vary from province to province.¹³⁸ They recognized that rich and powerful companies sometimes have more power than governmental environmental enforcement mechanisms and that a lot of MNCs “talk the talk” but don’t necessarily act on their intentions; their public philosophies are aligned with environmental protection, but their implementation is not.¹³⁹ In response, the project team approached some progressive companies (specifically Walmart) to identify why implementation was so hard.¹⁴⁰ The team found out several things about the reality of MNCs influence on their supply chains, including: MNCs have a lot of leverage over their direct suppliers but those further down the supply chain are hard to control because MNCs don’t have close relationships that far down; in fact, MNCs often don’t know or don’t want to know exactly where their products are coming from.¹⁴¹

enforcement. Interview with Alvin Lin, Project Attorney, Natural Resources Defense Council, in Beijing, China (Dec. 27, 2010).

¹³⁵ *Id.*

¹³⁶ Natural Resources Defense Council, Responsible Sourcing for Textile Industry, <http://www.nrdc.org/international/cleanbydesign/> (last visited March 15, 2011). NRDC team of experts has already “pioneer[ed] market-based approaches that will help solve global industrial pollution problems associated with apparel while improving the bottom line.” *Id.*

¹³⁷ Susan Keane, *supra* note 116.

¹³⁸ *Id.*

¹³⁹ *Id.*

¹⁴⁰ *Id.*

¹⁴¹ *Id.*

In response to these findings, NRDC decided to initially focus their project on training suppliers on first steps toward environmental risk management, that are good for the bottom line of the factory as well as the environment (such as: conserving water, energy, and materials).¹⁴² Some of the best practices they identified as most important were communication tools. Each factory they visited had many different certifications from different MNCs, NGOs, and government entities.¹⁴³ Lin Zixin, Project Manager with the Clean by Design project, explained that it would be greatly beneficial to Chinese industries and regulators if there were more unification of standards.¹⁴⁴

Results from the Clean by Design project so far include a case study; issuance of a document “recommend[ing] 10 practical, easy-to-implement best practices for textile mills that significantly reduce water, energy or chemical use and improve manufacturing efficiency”; and results demonstrating that the 10 best practices can help industries and MNCs reduce pollution and save money.¹⁴⁵ The NRDC Clean by Design team is continuing its “initiative to green the global textile supply chain” and they hope that the program can sell as both a cost efficient program as well as a program to save the environment.¹⁴⁶ Susan Keane, an Environmental Analyst at NRDC, says that MNCs could play a dissemination role in the program and that the program encourages companies to be explicit about the rewards that are provided for those suppliers that implement best practices.¹⁴⁷ She also, however, recognizes that more needs to be

¹⁴² *Id.* The NRDC team spent almost 2 years trying to understand the typical problems that Chinese industries face concerning EHS compliance. Interview with Lin Zixin, Program Associate, Natural Resources Defense Council, in Beijing, China (Dec. 27, 2010). The team found it difficult to just walk into the facilities so they worked with MNCs to gain access and understanding. *Id.* They went to over 30 factories and documented the best practices they found. *Id.*

¹⁴³ Lin Zixin, *supra* note 142.

¹⁴⁴ *Id.*

¹⁴⁵ Natural Resources Defense Council, *supra* note 136.

¹⁴⁶ Susan Keane, *supra* note 116.

¹⁴⁷ *Id.*

done and that often rewards and cost saving is not always enough to make industries understand that they have a problem.¹⁴⁸ For these reasons, the NRDC team is continuing their efforts to train Chinese facilities and look for solutions to greening the textile supply chain.

Our final example of valuable training in China is the Business for Social Responsibility (BSR). BSR is a non-profit organization that “works with its global network of more than 250 member companies to develop sustainable business strategies and solutions through consulting, research, and cross-sector collaboration.”¹⁴⁹ BSR works with companies, government, other NGOs, and international organizations on an array of project focused on encouraging sustainable business practices.¹⁵⁰ The organization facilitates cross sector collaboration based on topic and plays a unique position as regards the government, because their members work through them as “one voice.”¹⁵¹

In addition to numerous cross-sector collaborative training projects, BSR holds an annual conference on corporate responsibility that attracts from 1200–1400 people each year. The conference includes public training, plenary sessions, and break out sessions. Last year over 50 countries were represented at the meeting with about 70% from big MNCs and 30% from NGOs, academic, and government.

¹⁴⁸ *Id.*

¹⁴⁹ Business for Social Responsibility, <http://www.bsr.org/> (last visited March 15, 2011). The organization began 6 years ago and now has over 100 employees, 6 offices on 3 continents, and works in more than 70 countries. Interview with Wei dong Zhou, Country Director, Business for Social Responsibility, in Guangzhou, China (Dec. 31, 2010).

¹⁵⁰ Wei dong Zhou, *supra* note 149.

¹⁵¹ *Id.* There is no bar to membership but there are annual fees that vary based on size of the member company and annual gross revenue. *Id.*; BSR Membership, http://www.bsr.org/files/membership/BSR_Membership_2011.pdf. Some of the functions and programs BSR facilitates include: consulting, working with businesses to develop sustainable strategies and solutions; the BSR Energy Efficiency Program; the Electronic Industry Citizenship Coalition (EICC) program, an industrial citizenship collaboration including 30 MNCs; the BSR Training Institute; and research on electronic supply networks and water pollution in China. Wei dong Zhou, *supra* note 149; more information can be found at <http://www.bsr.org/en/>.



These are just three of the best examples of EHS training that is occurring in China. The programs are certainly making a difference, but with the enormous population in China, the affect is minimal. Training must be expanded throughout China in order to educate factory managers and workers on why compliance with EHS laws and regulations is important and how it is beneficial to their factory and communities. This expansion should be a collaborative effort, and the Chinese government should subsidize training programs and encourage participation.

VIII. Conclusion

The Chinese government must make EHS a priority and allocate the necessary resources to enforcing EHS laws and regulations. Due to China's enormous population, however, it is equally important that the work of corporations, international organizations, and NGOs are capitalized on in order to promote and ensure EHS compliance. MNCs and Chinese corporations can and should be employed as authoritative resources for enforcing EHS standards within Chinese industries. It is essential that the Chinese government utilize all of its resources in order to improve environmental quality and prevent further industrial environmental degradation.

Experts agree that internal EHS management systems are critical to successful EHS regulatory compliance within industrial facilities. Through the GCP, the Chinese government has made these systems mandatory for financial institutions. The government should make EHS management systems mandatory for industrial facilities as well. In order to enforce the implementation of management systems the government should employ and encourage corporations to oversee implementation within their supply chains. Since corporations have an increasingly large presence in China and the Chinese government needs and wants to encourage corporations to do business in China, it is likely that corporate presence will increase in the years

to come. For this reason, it is of the utmost importance that the Chinese government use corporations as partners for environmental protection, to ensure that at the same time economic goals are met, EHS standards are met and improved upon as well.

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