

**Insight from Outside:  
An international perspective on the role of collaboration  
in addressing environmental issues in China**

Lauren Armstrong, Lindsey Franklin, Laura Kuhl, Taylor Long, and Caitlin Matthews  
Environmental Studies Senior Seminar  
Middlebury College, Middlebury, VT  
May 2007

Submitted to Lila Buckley, Assistant Executive Director  
Global Environmental Institute, Beijing, China

## Table of Contents

<b>Introduction</b> .....	1
<b>Overview of Perspectives on Environmental Issues in China</b> .....	2
Climate Change.....	2
Energy Issues.....	3
Water Resources.....	4
Forestry and Biodiversity Issues.....	5
<b>Government, Business and Civil Society: International and Domestic Roles</b>	6
Government.....	6
Business.....	9
Civil Society: Academics, NGOs, Media and Public, and Social Entrepreneurs.....	11
<i>Academics</i> .....	12
<i>Non-Governmental Organizations</i> .....	12
<i>Media and Public</i> .....	16
<i>Social Entrepreneurs</i> .....	17
<b>Conclusion</b> .....	20
<b>Acknowledgements</b> .....	22
<b>References</b> .....	22
<b>Appendix A: Biographies of Interviewees</b> .....	25

## Introduction

China is changing, and the world is watching. As China propels itself into an era of unprecedented economic and industrial development, it will be faced with great challenges of how to accommodate an enormous population's demand for more energy, food, and material goods. As the world grows increasingly concerned with global environmental problems like climate change, China will face increasing outside pressure to limit its burgeoning environmental impact. China then may find itself in a tug-of-war between international interests and its own domestic interests. It will be faced with the difficult task of continuing to grow, while limiting the impacts of this growth. Jonathon Porritt, chair of the UK Sustainable Development Commission, believes that in terms of sustainable economic development, "...what's going on in China is quite simply the most important unfolding story anywhere in the world" (Porritt 2006). While domestic and international interests in China approach environmental issues from different perspectives both will be necessary in adequately shaping China's environmental future.

An analysis of international and domestic players in Chinese environmental action requires an understanding of the different limitations facing both. To frame these limitations, we borrow the concepts of *metis* and *high modernism* from James C. Scott's book Seeing Like a State. The term *high modernism* refers to the imposition of large scale, non-adaptive solutions to complex problems. Historically, *high modernism* is particularly relevant on the governmental level, as states have implemented solutions without taking the nuances of problems into consideration. To counter the concept of high modernism, Scott also introduces the idea of *metis*. *Metis* refers to local knowledge gained from experience, but Scott uses it to illustrate the ways in which local people have a unique ability to solve problems within their own context. Local people know the surrounding context for problems in a way that foreigners do not, and therefore are poised to solve them. Thus, these countering concepts provide a useful lens through which to evaluate and understand environmental problems and solutions in China.

In addition to the differing priorities of international and domestic actors, different sectors of society each have their own role to play in light of their unique capabilities. Different sectors are often thought to have competing interests, but the urgency of environmental concerns in China requires that we move beyond this limited point of view to seek new solutions through collaboration between sectors. Recognizing the interplay between sectors and the interests behind them is the first step towards enacting effective collaboration. This process requires an understanding of what each sector is capable of contributing, in order to see where the strengths of each can complement the strengths of others. In this report, we consider the following sectors: government, business, academics, non-governmental organizations, media and the public, and social entrepreneurs.

This report seeks to address two questions: What role does each sector of Chinese society play in addressing environmental issues? and What role can the international community play? Government, academics, NGOs, business, media and the public all contribute differently to environmental work in China, and the following research explores each sector's perception of their role and the role of other sectors. For our research, we conducted 18 interviews with Chinese and international experts from a variety of sectors. A list of interviewees and their affiliations can be found in the Appendix.

## Overview of Perspectives on Environmental Issues in China

China is a rising global power whose actions will increasingly influence the rest of the world. As a rapidly developing nation, China currently faces many environmental challenges. In our interviews, energy use, climate change, pollution, water use, and deforestation emerged as the most pressing concerns. The perspectives below offer insight into the priorities of environmental concerns among our interviewees.

### Climate Change

Through interviews, it became clear that while the rest of the world may see China as the greatest future threat to global climate, the consensus within China is different. Aimin Wang of the Global Environmental Institute explains that—for rural people especially—dealing with improving their standard of living is much more important than worrying about greenhouse gasses. Furthermore, Daniela Salaverry of Pacific Environment explains that global warming is the least prevalent issue at the grassroots level of Chinese environmental organizations as well. She emphasizes that these organizations are more concerned with protecting local resources like drinking water than worrying about global climate. Because coal emissions have serious tangible health risks, it is possible that pressure to curb these emissions will tangentially help curb China's contribution to climate change. While China's people may feel that they have more pressing environmental concerns than global climate change, China's role in the international community may still offer incentives to take significant regulatory measures.

China is the world's largest consumer and producer of coal, a major contributor of carbon to the atmosphere. While China was previously predicted to pass the U.S. as the world's largest emitter of greenhouse gases in the next decade, it is now expected to do so as soon as this year (McCarthy and Coonan 2007). With one-sixth of the world's population and a 10% economic growth rate, China has a huge potential influence on climate change. Currently, 70% of energy needs are met by burning coal, and plans are underway to construct many more large coal-fired plants (Bezlova 2007). The government is looking into carbon-capturing technology for its power plants, but Isabel Hilton, editor of ChinaDialogue.net, explains that the government is currently building plants that are not equipped to add this technology. Because these plants will last up to 30 years, even if clean-coal technology is developed in the next decade, it may be three decades before replacement of older technology is even possible. If sufficient measures are not taken to ensure that China does not emit as much carbon dioxide as developed countries did during the industrial revolution, there could be widespread and irreversible damage caused by climate change.

Concerns about climate change in China are beginning to surface already. The country's first ever "National Assessment Report on Climate Change," released in December 2006 predicted temperature increases of 1.3-2.1 °C by 2020. According to the report, climate change is predicted to aggravate the already severe water shortage in north China, worsen the already prevalent dust storms, cause landslides or mudflows in the area of the Three Gorges Dam due to heavy rainfall in the upper Yangtze River, increase floods from melting glaciers on Qinghai-Tibet plateau, and cause an increase in heart and blood diseases, malaria and dengue fever (World Watch Institute 2006).

China is acknowledging the necessity of addressing these predictions. In response to the findings of the National report, China has renewed its commitment to energy efficiency, and plans to reduce carbon dioxide and other emissions by 20% in the next five years (BBC News, February 6, 2007).

Following the release of the 2007 IPCC report, President Hu Jintao made the first public statement regarding climate change, saying that it was “not just an environmental issue but also a development issue.” China’s participation in CDM trading offers evidence that it is willing to take advantage of an emerging “green” market. The Clean Development Mechanism (CDM) allows developed countries to invest in clean energy projects and energy efficient technologies in developing countries as a means of fulfilling their commitment to reducing greenhouse gas emissions. There is a certain degree of controversy over the geographic distribution and types of projects being funded through the CDM, but for the most part, China has benefited greatly from the funding and technical advice provided by international companies and governments.

Heather McGray of the World Resources Institute points out that the government has made some bold statements about its commitment to curbing green house gas emissions, but it has not yet proved its willingness to regulate industry in any meaningful way. Within China, much of the blame for the current crisis is still placed on developed countries like the U.S. that have emitted the vast majority of greenhouse gases to date. This translates to pressure for the developed countries to lead the world in cutting emissions in an attempt to prevent the worst effects of climate change but not as much desire to address climate change within China.

## **Energy Issues**

While many see the protection of China’s natural resources as being crucial to protecting biodiversity, agricultural products, and usable water, the overarching threat is energy demand. As Isabel Hilton of ChinaDialogue.net explains, China has a huge growing demand for energy and a relatively small supply. Even more unfortunate, the most available resource—coal—is the most damaging and discouraged one. In Hilton’s opinion, the major issue with respect to minimizing the use of these coal resources is efficient energy use.

Hilton acknowledges the challenges of energy efficiency in China. She explained that efficiency mechanisms are harder to implement in China than in other countries such as the United States. Hilton went on to explain that in recent decades, China has reformed its markets to make them more free, which would encourage efficiency. The obstacle for efficiency now is that this process is not complete, so the current pricing structure still doesn’t encourage efficiency. Chinese government lies somewhere in between a completely planned economy and a completely market economy. There is not enough competition between power providers to provide energy in a more profitable and more efficient manner.

Hilton also expresses concern for the speed with which energy generating projects are being constructed. The Chinese government has expressed its interest in energy efficiency by setting goals, but there is no indication that it has begun to work towards reaching those goals. While new coal-fired plants are being constructed weekly, China is also aggressively building dams with a record of failures that result in large disasters. Heather McGray of the World Resources Institute explains that energy is probably the single most significant factor driving these dam projects. Hilton is not convinced that dams will work well to deal with their energy needs. Also, Tim Hildebrandt of the Woodrow Wilson Center points out that generating energy at an upstream location on a river simply means less energy potential downstream, which can lead to disputes over resource access across borders.

Shuang Liu of Greenpeace China’s energy campaign believes that focusing on renewable energy is

one of the best ways that China can address its future demands. However, she emphasized that this energy should come from wind and solar power, rather than hydropower because of the challenges associated with hydropower. Liu believes that efficiency measures can provide 10% of China's energy needs. Many interviewees' energy concerns focused on the speed and lack of caution with which China is moving forward.

## **Water Resources**

Many interviewees include water issues as one of China's top problems to address. Shuang Zhang of The Nature Conservancy in China even believes that water shortages may be China's single largest future problem to solve, posing a threat not only to biodiversity but also to a growing population that needs water for industry, drinking, and agriculture. China has made large steps to address this problem with the construction of the world's largest dam—the Three Gorges Dam—but organizations like the International Rivers Network (IRN) are protesting the building of so many large dams. Dam projects are an attractive alternative to coal plants because they help regulate access to water as well as generate emissions-free energy. Still, Heather McGray of World Resources Institute says that dams come at a cost. They displace people, submerge natural resources, and change the ecologic and economic benefits of the river. These trade-offs do not seem to deter the government. McGray adds that dams in China have historically been symbols of power because they control flooding. Furthermore, there is a sort of historical expectation that the government will provide this service for its people.

Heather McGray works in Yunnan province, where water may be the single most important social and environmental issue. The government in Yunnan seeks to take advantage of the hydropower potential of three rivers falling off of the Tibetan plateau. And because the northern stretches of these three rivers may be the last truly wild rivers in China, many NGOs have set out to slow or stop dam projects along these rivers. As the international community continues to apply pressure on China to curb its use of coal for electricity generation, hydropower and its controversial benefits will come into question.

Clearly, water issues in China have a geographic component, as some regions are more impacted than others. The abundance of water in the South is great, while the North is quite dry with many water shortages. The central government has now planned the North South water transfer project, a huge hydrological project to move water across the entire country. Projects like this emphasize the willingness of the central government to take drastic measures to quickly deal with these problems. Isabel Hilton of ChinaDialogue.net predicts that deforestation at the source of large rivers is going to seriously deplete what little potable water remains, especially in the northern regions, where the water is already running thin.

McGray also calls attention to difficulties associated with the pricing structure of water. Prices are different for industrial use and public use. Industry has more power to set prices. To combat this, rural areas have instituted rural water users associations that are democratically elected but they haven't functioned well so far, partly because they are not particularly powerful relative to industrial users. They still can't effectively negotiate for farmers with industry on pricing. As water resources continue to become scarcer, these issues will only become more exacerbated.

## Forestry and Biodiversity Issues

International and Chinese environmentalists alike are applying pressure on China to preserve its biodiversity against the threat of resource extraction and to enact more aquatic and terrestrial protection. Threats to China's biodiversity include population density, dams, water pollution, agriculture, over-harvest of resources, and road construction. Recently, the Yangtze river dolphin was declared to be effectively extinct as a result of habitat degradation, over-fishing, and shipping traffic (Whale and Dolphin Conservation Society 2006). This represents a loss not only to China, but to the entire world, so these issues may attract more attention and pressure from the international community.

Aimin Wang of the Global Environmental Institute points out that a major difference between addressing conservation issues in China and in the United States is that Chinese land cannot be privately owned. The Chinese government owns all of its land, so it cannot be bought or sold, but instead must be rented. Wang seemed fairly pessimistic about the long-term potential of many conservation projects because after they are finished the money runs out, the projects unravel, and the land returns to government control. All forest reserves must be designated by the government, but even then there are serious issues to face with respect to the local communities that surround these reserves.

There is evidence that Chinese people still hold a religion-based environmental ethic, especially in more Tibetan and Taoist areas. Shuang Zhang of The Nature Conservancy explains that many Tibetan temples have their own informal monitoring systems for regions that are still considered to be holy. Zhang suggests that holy mountains may be more effective nature reserves than ones with legislative protection because the local people protect the land themselves. He adds that many of China's highly biologically diverse areas are culturally rich as well, due to their limited access to more urban areas. In these areas, tapping into religious tradition may continue to offer the best protection.

While some rural areas show promise for self-motivated stewardship, issues of rural poverty and forest resource use in China are still very interconnected. Aimin Wang explains that many problems GEI seeks to resolve are centered on the reserves discontinuing the use of forest resources on which large communities have previously relied. Much of China's rural population uses surrounding forests for food, medicine, heat, and materials to make and sell forest products. Reserves cut off this access, forcing the poor to break the law and continue extracting forest products. Wang suggests that people need to learn to plant trees and herbs around the community and outside the reserves. They also need to find good markets for their products, so they can generate enough money to buy resources instead of having to illegally extract them from the reserve. According to Wang, many farmers know that it is very important to protect the local flora and fauna but they are also very poor, and they receive no government compensation for the resources that they are denied by the reserve. For the rural population of China, tangible resource availability is a central issue.

The Chinese government has acknowledged forestry and biodiversity as an issue. Shuang Zhang points out that the government is still the most powerful force for biodiversity conservation, spending much more money than even the largest NGOs. He adds that the government can hire thousands of people to work in the field, and recruit armed forces to enforce no-logging laws. Zhang is currently working on a joint project with the State Environmental Protection Agency to identify high priority areas for conservation in China. He seems hopeful that government agencies

will be willing to enact conservation as long as they have support from other organizations. Given the affluent international community's concern for charismatic megafauna, biodiversity and conservation may continue to receive government support, but as the loss of the Yangtze River dolphin reminds us, it remains to be seen what development sacrifices will be made for the sake of conservation.

### **Government, Business and Civil Society: International and Domestic Roles**

The following section examines the roles that the primary sectors in Chinese society—government, business and civil society—play in addressing China's environmental problems according to those interviewed. Due to the overarching role that the government plays in Chinese society, this section begins appropriately with a discussion of the respondents' perception of the government's role in environmental work. Next, it outlines the influence of the business sector and the effect of China's current rapid economic growth on environmental problems and solutions. Finally, it looks at the emergence of Chinese civil society and the role that academics, non-governmental organizations, media, the public and social entrepreneurs all play within civil society.

#### **Government**

Many of our respondents acknowledged that government is the central force shaping China's current and future environmental situation. The communist structure operates differently than do other government structures throughout the world, providing both strengths and limitations in addressing environmental issues. Discussions of the role of government were central to many of our interviews, because whether beneficial or limiting, the organization of the government is the basis for the way that other sectors operate. Understanding the role of government is crucial to understanding the roles played by other sectors of Chinese society.

Overall, both the strengths and limitations of the government stem from the reality that it is large, powerful and top-down controlled. The Chinese government exercises rights that place it in a more powerful position to affect change than governments in most other countries. However, this top-down power can also limit the speed, adaptability and efficiency of policies. In *Seeing Like a State*, James Scott notes that governments have historically sacrificed valuable local knowledge and management practices in exchange for a centralized and homogenized system of control. Known as high modernism, this approach has contributed to the destruction of countless natural resources throughout the world. However, the work of other sectors can help balance the high modernist tendencies of the government with small-scale approaches.

In discussing some of the limitations of government, Isabel Hilton of ChinaDialogue.net quotes a famous Chinese proverb from imperial times: "The sky is very high, and the emperor is very far away." She suggests that this idea still appropriately describes the difficulty of putting government policy into practice in China. Many systems are still in the throes of transition away from a completely socialist one-party state with little to counteract the state. Chinese society is now "half-reformed" whereby the non-state sector has certain powers and state has other powers. As Hilton points out, this is not a recipe for efficient government. She is pessimistic about the government's ability to achieve its goals, highlighting a long history of promoting large-scale hydropower projects which have a very poor record of success. In recognition of this, she and other respondents believe that one of the government's most important roles is to promote and encourage other sectors of

society to enact the changes that it desires but which it does not have the mechanisms to accomplish.

Our respondents overwhelmingly agree that the most important role that government plays is to set limits and enforce regulations. Hilton believes that despite its many inefficiencies, government is the only sector capable of enforcing large-scale change. This is particularly true in the case of issues that require organized and integrated policy, such as climate change. Many of our respondents believe that the Chinese government must play a significant role in addressing climate change, but must first come to terms with powerful and unruly local governments. Jennifer Turner of the Woodrow Wilson Environmental Forum on China notes that local corruption makes it difficult for the central government to enact widespread environmental protections and emissions standards for factories, power plants, and vehicles. However, she emphasizes that changing government policy will have a tremendous impact on controlling large issues like climate change.

In light of the failure of many efforts to address environmental issues through regulation, the Chinese government has increasingly focused its efforts on encouraging environmental protection in a way that does not significantly impede economic growth. In addressing forestry issues, Aimin Wang of the Global Environmental Institute saw encouragement of businesses to act in environmentally responsible ways as one of the primary ways that the government could promote a sustainable approach to environmental issues. This was also true in the case of climate change, where the government is working to facilitate more domestic and international financing for clean technology projects in China. Many of our respondents indicated that the primary function of the Chinese government is to facilitate economic development. However, Heather McGray believes the government also has a responsibility to regulate industry in a way that it hasn't yet successfully done. She feels that opening up pathways for information flow is an important thing government can do to make regulations more efficient. If people are engaged in the processes and know who pollutes, they can use their power to ensure their health, and the health of their environment.

Many respondents note that the most effective way to shape government policy is through collaborative work carried out by various sectors, especially government and academics. Both domestic and international companies are financing energy efficient ventures in China. Yang Jianlong of the State Council Research Development Center (SCRDC) says of the energy efficient projects that he facilitates: "It's my main purpose to provide enough incentives to the private investors...and most of them are interested in this area because they can make money from the project." He sees government as a facilitator of environmentally-friendly investment, but notes that this work will be slow due to pressures to develop as quickly as possible regardless of environmental repercussions. His comments exemplify what will hopefully become an increasingly widespread philosophy that energy efficiency does not have to come at the expense of economic development. Issues like climate change lend themselves more readily to market-based solutions than do resource conservation issues. However, addressing China's environmental issues will require a wide variety of innovative tools and collaborations.

The government is the most powerful financier of many conservation projects in China. Shuang Zhang of The Nature Conservancy, even while discussing the rising power of NGOs, emphasizes the frailty of their power compared to that of the government. He explains that the government still has the most power to make changes in favor of, or in opposition to, conservation. The government employs millions of people in the field, including armed enforcers of anti-logging laws in reserves. The government spends more money on conservation projects than any NGO. This is

why he believes that the government has played—and will continue to play—the most important role in biodiversity conservation in China. Wang also recognized the sheer size of the population as a serious issue. For example, one of the government’s main strategies for dealing with forestry issues is to build reserves and compensate the displaced rural population, but the vast number of farmers makes it impossible for the government to compensate all of them.

From an international perspective, Turner notes, “The collaboration that’s been going on between international and domestic research and political communities is very promising.” Her views were corroborated by the firsthand accounts of a domestic government financial policy advisor. Yang Jianlong of the State Council Research Development Center (SCRDC) described his government research group’s collaborative work: “Sometimes we work with private companies, sometimes with other governmental departments—for example the NDRC [National Development and Reform Commission], Environmental Resources Department, the Energy Research Institute, and the Environmental Protection Agency.”

The SCRDC actively seeks advice from many different sectors both domestically and internationally, then works to build financial systems that promote investment in energy efficiency. Reflecting on the challenges of collaboration, Yang notes that “We have many different ideas about the same problems, since we are coming from different points of view, but most of us agree with some important ideas such as: in the future, China will be the most important energy consumer, and the pollution will be heavy...all of us want to do some useful things to reduce the environmental problems.” The current work of government research groups like Yang’s is promising, but many current news reports indicate that a strong international political consensus is needed to achieve the broad policy changes necessitated by the issue of climate change (The Christian Science Monitor, 2007 and BBC News, 2007).

Both domestic and international respondents agree that international governments play a significant role in addressing environmental issues in China, whether through collaboration and information sharing, or through the creation of international agreements geared toward collective environmental protection. *Metis*, the thorough understanding of a specific place and situation, becomes important to the effective application of international financial models and technology. Yang and other members of the Chinese government must ultimately adapt the advice they receive from international governments, businesses, and academics to the specific context within which they are working in China.

Isabel Hilton believes that the most important role that international governments play is the transfer of technology. By making advanced technology available to China, international governments can encourage China to grow in clean and efficient ways that do not inhibit its growth. Hilton views this as an historical obligation, as well as a wise investment in the future. However, the international community must make sure it is addressing the reality of the situation in China. In a report prepared for the Pew Center on Global Climate Change, Chandler et al. highlight the fact that China has already done much more to curb their emissions than many international governments and media give them credit for. “China has dramatically reduced its emissions growth rate, now just half its economic growth rate, through slower population growth, energy efficiency improvements, fuel switching from coal to natural gas, and afforestation” (Chandler et al. 2006). China’s emissions growth rates are projected to continue slowing, despite the fact that net carbon emissions are likely to pass the U.S. emission levels this year (McCarthy and Coonan 2007).

Mark Levine, head of the China Energy Group at the U.S.-based Lawrence Berkeley National Laboratory, says: “We in the U.S. would be better off to deal with the reality of what China is doing rather than the perception of where China stands” (The Christian Science Monitor, 2007). His opinion is reflected in many of our interviews with Chinese and international experts, indicating that developed countries like the U.S. must address their contributions to climate change at the same time as they work to reduce the negative environmental impacts of China’s rapid industrialization. Many of our respondents felt that the most important role of international governments in addressing environmental issues, especially climate change, lies in the facilitation of domestic and international investment in clean energy projects. By endorsing programs like the Clean Development Mechanism, the Chinese government is allowing many sectors to work toward climate change solutions in a way that doesn’t unfairly disadvantage China’s economy.

International investment in environmental protection in China is not evenly distributed around the world. Turner points out that the U.S. government does not direct any funds toward addressing environmental issues in China, placing the burden on NGOs to seek funding for their work on energy and the environment. Other governments, especially in Europe and Japan, have invested heavily in clean technology for China’s growing industrial development. The Chinese government collaborates with businesses, academics and NGOs to discuss solutions that will not interfere with the country’s economic development. “Developing countries can use policies to leverage human capacity, investment, and technology to capture large-scale mitigation opportunities, while simultaneously augmenting their development goals” (Chandler et al. 2006). The conclusions of the Pew Center report reflect a sense of optimism among international experts about the potential for governments in developing countries such as China to reduce their environmental impact while continuing to raise standards of living through economic development.

## **Business**

With China’s rapid development, the business sector is coming to play a more and more important role in China. Chinese businesses are one of the major sources of environmental problems, particularly relating to energy and water use and pollution. Therefore, actions that the business sector can take to continue to develop—but in more sustainable ways—are essential to China’s overall environmental future. Fortunately, the business sector is beginning to recognize its ability to contribute to solutions, not simply problems. One of the most optimistic arenas businesses can address is social and environmental responsibility. Heather McGray of World Resources Institute captures many of our respondents’ opinions on the current situation of the business sector. She states that “the business sector has great power, but not so much corporate responsibility. It seems that this may be changing, though.” Although people recognize the past contribution of the business sector to environmental problems, and are concerned with the rapid growth of industry in China, they were also very optimistic about the future of this sector.

Several of our respondents are worried about Chinese business practices. Isabel Hilton of ChinaDialogue.net expresses particular concern over China’s corporate responsibility, highlighting the pollution caused by factories. She strongly believes that factories have gotten away with polluting for too long and that there is still not enough real incentive for industry to be convinced that good practice is also good business. Although Hilton believes that this is a phase any developing country must get through, she does think that China will begin to see more industrial responsibility in the future. Shuang Zhang of The Nature Conservancy echoes these sentiments. He believes that the business sector can best contribute by being more environmentally responsible.

He spoke of the environmental costs not yet internalized by businesses in China, and thinks that the sooner businesses internalize these costs, the better, because sooner or later the government and society will punish this behavior. Unlike Hilton, Zhang sees this environmental approach as more sustainable in a business sense, because he thinks eventually businesses will need to do this, and thinks that this shift will be the most important way for businesses to address environmental challenges in China.

Particularly in light of China's rapid growth, many of our respondents feel that the business sector will play a crucial role in the future of environmental protection and energy efficiency in China. Yang Jianlong of the State Council Research Development Center believes that "environmental concerns and energy efficiency must be pushed by private investors, and by everyone in the world. It's quite difficult for the government to do everything." Government policy has the potential to have a widespread impact, but will it occur soon enough to redirect the momentum of coal-burning power plants? The scale of environmental issues in China, especially those related to energy, necessitates rapid changes in the way that the country develops. Many of our respondents are not optimistic about the speed with which government can act, but do express hope about the ability of the business sector to change its practices.

In order for businesses to become environmentally responsible and move beyond their polluting past towards a more sustainable future, Chinese companies are actively seeking domestic and international financing for energy efficient ventures. Some of our respondents believe that adjustment of financial and corporate regulatory policies will be the key to promoting clean energy development in China. Bill Chandler of Transition Energy states that, "Many industrial customers are currently seeking finance for on-site power systems to control rapidly increasing costs, improve reliability, and obtain Kyoto credits. But investment controls, incorporation rules, usury laws and lending rules, as well as unclear and changing Clean Development Mechanism (CDM) regulations, combine to constrain a booming market to a trickle of projects"(Chandler, personal communication). The creation of government financial policies that unleash the innovative power of the private sector may provide the key to China's energy future. Although our respondents call for environmental responsibility on the part of the business sector, they also appear to be aware that this will not happen in isolation and government policies must support these practices.

In addition to issues of environmental responsibility in China, Aimin Wang of GEI highlights the problem of Chinese responsibility outside of China. He believes that Chinese businesses have a lot to do to improve their environmental ethics in the countries where they operate overseas. Drawing on his work in forestry issues, Wang stated that in some industries the majority of resources come from outside the country. Like Chandler, Wang believes that guidelines to help companies engage in more sustainable business practices will be essential to achieving these goals. Just as some Chinese businesses operate outside of China, many Chinese businesses are foreign-owned. Hilton calls for international consumers to pressure foreign businesses to maintain the environmental standards of their parent nation, instead of taking advantage of loose environmental standards in China.

## **Civil Society: Academics, NGOs, Media and Public, and Social Entrepreneurs**

The term “civil society” refers to “the arena of un-coerced collective action around shared interests, purposes and values” (The Centre for Civil Society). Additionally, it is often defined through its relationship with government and business. Of the players contributing to public good, civil society is composed of those *not* working through governmental or business pathways. Actors within civil society are motivated simply by the desire to contribute to what they perceive as common good. This section outlines the roles that academics, NGOs, media, the public and social entrepreneurs all play within civil society. The inclusion of these sectors within civil society certainly expands and blurs its definition. All have unique motivations that extend beyond a pure contribution to public good. However, this section examines the respective role each plays in addressing the environment, and thus looks directly at the contributions of each to the public good. While these sectors are not limited to civil society, they take on civil society’s role in addressing environmental concerns.

Across the board, respondents agree that civil society in Chinese culture emerged in recent history and is relatively undeveloped and limited. However, communal mentality is a traditional aspect of Chinese society that is reinforced by the Communist Party ideology. Christopher Dumm of Ashoka attributes the immaturity of China’s civil society to the isolation of the citizens from the ideas of global civil society and the isolated effort to “reinvent the wheel” of the Chinese citizen sector without the help of experienced leaders in global civil society. Respondents highlight three historical events as influences in the recent development of civil society in China: Deng Xiaoping’s 1978 reforms that created a market economy, the Beijing Women’s Conference of 1995, and the upcoming 2008 Summer Olympics in Beijing.

The 1978 economic reforms allowed for the formation of many new institutions and organizations outside of the state system in response to “diversified public interests and social life” (Ma 2006). Many of these organizations were social organizations as well as non-governmental and non-commercial enterprises now under the umbrella term “non-governmental organization” (Ma 2006). Randy Kritkauský of ECOLOGIA cites the Beijing Women’s Conference of 1995 as another “watershed event” that introduced global civil society and the possibility of a participatory citizen sector, and dramatically impacted the lives of the participants. Citizens realized that they could personally address problems and connect with people outside of China to gain leverage and support. Kritkauský adds that following the conference, the people who “were walking the line” of what was possible as a citizen in China created a “growing space” for civil society, but the space remains narrowly restricted.

Kritkauský believes that the 2008 Summer Olympics in Beijing will have a trickle down effect for the development of civil society in China. He sees that the Olympics offer China’s first major opportunity to gain “soft power,” which he defines as a moral high ground that exercises an unofficial influence over other nations. Soft power is particularly useful because it is less expensive than hard power (i.e. engaging in an adversarial confrontation with another nation such as an arms race). Investment in soft power can take the form of investment in a nation’s own people through development, poverty alleviation, environmental protection, or potentially supporting social entrepreneurs and socially responsible entrepreneurs. The international spotlight will be turning to China as global athletes converge in Beijing, and the Chinese government is very aware of the attention that this event will afford. Kritkauský says that the government seeks to earn a sympathetic international opinion, particularly in how China is caring for its own people.

## **Academics**

All of our respondents agree with enthusiasm that academics have an important role to play in addressing China's environmental concerns. Both international and Chinese respondents believe that Chinese academics play a more central role in society than their American or European counterparts. In addition to being more powerful, Heather McGray of the World Resources Institute says that Chinese academics tend to be much more pragmatic than academics in the United States. While academics in China play similar roles to academics throughout the world, their impact is greater and their potential to influence other sectors of society is exciting.

The most important role of academics is to influence government policy. Chinese universities are government run, which places them in a unique position to collaborate with government. Shuang Zhang of The Nature Conservancy describes academics as the "brain" of government. Aimin Wang of GEI states it is the responsibility of academics to develop policy and legislation. From her experience in the United States, McGray agrees that Chinese academics are much more effective at policy-making than U.S. academics.

Academics are at the forefront of new ideas. They work to take new concepts and make them understandable to the general public. Wang believes that their work to demonstrate the applicability of these new ideas before they are acceptable to the general public or government is crucial to the eventual success of new programs, concepts and ways of thinking. Similarly, Isabel Hilton of ChinaDialogue.net describes universities as the "advance guard of activism." Environmental clubs and organizations are active within almost every university in China. Zhang also highlighted the role of academics in educating future leaders. Additionally, many academics have founded research institutes or NGOs. McGray believes that some academics have been very effective in getting their message out to both the public and decision makers.

In Wang's opinion, academics play an important role in applying international models to China. A lot of research must be done to modify and adopt successful models from overseas before they will succeed in China. From their position as a link between sectors, academics can communicate with NGOs and government to inform decision-making and policy. In this same vein, the international academic sector also has its greatest influence in the realm of ideas. Although hesitant to trust in the lasting effects of international money, Zhang believes that the ideas, experiences, and innovations that can be imported from the international sector will ultimately have the most long-lasting importance.

While academics currently have a very positive relationship with the government, Hilton reflects on the historical challenges they have experienced. While she believes academics are the most radical sector in Chinese society, she believes that the terrible battering they received under communist rule has greatly limited their potential. In her opinion, they are just now coming out of their shell and will play a more important role in the future as they gain greater confidence.

## **Non-Governmental Organizations**

Governmental and business solutions have failed worldwide to adequately address global environmental issues such as climate change, deforestation, species loss, water pollution and resource waste. In response, both international and domestic non-governmental organizations (NGOs) have proliferated in order to develop and execute programs that seek to solve these critical

dilemmas. Large international environmental organizations operate in many countries in order to address global issues. They thus begin to develop global models of success that can be adapted to countries worldwide. China, due to the severity of its environmental problems and its large contribution to global issues, has attracted a large number of international organizations invested in finding concrete solutions for China's environmental future.

According to scholar Tim Hildebrandt, international organizations working in China often have a global perspective that allows them to use models developed elsewhere to seek environmental solutions. Models offer a framework on which to build and therefore can save the extraordinary amount of time and energy necessary to develop solutions from scratch. Because of the broad perspective that international NGOs offer, both international and Chinese respondents suggest that international NGOs can play a positive role in shaping China's environmental future. Interestingly, Chinese respondents place greater importance on the role of the international community as a whole compared to international NGOs alone. While enthusiastic about the international community in general, many speak openly about limitations of international organizations.

Respondents see great potential for the international community to press different sectors of Chinese society, particularly business and government, to improve environmental policies in each respective sector. For instance, Global Environmental Institute (GEI) operates within the pre-existing governmental and business frameworks and can both push government action and facilitate communication between sectors. Chen Shiping, of GEI's energy and climate change program, notes that GEI uses the Clean Development Mechanism for emissions trading as a financial tool to help Chinese companies reduce their contribution to climate change and provides the technical assistance required to carry out the necessary changes. While Chinese companies are interested in the economic benefits of the CDM, some companies, especially those in less developed areas, are not willing to take the risk of investing in energy efficiency. Shiping thus sees GEI as a mediator between the Chinese government, which is responsible for controlling pollution, and companies who are driven to find economic gain. Aimin Wang of GEI's forestry program also believes international NGOs like GEI are uniquely positioned to pressure the Chinese government to enforce laws that it otherwise might avoid. Jennifer Turner of the Woodrow Wilson Environmental Forum on China explains that international NGOs work to build capacity and awareness in the central government and provide financial and technical assistance to Chinese companies looking to increase their profits through energy efficiency. Peter Bosshard of the International Rivers Network (IRN) also feels that international NGOs should focus their efforts toward developing and promoting government financial policy reforms due to their ability to directly critique the government. Chinese NGOs, on the other hand, are fairly restricted in their ability to deal directly with—or critique—the government.

The international community can also aid environmental work in China through direct funding and support of Chinese organizations and development projects. As Daniela Salaverry of Pacific Environment notes, one of her primary roles is to fundraise from San Francisco for her organization's work in China. Her Chinese counterpart, Wen Bo, then works in Beijing to develop and fund grassroots environmental initiatives. Peter Bosshard of IRN views his organization's role in a similar light—it directly supports Chinese organizations by facilitating capacity-building and strengthening networks between organizations. The partnerships that IRN has developed with these organizations form the basis for all of their activity in China. By providing international expertise, IRN is able to support local action and local organizations.

The international community also offers Chinese organizations models of new and creative ideas and encourages Chinese organizations to learn new ways of approaching problems. Heather McGray of the World Resources Institute in Washington, D.C. believes that the international sector is most effective in sharing ideas and convening players that would otherwise not communicate because Chinese people tend to deal in closed networks. The international community, she claims, can offer creative new approaches based on past experiences and an “out of the box” way of thinking. International NGOs can help to “shake things up a little” and convene players who might not otherwise think to work together. Shuang Liu, working on Greenpeace China’s energy campaign, believes that the international community can set an example for Chinese organizations. In Shuang’s perspective, “China can learn from the past experiences of others and avoid the problems they have faced.” The international community’s past successes and failures thus provide a framework that can pave the way for China to address their own challenges.

Yet international environmental work also has severe limitations to which the respondents referred. These challenges directly reflect the concepts of *metis* and *high modernism* mentioned above. While the international sector has an opportunity to bring foreign ideas to the table, these ideas should be flexible enough to be adaptable to local needs. Scholar Tim Hildebrandt believes that models used by these organizations, while well-intentioned, can sometimes lead to negative consequences if implemented incorrectly. In this way, some international organizations run the risk of becoming *high modernist* institutions that impose ineffective solutions on complex problems because they do not take the needs, interests or knowledge of the local population into consideration.

Hildebrandt explains that the discrepancy between domestic needs and international work is not due to ignorance on the part of international organizations, but instead to the conflicting interests at play in international aid. International NGOs working in China often have high expectations of success due to work in other countries, and donors that want to see tangible results. The organizations can then use successes in other countries of a specific program or tactic to illustrate the potential results and secure funding. Organizations often work with local Chinese contacts to adapt the model to the Chinese location. However, Hildebrandt asserts that certain aspects of the culture, location, political structure or demographics of the area can still render the model ineffective. The Chinese contacts are in the difficult position of mediating between the reality of the situation and the expectations of the donors. In short, the needs of the Chinese contacts and the demands of the international donors often do not align.

Hildebrandt also points out the benefits that large organizations offer and the potential weaknesses in the idea of *metis*. Regarding environmental issues, local knowledge limits the local people who possess it to their provincial environment. If that environment changes, or if the person is relocated, that knowledge is rendered useless. Hildebrandt refuses to romanticize local knowledge, as it lacks the broader perspective provided by an international organization. Because *metis* is based on experience, *metis*-based solutions may be limited in their ability to address new problems or create solutions that require unfamiliar resources. In this way, environmental solutions need a larger perspective that local knowledge cannot provide.

Many international NGOs understand the limitations of international work, and work hard to avoid becoming *high modernist* institutions by working closely with Chinese contacts and organizations. Furthermore, many understand the difficult role that they play as outsiders trying to affect change in a foreign country. Hilton, for instance, warns that international NGOs need to “tread carefully” in order to avoid being hypocritical, as Western countries also contribute largely to global

environmental problems. This is particularly evident in energy and climate change issues. Until the United States has addressed its own energy issues, perhaps it is hypocritical to pressure China to deal with its energy issues.

In light of the limitations of international organizations, Chinese environmentalists have begun non-governmental organizations as well, addressing both local and national environmental problems. Chinese NGOs, however, play a very different role in China's environmental work than international organizations—not only do they lack the global organization models and framework of international organizations, but they are also very limited by the government. While still in development and therefore relatively weak, Chinese NGOs offer hope for future environmental work for many respondents.

Isabel Hilton of ChinaDialogue.net explains that Chinese civil society is beginning to play an increasingly important role in China. From the government perspective, NGOs that start out thinking about the environment can quickly move on to questioning corruption and the rule of law. Hilton believes that the history of the role of NGOs in Eastern Europe in bringing about the fall of communism has made the Chinese government wary and controlling of environmental NGOs. This is perhaps why NGOs are still not allowed to exist on a national level and why they must work collaboratively with the government. The government therefore directly shapes the roles that Chinese NGOs play in environmental work in China.

According to Heather McGray, the most common and effective role of Chinese NGOs is to research local issues and make recommendations to the government. For example, Zhang Shuang of The Nature Conservancy explains that NGOs helped the government research institute in drafting a China Clean Development Mechanism reforestation strategy. Yet as organizations grow and develop, some are now starting to take on more advocacy-related roles such as pollution litigation and public awareness. Liu Shuang of Greenpeace, for instance, now sees more Chinese NGOs educating the public, particularly about the costs and benefits of more sustainable practices. However, Chinese NGOs still do not challenge established governmental policies; they simply provide people the information necessary to live more efficiently.

Although NGOs are not able to directly change government policies, the close relationship with the government enables them to encourage environmentally-friendly policies. In addition, NGOs can help government to deal with things that are politically unacceptable to discuss, or begin discussing them before the government is ready. Chinese government often has useful policies, but lacks implementation. NGOs can therefore enable the government to carry its environmental policies through.

The restrictive role of the government emerges in nearly all interviews as the primary challenge currently facing Chinese NGOs. Heather McGray cites the ability to build memberships as one of the primary tools Western NGOs use to promote their causes to the government. Because Chinese organizations are not allowed to build national memberships, they are extraordinarily limited. Furthermore, Chinese organizations run the risk of enforcing *high modernist* solutions upon environmental problems if they are limited to working with the government.

The roles of the international and domestic organizations in China differ dramatically due to different external forces acting upon each. However, they also address different issues. While the international community focuses on global issues like climate change and loss of biodiversity, many

of these issues are far from the agenda of many Chinese organizations that must first focus on overt local issues. Daniela Salaverry, who works directly with Chinese organizations, explains that many Chinese organizations emerge in response to local pollutants or health hazards. Furthermore, Salaverry also works with many student groups in Chinese universities. These student groups tend to focus solely on “charismatic megafauna” that easily capture the attention of students and inspire them to act, instead of issues like climate change that are hard to understand.

Jennifer Turner of the Woodrow Wilson Environmental Forum on China reinforces this point, citing that most emergent Chinese NGOs have their hands tied by local environmental issues that pose an immediate threat to human health. Referring to the irrelevance of climate change to most Chinese citizens, she notes that “the CDM means nothing to the average Chinese peasant.” Furthermore, domestic NGOs do not directly address climate change because that would pit them against local companies owned by local governments. She explains that the responsibility falls on the shoulders of international NGOs address the problem of climate change by working to build capacity and awareness in the central government and providing financial and technical assistance to Chinese companies looking to increase their profits through energy efficiency. Peter Bosshard of IRN also feels that international NGOs should keep a low public profile in China and focus more of their efforts toward developing and promoting government financial policy reforms.

International and domestic NGOs fill different niches within Chinese civil society due to their different strengths and limitations. International organizations offer a global perspective that can pressure government and business, and guide Chinese organizations and development projects to drive environmental action forward. However, they are also limited by conflicting interests and the difficulty of tapping into the *metis* of the area in which they work. On the other hand, Chinese organizations have the advantage of working within a familiar local context, but are limited by the Chinese government and their lack of a global perspective.

## **Media and the Public**

According to Heather McGray of the World Resources Institute, the interests of the public are diverse, as one would expect in a country as large as China with varying regional and cultural needs. McGray identifies two populations at the center of Chinese environmental opinion right now: the middle class and rural populations. The emerging middle class follows the pattern of the global middle class, wanting to rid their backyards of polluting industrial plants. McGray asserts that the emerging voice of the middle class has an interest in their community and is willing to act upon it. The rural population is the second important sector of public opinion. McGray observes that rural farmers are losing their land to industry and being denied access to resources. As a result, many are resorting to violent protests, roadblocks, and demonstrations because they lack the institutional mechanisms to make their voices heard. These two populations illustrate the strong desire within the Chinese population to affect change. Although the public is not empowered, they are not apathetic.

Many respondents saw a lack of access to information as an impediment to public participation in China. International groups in China are advocating for more public participation whereas the Chinese public is calling for more information in order to be able to participate. Daniela Salaverry of Pacific Environment notes that the Chinese people require information with which to form their opinions and guide their participation, but also a better understanding of the process of “public

participation.” With reference to the government, Tim Hildebrandt says that State Environmental Protection Agency (SEPA) policies regulating public participation, access to information and participant rights fall short of actual State acknowledgement of the public’s right to know. Zhang Zhe of the Jane Goodall Institute criticizes the State for publishing environmental impact assessment (EIA) reports that are illegible and inaccessible to the public due to technical terminology and concepts. She notes that retired scientists have been essential in translating environmental impact assessment reports into the vocabulary of daily life. The former State employees understand the scientific implications and political language of the reports, but risk relatively little to make the information available to the public because of their retired status. Under current policies it is too risky for an individual engage in public debate and advocacy. According to Zhang, the translation of government reports must not require personal risk on the part of the “translator” in order for public participation to approximate the process westerners recognize as public participation.

Aside from the occasional retired scientist who advocates and educates within communities, journalists play an essential role in raising awareness of environmental issues in China. Kritkauský refers to Chinese journalists as the “leading edge of civil society” and believes journalists have a stronger influence on society than NGOs do. He explains that the Chinese government has set distinct limits for journalists whereas the restrictions for NGOs are less clear, and therefore journalists know the extent to which they can challenge the government. From this position, they can both disseminate information to the public and hold government accountable for their policies. Kritkauský observes that certain environmental issues (such as floods) allow journalists to criticize policy makers. By reporting these issues, they “identify processes and procedures” such as lack of accountability, transparency, and due diligence that apply in other areas as well. Salaverry believes that there is great potential for partnerships between media and local environmental organizations for increased publicity and advocacy. One example she discussed is Green Salon, a monthly meeting of local media representatives and local environmental groups that the media uses to gain information to report on environmental initiatives in the community.

Kritkauský, Salaverry, Hildebrandt, and Chandler emphasize that international media greatly influences the global perception of environmental issues in China. However, foreign journalists have few incentives to report positive aspects of the Chinese environment and may be deterred by editors who fear the perception of being sympathetic to communism or naïve, says Kritkauský. China is perceived as a major environmental offender as it grows economically. Bill Chandler of Transition Energy agrees that the negative aspects of China’s energy sector are true—it is dirty, hazardous to human health, inefficient, self-limiting, and an economic strain—but criticizes the international public for accepting these facts without critical analysis. Chandler notes that positive progress is masked by reporting negative issues or controversial policies (i.e. population planning policy). The current state of international journalism neglects to report some of the successes of China. Respondents unanimously call for more nuanced and complex reporting in order to better understand both China’s environmental problems and the efforts to address them.

## **Social Entrepreneurs**

Social entrepreneurs are often described as “changemakers” and drivers of progress. A social entrepreneur is a member of the citizen sector dedicated to using innovative approaches to find practical solutions to social problems. Vision, commitment, creativity, persistence, innovation,

networking, and collaboration between sectors are integral characteristics of a social entrepreneur. A social entrepreneur's motivation often originates from a personal experience as a member of—or service provider to—a marginalized, disempowered, or under-represented social group. Through this experience, the social entrepreneur identifies a dysfunctional social structure and seeks a path of change. Social entrepreneurs connect sectors of society and employ various tools that are often compartmentalized into specific sectors. A social entrepreneur is not just satisfied by making change in their local community but also asks, “How can this change be realized through the entire country?” Social entrepreneurs are dedicated to large-scale and long-term changes within their society. In the business sector, entrepreneurs strive to generate profit; in the citizen sector, social entrepreneurs endeavor to generate social value by empowering individuals, mobilizing communities, and building social capital (Bornstein 2004).

In interviews across sectors and areas of expertise, the term “exceptionalism” emerged. Some people firmly believe that China defies generalization or grouping with other countries. Exceptionalism may be particularly relevant to the work of social entrepreneurs and limitations of civil society in an “exceptional” governmental system. Ashoka's US Co-Director Traban Shorters commented on the culturally relative role of social entrepreneurs:

It helps to think of social innovation as being culturally rooted and therefore culturally constrained. China, culturally, is less concerned with individual rights than a country like Canada is...but China, culturally, is predisposed to collective work and so we are likely to surface many more social innovations stemming from this predisposition than we might from places like the US.

Author Ma Qiusha makes an analogous statement about civil society: “Under different cultural contexts civil society emerges to produce culturally distinct characteristics” (Ma 2006). The cultural relativity of social entrepreneurs and civil society mirrors the cultural specificity of *metis* – local, practical knowledge gained by experience. Social entrepreneurs employ *metis* in order to operate in a manner of local sustainability and relevance. Major systemic changes made by social entrepreneurs must be rooted in *metis* and enable *metis* in order to be effective and enlist the broad support of citizens.

In the past two decades, global organizations supporting social entrepreneurs have appeared in ever-increasing numbers and with increasing visibility as a new genre of global social organizations. These organizations “offer the equivalent of venture capital for social entrepreneurs” (Kristof 2007). Examples include Ashoka: Innovators for the Public (Ashoka) of Arlington, Virginia, founded in 1989 by Bill Drayton; the Schwab Foundation for Social Entrepreneurs of Geneva, Switzerland, founded in 1998 by Klaus and Hilde Schwab; and the Skoll Foundation (“Uncommon Heroes. Common Good.”) of Palo Alto, California, founded in 1999 by Jeff Skoll. Despite the general optimism that changemakers and social entrepreneurs exist in China, very few Chinese social entrepreneurs are receiving funding, support, or fellowships from international social entrepreneurship organizations. As of May 2007, only one Chinese social entrepreneur had been named and supported by these organizations. Wu Qing of the Beijing Cultural Development Center for Rural Women was supported by the Schwab Foundation for Social Entrepreneurs.

One organization that is exploring the possibility of supporting social entrepreneurs in China is Ashoka: Innovators for the Public. Ashoka is a global citizen sector organization that supports 1800

social entrepreneurs in 60 countries across the globe. Ashoka elects fellows after a rigorous and sometimes invasive investigation of a social entrepreneur's passion, projects, progress, and vision (Bornstein 2004). Fellows address social issues in civic engagement, economic development, environment, health, human rights, and education. By supporting social entrepreneurs, Ashoka seeks to lead the formation of a "global, entrepreneurial, competitive citizen sector" (Ashoka.org). At present, Ashoka has not elected fellows in China; however, Christopher Dumm leads the organization's efforts to launch a full program in the summer of 2007. The establishment of a full program requires the "the correct combination of an entrepreneur on the ground to manage the program launch, investors who will support the first five years of this program, and permission to operate in China," says Trabian Shorters. Dumm recognizes underdeveloped leadership as an obstacle in electing Chinese fellows and leaders to launch the program in China. Future Chinese fellows will be the first Ashoka fellows operating within a communist society. These first elected fellows may reveal the unique strengths and limitations of Chinese civil society.

ECOLOGIA's President and co-founder Randy Kritkauský believes that there are very few Chinese people who fit the Ashoka definition of social entrepreneur. He distinguishes social entrepreneurs from the Ashoka definition and warns against applying the term to all social innovators in purely social or activist roles. According to Kritkauský, the oldest definition of a social entrepreneur is a person with a social mission who becomes entrepreneurial in order to achieve their mission, but the immaturity of civil society has restricted the proliferation of these types of social entrepreneurs in China. According to Kritkauský, a more culturally relevant definition of social entrepreneurship in China is more often coined "socially responsible entrepreneurship" in the western world. Socially responsible (SR) entrepreneurs were business people first (rather than civil society advocates) who combine their business with a social aspect because it is part of the culture. Kritkauský estimates that 10-30% of the 30 million business entrepreneurs established since the 1978 economic reforms fit the definition of SR entrepreneurs.

Small and medium business entrepreneurs—distinct from large business owners and multi-national corporations—are influential members of civil society although they operate for profit. These SR entrepreneurs are socially-minded leaders in civil society whose organizational and entrepreneurial capacities tend to surpass those of leaders of the traditional social sector. Kritkauský explains that during the past two decades Chinese have entered business with a series of cultural and political expectations, specifically dictating that pursuing profit obligates one to share wealth with others in society. Dual notions of service to community and self-service are integral and paired in the SR entrepreneurial business culture in China, says Kritkauský. Chinese business entrepreneurs support their local communities by employing community members, making donations to community projects, and contributing to party officials and municipal functionaries (Kritkauský 2006). Kritkauský attributes this community wealth-sharing to the ethic of *tōng* relations - community relations beyond family that may be used to receive a favor but reciprocally obligate a person to return favors when they are needed. *Tōng* relations are particularly influential in small- and medium-sized enterprises because the traditional, family, and village values are tangible and observable. SR entrepreneurship encounters challenges as enterprises increase in size.

Not all social entrepreneurship support organizations need to work with social entrepreneurs on a national scale as Ashoka does. It is equally important to support social entrepreneurs who work effectively to make change in communities but will never be the "poster children" of the social entrepreneur revolution that Ashoka leads. Chinese and international NGOs are pioneering this

work by supporting emerging, local, socially innovative organizations. Kritkauský and ECOLOGIA seek to create a network of SR entrepreneurs of small and medium sized enterprises, beginning with the alumni of the Rabbit King's training school. Ren Xuping (known as the "Rabbit King") is an SR entrepreneur of Dayi, Sichuan Province, who has trained over 300,000 impoverished Chinese in the business of rabbit farming. His training school is an exemplary model of entrepreneurial philanthropy (Kritkauský 2006). ECOLOGIA's network would support SR entrepreneurs by creating connections through which SR entrepreneurs can learn from one another. A considerable part of ECOLOGIA's work will be building the tools to empower Chinese companies with the bargaining tools and international standards (from the International Organization for Standardization, or ISO) so they do not end up in a power imbalance with the foreign buyers of their products.

### Conclusion

After hearing the perspectives of the respondents on the role of their sector as well as the role of other sectors, several themes emerged: the balance between domestic and international interests, potential for collaboration, the ability to speak the language of the sectors, and the adaptation of methodology due to regional and cultural diversity.

Our interviews provide us with an understanding of the complex dynamic between domestic and international interests as they attempt to address environmental issues in China. The international community has the advantage of a broader perspective on the urgency of environmental issues on a global scale, as well as an understanding of which strategies have been most successful in addressing these issues. However, change on an international level requires broad financial and institutional support. This can lead to a conflict of interests between global organizations that must satisfy funding requirements while attempting to provide solutions that are applicable to local needs.

Still, the international community is poised to foster the development of civil society in China. Randy Kritkauský states that "socially responsible entrepreneurs' indigenous values and tendencies toward 'corporate social responsibility' are often validated and reinforced by encounters with international partners. Foreign partners are not the source of social responsibility ideas, but they appear to play a vital role in strengthening values and practices" (Kritkauský 2006). According to Kritkauský, many Chinese environmental NGOs are trapped in a narrow vision, dependent solely on local knowledge, and need outside input. Kritkauský offers a unique perspective on the contribution of the international community, saying "The beauty of the international perspective is that it is naïve and that it asks questions that people whose feet are stuck in *metis* never ask."

In addition to the theme of balance between international and domestic interests and knowledge, there is a new potential for collaboration between sectors. NGOs lead much of the collaboration between different sectors within China and between Chinese and international society. Many international organizations work to establish communication and collaboration between sectors, both domestic and international. For example, Ashoka sees its own strength as the ability to "bridge between the Chinese citizen sector and the global sector" by facilitating the exchange of ideas. The resulting exchange of ideas between the Chinese citizen sector and global civil society can promote the development of Chinese civil society and catalyze environmental action.

In order for different sectors to collaborate, they must identify and understand the interests and initiatives of other sectors. Each sector prioritizes different issues; therefore it is necessary to “speak the language” of other sectors in order to advocate for their own sector’s cause. For example, NGOs wishing to collaborate with the government must be willing to frame their interests in a way that best aligns with the government’s interests. It is apparent that international and domestic priorities are different. In the international realm, climate change is the most prominent topic. For many Chinese people, local and immediate environmental issues are most pressing. Thus, the topic of climate change must be communicated in terms of the pressing issues of economic development, human health, poverty, pollution, water quality, and energy.

The final theme, the adaptation of methodology due to regional and cultural diversity, relates to the avoidance of high modernism and uniform implementation of solutions. Effective solutions require intimate knowledge and experience in China as well as innovative thinking that may come from domestic leaders and/or foreign partners. International organizations working in China must be conscious of the need to adapt imported models of projects in other countries in light of cultural and regional diversity and needs in China. For example, Christopher Dumm of Ashoka recognized this need in the establishment of a full Ashoka program in China. According to Dumm,

[In China]...there are a set of rules that do not translate. We cannot take our Indonesia or France business plan and “find and replace” the word China into the text. It is going to take a lot of understanding to develop a China-specific and appropriate model that is still true to Ashoka’s core model.

The adaptation of models is applicable to all foreign partners, not just Ashoka. The above quote suggests that the outcome or goals of the project may remain the same on a global scale but the methodology must reflect the local reality. All efforts to address environmental issues in China must balance concern about the scale of global issues with the reality on the ground in China. The emergence of civil society in China offers a potential arena for work in this area and an essential framework for collaboration.

As China continues developing, the world will watch how it deals with the challenges that this development creates. There is considerable concern inside and outside of China for how these challenges will be met, but the Chinese government has made it clear that China intends to develop with more sustainability than its Western counterparts. It is in the world’s interest—not just China’s—that China successfully deals with the challenges of development. And to do so, all sectors of Chinese society must work together, incorporating international ideas, to create flexible, sustainable solutions. China has the opportunity to be a role model for the rest of the world in how to develop sustainably. We all have a stake in its success.

## Acknowledgements

Thank you to our interviewees for their time and input, our community partner Lila Buckley of Global Environmental Institute, and our professors Jon Isham and Diane Munroe of Middlebury College.

## References

- Bezlova, Antoaneta. "Environment-China: Prosperity or Pollution?" Inter Press Service News Agency. 5 February 5 2007. 3 April 2007  
<<http://www.ipsnews.net/news.asp?idnews=36436>>.
- Bornstein, David. *How to Change the World: Social Entrepreneurs and the Power of New Ideas*. New York, NY: Oxford University Press, 2004.
- Bosshard, Peter. Phone interview. 4 April 2007.
- Chandler, William. Phone interview. 23 April 2007.
- Chandler, William et al. "Climate Change Mitigation in Developing Countries". The Pew Center on Global Climate Change. October 2002. 24 April 2007  
<<http://www.pewclimate.org/docUploads/dev%5Fmitigation%2Epdf>>.
- Chen Shiping. Phone interview. 11 April 2007.
- Clayton, Mark. "Is China outdoing US in curbing carbon?" The Christian Science Monitor. 27 April 2007. 27 April 2007 <<http://www.csmonitor.com/2007/0427/p02s01-wogi.html?page=1>>.
- "Clean Development Mechanism." Wikipedia article. 4 April 2007 at  
<[http://en.wikipedia.org/wiki/Clean\\_Development\\_Mechanism](http://en.wikipedia.org/wiki/Clean_Development_Mechanism)>.
- "Climate Change 'Affecting' China" BBC News. 6 February 2007. 3 April 2007  
<<http://news.bbc.co.uk/2/hi/asia-pacific/6334749.stm?ls>>.
- Dumm, Christopher. Email interview. 30 April 2007.
- Gwin, Molly and Chandler, William. "Facilitating Finance for Clean Energy in China". Proposed outline prepared for the Energy Foundation. March 12, 2007.
- Hepeng Jia. "China launches carbon trading initiatives" SciDev.net. 7 February 2007. 3 April 2007  
<[http://www.scidev.net/content/news/eng/china-launches-carbon-trading-initiatives.cfm?&utm\\_source=feed-1&utm\\_medium=rss](http://www.scidev.net/content/news/eng/china-launches-carbon-trading-initiatives.cfm?&utm_source=feed-1&utm_medium=rss)>.
- Hermann, Michael. Phone interview. 22 April 2007.

- Hildebrandt, Tim. Phone interview. 6 April 2007.
- Hilton, Isabel. Phone interview. 6 April 2007.
- “Introduction.” The Centre for Civil Society 22 March 2004. 8 May 2007  
<<http://www.lse.ac.uk/collections/CCS/introduction.htm>>.
- Kristof, Nicholas. “Do-Gooders with Spreadsheets.” New York Times. 30 January 2007. 15 February 2007  
<<http://select.nytimes.com/gst/abstract.html?res=F30F10F83F5B0C738FDDA80894DF404482>>
- Kritkausky, Randy. “China’s Socially Responsible Entrepreneurs: Native Roots for Sustainable Development.” ECOLOGIA, April 2006. 27 April 2007  
<<http://www.ecologia.org/about/programs/ChinaSR06.html>>.
- Kritkausky, Randy. Personal interview. 1 May 2007.
- Ling Li. “China Releases First National Report on Climate Change”. World Watch Institute. 11 January 2007. 27 April 2007 <<http://www.worldwatch.org/node/4848>>.
- Liu Shuang. Phone interview. 16 April 2007.
- Ma Qiusha. *Non-Governmental Organizations in Contemporary China: Paving the Way for Civil Society?* New York, NY: Routledge, 2006.
- McCarthy, Michael and Coonan, Clifford. “The Great Pall of China”. The Independent. 25 April 2007. 27 April 2007  
<[http://news.independent.co.uk/environment/climate\\_change/article2483839.ece](http://news.independent.co.uk/environment/climate_change/article2483839.ece)>.
- McGray, Heather. Phone interview. 3 April 2007.
- Porrit, Jonathon. “China: The most important story in the world.” *Greening the Dragon: China’s Sustainability Challenge*. Green Futures Magazine, September 2006. 21 May 2007  
<[www.chinadialogue.net](http://www.chinadialogue.net)>.
- Salaverry, Daniela. Phone interview. 9 April 2007.
- Scott, James C. *Seeing Like a State*. New Haven, CT: Yale University Press, 1998.
- Shorters, Trabian. Email interview. 13 April 2007.
- Turner, Jennifer. Phone interview. 5 April 2007.
- “Vision and Mission.” Ashoka: Innovators for the Public. 18 April 2007  
<<http://www.ashoka.org/visionmission>>.
- Wang Aimin. Phone interview. 11 April 2007.

Whale and Dolphin Conservation Society. "Yangtze River Dolphin Extinct." December 2006.  
14 May 2006 <<http://www.wdcs.org/dan/publishing.nsf/allweb/14139AA1715D7109802572440032EE75>>.

"Wu Qing: Beijing Cultural Development Center for Rural Women." The Schwab Foundation for  
Social Entrepreneurs. 18 April 2007  
<<http://www.schwabfound.org/schwabentrepreneurs.htm?schwabid=767&extended=yes>>.

Yang Jianlong. Phone interview. 17 April 2007.

Zhang Shuang. Phone interview. 1 May 2007.

Zhang Zhe. Personal interview. 10 April 2007.

**APPENDIX A**  
**Biographies of Interviewees**  
Alphabetical by Family Name

**Peter Bosshard** has worked for the International Rivers Network for the past 5 years, dealing with China's international role in financing development projects. He also authored "Export Credit Agencies and Environmental Standards: An Invitation to Join the Dialogue."

**William Chandler** is founder of Transition Energy, a company that develops clean energy projects in transition economies. His experience in China spans 35 years in energy and the environment working for environmental organizations and think tanks, including 20 years as the founder and director of the Advanced International Studies Unit Joint Global Change Research Institute. Chandler founded the Beijing Energy Efficiency Center (BECon), a non-profit, independent, non-governmental energy conservation and promotion organization. For the last two years, Chandler has been working with GEI's Energy and Climate Change program to investigate the potential for market forces to motivate greenhouse gas emissions reduction.

**Shiping Chen** works for the Global Environmental Institute on energy and climate change. He facilitates ecologically responsible energy investment projects and advises Chinese companies about how they can comply with the Clean Development Mechanism to receive international financing.

**Christopher Dumm** is an Ashoka: Innovators for the Public representative working to launch Ashoka's program in China in the summer of 2007. He served for five and a half years on Capitol Hill as a Congressional staffer in various capacities, as well as Executive Director of the Indian American Center for Political Awareness.

**Michael Herman** helps lead the China branch of Humana People to People. While the organization works on projects regarding village development, disease prevention and resource management, Hermann is currently focusing on the development of a renewable fuel trade network of a local biofuel in Yunnan.

**Tim Hildebrandt** served as a project assistant for the Asia Program and China Environment Forum (CEF) at the Woodrow Wilson Center for Scholars in Washington, DC, and managing editor of CEF's China Environment Series 8. He is currently a graduate student in the Political Science department at the University of Wisconsin – Madison where he is studying comparative politics and international relations with a focus on China. His primary research interests include NGOs, public participation, social movements and civil society development, and environmental policy.

**Isabel Hilton** is the editor and founder of ChinaDialogue.net, an British based internet site that shares information, articles, and active blogs on issues in China. Her website is the first completely bi-lingual (English and Chinese) of its kind and seeks to connect students in China and the United States and England to share experiences in tackling issues like climate change.

**Randy Kritkausky** is the President and co-founder of the non-profit ECOLOGIA based in Middlebury, Vermont. Kritkausky's work at ECOLOGIA has allowed him to focus on societies in transitions of profound social and economic change. Kritkausky and ECOLOGIA are working to build partnerships between community-based organizations and private enterprise.

**Shuang Liu** works at Greenpeace in China, and is in charge of the China region of Greenpeace's Energy Revolution Report, one of nine regions Greenpeace is considering in its predictions of the global energy situation in 2050. Her work focuses on analysis of the role that energy efficiency and renewable energy can play in China.

**Heather McGray** is working for the World Resources Institute on a scoping project that is looking broadly at environmental governance in Yunnan province. Given the region's recent surge in dam proposals and constructions, her research focuses on hydropower issues.

**Daniela Salaverry** is the China Program Associate for Pacific Environment, an international NGO focused on protecting the environment of the Pacific Rim through grassroots activism, strengthening communities, and reforming international policies. The primary role of Pacific Environment's China Program is to provide financial support through grants, organizational development, and networking to grassroots environmental groups, many of which are university clubs and emerging professional environmental organizations in urban areas.

**Trabian Shorters** is the US Co-Director at Ashoka: Innovators for the Public where he works with Ashoka Fellows in the United States. Shorters is a recognized social entrepreneur with experience in leadership development and organizational capacity building, as well as conflict mediation, advocacy, and the use of technology in the non-profit arena.

**Jennifer Turner** directs the Woodrow Wilson Environmental Forum on China facilitating research exchange between scientists around the world. The forum generates research fact sheets and briefs about environmental health issues, which are then posted on the forum's website and used to guide government policy.

**Aimin Wang** works in the forestry division for the Global Environmental Institute. He is currently working with the State Forest Administration of China and the Ministry of Commerce to establish regulations for forest companies in China to make them engage in more sustainable harvesting of wood.

**Jianlong Yang** heads a research group with the State Council Development Research Center that researches financing of industrial development, to make policy recommendations to the Chinese government. He is investigating ways to provide private investors with enough incentive to invest in energy efficiency in China, focusing on domestic commercial banks and stock markets.

**Shuang Zhang** is a staff member of The Nature Conservancy in Yunnan. He worked on a blue print project with the forestry sector to promote carbon sequestration and address monoculture problems in China. He now works on a joint project between the Nature Conservancy and the State Environmental Protection Agency to identify high priority conservation areas to protect China's biodiversity.

**Zhe Zhang** is the Roots and Shoots Program Director at the Jane Goodall Institute China (JGI). Roots and Shoots is the largest JGI program in China, facilitating students of local schools and universities to become involved in environmental conservation, animal protection, and human welfare. Zhang visited Middlebury College as a visitor of the U.S. Department of State.