

Global Concerns – Global Cooperation

How European and Chinese NGOs
Can Learn from Each Other

A Documentation – Hainan/Guangzhou – June 2009



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**EU-China Civil Society Forum
Friends of Nature**

– English Edition –



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European-Chinese NGO Cooperation in the fields of climate change, food safety, sustainable agriculture and water

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This documentation will also be published in Chinese.

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Preface

Li Bo and Nora Sausmikat

The process of globalization triggered not only a global economy, but created common concerns and strengthened cooperation on many different levels.

There have been a great number of opportunities for dialogue and negotiation amongst the European and Chinese governmental organizations on a diversity of common concerns. Yet, the exchanges and mutual learning between the civil society groups in Europe and China remain low. Particularly, it is much lower than the contacts and exchanges between Chinese NGOs and those based in North America. Therefore, the EU-China Civil Society Forum provides a perfect platform to change this situation. Friends of Nature (FON) together with the German Asia Foundation (Asia House Germany) organized an international workshop on the three topics; climate change, food security and water. Since these topics have transnational relevance, the exchange and networking between European and Chinese Civil Society Organizations also gains importance.

The workshop – which took place in Hainan and Guangzhou from June 8–18, 2009 – brought together 43 participants from different Chinese Civil Society Organizations with ten European representatives from ten different organizations. It was accompanied by a fieldtrip to project sites and local organizations in Guangzhou, Shenzhen and on the Hainan Island. Apart from exchanging expert knowledge on the respective topics, the participants discussed possibilities of cooperation as well as exchanging their different perceptions of each other. The fieldtrip consisted of bilateral meetings of the respective NGOs/CSO and visits to some areas with severe environmental problems, as well as some selected environmental programs and projects (like nature reserve, water recycling plants and other). The aim was to identify common objectives and initiate/start the beginning of long-term cooperation.

Without the help of some key actors, namely Wen Bo of Pacific Environment, Green Eyes (Hainan), SIFE (Guangzhou) and Green Anhui (Anhui), this event could never have happened. Therefore, we would like to express our deepest thanks to all helping hands involved in this event. The sound cooperation between Friends of Nature and the German Asia Foundation, as well as the EU-China Civil Society Forum, provided a secure and productive environment for exchange and learning.

Finally, we would like to thank all contributors and paper presenters for their efforts to enrich the whole community with their insights. We also would like to thank the translators Helen Zengyan, Staphany Wong, Henry Terrel and Suki Chung for their outstanding efforts.

This “experiment” produced extremely new insights on a very active young environmental and consumer protection movement in China, as well as on the commonalities and differences between Chinese and European organizations. We hope that this will be the beginning of a long-term productive NGO EU-China relationship.

We also have to thank the European Commission and the Church Development Service (EED) for providing the necessary funds.

Li Bo (Friends of Nature)
Nora Sausmikat (German Asia Foundation)

January 2010

Introduction

Nora Sausmikat

The following is the English version of the bilingual (Chinese-English) documentation recorded at the international networking meeting “Global Concern-global cooperation” in Guangzhou, 8.–18.6.2009. This was organized by the German Asia Foundation for the EU-China Civil Society Forum in cooperation with Friend of Nature (FON).¹ As mentioned in the preface, a group of approx. 50 NGO people involved in water issues, food safety and climate change, gathered in South China to exchange their views on the respective issues. The workshop was meant to provide space for the exchange of experiences, learning from each other and strengthening contacts between European and Chinese Civil Society Organizations (CSO). The guiding principle throughout the whole workshop was to enable the participants to exchange their experiences, identify the determining conditions for certain best practices, and to discuss possibilities and mutual benefits of cooperation. Since this workshop happened in China, the main emphasis was on Chinese experience.

Aside from the workshops and bilateral meetings, the participants visited several projects and met different Chinese NGOs. They visited, for example, the SIFE Eco-village project nearby Guangzhou, the rain forest “Baiwangling Nature Reserve”, the Mangrove Nature Reserve, and several NPOs engaged in combating climate change or promoting sustainable agriculture.

This documentation was aimed not only at recording the different inputs given by paper presenters during the workshop, but also to document the outcome of some informal discussions and some learning effects. This idea is reflected in the structure of the book: The first part documents the two keynotes reflecting on the different analysis of the three topics in question. It describes roughly some reactions inside the Chinese and European NPO scene, while the European part is mainly focused on the German speaking regions (Germany, Austria).

The second part will present some case studies dealing with the cause and necessity to organize in the respective field, the analysis of the problem and the aim and identity of the organizations. These contributions differ very much in alignment, academic bias and structure.² Since we have also included information like a shortened version of a consumer protection guide, as well as some academic studies of specific organizations in the respective field, this part is very heterogeneous. This was the

1 The Chinese version can be purchased through German Asia Foundation (Essen) or Friends of Nature (Beijing).

2 It has to be mentioned that we did not polish these texts after translation. Therefore, we want to apologize for any inconvenience while reading.

natural outcome of providing as much information as possible for both sides to get a comprehensive understanding of the activities going on in China and Europe. The third part of the proceeding consists of the outcome of the several working groups during the workshop. The different quality of these articles reflect some basic problems in the transnational networking: language problems, high fluctuation of personnel as well as heavy work load signs responsible for some very brief designed texts. Originally it was planned to co-author this part by one Chinese and one European participant.

Finally, the conclusion attempts to summarize the experiences made and to formulate lessons learned, as well as potential areas for future cooperation.

The additional material contains short presentations of two NGOs which are both "children" of one local NGO, and similarly are connected to international NGOs, the text and a rap song on the topic of water pollution in China, a participants list.

I. Different Analysis and Activities by Chinese and European NGOS

Chinese and European NGOs active in three different fields

Nora Sausmikat

Water Issues, Food Safety, and Climate Change are topics of enormous actuality and relevance for the present as well as for future generations. For civil society organizations, which are engaged in these thematic areas, there is a need to define and debate the challenges in these areas and formulate policies in the framework of sustainable development.

Clean Water

Although climate change is currently under hot debate, we will start with the two topics of clean water and food safety for this documentation. Other than climate change the two topics of clean water and food safety are much more “real” and nearer to everyday experience. To ensure a long-term food safety a safeguarding of clean water is necessary. In general, water is becoming an increasingly scarce resource. The Chinese Ministry of Environmental Protection (MEP) speaks of 340 Mio. people without access to clean water¹ Kenneth Pomeranz summarizes the problem as follows: surface and near-surface water per capita in China today is roughly ¼ of the global average, and worse yet, it is distributed very unevenly. The North and Northwest, with over half the country’s arable land, have about 7 percent of its surface water; the North China Plain, in particular, has 10 to 12 percent of the per capita supply for the country as a whole, or less than 3 percent of the global average.² Indeed, the Chinese government has declared the improvement of the water quality as an important target.³ On the sixth meeting of the EU-China Round Table in Stockholm in October 2009, as part of the EU-China strategic partnership dialogues, water management as well as water policies, the proper enforcement of a legislative framework and better water-efficient practices, were at the core of the

1 <http://datacenter.mep.gov.cn/getCountGraph.do?type=waterHomePage>

2 http://www.huffingtonpost.com/kenneth-pomeranz/chinas-water-woes-past-pr_b_1166850.html

3 <http://websearch.mep.gov.cn/was40/detail?record=1&primarykeyvalue=RECID%3D331412&channelid=54582&searchword=%E5%9C%B0%E8%A1%A8%E6%B0%B4>

consultations. Not only water scarcity, but much more pollution and environmental accidents are endangering China's water resources. For the most part pollution of industrial effluent and agriculture is the cause, but also the lack of implementation of waste water technologies, e. g. the waste water treatment plant, conducive to water impurity. The central government wants to assure the adherence and regulation of measures against water impurity on local levels through the Water Pollution Control Law. In 1988 the first Water Pollution Control law was enacted and was revised in 2002 by adding the so called polluter-pays-principle. Thus for example predatory exploitation of ground water can be prosecuted more effectively. However, in reality this legal regulation is often not implemented – there is still a lack of legal cognition and a distinctive perception for environmental issues.

Due to this, NGOs are often the only instrument to critically monitor implementation processes. The NGO Green Anhui was represented very prominently in this proceeding, and is well known for their advocacy actions. Another NGO, the Centre for Legal Assistance to Pollution Victims, provides legal advisers and information for victims of environmental crimes committed by companies. They attracted great attention in the Chinese media. Furthermore, there are numerous other NGOs that have specialized and operate on water issues nationwide.

In Europe, the situation is a bit different. Most of the countries are not affected by water shortage or poor water quality as bad as in China, although some Southern European countries like Spain suffer very seriously from water shortage. Nevertheless, the European Commission criticized that the total surface water is loaded with harmful substances and meanwhile 65 % of the potable water consumption is already provided by ground water reserves. Some European NGOs criticize that water is wasted by highly subsidized agricultural industries and ineffective water supply. The European Environment Agency (EEA) even cautions against an increasing drought in South Europe and calls for a "risk management" instead of a subsequent "crisis management". The framework directive for the "protection of the water bodies and the groundwater" of the European Commission is a beginning.

Nevertheless the ecosystem is endangered due to the fact that water producing ecosystems (like forests) are still protected insufficiently. A study of the EEA comes to the conclusion that mainly farming has enormous impacts on water in Europe. This could be perceived basically in nitrate- and pesticide concentration. Similar to China and other parts of the world the consequences of using fertilizer, pesticides etc. would be considerably lower if more information about this and many other used chemicals were available for producers and consumers. The European Union's Enlargement with East Europe countries will lead with the utmost probability to a degradation of the water quality in Europe. An important economical goal for these countries to the catch up to western standards will be the intensification of farming which will be borne by intense usage of chemicals. The problem of, in and around the resource "water" has already been recognized by European and national NGOs

like Green League, ATTAC, Wateraid (GB) and WWF, who have made this issue one of their core objectives.

One of the common problems in both regions is definitely the privatization of water.

Food Safety

15 years ago, Lester Brown's book "Who will feed China" triggered a world-wide discussion on his hypothesis that China will rely on wheat imports by 2030. This hypothesis was based on the assumption that China's urbanization and environmental deterioration will destroy her ability for food security.

Food safety and food security are two different things but in some aspects touch on each other. If we consider that North America and Europe consume 40% of the world-wide food although they just represent 19% of the total population, and that agrarian countries in the South suffer much more hunger, and mass unemployment among farmers than countries with agrarian industry, we already feel something must be wrong. On the other hand, global price policies, based on national subsidies for agrarian products are the reason for the dependency of poor countries on imports from the North. This topic triggers long-standing fundamental questions of ecological and economical justice. But concerning China and Europe, we do not have a simple cause-effect relationship (which might be the case with some African countries). China freed herself from the above mentioned scenario by different measures: it integrates into the Free Trade Logic by occupying huge areas in the South to build up their own agrarian industry. Also, to maximize profits, using extensive gene technology became a must.

Here, food safety comes into play. In April 2007, the scandal surrounding the melamine poisoned pet food imported from China to the USA was still discussed in the framework of well-known trade quarrels (which earlier were fought in the field of toy production). But one year later, another food scandal grabbed the headlines: Six babies died and at least 53,000 children got sick because of melamine-contaminated baby food (melamine is used in the industry as binder and replaces the protein content in food). Chinese civil society reacted very quickly: intellectuals and bloggers discussed fundamental questions of human dignity concerning environmental deterioration, contaminated food and the helplessness felt vis-avis an economic system which is solely profit driven. Melamine is much cheaper than real proteins.

As always happens after a scandal, some high level officials were identified as culprits and punished. The lack of regulations in China entice exporters to frauds, for instance with sticking wrong labels. The Chinese Ministry of Agriculture reported an annual figure of more than 40,000 toxicity casualties. Furthermore, heavy metal pollution, lead and mercury can be detected in fruits, vegetables, meat and fish. The

use of pesticides, fertilizers and the use of low-grade materials for food production are the chief causes.

Actually, in China there is a series of food safety regulations but they are often not duly followed by local governments. Decentralized politics has provoked that local cadres tend to protectionism of the provincial industry to make more profit and prosperity. Environmental protection and measures for accurate food safety are frequently ignored. On the first of June 2009 the Chinese Food Safety Law came into effect. This law shall strengthen the observation, monitoring both of the above mentioned and lead to criminal prosecution to ensure food safety. According to the Chinese food safety expert Luo Yunbo, China is going to establish a Food Safety Commission on a national level that will be supported by the State Food Safety and Technology Commission, the State Food Safety Risk Assessment Commission, and the State Food Safety Commission.

As we see in this proceeding, Chinese civil society groups are few in this field. But as we know from other research there is something going on like a Chinese "green revolution" or "green movement". More and more green products as well as the rise of certification firms can be witnessed.⁴ The texts in our proceeding show that this topic is not treated as a single point topic, but is linked to general questions about the development in rural areas, market mechanisms and financial assets. One important issue for the future is also the question of land rights which directly influences the development of agrarian land loss.

To discharge Europe from food scandals would be naive. In this context keywords such as BSE (bovine spongiform encephalopathy), bird flu or the salmonellae poisoning remind us how important the quality control of food actually is for the consumer. Since then, approaches to improve the situation can be recorded such as the European Food Safety Authority, established in 2002 which is responsible for food safety, but directives are followed hesitantly – mainly to seek more profits. The European Food Information Center refers to a European-wide study that emanates from the fact that "11% of food products monitored by the national public authorities do not correspond with European food legislation" and "21% of the two million retail branch offices (shops, hotels, restaurants, wholesalers) do not meet the hygiene regulations".

Civil societies in Europe are relatively well-represented in the field of food safety such as various consumer advice centers and NGOs. Also, different from China, farmers themselves are able to form their own organizations. Many European NGOs ask for more fair trade mechanisms. Europe should regulate its food markets in a way that would not discriminate against developing countries. Equally important, it should

4 http://www.eu-china.net/web/cms/upload/pdf/materialien/eu-china_2009_hintergrund_10.pdf and http://www.eu-china.net/web/cms/upload/pdf/materialien/hoering-eco-china_09-09-03.pdf

stop pushing its surplus agricultural products into the markets of developing countries and demand further import liberalization from them, and accept the concept of food sovereignty (the right to decide for itself about its agricultural development).

Climate Change

China tops the ranking of countries worldwide which produces carbon-dioxide emissions – followed by the United States. Nevertheless, China has invested 930 million USdollars in innovations in climate protection since 2001. Especially investments in the range of regenerative energies play an important role. According to the World Resources Institute (WRI) China even contributes more to the climate change than the USA. Furthermore, the WRI is very optimistic that China will achieve the goals it has set for climate protection. By 2020, 15% of the energy is to be extracted from regenerative sources.

On the other hand, there have been numerous NGOs that have lately come together to operate in the field of climate protection (the tendency is upwards). Shortly before the UN Climate Change Conference in Copenhagen in December 2009, the Chinese Civil Coalition on Climate Change, endorsed by the international environmental organizations' China offices,⁵ managed to launch a joint statement. This statement is significant because for the first time ever Chinese civil society groups are united in offering a statement supported by a wide range of almost 40 environmental organizations. The statement was well received by the Chinese media and made it to the second biggest state-owned news agency; the China News Service.⁶ In this statement, they distinguish between international and domestic policy recommendations, but clearly demand that "China should take the lead among developing countries in combating climate change". On the other hand, this statement did not differ very much from the official line on the principle of "common but differentiated responsibilities" and recommended to the international community to assume more responsibility for the climate protection. Particularly, "developing countries should proactively implement measures of mitigating and adapting to climate change and set up voluntary domestic emission control targets."

China's self-imposed target to reduce carbon intensity (carbon dioxide emitted for each unit of GDP) by 40% below the 2005 level by 2020 was well received by Chinese NGOs and academics.⁷ Nevertheless, these commitments are not binding and depend very much on the willingness of the developed countries to provide financial support and technical transfer as well as capacity building. The whole topic of climate change is very much influenced by local interpretation of development

5 http://www.eu-china.net/web/cms/upload/pdf/materialien/eu-china_2009_hintergrund_14.pdf

6 http://www.eu-china.net/web/cms/upload/pdf/materialien/eu-china_2010_hintergrund_01.pdf

7 http://www.eu-china.net/web/cms/upload/pdf/materialien/eu-china_2010_hintergrund_01.pdf

rights and the question of “ecological justice”. Copenhagen did not really produce some new commitments: Also, the European Union stick to their former announcement to reduce greenhouse gas for 20% below the 2005 level by 2020, to increase renewable energy resources by 20% and to raise energy efficiency likewise by 20%.

Similar goals and claims on the part of the Chinese civil society are demanded as well by the western/international NGOs such as Germanwatch, WWF and Greenpeace. They request the industrialized countries to put much more effort into emission reduction, to integrate the USA in legal agreements, and to empower developing countries into the process of climate protection through measures and agreements. As we will see in this proceeding, Chinese grassroot NGOs, students associations as well as academics, are very concerned about the local dimension of climate change, and provide field research about eco-tourism, multifunctional ecosystems and climate protection information for other students and the public.

Where is the Common Ground?

The workshop “Global Concerns – Global Cooperation?” brought together Civil Society Organizations from Germany, Austria and China to discuss these topics. Moreover, the central overarching aim of the meeting was to reflect on common understandings and strategies of the organizations: How are we analysing the problems from a European and from a Chinese perspective? Are we sharing common visions and common strategies?

As a basis for discussions during the meeting, we had two introductory key note speeches, showing the European and the Chinese approaches towards the three topics. These key note speeches focused on the following two questions:

- How are we analyzing the global challenges of Climate Change, Water Issues and Food Safety?
- Where are the main working areas of the NGOs in these three topics?

China: Coping with Water Crises, Food Contamination and Climate Change – China's Environmental NGO Advocacy Actions

Fu Tao

Along with the rapid economic growth brought by China's reform and opening up, environmental problems have become increasingly worse. Water shortages and pollution, food safety, and the growth of greenhouse gas emissions are the three major environmental challenges that China currently faces.

According to 2004 data from the former State Environmental Protection Administration and the National Bureau of Statistics, every year pollution causes an annual loss of 3.05% of total GDP, while water pollution accounts for 55.9% of that loss. According to an approximate estimate, each year 118,000 people in China die from cancer related to drinking contaminated water. In February 2009, government monitoring data indicated that seven major river systems were moderately polluted, among which class four, class five, and heavily polluted systems reached 46% of the total.

While water pollution is becoming increasingly worse, at the same time China is dealing with serious water shortages. According to United Nations standards, in 18 provinces and cities per capita water resources are "very low" (2000 cubic meters or less), and "extremely low" (1000 cubic meters or less) in 10 provinces and cities. Of China's 668 cities, 400 are experiencing water shortages and 100 are facing critical water shortages. In addition, water resources are distributed unequally both temporally and spatially and natural disasters are frequent. According to statistics, the annual losses caused by floods and droughts total about US\$10 billion.

In food safety, the use of pesticides and fertilizers is abnormally high and food crises have occurred frequently, with some even negatively impacting global trade. Genetically modified agricultural products have also faced increasingly larger challenges from legislation, consumer rights groups and some domestic industrial organizations.

In October 2008, Xie Zhenhua, deputy director of the State Development and Reform Commission, acknowledged that China's greenhouse gas emissions had reached the same level as the United States (though per capita emissions remain well below United States levels). China has taken steps to reduce emissions, though it is starting from a very high level and is considered a developing country within global climate negotiations. While on the one hand China is pushing hard in international climate negotiations for emissions cuts, it has also adopted many domestic policy measures to encourage energy conservation and emissions reductions. These are

mostly top-down measures that rely on implementation by local administrators; the system still needs to be improved and made more efficient to allow local governments to autonomously propose and implement emissions-cutting and energy conservation measures.

The environmental crisis has also highlighted the issue of environmental equity and led to the intensification of social conflicts. According to government statistics, since 2005 China has on average experienced an environmental emergency every two days, of which 70% involve water contamination. Between 1995 and 2005, the number of "mass incidents" (large-scale protests) caused by environmental problems increased by a factor of 11, marking an average annual increase of 30%, while the number of petitions initiated because of environmental problems rose from 50,000 to between 80,000 and 90,000.

In order to protect their environmental rights, people began to take spontaneous collective action. A typical example is the case of the PX plant in Xiamen. After objections by members of the Chinese People's Political Consultative Committee (CPPCC) and local residents, the government finally decided to move the location of the chemical plant. City residents had gone on collective "strolls" as an expression of protest, and officials ultimately took heed of public opinion in making their decision, marking a clear victory for public participation in environmental governance. Environmental pollution has also contributed to the emergence of advocacy groups such as the Green Association, a group of pollution victims from Pingnan County, Fujian Province, which has led a decade-long struggle against a large-scale chemical plant in the area.

Coping with Water Crises

In addition to groups of pollution victims that have organized to protect their rights, there are many environmental NGOs that have directed their efforts towards environmental investigation and advocacy activities.

In early 2007, Beijing's "Happy Water City" action was collectively sponsored by Global Village, Friends of Nature, Green Earth Volunteers, Green Camp (a nationwide university student organization) and other environmental groups. The action aimed to raise public awareness of and concern for the city's water quality. The event was later extended to other provinces and cities. For example, the Green Friends in Hebei and Green Camel Bell in Gansu both carried out similar actions. In promoting water pollution control and protecting the rights of the public, environmental NGOs have adopted a variety of different approaches.

For example, the Center for Legal Assistance to Pollution Victims (CLAPV) at the China University of Political Science filed lawsuits on behalf of victims; the Hubei Green Hanjiang River group and the Hebei Huai River Guardians have maintained a long-term commitment to monitoring the river and have interfaced with and pres-

sured polluting industries and local governments. These organizations have pushed the local governments to regulate polluting industries and improve the river's water quality and aided in providing contaminated communities with clean drinking water. After three years of hard work, in 2008 the Anhui Green Manjiang River group successfully pushed local government to close down and move three polluting chemical factories from Qiugang village in Bengbu district. In this case, the Green Manjiang River group also helped contaminated communities support unofficial leaders, increasing the ability of the villagers to speak for themselves. With regards to community participation in water resource allocation, utilization and watershed management, Green Watershed in Yunnan province launched a small-scale community governance watershed project. The Xinjiang Conservation Fund investigated the privatization process of water supply in China's cities and prepared an extensive report raising several problematic areas.

Promoting Food Safety, Influencing Corporate Behavior

NGOs have also launched public advocacy actions promoting food safety and highlighting the hazards of genetically modified foods.

In 2007, 21 environmental organizations jointly launched the "Green Choice" campaign. The campaign encouraged consumers to take into account the environmental performance of the companies whose products they purchase, to not purchase products from polluting companies, and to use their purchasing power to make enterprises improve their environmental performance. At the same time, they encouraged major retailers and large enterprises to take the initiative in strengthening the environmental management of their supply chains; they have created a "blacklist" of suppliers that don't meet environmental standards, and carried out strict environmental audits against non-compliant companies. This marks the first time that environmental organizations have worked together to respond to polluting industries at the consumer level.

Compared with food safety in developed countries, Chinese consumers are much less aware of their rights and have far fewer channels for obtaining relief following incidents. Because of limitations in the institutional environment, it is difficult to use the consumer sphere to create effective curbs on polluting industries. Greenpeace is a pioneer in this respect. They test for pesticide residues and assess genetically modified food from large-scale supermarkets, make the test results public, and exert significant pressure on supermarket chains and other related companies. Greenpeace has also provided the government with policy advice and provided warnings on the threats to China's agriculture from multinational corporation's genetically modified products.

Another example comes from the Yunnan Pesticide Eco-Alternatives Center (PEAC) and its promotion of eco-friendly agriculture. Also, there are a number of other NGOs

that encourage farmers to establish cooperatives and community-supported agriculture with pilot projects in rural areas. These promote the production and marketing of pollution-free products by establishing links between urban consumers and agricultural producers in order to reduce the role of middlemen and promote fair trade. The program's intention is to maintain the health of the environment and raise the farmer's standard of living, while at the same time promoting the sustainable development of rural communities.

This forward thinking approach focuses on how, within the context of globalization, developing countries and small farmers can ensure food sovereignty and sustainable livelihoods. This is one of the major issues facing China's agricultural sector.

Dealing with the Climate Crisis

Along with the international communities deepening understanding of climate change and the prominence of climate politics, some Chinese NGOs have begun to address this new topic. A few examples of public advocacy campaigns are the "26-Degree Air Conditioning Action", "Summer Solstice Lights-Off" and "Green Travel". These campaigns represent a coordinated approach to global warming by NGOs, and have significantly influenced public behavior. The Green Earth Volunteers have setup a reporter's network to bring up these issues and Global Village has setup an energy reporter's network. These have utilized the press to spread a message to the public of water conservation, energy conservation, environmental health and rights and other calls to environmental protection.

In the realm of government cooperation to promote energy conservation and renewable energy policy and implementation, some international environmental protection organizations have played an important role, providing the government with expert research and policy consultation and support. A developing aspect of NGOs work has focused on how China, as a developing country, can take adaptive measures to enhance the presently weak ability of communities to respond to climate change. These organizations have assisted communities in developing biogas digesters, solar energy and other new energy sources. These have enhanced rural communities ability to respond to natural disasters caused by extreme weather.

Concerning international climate negotiations, the formation of public awareness and a public response to climate change among China's civil society has seen the emergence of three network-based organizations: the China Climate Change Action Network (CCAN), the Chinese Civil Society's Response to Climate Change: Consensus and Strategies project, and the China Youth Climate Action Network (CYCAN), mainly consisting of university students. These three networks share the common characteristic being established with external help and within the context of international climate politics. However, on this topic they are concerned both with making progress in international climate politics while at the same time working on China's

future climate policy, programs and public action campaigns. Of course, there is still a long way to go for new Chinese NGOs with respect to the complicated process of strengthening professionalism.

Promoting Information Disclosure and Public Participation

In addition to the specific aforementioned areas, environmental NGOs are involved in policy advocacy and actively promoting public participation in strategic environmental decisions, among which pushing for environmental information disclosure is an important focus. Environmental NGOs have been actively involved in the government's environmental impact assessments as well as public participation in legislative consultation and pushing for the implementation of public interest litigation in China. For example, organizations such as the Institute of Public & Environmental Affairs (IPE) and the U.S.-based Natural Resources Defense Council (NRDC) cooperated to release in June of 2009 rankings of 100 cities for environmental information disclosure, as well as monitoring the status of local governments in their implementation of environmental information disclosure. Previously, the IPE also produced a map of China's air and water pollution, as well as making public companies' emissions and cities' air quality, thus protecting the public's right to know while at the same time putting public pressure on polluting companies and government regulatory agencies.

Another case of public action having visible results has been with hydropower development, with environmental NGOs joining together in 2003 to oppose the building of a dam on the Nu river. The campaign involved the cooperation of experts, academics, media and supporters from domestic and international institutions, which pushed the plans for construction of the Nu river dam onto the public stage and sparked discussion and debate. NGOs have also used channels within the system to get their voices heard at the highest levels of government. In calling into question the construction of the Nu River dam, NGOs brought an ecological and environmental appeal together with protecting the rights of affected people, marking a significant change in advocacy action from the previous emphasis on only the environment. They called for fair and transparent environmental and social impact assessment, as well as participation by indigenous peoples and the public in the decision making process for large-scale engineering projects.

In 2005, environmental NGOs participated in the State Environmental Protection Agency's consultative hearing about a project that would cover the lake bed of the Old Summer Palace with an impermeable membrane, which brought about expressions of doubt from the public and increasingly large social opposition. This is yet another case of the public participating to promote environmental protection.

In the realm of public advocacy, some environmental groups realize the importance of the media and publications. The Green Earth Volunteers, the Friends of Nature and other organizations issue periodic publications of research and action

reports on environmental issues, expanding their voice and their message. The Global Greengrants Fund has used micro-financing to support local environmental protection organizations in a number of specific investigations and report publications, as well as funding for youth environmental organizations' capacity building.

At the local level, there are many similar cases in environmental NGOs responses to environmental challenges. Through their efforts, environmental NGOs have tried to promote the creation of a more institutionalized form of Chinese public participation in environmental decision-making and protect their environmental rights, interests and advocacy channels.

Environmental NGOs have performed a lot of work with regard to water pollution, food safety and climate change; the above is just a simple list of a few of their accomplishments, and it is inevitably generalized.

The three challenges of water pollution, food security and climate change, both with regard to the technical aspects of how to deal with the problem as well as the worsening environmental crisis, have highlighted the importance of institutional changes necessary to ensure environmental equity. These changes include environmental information disclosure, the public's right to know, equitable distribution of environmental resources, and democratic and governance problems regarding ensuring the environmental rights of marginal groups and the public at large. Taking the impact of climate change as an example, on the one hand it is a reflection of an imbalance between the consequences of human activity and nature, while at the same time it shows that among northern and southern countries, wealthy and poor countries, there is a wide gap in energy consumption and emissions, and there is therefore unequal responsibility for the impact of emissions.

Along with a sharp increase in its international prestige, China has brought economic growth to the world, as well as regional stability and various other beneficial effects. At the same time, it is also responsible for some negative effects, such as carbon emissions that contribute to climate change. China's trade and foreign investment has brought about significant local environmental and social impacts, upstream development has had downstream consequences, etc. In more and more areas, domestic and international issues are intertwined. Therefore, international organizations, including NGOs from northern and southern countries and domestic Chinese organizations, have greatly increased both their desire and need to cooperate in their responses to relevant crises and challenges. Regarding the relationship with international NGOs, certain sectors require Chinese domestic organizations to expand their global outlook, and go from serving as organizations that receive help for domestic problems to becoming cooperative partners with international NGOs in facing specific global issues (still, the vast majority of organizations still need to focus on local responses to domestic environmental issues). Chinese and foreign environmental NGOs now face a new matter: how to carry out basic communication based on the needs of both parties and gradually build a new form of partnership.

Europe: NGOs in combating water, food safety/food security issues and the crisis of climate change

Franz Halbartschlager (Südwind)

Claudia Schürz (Weltumspannend Arbeiten)

Topic 1: Water Issues

More than 1.1 billion people have no access to clean drinking water and the supplies are unevenly distributed around the globe. A major problem in this field is the water quality. In developing countries, 90% of the contaminated water and 70% of untreated industrial waste reach into surface waters. The consequence of this is that each year more than 5 million people die from diseases, which can be associated with contaminated water. The prognosis of the UN is that in 20 years, while maintaining consumption; 1.8 billion people have to live with absolute water scarcity. This will be tightened by the continuing rural exodus, and the concentration of population in large cities.

But only 55% of the harvested water is actually consumed; the remaining 45% is lost through leaking pipes and evaporation or leaching in agricultural irrigation, which now has 70% of the world's total water consumption.

Remedies by technical measures such as desalination are too expensive and consume too much energy. More sense would make a more efficient use of scarce resource "water". Equipment and pipes for transporting drinking water must be repaired or rebuilt. The water supply must be protected and water pollution has to be combated.

According to information provided by financial institutions 180 billion US\$ will be invested for this. Currently investment in water infrastructure is at 75 billion US\$ dollars annually.

Another enormous problem forced privatization of water by the IMF and the World Bank. 5% of global water resources are already privatized. Many civil-society movements condemn such a commercialization of water; because the access to clean water is a fundamental "human right".

International Agreements

There is no international agreement for water protection like the Kyoto Protocol against climate change. Nevertheless there are agreements on a very high political level as the Common EU standards of protection against water pollution, the Drinking Water Directive of the EU and the Office of Water in the U.S. Environmental Protection Agency (EPA).

On 18 July 2006 the EU-Commission proposed a directive in the limits for the concentrations of hazardous substances into surface waters should be established. The Common EU standards of protection against water pollution include 41 types of pesticides, heavy metals and other hazardous chemical substances that pose a particular hazard for animals and plants in the aquatic environment and to human health; compliance with these limits must be ensured by 2015.

The objective of the Drinking Water Directive is to protect the health of the consumers in the European Union and to make sure the water is wholesome and clean. To make sure drinking water everywhere in the EU is healthy, clean and tasty, this Directive sets standards for the most common substances that can be found in drinking water. 48 microbiological and chemical parameters must be monitored and tested regularly. The Directive obliges Member States to regular monitoring of drinking water quality and to provide to consumers adequate and up-to-date information on their drinking water quality.

Water issues and Civil Society Organisations

Numerous non-governmental organizations from the fields of environment and development cooperation deal with the longstanding issue of water. The two following named global movements try to help people who are affected by water scarcity or water pollution.

Global Water is an international, non-profit humanitarian organization founded in 1982 focused on creating safe water supplies, sanitation facilities and hygiene-related facilities for rural villagers in developing countries because the lack of safe drinking water and sanitation facilities are the main causes of hunger, disease and poverty throughout the developing world. Their water projects have an immediate life-changing impact, particularly for women and children, who have the responsibility to gather water for their families every day of their lives in the developing world. Successful Global Water projects utilize water and sanitation as a tool to create sustainable socioeconomic development in these poor rural communities.

The People's Water Forum is a Forum for the global water justice movement to coordinate the work in defence of water as a human right, a public good and a central component of the global commons. The members include farmers, indigenous

peoples, activists, trade unions, faith members, NGOs, allied social movements and other networks that struggle for water access throughout the world.

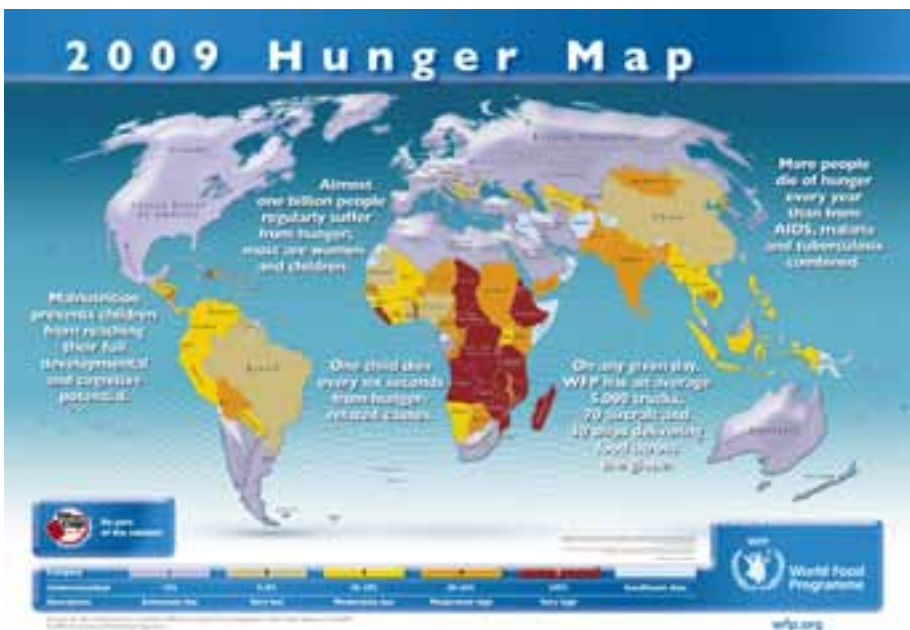
This movement advocates for community-led solutions to the water crisis. Water has to be upheld as the basic element of all life on the planet and as a fundamental and inalienable human right. All forms of privatization have to be stopped and a declaration that the management and control of water must be public, social, cooperative, participatory, equitable and not for profit has to be adopted. The movement opposes the dominant economic model that prescribes privatization, commercialization and corporatization of public water and sanitation services.

As affirmed at the 2009 World Social Forum in Belém (Brazil) it is time to strengthen the strategic alliance between water movements and movements for land, food and climate. New networks and new social alliances has to be built to involve local authorities and parliamentarians who are determined to defend water as a common good and to reaffirm the right to fresh water for all human beings and nature.

Topic 2: Food Security/Food Safety

Food Security

In the World Food Summit from 1996 the FAO states that: "Food Security exists, when all people, at all time, have physically and economic access to sufficient, safe



and nutritious food to meet their dietary needs and food preferences for an active and healthy life!”

The reality on the globe is a very different one: In June 2009 the BBC reported that for the first in world history more than 1 billion people on the globe go hungry; per year about 8,8 million people die because of hunger! Most of the starving people living in Asia (about 524 Millions), Africa (about 206 Millions), Latin America (about 52 Millions) and the Near East (about 38 Millions).

Statistically since 2002 the number of “Food Emergencies” in different regions of the world is increasing, after a phase of decreasing around the year 2000: 2002 (41), 2003 (42), 2004 (43) and 2005 (44). The causes for this emergencies are heterogeneous, but weather caused reasons are getting more and more important.

Food Safety

“Illness due to contaminated food is perhaps the most widespread health problem in the contemporary world and an important cause of reduced economic productivity” (FAO Expert Committee 2001). Statistically, the number of food borne diseases has increased dramatically: the FAO is estimating 1,8 million deaths per year due to dehydration and millions of related deaths due to malnutrition and diseases associated with poor nutritional status.

We can summarize the reasons for the increasing problems with food borne diseases under the following arguments: (1) population growth, life style and the need for more food production, (2) increase in consumption of animal products, (3) urbanization, (4) increase in international trade in food and feed and finally (5) the global tourism is an important factor too.

Food Security/Food Safety and the European Civil Society Organisations

The topics Food Security and Food Safety are intensively discussed in Europe on various levels. Important key questions for the Civil Society Organisations, related to these topics are: overproduction and environmental degradation in agriculture, genetically modified products, agrofuels and alternative food production (organic, fair trade).

Some important movements are e. g. the Slow Food Movement, which was initiated by Carlo Pertini (slogan: buono, pulito e giusto/tasty, safe and fair). Slow food should be a sustainable alternative against fast food; regional and seasonal products should be used instead of globalized uniform food. Various communities in a number of European countries are already members of this Slow Food Movement.

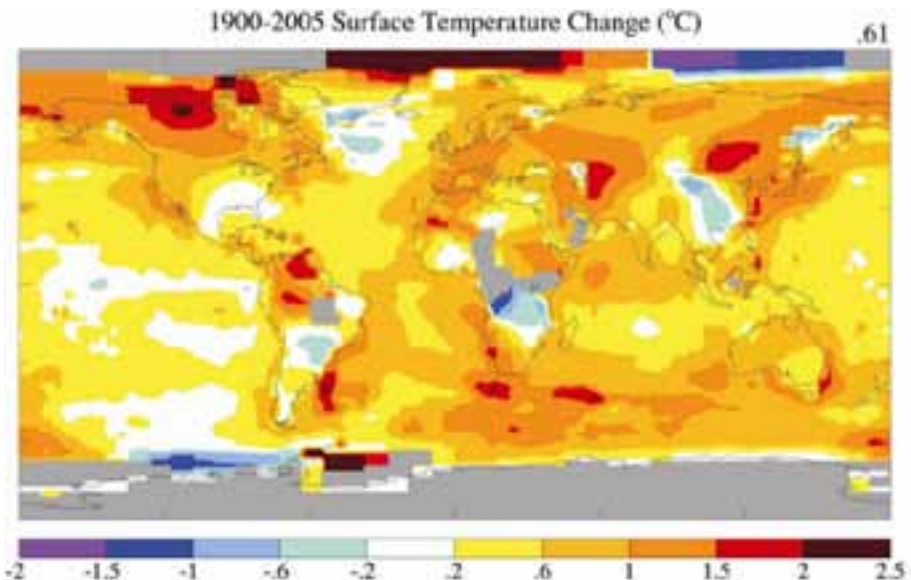
The organic farming is another important initiative. The “farming methodology” is strictly based on organic criteria, like using no fertilizer, no pesticides, no genetically modified organism. In Austria meanwhile 11 %, in Germany 4,7 % of all Farmers are organic Farmers.

A new form of consumer oriented approach is the label "Faire Milch", which could be found in a couple of European countries. In Europe there is a tremendous overproduction of milk of the European markets. So the prices, farmers are getting for milk, is decreasing since many years. A farmers-initiative decided to form a new cooperative to offer milk to consumers who are ready to pay higher prices for their milk to guarantee the further existence of farmers in Europe.

Topic 3: The Climate Change

The third IPCC Report (Bonn 2001) formulates very diplomatic: "The Earth's climate system has changed globally and regionally, with some of those changes being attributable to human activities." But without any doubt today Climate Change could be seen as the most serious threat for our globe. Facts and figures, showing a sustainable change of our climate regime in different regions of the world can not be denied:

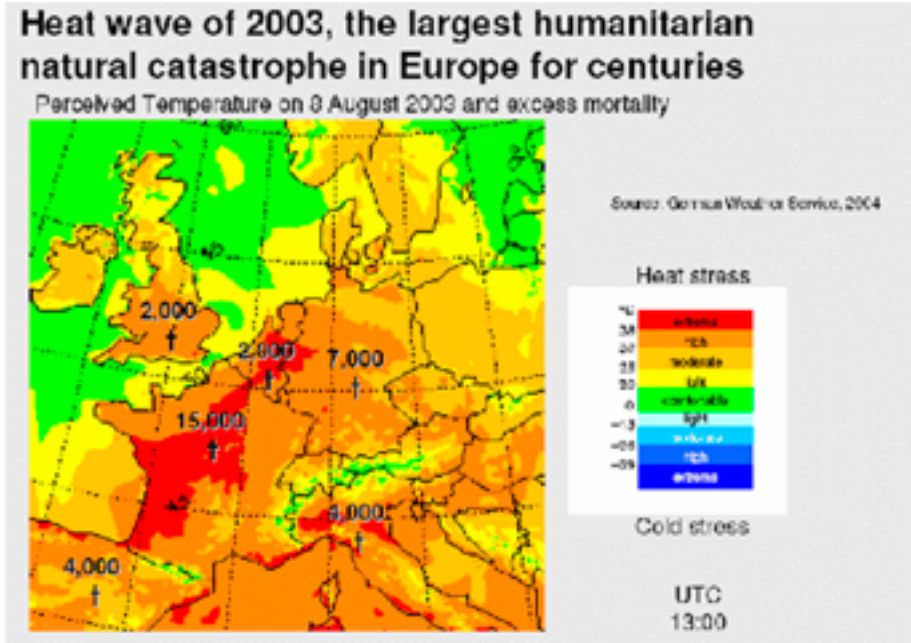
- The earth has warmed at least about 0,6 °C since 1860; the last two decades being the warmest of the last century.



Change of surface temperature index based on local linear trends using surface air temperature over land and SST over ocean.

Sources: Hansen et al., *JGR*, **106**, 23047, 2001; Reynolds and Smith, *J. Climate*, **7**, 1994; Rayner et al., *JGR*, **108**, 2003.

- Precipitation patterns have changed with an increase in heavy precipitation events in some regions; the following example shows the extreme heat wave in western European countries in 2003.



- Sea level has risen 10–20cm since 1900; most non-polar glaciers are retreating, and the extent and thickness of arctic sea ice is decreasing in summer. The Pasterze is the biggest glacier in Austria and a well documented example for the shrinking of glaciers in Central Europe



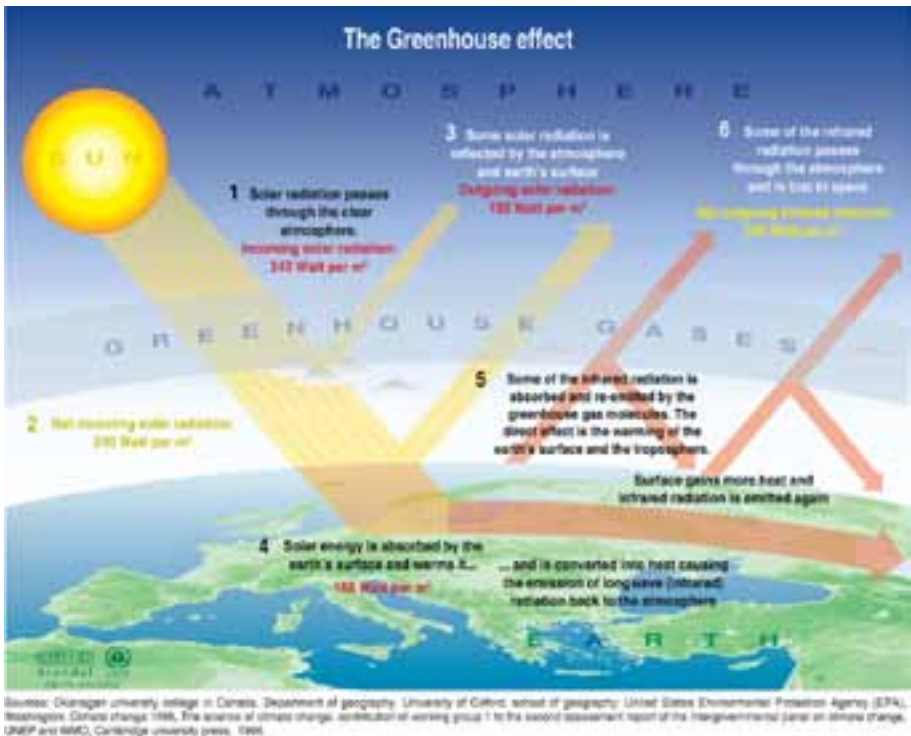
Pasterze 1875



Pasterze 2004

The Greenhouse Effect

There is nearly no doubt in the academic debate that the so called “anthropogenic greenhouse effect” is responsible for the actual Global Warming. The following graphic gives an overview about the physical process. (chart can be downloaded at UNEP)



In the past years, greenhouse gases, like Carbon Dioxide (CO_2), Methane (CH_4) and Nitrous Oxide (N_2O) were emitted in a tremendous increasing extent. Economic sectors like electricity production, refineries, industrial production (including the agro business) and transportation are the main causes for that.

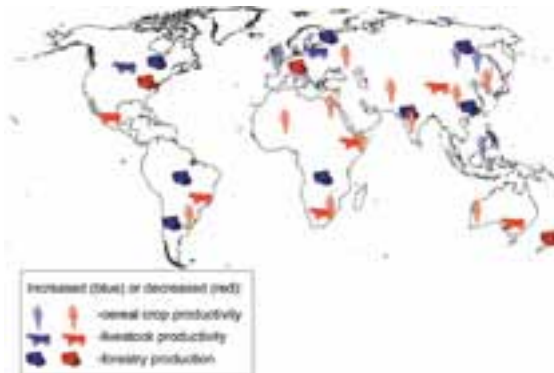
About the long term impacts of Climate Change on the world development or on some specific areas there are a big number of scenarios existing and often presented in various forum. To give only one example, the following map (source IPCC AR4 WGII) shows the Climate Change impacts on agricultural production, specifically on crop, livestock and forest production. There we can see some differentiated consequences of the Global Warming in different regions of the globe. In Australia for example increasing droughts and desertification of farmland could become reality;

In South and East Asia increased storm and flooding on the one side, but increased droughts and diseases on the other side are forecasted. Finally Europe could count on increased crop varieties and lower yields; at the same time more diseases could happen on the European Continent as well.

Climate Change and the European Civil Society Organisations

The topic Climate Change has a high priority in the European political agendas, but this seems to be only on a rhetoric level. The reality shows that a couple of European governments are not fulfilling the targets of the Kyoto Protocol, including Austria.

Regarding the political responsibility Climate Change is a cross-cutting issue, touching political areas and topics like Energy (production and efficiency), Traffic policy, Agriculture, Consumption and some others.



Kyoto-Protocol: Targets and Trends

The graphic shows the greenhouse gas emissions of industrialised countries which have ratified the Kyoto-Protocol.

+/- shows the target related to the Kyoto-Protocol.

The blue column shows the prognosis of the UNFCC

The red column shows the Kyoto-Protocol target.



Countries

- Spain
- Portugal
- Canada
- New Zealand
- Norway
- Austria
- Italy
- Japan
- Denmark
- France
- EU
- United Kingdom
- Germany
- Czech Republic
- Belorussia
- Poland
- Hungary
- Bulgaria
- Estonia

The projection shows the activities already in the process of implementation, and not only planned once.

The Civil Society Initiatives are therefore focused on these political areas. Environmental Education groups have already started their work in the 1970ies with “save energy” slogans to reduce the air pollution. The “car free day” is a huge Civil Society initiative all over Europe; campaigns against agro fuels and huge agro industries have found many supporters in all European countries. And finally educational programs on “critical consumption” were very successful in Germany and Austria. In Austria the past 3 years the so called footprint initiative did a lot of awareness raising mainly focused on reducing greenhouse gases through personal life style behaviours.

But the most successful Civil Society initiative on the Climate Change issues in Europe is the “Climate Alliance”, which is a global partnership project between communities in Europe and Brazil to save the global Climate, by saving the rain forests (Brazil) and by reducing greenhouse gases (Europe). The success story of the Climate Alliance is the community based approach, which allows the taking of very concrete actions.



II. Case Studies – NGOs, Water, Food, and Climate

This part will present selected NGOs, their work, methods, strategies focus and analysis in the respective three issues water, food safety and climate change.

Water

a) Reflections of the University Students-led Environmental Organizations' Work on Water Issues

Tian Qian (Green Students Forum)

Introduction

Water shortage and water pollution has become a prominent problem in the modern society. Water crisis, coming after the oil crisis, is no longer a scaremonger's vision. How to protect the water resources effectively is now an urging issue. Apart from government's policy, new technology on water saving and pollution reduction, related infrastructure in delaying the crisis temporarily, to involve the public and raise their awareness are also necessary means to combat the problem. University students-led environmental organizations have become an important force in the civil society, their characteristics and advantages and the way to maximize them, are worth to be discussed in the area of water conservation.

Here, we would take the water project of the Green Finger, a group organized in Beijing Forestry University as an example, to analyze their activities, the pros and cons of their work in the past four years. Through this exercise, we want to provide some advice on actions of university students-led Environmental Organizations' and hope to promote their further development in the field of water conservation.

The Green Finger was established in October 2003, and by 2004, it has fixed its focus on the river conditions of Beijing city. In the past four years, the Green Finger's volunteers have worked on Tonghui River, Jing-Mi Canal, Qing River, Ba River, Wenyu River and Miyun Reservoir, etc. It has developed from a solitude team to an alliance of university students in Beijing, to supervise the water quality. Its field work has grown from once-off summer field trip to a long-term monitoring system. Moreover, its concern has been shifted from water quality to humanity. The whole evolving process involves self-identification, goal evaluation, audience targeting; by continuously readjusting its implementations, to achieve the optimal effect.

1. Contents of its Field Work

1.1 River Quality in Beijing City

One of the important aspects of the Green Finger's water conservation work is monitoring the river quality. It effectively combines the group's strong background on environmental science, professional knowledge and the skilled students' involvement, to conduct scientific research, collect water samples and analyze the test results and get to know the water quality of rivers in Beijing by using a standard evaluation method. Table One shows the water quality results of Jing-Mi Canal in 2006.

Code	Location of sample collection	Flow direction
Jing 1	Xinzhuang of Wenquan Town	Upstream
Jing 2	Tundian Bridge	↓
Jing 3	100 meters downstream of Hongshan Bridge (Shops and factories at Qinglong Bridge)	↓
Jing 4A	South Gate, Summer Palace	↓
Jing 4B	Changchun Bridge (Changhe Wan Pier)	↓
Jing 4C	Tower of Linglong Park (at Bali Bridge)	↓
Jing 4D	Air Force General Hospital	Downstream

Table 1.1 Locations for water sample collection

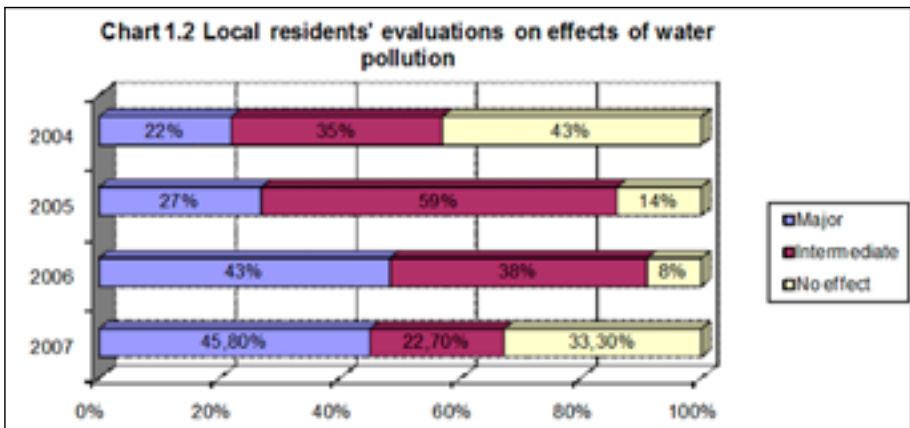
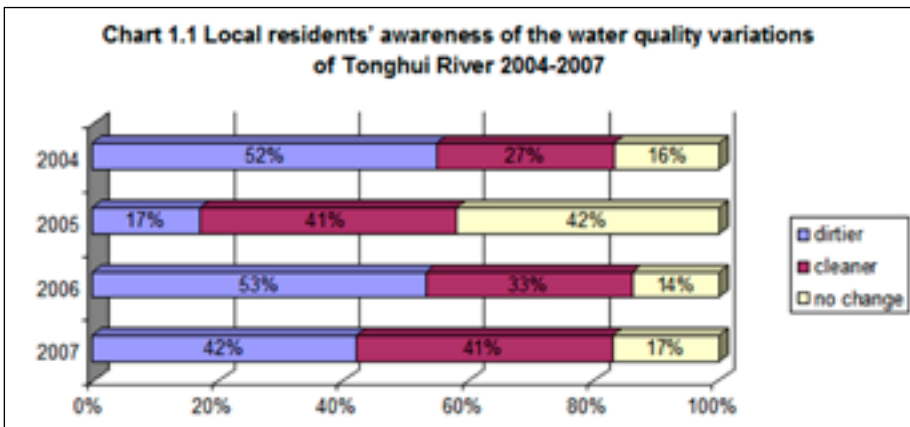
Results	Jing 1	Jing 2	Jing 3	Jing 4A	Jing 4B	Jing 4C	Jing 4D	Average
pH	8.00	8.23	8.01	7.53	7.50	7.74	7.84	7.84
CODCr(mg/L)	28.486	19.008	17.551	36.499	34.313	45.245	25.565	29.524
Cr6+ Ion (mg/L)	0.057	0.046	0.046	0.046	0.046	0.046	0.069	0.051
Turbidity (NTU)	2.1	3.5	3.3	10.4	5.4	9.9	26.5	8.7
Water Hardness (mg/L)	25.225	21.421	31.031	7.407	3.704	3.003	6.507	14.043

Quoted from statistics from the Green Finger's research in 2006)

Table 1.2 Text results of Jing-Mi Canal, 2006

1.2 The Awareness of Environmental Protection Among the Citizens

While conducting the field work to monitor the water quality, the locals' awareness of environmental protection is another part of the research. Through collecting the questionnaires, the Green Finger studied how concerned the local residents were about the water quality and the impact of water quality varied on them, etc. The following charts show the changes in environmental awareness among the locals between 2004 and 2007.



(Quoted from statistics from the Green Finger's research in 2007)

1.3 Hydrological Study

The hydrological study examines the surrounding environment of rivers, tracing the sources of pollution, social problems which are raised due to river pollution or water shortages. Table 1.3 reflects the relationship between water and the life of the residents.

Table 1.3 Hydrological study of the summer internship, 2005

	Source	Price	Quality	Awareness of water saving	Water recycling
Guangzhuang-Xihaizi Park	Zhumuchang District	free	Same as before	no	most people don't have this concept, no water recycling system available
	Ximazhuang District	3.7 Yuan/ton	Water with alkali flavour, more sediment, increase in hardness	yes	
	Yongshunmanli District	3.7 Yuan/ton	Water gets too hard, with alkali flavour and dark sediment	yes	
Tonghui River	Guobeidian-Guanzhuang	Monthly rate or for fee	Not good	yes	most people don't have this concept, no water recycling system available
	Tap water (for residents in buildings)	3.7 Yuan/Ton	So-so	no	
	Dongbian Gate-Gaobeidian	Complicated (temporary residents pay more than citizens)	OK	Only a few have, most don't	A car-cleaning company uses recycled water

(Quoted from the Green Finger's research in 2005)

1.4 Environmental Education and Publicity Activities regarding Rivers

In addition to the research mentioned above, introducing environmental awareness and environmental education is also one of the Green Finger's targets.

A water-week was introduced: with a series of activities, such as exhibitions, seminars, essays recruitments, to be conducted in some colleges and universities.

Community publicity work: a green evening party was held at the Asian Games Village, to introduce the water project and knowledge related to water conservation.

Environmental education: selecting communities, primary schools near the rivers for conducting water-related environmental education.

2. Comparison and Lessons learnt from the four-year Water Project

2.1 Comparison, see Table 2.1

The project name of 2004: Summer Social Internship of "Welcome the Green Olympic, Be a Messenger of Clean Water: Research on Beijing Olympics' Water Condition and Quality of Water Supply".

The project name of 2005: Summer Practice of "Welcome the Green Olympic, Be a Messenger of Clean Water: Water Quality Monitoring Network of the Capital's University Students"

The project name of 2006: "Big hand holds the small hand, realizing the dream of clean water: comprehensive survey on rivers and education"

The project name of 2007: "Seeing the water spirit together: Tonghui River Project"
Funding between 2004 and 2006 came from schools and the Green Finger's fund-raising activities; in 2007, it came from Pacific Environment Foundation.

Table 2.1 Comparison of the four-year project

Year	River	Type/content of activity	Time duration	Goals	participants	Target audience	Results
2004: the start- ing year		Summer social internship, water quality monitoring, field work	May-July: Preparatory work in May 10-day intensive field work in July	To understand the water quality of rivers in Beijing, to give recommendations and inform the relevant departments	20 members and 40 volunteers	Members, volunteers and a small number of citizens	Research report
2005: year with fluctua- tions	Wenyu River, Qing River, Tonghui River, Jing-Mi Canal, Yongding River	Summer internship in setting up a water monitoring network as in 2004, research on river vegetation, publicity work in the communities	Early March for 2 days, 10-day intensive field work in July	To understand the water quality of Beijing, to give recommendations and inform the relevant department, the first trial of cooperation among colleges and universities	40 participants from 6 colleges and universities, 40 volunteers	Members of environmental groups, volunteers, residents of Asian Game Village, citizens	Research report
2006: year of reform	Jing-Mi Canal, Tonghui River, Beijing Water Conservation Exhibition Hall	Water-week activities: exhibition, essay writing. Summer social internship: comprehensive survey on rivers, environmental education of rivers	One week in March, mid-June to mid-July	To enhance the self-environmental education, experience and community environmental education among the volunteers from colleges and universities	4 colleges and universities, 30 others and 60 volunteers	Students, volunteers, residents at the communities and citizens	Research report
2007: the reward- ing year	Tonghui River	Daily activities: history and culture of water, comprehensive survey on rivers, environmental education of rivers, community survey	Oct 2006-Nov 2007, weekend field trips	From historical, cultural and living aspects to study the change of water quality of Tonghui River; to trace the source of pollution, to introduce the relationship between health of a river and people's livelihood	4 colleges and universities, total 60 members	Members, residents of the community, selected primary schools	Research report, education materials on river environment

2.2 Summary of the analysis

2.2.1 *Merging Scientific Research into Activities*

The Green Fingers makes good use of its academic background and students' professional training, to bring scientific research into their activities. In studying the river conditions of Beijing, the university students could then practice what they have learnt from classes. Such an arrangement trained the students to analyze the water issues with scientific and rational thinking.

2.2.2 *From "water quality" to "humanity"*

In 2004 and 2005, the Green Finger related its river monitoring work to the Beijing Olympics and the quality of water supply. Through the students' practice to discover the water problems of Beijing and come up with feasible recommendations, it then reported the river conditions, together with the test results to relevant departments, hoping to get their feedbacks. The field work in 2004 and 2005, and water quality reports of the later stage did reach a certain scientific expertise and were able to give detailed analysis. However, in terms of project orientation and goal setting, its capacity and advantages as a university students-led environmental organization were not taken into consideration, and therefore the reports of the later stages, were not fully acknowledged and failed to get much publicity. Moreover, without sizable publicity and environmental education work, members could not realize the impact of the project and therefore, doubts were raised. It led to the necessary changes introduced in 2006, as the project started to show the linkage between rivers and humans and made it a focus point. By caring about the rivers, the people who live by the rivers also came under the spotlight. On one hand, they create the water problems, while on the other hand, they suffer from these problems too, their interactions with the water environment become a new topic. The activities in 2007 continued with the linkage between people and rivers, by exploring river environmental education in cities as the main target. It was also the first attempt to conduct in-depth research on Tonghui River, by understanding its historical and cultural background to compare its past and present conditions, and offered deeper knowledge of the river's connotation and the crisis it is facing. The project was no longer only about water quality statistics, but demanding the relevant departments to adopt more authoritative and comprehensive means, to be more responsible in tracing the sources of pollution and to set up realistic targets.

2.2.3 *From "several" to "single" river(s)*

The Green Finger has dropped the number of rivers in its studies and intensified its effort into the selected rivers. It is a strategic and necessary move regarding its current capacity. As a students-led environmental organization, members could only be involved at their spare time. It is then an urging issue for the organization, to maxi-

mize its capacity under the constraints of time and energy. Therefore it must prioritize its goals, instead of setting up fruitless targets.

2.2.4 Summer activities & shift of daily activities

Organizing summer activities takes up a large amount of energy, while the impact is usually short, as they are not as substantial as other daily activities. Environmental protection is a protracted battle and the summer activities, especially those related to linking the water problem with the “humanity” aspect, could not feed its need. Therefore, while the project target has changed in 2006, the Green Finger also readjusted its activity model. In 2006, it set up a water concern group, to support daily works of the water project.

2.2.5 Extending the target audiences

For the participants, the four-year water project has offered them a wonderful environmental education and spiritual experience. The first three years involved the members of the Green Finger and volunteers, while the fourth year only allowed members for its activities. Such a model indeed restricts the organization from educating and influencing others. River environmental education should be extended to the public, instead of limiting to a small group of people. From our experience of the previous years, the citizens, apart from being our research subjects, should also become our targets in publicity work. It is especially true for organizations led by university students, as most the activists are serious players in the field of environmental protection and from our experience of the past four years, we do not want to limit our participants to only this category. That is why our targets should not be only members of tertiary education institutes.

2.2.6 Collaboration between colleges and universities

A water quality monitoring network was set up by 11 colleges and universities in Beijing in 2005, which was considered as the first peak during the development of the water project. Collaboration between these schools enlarged the participation of students and empowered them, in terms of influence on water issues. However the water project and the Green Finger’s development at that time was not mature enough and did not fully materialize the colleges’ initiative in carrying out effective activities. By now, the network exists only on paper. Only four out of 11 colleges continue to work on the water environment of Beijing.

2.2.7 Development of river environmental education materials

The Tonghui River Project of 2007 talked about the relationship between people and the river. It went along two main lines, one on field work research while the other on education, especially river environmental education among primary school pupils. Central Primary School of Gaobeidian was selected for a pilot project. The

project created a story of “the Adventure of Xiaobai” and the supplementary teaching materials for the young pupils at the lower grades, for the age group between eight and ten. The materials cover four parts, namely the main storyline, questions, activities and after-class reading, in five chapters. The story is about a fairy tale of Xiaobai, a whitefin dolphin from Yangtze River which has been officially announced “extinct”, which leaves his birthplace for his dreamland (the ocean) and the series of dangers and hardships he encounters. It ends as a tragedy to encourage the readers to sense the necessity to find a solution. Each chapter offers environmental protection tips, questions, some with games, children songs and fairy tales, the format of participatory education tries to excite the children while they learn, which is special for children who growing up with the formal educational methods.

3. Significance and Recommendations

3.1 Water Project: Practical Education

The Green Finger’s water project activities are considered as practical education, and its significance must be recognized. Firstly, the volunteers were benefited. By conducting scientific research on the river conditions of Beijing, the volunteers and students learned how to do practical works and were trained to think from an environmentalist’s perspective. The hydrological study covered economic, social, environmental, human and legal aspects, which guided the volunteers to interpret the river issues not only through the eyes of an environmentalist, but with a comprehensive point of view. Just like biological diversity, to solve the river problems, it also takes a wide range of theories and perspectives to offer a solution. In researching the public’s awareness of environmental protection, it involved dialogues between different parties, which exchanged our perspectives and provoke our feeling of union. “Our comfort at this moment is built on others’ suffering”, such a consciousness brought us to monitor our own behaviours. Secondly, each field trip would mean to influence the public through our actions, to provoke their long forgotten concerns or issues they have ignored in their daily life. To make the public then alter their behaviours would mean a further success of the project. Thirdly, each round of goal setting and implementation would also have its social impact. Though there is a limitation of the students’ actions, their advocacy work and the influence in their small cycle should still be recognized. Fourthly, in readjusting the goals of the project to make it more sustainable, to change oneself and other over a long run, aims to solve the concrete problem eventually.

3.2 Recommendations for University Students-led Environmental Organizations regarding Water Issues

The four years’ frontline experience of the water project of the Green Finger, the characteristics of a university students-led organization and the objective aspects of

the water issues could be summarized and turned into some recommendations for the organizations' further actions.

- a. To search a sustainable educational model: field work, publicity of environmental education, self-learning and selected group for environmental education should be combined to promote the sustainability of the environmental education. "Self-participation, involving others, joining forces" should be promoted all at the same time.
- b. To set up realistic goals, with reasonable planning and steady implementation: a students-led organization should be fully aware of the reality, such as its high turnover of members as the membership changes once every two years, limitation of students' energy, experience, funding and social resources. Therefore, it should try to set up short-term goals, ideally to be completed in two years, instead of idealistic but unrealistic goals. It should prevent a massive turnover of membership or sudden changes, as they hinder the development of the organization. For example, the Green Finger had a very rosy vision, yet over-stretching vision between 2004 and 2005, which raised doubts among the members and once hindered the water project's development.
- c. To maximize the organization's advantages in running the project: to magnify one's advantages in operation could bring one closer to the goal. For example, some colleges in the water quality monitoring network, though they do not have the environmental science background, they could carry out tasks such as field work on cultural issues and publicity of the environmental education.
- d. Defining and influencing the target audience: the water project of the Green Finger of the past four years aimed mostly at reaching the public, the citizens and the residents at communities it visited. Yet, it failed to reach another important group, namely the students from the colleges and universities. In fact, the group had very good channel to reach them and engage them in its activities, but nevertheless, it failed to do so and it cost some setback on the water project. Dogmatic pledging would not work on this type of audience, while psychological tactics and innovative activities might draw their attention. In the water project of 2008, on top of the Tonghui River research and environmental education, water saving in campus also became a new theme, to attract the new audience.
- e. The inter-college cooperation: the geographical distribution of the rivers makes the cooperation among colleges crucial. An alliance of the colleges should also mean an alliance of time, space, resources and mutual understanding. How to promote the motivation and cooperation of the colleges is indeed a topic which needs to be carefully discussed. The Green Finger failed in managing the water quality monitoring network. From this failure, we learnt that the activities should not involve us only as individuals, but it should treat us as a team. The team players should first be friends, who care for and encourage each other and act like

comrades, to have the same mission in protecting the rivers. It is only when the team players have developed a sense of partnership, having a sense of belonging to accomplish a task together, then they would be fully motivated and responsible for the project.

- f. To enrich the process of the river study: apart from the field work mentioned above, it should also bring in the idea of natural experience, to discuss the actual situations. For the audience to experience the natural ever-lasting water cycle and the impact of water pollution, it would awaken the participants' feeling and enhance the impact of the activities.
- g. To make use the advantages of the university students by launching seminars: from the various activities hosted by the university students regarding the water issue, the most effective and influential one is believed to be the "water salons", to discuss the water related issues from social, legal, economic, technological, environmental, historical, cultural, art and philosophical aspects. It is also a process for young people to learn, upgrade and rethink about the issues and consolidate with even better recommendations. However, many environmental organizations, including the water project of the Green Finger, missed the opportunity to have more of this kind of exchange and the golden learning opportunity. Without these salons, we fail to conduct interesting discussions, missed out some crucial points and the chance to accomplish more. Therefore for the future work, it should conduct more salons, to brainstorm and deepen our understanding of the water issues.

b) Green Anhui

Victory: A Grassroots NGO Empowers a “Cancer Village” to Take Action¹

Sarah Skye Gilbert (Green Anhui)

In the two and a half years leading up to 2006, Qiugang – a village of 2,000 people in the Huai River Basin in Anhui Province – had 53 deaths due to cancer.² These deaths were not solely among the elderly; children as young as one-year old manifested malignant tumors. The air in the village smelled like rotten eggs. The Baojiagou River – a tributary of the Huai that is vital to the Qiugang’s local economy and welfare – has actually been the source of serious environmental health problems. Turtles and fish were turning belly-up in the river and farmer’s seeds that came into contact with river water would not sprout. Children in the schools near the river suffered from severe diarrhea, vomiting, nosebleeds and lightheadedness. The water had by turns a white, red or yellow film that would cover the riverbanks and irrigated fields after the water drained away. The villagers in Qiugang knew that the wastewater of local factories caused this discoloration, but did not know how the pollution related to their health problems. Furthermore, they did not know where they should report their suspicions.

The story of this Chinese village could have been a tragic one, like many other cancer villages in China, with increasing death rates, decreasing crop yields, and children who suffered lasting damage. The magnitude of Qiugang’s serious environmental health problems in 2006 led Green Anhui, the first environmental non-governmental organization (NGO) in the province to take actions that have given the citizens of Qiugang hope. Green Anhui has helped the Qiugang citizens publicize their situation and work with the government to find viable solutions to the pollution that is destroying health and the environment in this village.

Water Pollution in China

If you visit one Chinese household at random – particularly in rural areas – and ask for a glass of water, chances are high you will be drinking from a polluted source. Out of a population of 1.3 billion, 700 million people in China drink polluted water. Untreated wastewater – particularly from municipalities – is a major contributor to this problem (See CEHP research brief on wastewater). From 2002 to 2005, 63 billion

1 This article was first printed in China environmental health project research brief which was produced as part of the China Environment Forum’s partnership with Western Kentucky University on the USAID-supported China Environmental Health Project. We thank China Environmental Health project and the author for the permission to reprint this article.

2 Green Anhui. (2008). Huai River Protection Communication Committee Presentation. Green Anhui.

tons of industrial and municipal wastewater were dumped into China's rivers.³ The long-term costs to local ecosystems or, in the case of Qiugang, the cost of the human lives lost to cancer are huge, but due to lack of data highly difficult to quantify.

Though China has a robust body of environmental legislation, these laws have not necessarily reduced water pollution as they are not always enforced at the local level (See CEHP research brief on environmental lawsuits). However, the 2007 moves to establish regional environmental protection offices under the Ministry of Environmental Protection (MEP) and the recent amendment of the Water Pollution Control Law suggest that the central government would like to improve local enforcement of water pollution regulations (See summary of October 2008 CEF meeting "Giving the Courts Green Teeth"). Outside of the law, both central and local governments have launched many efforts to improve municipal waste water disposal. The construction of wastewater treatment facilities has been highlighted in multiple Five-Year Plans. Anhui Province, in which Qiugang village is situated, has applied for and received both World Bank and Asian Development Bank loans specifically to construct more municipal waste treatment facilities. However, the pace of facility construction is too slow to match the increase in population, and does nothing to address industrial wastewater pollution. In fact, concerning agricultural or industrial pollution, Anhui Province is no exception to the national problem of weak enforcement at the local level. The Huai River Basin, which passes through northern Anhui and Qiugang village, garnered national attention in 1994 when failure to contain industrial pollution resulted in massive fish kills and waterborne illness in villages bordering the river.

The Ugly River

In Bengbu, just upstream of where Baojiagou tributary joins the Huai River, bulldozers are parked on top of small hills of silt. These hills alongside the river are constantly growing as the dam on the Huai River south of Bengbu creates a buildup of silt. In the early days of Green Anhui, the NGO's director Zhou Xiang and his friend and colleague Kenny Ye walked the length of the Huai River, documenting pollution and talking to citizens along the way. They both call the Huai an "ugly" river, with many silt pile-ups and industrial centers along its length, few parks and of course the polluted water.⁴

The Huai River Basin remains one of the most polluted watersheds in China, a disturbing fact given its size. The river stretches 1,100 kilometers (km, 660 miles) across four provinces and the 190,000 km² basin supports more than 150 million people,

3 United States Department of Commerce. (2005). *Water supply and wastewater treatment market in China*. [Online]. Available: <http://www.icwt.net/Chinapercent20Water.pdf>.

4 Wang, C. & Ongley, E.D. (2004). *Transjurisdictional water pollution management: The Huai River example*. *Water International*, 29(3): 290–298.

the equivalent of half the population of the United States. Prior to a major fish kill in 1994, the basin also had 150 industrial plants, including some 5,000 small paper mills, tanneries and breweries.

In 1994, heavy rain caused a Huai tributary to rise above flood-control alarm levels, so multiple sluice gates were opened. The resulting flood of toxic chemicals and sediment created a 100-kilometer pollution belt along the Huai River. People living downstream suffered from nausea, vomiting and diarrhea until the water supply was cut for 54 days. During this time, bottled water was transported into the basin by the People's Liberation Army and cost more than petrol.⁵

The Chinese government responded to this crisis by tightening regulations on industrial enterprises. Three years later, 4,987 small companies, primarily heavily polluting pulp and paper factories, were closed and a further 1,562 enterprises changed their waste management to meet pollution control standards.⁶ There was also some progress in the construction of wastewater treatment facilities, though fewer than the stated goal of fifty by 2000. This paucity in wastewater treatment plants is a major issue, as in Anhui Province, organic, municipal waste is the major contributor to water pollution. In 1997, more than 40 billion cubic meters of urban wastewater, out of a total of 45 billion, were left untreated.⁷ Though official MEP documents claim that the state of the Huai River has improved due to stricter industrial regulations and increasing numbers of wastewater treatment facilities, there is some controversy—even between government agencies on the accuracy of these cleanup claims. Specifically, the Ministry of Water Resources (MWR) is charged with monitoring the allocation and use of water, with ambiguous responsibilities concerning water quality, and it disagrees with the MEP's method of measuring pollution levels.

MEP measures chemical and sediment content on the surface of the Huai River, but the MWR believes that this does not give sufficient information about the levels of pollution in the Huai's tributaries.⁸ An Asian Development Bank (ADB) report supports the MWR's argument that MEP is underestimating the rivers pollution. According to ADB, in 2002, out of 93 sample sites along the Huai River, over 80 percent fell

5 Ibid.

6 World Bank. (2001). *Project Appraisal Document on the Proposed Loan to the P.R. China for a Huai River Pollution Control Project*. [Online]. Available: http://www.wds.worldbank.org/external/default/main?pagePK=64193027&piPK=64187937&theSitePK=52367_9&menuPK=64187510&searchMenuPK=64187283&siteName=WDS&entityID=000114496_2004090200440020.

7 Wang, C. & Ongley, E.D. (2004). "Transjurisdictional water pollution management: The Huai River example." *Water International*, 29(3): 290–298.

8 Asian Development Bank. (2004). *Technical Assistance to the People's Republic of China for the Evaluation of Environmental Policy and Investment for Water Pollution Control in the Huai River Basin and the Taihu Lake Basin*. [Online]. Available: <http://www.adb.org/Documents/TARs/PRC/tar-prc-38555.pdf>.

into Class V or below, China's lowest ranking for its most polluted rivers.⁹ In Anhui Province, the health of the tributaries is especially important as it has over 1,500 kilometers of tributaries that feed into the province's 420-kilometer stretch of the Huai River. Furthermore, pollution in smaller tributaries can be more harmful than in large rivers because there is less water to dilute the pollutants. Dams on tributaries that slow the natural flow of water notably lower the capacity of the tributaries to dilute pollutants.¹⁰ Qiugang sits on the Baojiagou tributary, and if the pollution of the Huai River really was improved in the years following 1994, Qiugang's water certainly saw none of that reduction.

Beyond protests, citizens in the Huai River Basin have had few opportunities to shape the policies to improve the river's water quality, but in Anhui Province, the NGO Green Anhui has been helping pollution victims along the Huai seek solutions to the pollution that is damaging their health and environment.

Green Anhui

Green Anhui, founded in 2003 by 17 student organizations, is Anhui Province's first NGO. Its mission is to: (1) endorse actions that protect the environment and promote sustainable development; (2) improve public awareness and involvement in environmental issues; and (3) initiate the establishment of policies that protect the environment in Anhui. Originally called the Anhui Federation of Environmental Students, the environmental education of students remains a core part of its mission and activities. Most of Anhui's university environmental groups are affiliated with Green Anhui, and most of Green Anhui's volunteer basis university students.

From its grassroots beginnings, Green Anhui has grown into a multi-office, multi-branch organization that handles a range of environmental issues in Anhui Province. Seven board members direct Green Anhui, which employs nine full- and part-time staff and oversees 1,000 volunteers. It has won three international environmental prizes: the 2004 Ford Prize, the 2005 SEE Prize, and the 2006 Roots & Shoots Prize for its environmental education program. Green Anhui has been extremely successful in using international resources to promote environmental activism throughout Anhui, receiving thousands of dollars annually from international foundations and grant agencies.

Being a grassroots organization, Green Anhui's five programs are organized around local demand and need:

9 X. Zhou, personal communication, December 5, 2008.

10 X. Zhou and K. Ye, personal communication, December 6, 2008.

a) Green transportation.

Anhui's capital, Hefei, has a double-digit growth rate and its roads are crowded with four million residents. Green Anhui has created an educational pamphlet that explains the environmental and economic advantages of biking and walking rather than owning a car or taking the bus. In 2008, Green Anhui convinced 400 people with cars to agree to drive one time less each week, and to sign a certificate to that effect.¹¹ They plan to broaden their scope and convince more families to decrease their reliance on cars. As part of a worldwide effort to reduce urban pollution, Hefei joined hundreds of other Chinese cities in promoting Green Transportation for one day in September 2008.¹² *Environmental health*. Through this new initiative based in the Wuhu office along the Yangtze River, Green Anhui hopes to give medical students training and then offer them opportunities during their vacations to monitor and research how local pollution problems in Wuhu are impacting health. In 2007, Green Anhui received a Global Greengrants Fund grant to investigate reproductive health consequences of environmental pollution in Wuhu. Finally, Green Anhui has held forums on environmental health for Chinese citizens living near heavily polluted Chao Lake.

b) Ecology.

Green Anhui's offices, particularly its Wuhu office, provide an ecology library that citizens can visit to learn about wildlife in Anhui Province. Green Anhui also encourages citizens to lobby for the re-introduction of the Yangtze River crocodile to its natural habitat, and educates the public about the rare Pei Lan flower, which naturally flourishes in Anhui, but is threatened by development.

c) Education.

Green Anhui works with students from university to primary school to increase awareness of their local natural environment, the threat of pollution, and the importance of conserving resources. Green Anhui staff has developed environmental education curricula for primary school students and conducts training sessions and camps for older students. Green Anhui also provides small grants to student groups at universities and empowers other fledgling NGOs by helping them develop business plans and giving them access to useful resources. One veteran of Green Anhui went on to establish the highly effective environmental NGO, Green Camel Bell, in Gansu Province (See CES8 Spotlight on NGO Activism Box on page

11 Meng, G. F. (ed). (2008). "In Hefei, 400 families pledge to drive one time less often every week." Anhuinews.com. [Online]. Available: <http://ah.anhuinews.com/system/2008/09/22/002122058.shtml>.

12 Green Anhui. (2007). "Choose green transportation; choose a more energetic lifestyle; let us share all that is green." *Zhong An Forum*. [Online]. Available: <http://bbs.anhuinews.com/viewthread.php?tid=292706>

109). Finally, it has recently founded the Green Salon for Journalists to generate news media interest in water pollution in the Huai River Basin.

d) Water Pollution Prevention.

Green Anhui's largest and most important activity is its Water Pollution Prevention Program, centered in Bengbu, a small city on the Huai River. In addition to recruiting volunteers to document the water pollution of the Huai River and its tributaries, Green Anhui staff and volunteers have photographed battery dumping alongside the Huai River, which initiated government efforts to penalize the perpetrators and prevent its recurrence. Green Anhui also organized a conference on water pollution, with the aid of the U. S.-based NGO Pacific Environment, which brought 20 NGO representatives from across China to discuss water pollution challenges and prevention strategies.

In late 2008, Green Anhui received a grant to study the environmental impact of hydraulic construction projects in the Dabian Mountains, whose rivers flow into the Huai. Finally, in conjunction with environmental NGOs from other provinces on the Huai River, Green Anhui is publishing a newsletter updating local citizens on issues concerning pollution in the Huai River. Green Anhui's Water Pollution Prevention Program is extensive due to the drastic pollution problems facing communities within the Huai River Basin. One of Green Anhui's most important water initiatives was documenting the declining health of villagers in Qiugang and working with community members to undertake grassroots activism to push for improvement of the water problems. This activism has engendered hope in the village's community.

A Farmer versus three Factories

The village of Qiugang is mostly filled with the old and the young, the middle generation having left to find better-paying work in China's larger cities. Some rather modern, European houses line the village streets; these are the families of the more successful migrant workers. Many Qiugang residents commute to work outside the village, though Qiugang also has 10–12 small factories including paper mills. Strikingly, apart from a few very poor residents, no one in Qiugang has ever worked at the three chemical factories that dominate the center of the village.¹³

Mr. Zhang—a farmer in Qiugang—has developed a particular passion for the environmental issues that are impacting his village. Though all of the village's crops have been affected by the pollution, his field is right next to one of the factories in the center of town. It is covered in black grime and white crystals, and he has not been

13 G. C. Zhang, personal communication, December 6, 2008.

able to grow crops on it for four years.¹⁴ While walking through the field, one can barely tolerate the stench, and liquid flicks onto one's hair and clothes. It is not rain.

In his spare sitting room, Zhang displays badges of multiple environmental conferences that he has attended over the past two years, with the sponsorship of Green Anhui. When asked about the story behind Qiugang's pollution, he relates a dark history of sabotaged water quality tests and local villagers being beaten. It is against this backdrop of fear that Qiugang villagers and Green Anhui began their campaign for reduced pollution and better health.

From Awareness to Action

In 2006, Green Anhui volunteers were shocked to discover the disturbing red and blue colors of the river near Quigang. The volunteers took pictures and reported the discoloration to Long Haizheng, a Green Anhui staff member at the Bengbu office. After conducting more research, Long Haizheng determined that the pollution likely came from the three chemical companies in Qiugang. All three companies manufactured multiple drugs and chemicals, the primarily the carcinogen benzene. One company had insufficient waste management facilities, violating local regulations; the other two had none at all. All three companies dumped their chemical waste directly into the river, flushing sediments and toxic chemicals into the river at an alarming rate.

In response to the blatant pollution and alarming cancer rates in the village, Green Anhui volunteers gave villagers information about how the pollution from the factories might be affecting their health. They distributed information about benzene exposure and water pollution in general.¹⁵ The symptoms of benzene exposure matched exactly the illnesses suffered by many villagers, particularly the high cancer rates. After educating the villagers about the potential source of their health problems, Green Anhui volunteers then recorded villager testimonies of how the pollution destroyed their crops, killed their fish, and made their children ill. Alongside these testimonies, volunteers also took photographs to visually confirm the health consequences of the water pollution. The villagers prepared a petition that outlined the factories' violations, as well as the consequences to the villagers' health. In March 2007, citizens in Qiugang signed and submitted a petition to the local Environmental Protection Bureau (EPB) in Bengbu.

When the EPB denied any violations, Green Anhui used its news media contacts to land a front page article in the *Anhui Xinwen* newspaper—the most widely

14 *Anhui Legal News*. (December 25, 2008). "Who will pay for the destruction of land?" AnhuiNews.com. [Online]. Available: <http://ah.anhuiunews.com/system/2008/12/25/002180880.shtml>.

15 G. C. Zhang, personal communication, December 6, 2008.

read daily paper in Anhui Province—outlining the citizens’ grievances.¹⁶ Both *Xinhua News* and *Xinan Evening News* picked up these stories on the tragic condition of Qiugang. The EPB eventually admitted on public television that the Qiugang residents’ claims were accurate, and two factories were subsequently assigned to pay fines of 100,000 Yuan (about \$15,000) while the third was ordered to reduce its pollution. The fines, however, seem insignificant given the revenues of the companies. In fact, fining in general has not been an effective deterrent to pollution in China as the amount of the fine is often small and the local government, desperate to attract industry, sometimes refunds part or all of the fines to the polluting enterprise.¹⁷ To this day the citizens have never been compensated for their health costs, though it is doubtful a fine of that magnitude could be raised to cover them.¹⁸

While the local EPB solution was not sufficient for the people of Qiugang, MEP proved to be a far more effective enforcement agency in this case. Once the MEP was appraised of the situation in Qiugang, it ordered all three factories to shut down, giving new hope to Qiugang residents. Though it could not enforce its mandate in the same way as the local EPB could, MEP took advantage of the Green Credit Policy of 2007 to obtain cooperation of the chemical companies. Under this law—issued jointly by MEP and the Peoples’ Bank of China with the aid of the World Bank’s International Finance Corporation—banks suspend loans to companies with excessive polluting violations. Unfortunately, many local governments and banks do not enforce this law, and smaller companies tend to rely on personal connections rather than banks for loans.¹⁹ While a miniscule number, it is still encouraging that in 2007, the loan applications of 12 companies in China were suspended due to excessive polluting violations.

Qiugang village was doubly lucky in that the chemical companies did apply to a bank for loans and their pollution violations attracted the attention of the MEP, which subsequently suspended the loans and even intermittently shut down electricity. This pressure was effective, for on 20 December 2008, the final factory shut down and moved to an industrial site far from any residential areas and with sufficient waste treatment facilities installed. Both the villagers and Green Anhui were excited by the victory, but not surprised. In early December, the head of Bengbu’s EPB pledged that he would resign if the factory did not move by the 20th of that month.²⁰

16 X. Zhou, personal communication, December 5, 2008.

17 Economy, E. (2004), *The River Runs Black: The Environmental Challenge*. New York: Cornell University Press.

18 G. C. Zhang, personal communication, December 6, 2008.

19 Zhou, X. (2008). “China green credit move meets resistance: Watchdog.” *Reuters*. [Online]. Available: <http://www.reuters.com/article/environmentNews/idUSPEK28024220080213>.

20 X. Zhou, personal communication, December 5, 2008.

Rivers to recycling

The smell of rotten eggs may be gone from Qiugang village, but years of pollution have left the soil contaminated—the entire village is less than 17 acres, and 10 percent of its soil is severely polluted.²¹ One chemical company offered to compensate the villagers for crops lost during the time it produced chemicals, but this compromise ignores the long-term damage to the soil and the many years to come during which Qiugang villagers will be unable to produce edible crops.²² The compensation also does not address lingering health problems.

Strikingly, the news media exposure of this “small victory” has been so extensive as to provide hope for similar victories in the future. At least five newspapers in Anhui Province printed stories about the closing of Qiugang factories.²³ Green Anhui has grown from a collection of university student organizations to one that encompasses all age groups. Whereas environmentalism was a foreign concept to many Anhui residents ten years ago, the obvious effects of pollution have created a strong interest in environmental issues. The government has in part supported public interest by painting slogans encouraging environmental protection in Anhui’s parks. Recycling has been systematized throughout the province, and throwing garbage into a green-colored bin now generates nasty looks. The tide of public interest may just prove powerful enough to turn small victories into big ones.

21 *Anhui Legal News*. (December 25, 2008). “Who will pay for the destruction of land?” AnhuiNews.com. [Online]. Available: <http://ah.anhuinews.com/system/2008/12/25/002180880.html/12/25/002180880.shtml>.

22 *Ibid.*

23 X. Zhou, personal communication, December 24, 2008.

c) The Xiangfan Environment Protection Association

Yun Jianli (Green Hanjiang)

Care for the Water Resources, Protect our Mother River: Reflections of the activities of the Green Han River (Xiangfan Environment Protection Association) in the Past Six Years (Summary) (21 September 2008)

Xiangfan is a city located in the middle-stream area of Han River, under the Danjiang Reservoir, along the central route of China's South-North Water Transfer Project (for details of the project, see Wikipedia http://en.wikipedia.org/wiki/South%E2%80%93North_Water_Transfer_Project). The Han River is the largest tributary of Yangtze River, it crosses a length of 195 km in Xiangfan City and currently, the embankment in Xiangfan is 221 km long. Xiangfan city is divided by the Han River, which runs through its heart and divides the city into north and south. 90% of Xiangfan's 5.8 million inhabitants are living by the Han River.

In terms of water resources, with very low and uneven rainfall (at an annual average of 913 mm of precipitation, 57% of the province's average rainfall) and high level of surface evaporation (at an annual average of 1,310–1,500 mm, when compared with 300–850 mm with other cities in the same province), Xiangfan City relies heavily on the water from Han River. Furthermore, the agricultural powerhouse, which provides 65.5% of the foodstuff, 62.8% of cotton production and 71.8% of the oil crop (rape, peanut, soy, sesame etc, *ed.*) for the city, is along the river banks. Also, the majority of Xiangfan City's groundwater is reserved in the area of river banks of Han River. The groundwater of Xiangfan is divided into four categories; the first two are located in the Han River area and the other two in somewhere else. In the recent years, the pollution of Han River's five tributaries in the Xiangfan area has been worsening. Xiangfan's industrial and agricultural production, flood and drought prevention and ecological system are all crucially affected by the volume and quality of the Han River, therefore, the Han River is named as "the mother river of Xiangfan City".

The South-North Water Transfer Project is considered as a national pride and a blessing for the people in Beijing-Tianjin area, as it would secure their water supply. Most of the attention is drawn to the upstream of Danjiang Reservoir and its impact on the downstream of water transfer port, the middle-stream of Han River, is not widely discussed. For example, Xiangfan City's water supply from Han River, will be dropped by one-third after the Project is finished and inevitably will cause enormous and irreversible effects on Han River's water quality and the ecological system in the region, yet, this problem, until now, is only discussed by the population of Xiangfan, but not nationwide.

That is why for the population in Xiangfan city, protecting their Mother River, has become an urgent task. In the light of this urgency, the Xiangfan Environment Pro-

tection Association (also known as “the Green Han River”) was established in August 2002, to express the people’s wish in keeping the River forever green.

Since its establishment, the Green Han River has been recruiting members and volunteers from all levels of the society. Currently it has 58 organization-members, 146 individual-members and some 2,000 volunteers. Its slogan is “Care for the Water Resources, Protect our Mother River”.

The main focus has been put on protecting the water resources. The Green Han River carries out its work in several aspects, which would be introduced and discussed as below.

Educational Work

- At the beginning of our work, education on environmental protection was put as the organization’s top priority. We understand that only when the people would care about the environment from their hearts, to develop the awareness of environmental protection, then we would have the hope for protecting the environment. Therefore, we sought support from various sources, such as City’s Education Bureau, Environmental Protection Bureau, City Government, the City’s Federation of Women, in launching our educational work, to all levels of the society.
- We have hosted 21 seminars of environmental education classes, with the participation of 791 schools and 1,404 teachers. We also invited trainers from Japan, Germany, Beijing, Wuhan, Chongqing and Chengdu, to combine their participatory, open and interacting teaching methods, in order to stimulate our teachers we trained. We also paid 460 visits to schools, villages and communities, reading some 240,000 audiences (means with television, internet and broadcasting excluded), to give them talks and exhibitions.
- We worked closely with many schools, especially in hosting different types of competitions, summer camps, outings for both pupils and as well as teachers, to get them more involved in our daily work.
- We ran several pilot projects in schools, with the assistance of local government, such as generating renewable energy resources in 20 schools in Xiangfan City, by 2006.

Making Use of the Media

- There are some journalists among our members and volunteers, they often write on topics regarding environmental protection in newspapers, making documentaries for televisions, such as about Tangbei River, and reporting on our campaigning work.
- Our members are also very proactive in contacting the media, they have been interviewed by the Xiangfan Television, creating and writing blogs to discuss their work. Since September 2004, the Green Han River website was built for better promoting the organization’s activities.

- Since March 2007, journalists have been invited to the “Green Journalists’ Salons”, to engage them more in the environmental protection work.
- The Green Han River also accommodated foreign journalists who were interested in understanding the Xiangfan situation, for example, it was interviewed by the American Public Television in 2007 and 2008, to show them its work with schools and villages along the Han River. Its work was also reported by Time Magazine in October 2006.

Reaching the Rural Area

- Since July 2007, we have made nine field trips to the villages, for research and publicity work. In the process, we made friends with many women who lived in the rural area.
- We invited experts from Beijing’s Chinese Academy of Social Sciences, who could provide concrete suggestions to the rural population on rubbish separation and collection, biological tea plantation, and eco-tourism.
- We gave talks, sent trainers into villages, for further discussing with villagers with topics they were interested in, such as eco-tourism.
- Rights defending of some unfortunate villages, such as the Diwan Village, where villagers had no clean water to drink and many suffered from cancers due to long exposure to contaminated water.

Cooperating with other Environmental Groups

- In May 2003 during the SARS outbreak, we joined the Friends of Nature (Beijing)’s campaign on “fighting against SARS, protect biological diversity”, in calling the people to stop consuming wild animals.
- In 2004, we joined Global Village of Beijing, Friends of the Earth of Hong Kong and Friends of Nature of Beijing in consumer campaigns, such as reducing the packaging on mooncakes, setting the air-conditioning at not less than 26°C in summer and the heating not higher than 20°C in winter, etc..
- Other environmental groups are also invited to give talks to Xiangfan’s residents, especially those groups which are working in the areas along the South-North Water Transfer Project, for the Xiangfan people to understand the full picture of the Project, as well as others’ concerns in Beijing and Tianjin. It also helps strengthen the cooperation between environmental groups.

Involving the Government Departments

- Many government departments or semi-official organizations have been approached by the Green Han River. Some became our partners, such as the City’s Federation of Women, which launched the “Virtues of the Rural Area” activity in July 2007, and Green Han River has joined it for visiting two villages, reaching some 300 farmers, for its educational work.

- The City's Education Bureau has also been an important partner, especially in hosting essay-writing competitions, organizing field trips for pupils.
- We co-published 15,000 copies of "Handbook for Saving Water and Preventing Pollution" with the City's Water Department in 2007 and 2008, and later 4,000 copies of "Environmental Protection Handbook for Rural Area", distributing them to both the citizens and rural population.
- In April 2003, the Green Han River and the City's Environmental Protection Bureau co-organized a research project, to fully study the ecosystem of the Han River's Xiangfan part. After then, the results were shown to the public as exhibitions.
- In January 2005, it was among the first to co-sign on a letter, in supporting the Ministry of Environmental Protection to tighten its control on environmental issues.
- The Green Han River also initiated researches on its own and later lobbied the government for improvements. For example, it identified that turmeric processing was becoming a serious water pollution problem and reported it to the mayor of Xiangfan City, which led the city government to order some restrictions on the turmeric processing industry.
- In another case, it visited Diwan Village for 42 times, the first village in Hubei Province where the Beihe, a section of Han River, enters. In this particular village, some 3,000 villagers have been drinking polluted water over the years and some 130 of them died from cancers in the recent years. The Green Han River reported their situation to the city, provincial, and national governments, and lobbied them to build a deep well for the villagers and applied USD 30,000 from the World Bank. By June 2006, the villagers in Diwan could finally have clean drinking water.
- In January 2007, the Green Han River received a formal reply from the Hubei Provincial Environmental Protection Bureau, which stated that "The Green Han River's 'Impact analysis and recommendations on the Xiangfan Section of the South-North Water Transfer' has been taken by the Bureau seriously. The result has been rich in contents, its recommendations are critical and a major part of the report has been adopted by the Bureau and will be then proposed to the higher levels, such as the Provincial Party Committee, Provincial Government and the National Government. Some recommendations would become background information and references, in drafting the national policies".

Cooperating with Companies

- We seek support (materials and funding) from companies and engage them in our activities. Companies are welcomed to join as organization-members.
- In April 2004, the Xiangyang Dayin Bearing Company sponsored our research work on Tangbei River, the biggest tributary of the middle-stream of Han River. Our five-day research showed that the pollution was coming from the up-stream and it would need both sides to solve the problems.

- In June 2005, our organization-member “Show Best” sponsored us an activity in encouraging the shoppers to replace plastic bags with the traditional bamboo baskets. With its sponsorship, we bought 200 bamboo baskets and distributed to the interested shoppers.
- On 23 March 2008, “Show Best” co-organized with us an activity, to introduce the idea of energy consumption index to the public, by telling them how to choose energy saving electric appliances.

The Characteristics of the Green Han River

- It actively links the government and the Xiangfan people, to fill in the gaps between the government’s roles and responsibilities and the people’s expectations.
- It does not employ young full-time staff members. Most of the daily operation work is conducted by the elder volunteers, who have been committed to the organization for years.
- It has successfully raised the environmental protection awareness among the locals. Its mission “Care for the Water Resources, Protect our Mother River” has been publicized in each event and its workshops; its interacting activities are welcomed, and largely supported by the people.
- It has recruited outstanding volunteers, divided them into different groups for different activities and hoped that they would then reach more potential volunteers.
- Its consistence in carrying out environmental protection work has been recognized and encouraged more participation from the public.
- The teaching materials on “renewable energy resources” have helped the people to develop the concept of energy saving and encouraged sustainable development.
- The water monitoring group has promoted the “Care for the Water Resources, Protect our Mother River” message among the citizens. At the same time, we also developed the water monitoring groups in the villages by the river, which was a brand new concept in China. We believe that our river is protected, only when all people, who live by the river are taking action.

In the past years’ work, the Green Han River has achieved a lot, and yet, our achievement would not be made impossible, without the support from the City’s Communist Party Committee, City’s National People’s Congress, City Government, the City’s Political Consultative and all the government departments which we have worked with.

As an environmental organization, our role should not be limited by only discovering, understanding and reporting the problems. The more urging issue is, we need to look for solutions, and to make use of our capacity to solve the problems.

d) Guangdong-Guangxi Green Camp Report on the 2008 Pearl River Comprehensive Survey

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1. Pearl River Water Quality Issues

In July of 2008, 29 volunteers from Guangdong and Guangxi belonging to the youth environmental organization GreenCamp conducted a one-month survey of the Pearl River. They started from the headwaters and worked their way to the Pearl River estuary, focusing on issues such as water quality, dam construction, local residents drinking water, and more. In the past, the Pearl River was considered China’s most beautiful river and its “generous mother.” Now, however, it no longer possesses the beauty that once moved people, and has been made to suffer unbearably.

This survey was conducted along the Yu River, Qianjiang River, Xunjiang River, Xijiang River, Beijiang River, Suijiang River, and others, and focused on the current water quality of the Pearl River system’s various tributaries. During the process of water sample collection from the rivers multiple channels were tested at the same time in order to better learn about the river’s water quality (see table 1).

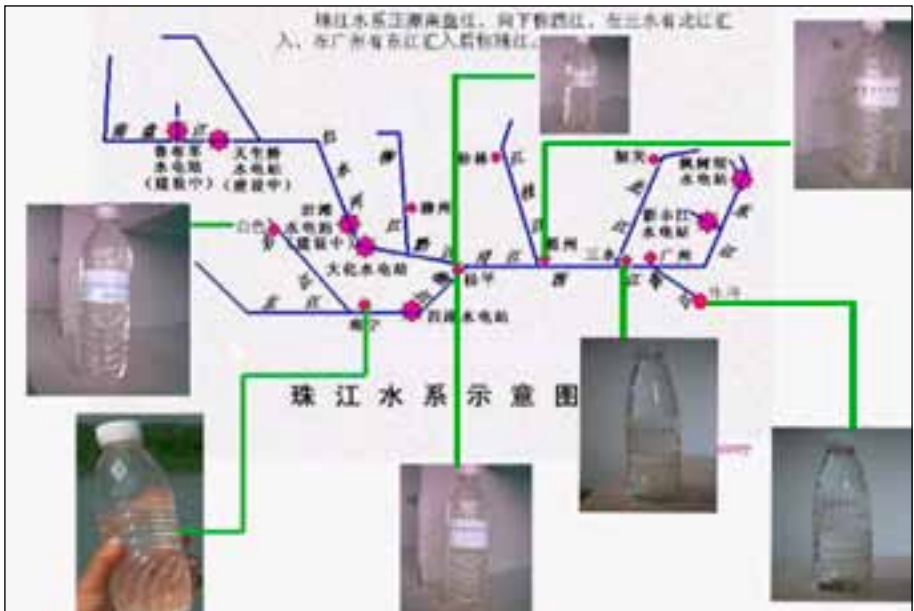


Table 1: Water Samples Legend

- 1 The first water samples were collected from the Yu River's Xijin reservoir in Heng county, near Nanning in Guangxi Province. During sample collection one could clearly see waste that had accumulated in the reservoir, yet the water was still relatively clean. This waste had floated into the reservoir from upstream, a section of which grew water hyacinths, which after a large rain would drift down with other debris.
 The Heng county section of the Yu River is classified as State Water Quality Grade II; in the past it was Grade I, which is considered fit for drinking. It can be seen from the above data that the Heng county section of the Yu River currently has a certain degree of pollution, for which there are a variety of reasons. Firstly, dam construction blocked this section of the river. The resulting slowed water flow reduced the ability of the water to purify itself as well as its holding capacity, so that accumulated impurities had a large affect on water quality. Near the Xijin dam there are deposits of debris as thick as two meters which can withstand the weight of a person. Secondly, factories have been built along the river. A gold mine upstream of the Xijin reservoir is a major source of pollutants. In addition, emissions from a silicon plant and a steel plant have polluted the river. There was a shipyard within the administrative area of the dam, but because the pollution was considered so serious it was closed down many years ago. There is also a sugar factory nearby, whose emissions can change the composition of the water, thereby greatly affecting the river. During the surveying process it was very clear that the Xijin River's water color was unnatural. Thirdly, many eucalyptus trees have been planted along the river. This species grows very quickly, and can begin making economic returns within four to five years, when it can be used as a special material for paper-making. However, the eucalyptus tree is also known as "green pollution". It is like a nutrient sponge which takes nutrients and water from the area surrounding it, squeezing out other living organisms. Eucalyptus planted along riversides destroys the original vegetation. In addition, the trees do not have the soil and water conservation capacity to prevent soil erosion, thus affecting water quality.
- 2 The second stop was the city of Guiping. The city of Guiping has three rivers that pass through it: the Qu River, the Yu River, and the Xun River. In the course of the survey, water samples were collected from the Qian River and the Yu River.
 While collecting water samples from a water control project at the Guiping section of the Yu River, it was easy to see a large number of debris floating in the water, and the water's appearance was divided into different colors. There was a large yellow flow, a large red flow, and several other colors. Also, there was a large amount of sand mixed into the water, which caused irritation upon contact. The area around the Guiping water control project was the dirtiest section of all

that were surveyed, and was the only area inspected within city limits. There is a concentrated urban population, a large number of factories, and emissions far exceed the purifying capacity of the river.

Water samples from the Qian river were collected from a section of Guiping's Dateng Gorge water project. Seen from a distance, the area appears as clear mountains and beautiful water, but up close one quickly sees that the river banks are covered in oil and grease left by the frequently passing tourist boats. Guiping is developing the Dateng Gorge into an ecotourism destination, bringing large numbers of tourists into the area. Since the area is all waterways, tourists observe it from boats. Besides the mark that tourism has left on the local ecology, there is not much other pollution here, and the general feeling is that the water quality is pretty good.

- 3 The third stop was Sanshui District. The Sanshui District water samples were collected from three rivers that converge near the Bei River. Sanshui District in Foshan City is the convergence of the Xi River, Bei River and Sui River and is a strategic waterhead of the Pearl River Delta, making it important to Guangzhou, Foshan, development of production, and the health and livelihoods of tens of millions of people. At the same time, it is the source of drinking water for Sanshui District. It could be said that protecting the Sanshui District waterhead is of the utmost importance. Sanshui District government officials said that, in order to protect the waterhead, they have rejected the construction of a factory, while at the same time making factories that had polluted in the past move out of the area. In addition, they fully treated the Sanshui convergence area, and at present sections of the Xi River and Bei River are maintaining a stable Class II level of water quality, and the drinking water source has a 100% compliance rate. It can be said that water conservancy work is going pretty well at the Sanshui District waterhead. Data indicates that 70.8% of the Pearl River is mostly Class II and Class III water quality, with 25.7% being Class IV and the worst Class V, with Class I accounting for only 1.6%. The status of reservoirs and lakes is also a cause for concern. The main cause of water pollution in the river is water waste emissions from factories. Urban sewage and garbage add further strain on the river. The destruction of riverside vegetation and waterhead forests result in soil erosion. Dam construction changes the river's water flow and natural state. These problems, along with many others, put the Pearl River in a precarious situation.

In general, the whole situation of the Pearl River can be summed up in six words: upstream protection, midstream destruction, downstream management. Upstream, the government attached great importance to conservation work. It has established several protected areas, such as the Cenwang Laoshan Waterhead Forest Protected Area. However, much economic development is still needed in the middle reaches, and governments are fairly relaxed when it comes to monitoring water pollution.

Many factories are being built with no restrictions placed on waste water emissions (in Guiping City a local told of a factory which directly discharged waste water into the river). Moreover, Guangdong is in the middle of industrial transfer (Sanshui moved its heavily polluting ceramics industry to Guangxi), and Guangxi's limited economic development leaves it with no choice but to accept polluting industries, thus leading to the destruction of the middle reaches of the river. Guangdong is industrially developed and its pollution is very serious, however there are many treatment projects being proposed.

There are a lot of problems on the Pearl River worth considering; its value lies not just in its material qualities but also in its spiritual ones. However, the Pearl River has already been subjected to a lot of damage, and the memory of its clear water is already gone, while many species are disappearing or have already been lost. Its destruction was swift and thorough and has many causes: Firstly, the pursuit of profit. Secondly, the lack of knowledge. Thirdly, irrational development. Fourthly, a serious lag in conservation efforts.

For the sake of the health of China's Mother River, action must be taken to protect every part of the Pearl River system. Concrete measures can be taken at the national level through legislation and comprehensive plans which provide strict production controls and rational treatment of waste water emissions. At the grassroots level, the public can participate by producing less garbage and conserving water, among other measures. Protecting the Pearl River requires concerted efforts; economically developed areas downstream should consider offering funding and technology to midstream areas. Those living upstream have improved their own lives, and now have the ability to better protect the source of the Pearl River. With sufficient funding and technology, the midstream areas can successfully treat water pollution and control waste water emissions, thus reducing the burden on downstream areas. In this way, all areas can participate in protecting the Pearl River; the Pearl River belongs to all, and needs the concerted protection of everybody.

2. Community Problems Resulting from Dam Construction

2.1 Survey Data of the Baise City, Yangwei County Water Control Project

The topography of the Pearl River has a large water drop, strong water flow, and rich hydro-electric potential. Many large-scale hydro-engineering projects are currently underway.

The Baise Water Conservation Project was approved by the State Planning Commission in the second part of the "Pearl River Valley Comprehensive Utilization Planning Report: Xi River system and Yu River." The main projects are flood prevention, power generation, irrigation, navigation, water supply, and other large-scale projects that make efficient and comprehensive use of the water resources.

After completion of the dam, a total of 12 towns, 42 villages, 169 stations and the Baise tea fields were all submerged, located variously in Baise City of Tianlin County, Guangxi Zhuang Minority Autonomous Region and Funing County, Yunnan Province. According to survey statistics of the affected area, a total of 26,969 people from the reservoir area were resettled, of which 17,450 came from Guangxi and 9,519 from Yunnan. Normally, the reservoir fills to a height of 228 meters, and submerged a total of 40.16 square kilometers of farmland.

Yangwei is one of the townships that relocated and is now known as New Yangwei, located very close to the Baise Water Conservation Project. The town is situated in a narrow valley, both sides of which residents have constructed homes on, and there is a road passing through the middle. The town government buildings are in a comparatively spacious area; both it and the residential buildings have been constructed within the last four to five years, leaving them looking relatively new. Residents from the original village are living here, and are distributed throughout the valley according to their location in the original village. Because it is a new resettlement town, many of the houses here are still under construction, especially those on the left side of the valley as they were relocated more recently; many still have exposed outer walls of red. Residents living in houses on the right side of the valley moved in earlier, and one can see from the exterior that their houses are more fully renovated; this includes Pingwei Village where residents from several villages now live.

These residents moved in from the original Pingwei Village over ten years ago, and as they came so much earlier their houses are mostly completed. There are other residents who moved only within the last four to five years, a significant difference in relocation time. The Pingwei Village houses were built at the time by a single construction company using a unified design. After completing the first level, there were quality problems and cracks appeared in the homes. As compensation, the company gave the first level to the villagers free of charge, and after that most villagers built the second level themselves. While from the outside the appearance of the houses looks decent and clean, in fact there are serious safety risks; although the cracks have been covered up, they still exist.

Most people are not fully satisfied with the resettlement situation. Besides more convenient transportation and other improvements to the living situation, many problems exist in other areas. They are most dissatisfied with the lack of land; many villagers believe that without land they are without their most basic form of security. Before they could depend on the land for their livelihood and there was no worry about where their food would come from. Now, they must pay for basic commodities like food and water, which has created a heavy burden for families that are in difficulty. A small number of people have maintained fields in the higher-elevation areas of the reservoir, but they complain that getting in to work the fields is very inconvenient as they must first get permission from the dam administrators; when the latter don't give their consent, the farmers have no way to work their fields. In

addition, after they moved many were left without jobs and just sit idle at home, though sometimes they may have opportunities to perform day labor; most people have left to find work.

Throughout the resettlement process many problems arose which were not handled well, which has been another contributing factor to the villagers' discontent. Currently, villagers are granted a compensation of 50 yuan per person per month for a period of 20 years. Compensation was also given for submerged houses and farmland, but nothing else. Compensation for farmland was calculated according to mu, and the villagers were not satisfied with the results of the calculation; they found the compensation level too low. The compensation amounts failed to take into account the rise in commodity prices in recent years. Many people were unsatisfied that resettlement compensation was figured according to how many people there were at the time of moving. If an older family member died, then the family would no longer receive their compensation. However, if a new child is born or a girl marries into a family, they don't receive any extra compensation.

The villagers noted that during the dam construction process no relevant departments sought their opinions on the project or attempted to understand their wishes. In some areas it was also very difficult to reach villagers and disseminate information about the project. Many people reflected that some partial compensation has still not yet been met regarding the government's commitment at the time to offer running water and build factories. The villagers admit that the dam has some use for flood control, but also noted that the area does not experience flooding very often.

2.2 Survey Data From Xijin Hydro Project, Heng County, Nanning Municipality

The Xijin Reservoir, located in Heng County of Guangxi Province, was built in 1964 and is China's first low-head power plant, with an installed capacity of 234,00 kilowatts. In order to reduce costs, latter local resettlement was adopted, and Heng County, 19 townships in Lingshan County, 113 villages, and 50.66 square kilometers of arable land were all submerged, with a total of 81,000 residents relocated, of which 55,000 were latter resettled. At present, the biggest problem for resettled residents is poverty: 12 townships in Heng County Reservoir District have over 40,000 residents living in poverty, which accounts for 71 % of the county's impoverished population.

As a result of the resettlement, the peasants deforested some areas to create farmland, and a large area of woodland was destroyed. Only 30% of the land is arable, and significant soil erosion resulted; there exists a vicious destructive circle between ecology and economy.

The survey of the Xijin Reservoir area focused mainly on Dateng Village. The survey showed that many of the residents of Dateng Village had many complaints about the dam, and did not have good relations with the dam management. Some older villagers didn't agree with the dam construction mainly because they were not will-

ing to change their way of life, this perhaps has something to do with China's tradition of being reluctant to leave one's native land. The younger generations didn't have any experience with moving, so they were also unhappy with the prospect. The construction of the dam resulted in nearly half of their land being submerged, for which there was no compensation. According to the villagers, a whole year's crop was submerged when the dam released water and submerged their farmland, creating significant losses that also went without compensation. They think that the flood control function could be beneficial for those upstream, but is not of much use for them downstream, and sometimes can even be harmful, as in the above case.

Information obtained from the dam managers and the information obtained from the villagers point to two different stories. Dam staff said that the building of the Xijin hydropower plant gave villagers free electricity for 30 years (and now the cost has gone up), but the villagers deny this. Because of the narrow time frame, the villagers and administrators were unable to come to a mutual understanding or conclusion. The villagers also pointed out that the dam was demarcated from the village boundary, but over the past few years the dam has pushed back the village boundary by saying that the land within the boundary vicinity belonged to the dam. Because of this potential loss the villagers are extremely unsatisfied.

Another dam administrator said that the dam also brought the construction of a number of factories which brought work opportunities to the villagers and raised their income. However, very few factories recruit local villagers, instead bringing in temporary workers from outside, and they also may require "finder's fees" and other costs. Also, many villagers only received a primary school education before they left school to find work.

Transportation in Dateng village is very inconvenient, as leaving the village requires passing over the Xijin reservoir dam and the dam has several restrictions on pedestrian traffic which apply to the villagers. Villagers must obtain an access permit that costs 15 yuan per year and which they must show each time they go out or come in. Furthermore, at night no one is allowed to pass, creating a large inconvenience for the villagers; even an ambulance must get permission to cross. In addition, there are no public buses, and villagers generally travel in pedicabs.

2.3 Survey Data From Changzhou Island Hydro Project, Wuzhou Municipality

The city of Wuzhou is 12 kilometers from Changzhou Island, which is the largest river island in China, covering 12 square kilometers and with the highest point reaching 63 meters. The island was originally established as Changzhou Township, but is now Changzhou District. It is mountainous in the northeast, where it neighbors Dieshan District and Cangwu County. To the southwest is also Cangwu County, and it shares the same people and soil as Tengxian County. The area covers 377.76 square kilometers and had a total population of 1.2 million people as of 2004. The Qing River, Xi River, and Zhi River all pass through the area.

The Changzhou hydro project was implemented as part of the national “Electricity From East to West” strategic plan and as part of the autonomous region’s “15 plans” key projects. The project was officially started in December of 2003. After the Changzhou Island dam is completed, it will be the world’s longest dam. Changzhou is often hit by floods, and the construction of the dam will reduce potential flood damage.

There is not much arable land on the island, in fact there is so little that its not calculated according to the usual “mu” measurement but rather by sub-fields. It is said that the average land per person doesn’t reach more than one field. Locals don’t grow rice, rather producing different types of vegetables. In addition, more and more people are leaving the village to find work in the cities. Construction of the dam didn’t provide many jobs for the villagers, as most of the workers came from Qinghai, Sichuan or other regions. Many of the peasants have to cross a river to reach their fields. Before, there was a ferry close to where the dam was built which could carry residents across, but after the completion of the dam it no longer operates, and residents now choose to walk across the dam. However, the dam now requires that the residents carry a pass if they wish to cross the dam.

The survey began with Zhengyang village. Under the village level, there are still smaller administrative work groups and teams. Zhengyang has 21 work teams, somewhat more than Changzhou Island, though its transportation situation is extremely inconvenient. Starting in 1995 they began to move to a higher altitude region, and many people left their homes to avoid the frequent flooding. In this instance, villagers did not move because of dam construction, though some of their fields were submerged as a result of it. Some 80 households moved to Zhengyang village, and compensation was distributed to both families and work units. Work teams received the total compensation packets and then distributed them, with each person receiving an average of 1,000 yuan. Compensation was calculated according to home size and the amount of fields submerged. Each mu of land received about 60,000 yuan, each square meter of housing received 289 yuan, with brick houses receiving 369 yuan per square meter.

Roads are in very bad condition because of construction occurring on the island, and there is an excessive amount of dust. In addition, several landslides occurred because of a water deluge caused during the construction process. Villagers say that there used to be a lot of vegetation along the river banks as well as vegetable-growing plots, but they have all disappeared. Residents used to go to the river to swim, however they now refuse to go as the current is too fast and its very unsafe. The upstream flow is nearly stagnant; although there is no industrial pollution there are too many debris which can’t be removed.

According to villagers, officials did not seek their feedback before construction of the dam; some officials came to them to speak about compensation levels, but didn’t make any promises. Many villagers were dissatisfied with the provided com-

pensation. They argued that if it was going to be a one-time payoff, they would have nothing left after it was spent, and were particularly worried about the problems the next generation would face. They hoped that the government would make gradual compensation payments and that their children and grandchildren could also benefit from them. For the land used for construction, they saw things differently from officials. To them, they had lived here all their lives, and they had the landowner rights. They hoped that their land could be leased to the dam, rather than appropriated by it. Rental income could provide long-term support which both them and future generations could use, and they and their descendants would not have lost the land forever.

The behavior of the villagers towards the dam is interesting in that they had no strong opinion regarding construction of the dam, but they put forward several of their own suggestions regarding compensation policy. In fact, some of the older generation opposed the dam, but many of the younger generation supported it. They hoped that construction of the dam could bring some changes to their lives, that in the future they could live in a town and not be farmers.

The geographical conditions of the Pearl River provide it with abundant water and hydropower resources. A number of large and small dams have already been built along the Pearl River. From the first hydro project in Guangxi to the massive Three Gorges Dam, the Pearl River has provided everything.

This survey focuses on the resettlement and environmental problems caused by dam construction, with three dams used as example cases. The Xijin reservoir has already been completed for over 40 years; the Baise dam was just recently finished; and the Changzhou Island dam is still under construction. Each project represents a different stage of development and each possesses its own distinctive yet representative characteristics. In general, there are three main problems facing residents displaced by the dam. As the Xijin reservoir was built several decades ago, its environmental problems are most obvious.

Throughout the course of the survey we learned that most displaced residents actually supported construction of the reservoir, and there was never any strong sentiment against construction. The negative feelings only appeared because of how specific problems were handled during the relocation process. Problems were mainly concentrated in the areas of compensation amounts and methods, submerged farmland, infrastructure in the relocation areas, government promises, and various aspects of the displaced residents' lives after relocation. The issues facing the displaced residents of these three projects had their small differences, but they all faced the problems mentioned above.

The displaced residents unanimously agreed that compensation amounts were too low. Every citizen in Baise City of Yangwei County was given 50 yuan per month. If a family faced any extra difficulties, this amount could not even cover basic living expenses. Taking into account price increases in recent years, this 50 yuan becomes

even more unsubstantial. Secondly, as far as compensation methods, we can take the opinions of Changzhou Island residents as an example. They hoped that the government wouldn't expropriate their land in a one-time deal or with compensation provided over several years, but rather that the dam would lease the land from them, and in this way they could be continuously compensated for their loss and future generations wouldn't lose their sustenance. The third point is the flooding of the fields, which displaced residents had a hard time accepting. They had a deep connection with and dependence upon their land, and its loss had a profound impact on their incomes. The survey found that 87.5% of displaced residents had their land submerged, and of those 97.6% thought that this influenced their income, with only 2.4% reporting no effect. They felt as if they had lost their most dependable support, and whether considered from a material or emotional perspective, they couldn't deal with this loss at first. The fourth issue was the poor infrastructure of the areas they were relocated to. Residents of Yangxu found several problems with quality, villagers in Dateng still don't have proper water supplies after over forty years since their relocation, and the roads of Changzhou Island are in desperate need of repair. Lack of infrastructure was also a main complaint among relocated residents. Fifth, government officials and agencies often made promises they didn't keep. Baise city residents said that the government committed time and again to building a water plant, but things never developed beyond words. Sixth, after relocation many residents had issues ensuring basic living conditions. Because they had lost their land, they had lost their most basic security, which becomes a serious threat when other methods cannot ensure a stable income. Seventh, during the relocation process residents were not given full information and their voices were neglected. The communication process between officials and residents did not meet the latter's expectations for respect. The displaced residents can be seen as victims who suffered for the benefit of others. They were uprooted from their homes, forced to leave their old way of life and cultural environment, and throughout the compensation process they were the unheard recipients of injustice. Throughout the process they have silently endured, holding out hope for a last ray of light.

Xijin reservoir was limited by technical constraints as well as many pre-existing environmental problems. The reservoir faced problems from the surrounding vegetation to water pollution, fish and wildlife in the river, and so on. The native vegetation around the reservoir has disappeared, and the secondary vegetation is being increasingly replaced by artificial economic forests, seen in the rapid spread of the fast-growing eucalyptus, giving rise to a serious threat to the biological diversity of the surrounding environment. Most secondary vegetation has been replaced by economic forest, including the fast-growing eucalyptus, acacia mangium, wetlands, pine and Chinese red pine. In fact, the land area of the eucalyptus has rapidly expanded under the grand slogan of "restoring agricultural land to forest", and one can now often find the river flowing under the shadow of eucalyptus trees. Only areas scat-

tered near the village retain better protection, and one can see the restoration of a small bit of secondary evergreen broad-leaf forest. In 2007, the government of Hengxian county started to promote the creation of a bamboo reserve near Xijin reservoir. Bamboo is a good choice because it can be used for paper-making and has evident ecological benefits. Although there are a number of ecological protection initiatives near Xijin, because of long-standing destructive practices it still faces a very serious ecological crisis.

The Guangxi and Guangdong areas of the Pearl River have built a large number of dams, and are also planning new dams such as the Dateng Gorge Dam and the Feilai Gorge dam. By everyone's consensus, the construction of the dams will bring tremendous economic benefits and numerous conveniences such as electricity generation, flood control, irrigation, water management, etc. It is also believed that in the long term the building of the dams is of more benefit than harm, and both the central and local governments are vigorously planning dam construction. Currently, China's dam construction projects are being carried out in full swing; China accounts for 45% of the world's dam construction.

Looking at various sources, dam construction has a huge role in promoting the local economy; dams can bring enormous development opportunities and solve energy supply problems. However, from a more long-term point of view, dam construction has many other aspects that are worth considering.

The building of dams is now a matter of global debate. One camp supports dam construction and the other opposes it. Those who support dam construction all hold the aforementioned view, while those who oppose argue that, in the long-term, the overall destruction that dam-building causes outweighs any short-term benefits that it may bring. The construction of dams can change a river's hydrology, which is basically its circulatory system, and these changes will affect the entire basin. Dam construction has brought a series of complications, such as huge debt, a large number of displaced residents, environmental health issues, damage to the ecological landscape, sedimentation, reservoir lifespan, etc.

The problems of relocation was the most obvious issue in our survey, with the most direct consequence being the tremendous change it brought about in the lives of relocated residents. However, its effects are potentially much larger than this, as large-scale relocation can create a social fault-line, disrupt cultural continuity, disrupt people's livelihoods and put tremendous stress on fragile environments, as well as a legacy of other historical problems.

The second most obvious issue was environmental health. It is well documented that the the environmental impact of dams is long-term and partially irreversible, especially regarding the impact on ecological and species diversity, the submerging of agricultural fields and cultural relics, the cutting off of annual migration routes for various fish species, habitat destruction of downstream river fish and wildlife, and effects on the ecological environment of the entire watershed.

The third most prominent issue was sedimentation. Sedimentation problems, such as the one at Xijin reservoir, can seriously reduce the useful lifespan of the reservoir, impact the ability for ships to pass through, and result in downstream water lacking nutrients and therefore contributing to crop failure and other serious issues.

Fourthly, there is the issue of the lifespan of the reservoir. Eventually, the planned lifespan of Xijin reservoir will come to an end, and it will have to be destroyed. Every reservoir has a specified life cycle, and while its construction brings about tremendous change in the nearby region, its destruction will also have a significant impact.

When choosing between direct economic benefits and long-term ecological protection, the former tends to win precedence over the latter. In 2003, tireless efforts from all sectors of society were able to prevent the construction of dams along the Nu River in southwest China, protecting one of China's longest free-flowing rivers. But the Pearl River has lacked such protective activism, as it faces pressure from many sides to be developed. When will it be able to freely choose its own path?

3. The Issue of Drinking Water for Community Residents

The residents living in the Pearl River area are also faced with many issues regarding drinking water. From the water source at the wooded hills of Wanglao Mountain to the mouth of the sea at Qiao Island, numerous places all along the way face different problems with regard to accessing clean drinking water.

Baise City was formed as a relocation county to take residents displaced by dam construction. Currently, a lot of the city's infrastructure is incomplete, and many problems have emerged regarding public water supply. According to reports from residents, they were promised that the dam would bring them a steady supply of water, but this never became a reality. Villagers say that they cannot drink water from the river, and they are all currently drinking well water. It is reported that many people here get kidney stones because of the drinking water.

Datong Village in Hengxian County, near the capital of Guangxi province in southern China, is located next to Xijin reservoir. However, drinking water is relatively difficult to obtain, and every village currently uses mountain spring water – there is no public water supply as of yet. Some homes are simply in a bad location, and sometimes have to deal with not having any water. The drinking water situation in Dateng Village is relatively tight, and even the local primary school doesn't have a faucet set up yet, because of fears that the children may waste water. However, water resources at the Xijin reservoir are abundant, and during the period of dam construction rich mineral water resources were discovered which provide not only an adequate supply for the area, but also an excess that can be sold.

Changzhou Island has three rivers that cross through it, namely the outer river, inner river, and central river. Their water resources are also abundant, yet residents still face problems when it comes to drinking water. Currently, their drinking water does not go through any sort of treatment process. According to the villagers, they

were promised several wells by officials at a depth of 70 plus meters, but after three years the wells were damaged beyond use, and there has not been any maintenance. Therefore, villagers now just drink the river water directly, which may present serious health risks.

Villagers on Qiao Island previously used well water, but after it became contaminated began to use tap water. However, after awhile the supply became inadequate, and they are also currently using mountain spring water, though this resource is also unable to fully meet demand. Now, the spring water is used for drinking and tap water is used for daily use.

The sites visited above are all near the river, but many contributing factors have created a situation where residents live close to water supplies, yet their water resources are insufficient. There are a number of reasons for this situation. Firstly, the rivers are polluted, and water quality has declined to the point where they cannot drink the water directly. Second, a lack of infrastructure leaves them feeling inadequate and frustrated. Third, the most fundamental thing is that their rights have been ignored, and the issue of insufficient drinking water is merely a symptom that highlights this problem. For example, dam construction should provide a convenient water supply for more people. However, as it often happens, this water is brought to far-away urban residents and those relocated residents living next to the dam are ignored. In terms of the allocation of water resources, they have dealt with a high degree of injustice. Their rights need to be respected, and the drinking water situation must be improved. The most efficient course of action is for the government to provide better drinking water infrastructure and to ensure their water security.

4. Conclusions and Recommendations

The roots of the many problems facing the Pearl River area run deep, and require a comprehensive analysis.

First, there is the pursuit of interests. In the modern age of materialism, more than ever people seek gains and benefits. Water and forest resources have developed into eco-tourism and people can enjoy the natural environment, but at the same time this places a tremendous burden on that very environment; industrial production uses clean water from the Pearl River and then returns an unending stream of polluted water; in the name of cities and roads, old-growth forests have been cut down; in order to maximize output from hydroelectric power, the biggest of dams has been built; economic forests of eucalyptus trees have destroyed both the water and soil alongside the river, becoming "green pollution", yet they are still planted in large numbers because of their high economic return. This mix of interests has made people blind in their decisions.

Second, the residents don't have all the information. On the internet there some opposition to the construction of the Dateng Gorge Dam and hope that the citizens of Guiping City will come out to protect the original appearance of Dateng Gorge.

Of nine replies, five clearly answered that they were in favor of construction, and two were against. But the reason for their opposition was that the dam would bring them no benefit, and one reply stated that they weren't aware of the situation (refer to <http://www.gpbbs.cn/read.php?tid=12297>). Most of the replies all indicated that they are in favor of building the dam. Also, survey data showed that 85.4% of the residents reported a limited or very limited understanding of the situation. From this, we can see that average citizens don't have a very complete understanding of the issues revolving around dam construction. They don't understand the long-term consequences of the effects on water resources, and also don't understand the ecological crises that result from dam construction. Incomplete knowledge hindered their judgement and prevented them from taking action. While the rest of the world has begun a fight against the construction of further dams, our country's citizens still fully support it. If they knew the consequences that they will eventually face, they would probably change their minds.

Thirdly, there is the issue of the impotence of popular opinion and the government's disregard for the voice of the people. According to my present understanding, a civil society organization working for the protection of the Pearl River has not yet been formed, and this signifies a major deficiency. Even when non-governmental organizations (NGOs) are present, their voice is very weak. The protection of the Nu River in 2003 was initiated by NGOs, and this was taken seriously. But its not every time that the people's voice has such power.

Fourth, a re-evaluation of the power of all different kinds of groups is lacking. In the Pearl River development process, it is clear that a lot of people benefited, but in reality there were more people whose rights were infringed upon. In particular with regards to resettled residents and those living alongside the river and near factories who suffered from serious downstream pollution. Their lives were seriously affected and they were forced to change their old way of life. When people yield their own benefit for that of others, their rights must be respected.

The Pearl River has already been destroyed, so it is need of protection now more than ever. Protecting the Pearl River requires action by the government from above and by the people at the grassroots. Groups at every level need to take practical action and in the course of this action reflect on the nature and consequences of human behavior on the Pearl River, and what that river is really worth to them.

First, let's look at national legislation. A sound legal system is needed which is namely directed against the standardization of dam construction and faces up to the various elements required for protection of the river. Furthermore, it is needed to prevent planning and construction which causes substantial damage to river ecology, while also ensuring that the local environment and groups in the region have their rights protected.

Second, there is the issue of rational planning. There must be more stringent examination of the capacity of the river to plan appropriate development and to minimize "blind" projects. In the engineering process, projects must carry out impact assessments on local residents and the environment, projects should be planned scientifically and there must be corresponding countermeasures to solve problems as they arise. There must be a respectful attitude towards the local environment, culture, and people, and their future must be taken into account.

Third, there needs to be a reevaluation of interests. With regards to the pursuit of interests, a more long-term perspective must be adopted. Development of water and forest resources, use of river water and dam construction all require more consideration. Horizontally, a comprehensive assessment of water resource development on the region must consider factors ranging from economic, social, relocation, ecological, cultural, and many more. Vertically, water resources must be assessed in terms of their future potential and impact. The government has taken charge of development of the Pearl River and is also the one who has the most power to protect it, and in the control of commercial development it must take measures to perform its work with more attention to detail.

Fourth, there is the involvement of multiple stakeholders. The development of water resources also requires the participation of the public and civil society. NGOs have unique advantages in this regard. Their continuity, direction and publicity work can make it far easier to raise public awareness of conservation issues. Furthermore, specific services provided by NGOs can provide valuable advice in the development process. All of this requires full attention to the views of civil society, while the development of civil society requires greater attention and support. In addition, the integrity of public information must be ensured, so that citizens can make rational choices in the decision-making process. It is of fundamental significance to awaken the public to act for the protection of the Pearl River.

This survey performed a comprehensive overview of the situation of the Pearl River water system. From the information gathered, it can be seen that in many aspects and places the Pearl River has already been destroyed because of blind economic development. A comprehensive measure of the capacity of the Pearl River can change the working methods used in the development process, and it is especially urgent to use the strength of the people to protect the Pearl River. The Pearl River's protection urgently requires action on the part of every person.

e) Face the River – Some Personal Reflections

Cheng Shuling (Dalian Environment and Research Center)

This article is based on research done by Shuling Cheng in three areas including Liaoning Province, Anhui Province and Guangxi Zhuang Autonomous Region.

Until now, I have investigated three rivers: Pearl River System, Dalian Biliuhe River System, and Qingyi River System in Anhui Province. Since every river has various pollution problems, I always feel indignant and heart-struck, and this has been presented in the reports. However, there are some episodes of the conversation with the locals and their attitude towards the rivers, existing only in my memory.

When surveying Biliuhe River System, I saw the local people of Wolongquan Town in upstream throwing rubbish by the riverside. “Why do you pile the rubbish by the riverside? It will pollute the river, and you cannot use it.” “We get our water from the well. Whether the river is polluted or not is none of our business. Moreover, it is people in Dalian who use the river water. We benefit nothing from it, so throwing the garbage everywhere doesn’t hurt our interest,” they said shamelessly.

When observing Biliuhe Reservoir, we visited the administrators of Reservoir who told us something about the administration of Reservoir, of which one answer shocked me deeply. We asked him how the protection work of the river was carried out. He said that we only protected the upstream of the reservoir, ensuring the water above the reservoir is good, and the management of the following did not belong to them. When being asked about irrigation of the downstream, he said they did not have the obligation to take care of irrigation, so they did not supervise it.

At Songtun Village of Chengzitan Town in downstream, I met an old man doing farm work. Outside of Songtun Village, there is a small dam. The old man said it is used to save the water of downstream flow of the reservoir for irrigation. Due to lack of water, some paddy fields has been turned into dry land.

The ultimate value of Biliuhe River lies in Dalian. Although 90 % of the water came from Biliuhe River, less than 90 % of the citizens truly understand the River. Certainly only few people know that their drinking water in some places filled with garbage, breeding bacteria. They also do not know that some farmers have no water for irrigation, and can only rely on a small amount of water saved in a small dam coming slowly out of the reservoir.

The residents and the citizens, although living near and benefiting from Biliuhe River, their relation is fractured, since the residents benefit nothing from the River and the citizens cannot feel the importance of the river. The administrator of reservoir cares only the supply of water, and the farmers in downstream have to face the reality of having no water for irrigation. They find no ways to complain, or maybe they think it does not worth complaining. Living near the same river, people who connect with each other in various ways every day have different rights for the river.

The imbalance of the rights and the competition for the interest produce the different acts of vandalism. Their actions or words are based on the fragment of relation with the river or with the other people. People discarding garbage do not realize that people of downstream are drinking unclean water, while the lower reaches of people would not know that their safe drinking water is at others' sacrifice. In order to ensure the proper functioning of Dalian, Dalian municipal government constructed the reservoir to protect the water, but it also ignores the rights of other residents. Because of the mutual neglect, the fracture of the relationship, people injured each other. These injuries are not specific and direct, but it will exist all the time in daily life.

For other rivers, people near the river live almost in the same situation. What impressed me most is something I got to know at Xijin Reservoir in Nanning of the Pearl River. There is a village beside Xinjin Reservoir called Datang. With a river of abundant water and a large reservoir, the villagers have the problem of drinking water. With the river being polluted and having no tap water, the whole village is drinking mountain spring water. Some families having bad geographic location will have a certain period of time without water for use in a day. The drinking water is so stressed in Datang that the village primary school is not even set up a tap, for fear of the children wasting water. However, Xijin Reservoir has abundant water resources. During the period of constructing reservoir rich mineral water resources have been found here, with adequate supply for internal use and the excess for selling. This example also reflects the fracture of the relation between the river managing department and the residents. The managers do not care about people's problem; in return, people resist strongly the management. If the government or other organization asks the residents to protect the river, they have no motivation at all. They may even feel unequal inside because from the beginning they did not enjoyed an equal right of using the river, and when in face of the river, they are just the victims of the interest. I think it is quite normal for them to have this opinion, and we have no reason to criticize them. With the fracture of the relation, many people indeed have been treated unfairly. The division of interests, and the fracture of personal relationship led to the mutual injuries.

In fact, everyone is in the state of connection at every moment. If people of upstream throw the garbage, people of downstream will suffer from the polluted drinking water. If residents of downstream have the gratitude for and care for residents of upstream, and heal the fracture of the relation, the latter will not litter any more since they get what they own.

All people have the certain rights to the river. Only when people of upstream and downstream have mutual understanding through some close links, the mutual rights and obligations can be balanced and the river can be protected properly. For this balance, it is needed to care about the needs of interest groups and everyone's daily life, because daily life is the basis for the variety of links.

The reason for caring everyone's daily life is that when visiting the sewage treatment plant in Foshan City, Guangdong Province, I observed that the garbage disposed is common in our life, for example, the ice-cream wrapping paper, Coca-Cola bottle and some plastic bags. These rubbish are all produced in our daily life. In fact some river pollutions were caused by our own actions. On one hand, we are eager for the safe and reliable water resources, on the other hand, we pollute the water by ourselves. Since our daily life is separated from the rivers and other people, can we indulge ourselves in consuming and producing rubbish, and after that we feel shameless to blame others for environmental destruction. All in all, we should balance our rights and interests with others'. Only in this way, we can be out of the mutual injuries from the fracture of the relation.

f) EU and Nationwide Water Protection

Michael Bender (The Green League, Germany)

Michael

The Green League Water Policy Office has been working for years on water issues with regional, state and international focuses. It leads nationwide information seminars for interested parties. The EU Water Framework Directive (WFD) formulates new objectives for the protection of rivers, lakes, coasts and groundwater. The Water Policy Office prepares "good practice examples" for re-naturation and cooperation in the form of profiles. A related exhibition can be lent out. Regular publications include the bi-annual *WRRL-Info* newsletter as well as the monthly "Water Page" email. Further information is available on the website www.wrrl-info.de.

The Water Policy Office has been part of the Water Working Group of the European Environmental Bureau (EEB) for years and participated in the EU-wide drafting process for the EU Water Framework Directive and other European water legislation processes and has coordinated the intentions of German environmental organizations nationwide. Michael Bender represents the GREEN LEAGUE as an observer in the Assembly and WFD Working Group (Water Framework Directive) of the International Commission for the Protection of the Elbe and the Elbe River Basin Community.

The GREEN LEAGUE supports initiatives and organizations who work towards sustainable water development: One such completed cooperative project was with the NABU Kranenburg Nature Conservation Station and the BUND, ran from 2004 to 2008 and supported the coordination of environmental organizations working in the River Basin Commissions of the Elbe and Rhine (www.verbaende-in-flusskommissionen.de). Tobias Schäfer coordinates the Brandenburg WFD Environmental Organizations Working Group.

Since mid-2008 a collaborative project with the Czech Arnika Environmental Organization has also been under way, from which the results and findings will be transferred into the further development of the WFD.

Actions & Initiatives

Action Alliance against the Havelberg Expansion

The GREEN LEAGUE Berlin e. V. is one of the cofounders of the "Alliance for action against the Havelberg expansion." The objectives of the project are the protection of the Havel landscape and stopping the transportation project "German Unity" No. 17, which proposes excessive construction in Havelberg.

Berlin Water Roundtable

The Berlin Water Roundtable is a local network of representatives of different groups, initiatives, and interested citizens grouped together under the common theme that "Water belongs to us all – water is a human right." As a regional network, the Water Roundtable concentrates on the goal of ensuring transparency in water management and ensuring the end of the partial privatization of the Berlin water utilities. The GREEN LEAGUE was the key signature collector during the People's Initiative "End the Secret Contracts – We Berliners want our water back!"

Forum on the Environment and Development, WG Water

In the Water Working Group of the NGO Forum on Environment and Development (FED), environmental and development organizations work on water issues of international importance. The working themes include the human right to water, large dams and their consequences, the privatization of water management (with particular regard to the GATS negotiations at the WTO), and basic sanitation. The GREEN LEAGUE coordinates the work of these organizations in the WG Water of the FED and in the German Nature Conservation Network (DNR).

Food

a) Solving the Issue of Sustainable Development in Rural China through a Three-in-One Mode²⁴

An Xin, Chen Zhiping (Global Environmental Institute)

Every development project stems from a search for a solution to a problem in economic and social development. Since early 2004, the Global Environmental Institute (GEI) has been working on sustainable development in rural China, originating from our concern for and research on issues encountered in the development and ecology of rural China.

1. Issues in Rural Development

China has been an agricultural country since ancient times. Even at the beginning of this century, over 70 % of the Chinese population remains agricultural. Over the thirty years since China began to launch reform and opening policies, China's economy has witnessed dramatic changes, with the GDP growing at an average annual rate of 9.7% and per capita GDP growing to 49 times its original value.

By comparison, rural areas in China rarely benefit or benefit insufficiently from these policies. By the end of 2003, there were still 23 million rural people living under the absolute poverty line, with an average annual income of less than CNY637. At that time, the average rural income was CNY2 622, while the average urban income during the same period reached CNY8 472 (a ratio of 3.2:1 for urban-to-rural income).

These issues are more apparent in the southwestern areas of China, which are often inhabited by relatively poor ethnic minorities. Due to multiple historical and geographical reasons, the economic development of southwestern China falls far behind the more developed areas in eastern China. Take Yunnan Province for instance. The province has the largest concentration of ethnic minorities in China. Here the average annual rural income in 2003 was CNY1 697.12, almost CNY1 000 below the national average.

Many factors lead to such low rural income, including obstacles to transportation, lack of resources, lack of education, insufficient access to information, outdated technology, and an inefficient product structure. Nevertheless, under the market economy, the lack of capital and markets are no doubt the fundamental challenges to poverty elimination in rural China.

24 Original published in: China Insight, China Environmental Science Press, 2009.5, Page 177–187.

1.1 Lack of Capital

To eliminate poverty and achieve economic development calls for capital. There are two main methods for the government to provide financial loans to the poor population. First, the government provides credit loans at an interest rate lower than that on the market. Second, the government might alternatively offer small-sum credit loans according to market principles by exploiting civil capital that is self-governed by the rural population.

For the first method, although the state stipulates that discount-interest loans should mainly go to the poor population, in actual practice, local governments, which have a comparatively bigger say in where discount interest loans for poverty elimination should go, often transfer the use of poverty-eliminating loans for their own benefit. Therefore, two problems stand out in offering discount-interest loans for poverty elimination. First, loans fail to reach the target population. Second, a large percentage of loans are not paid back. In addition, there are insufficient corresponding punitive measures in the process of offering loans—a farmer will not face a serious penalty for refusing to pay back a loan. As a result, it is difficult to advise farmers on how to make better use of their loans, which, as a result, has hampered the development of a healthy financial credit system in rural China.

China has had limited success in implementing small sum credit loans since it began introducing them in 1997. Compared to the government's previous system for poverty-eliminating loans, this financial system, which relies on self-governance and mutual assurance by farmers often seem more efficient and vigorous. However, constrained by factors like income source, to promote such in a wider scale still faces a lot of difficulties.

It seems as though the rural financial market is suffering from a kind of "anemia" in offering capital to farmers to expand production. There are only a limited number of financial institutions officially offering loans in rural areas, especially to individual farmers. According to relevant statistics, there are 2 868 townships across China that do not have their own financial institution, and 80 % of these townships are in western areas like Yunnan. At present, there is essentially only one financial institution that offers credit loans to rural China—the Rural Credit Cooperative (RCC)—which contributes to 80 % of all rural credit loans, and in some areas this figure exceeds 90 %. However, farmers are often discouraged from taking out small-sum loans offered by RCC because of their high interest rate and rigorous mortgage requirements. These factors often hinder farmers from expanding production and in turn further constrain the growth of the rural economy.

In addition, insurance services in rural areas have remained inactive for a long time. Domestic insurance companies mainly offer insurance in non-production sectors like property and fire insurance services for farmers and agricultural enterprises, while there is almost no insurance available for agricultural crops and breeding, the type of insurance most desperately needed by farmers. In 2002, the revenue from

agricultural insurance in China only accounted for 0.043 % of added value in agriculture, with the average agricultural insurance fee paid by per farmer around CNY2.6 and the indemnity paid by the insurance company at only CNY1.6 per farmer.

1.2 Small-scale Peasant Production and big-scale Markets

The small-scale peasant economy centered around the family unit has been in operation for thousands of years in China. Products generated under this economy are usually for subsistence and are rarely used for commercial exchange. In the wave of global agricultural industrialization, more and more deficiencies have been exposed within the small-scale peasant economy, such as low productivity, slow progress in embracing mechanized agriculture, and difficulty in achieving economy of scale as a result of geographical scattering. The instability of the small-scale peasant economy is also one of the most important reasons why commercial finance and insurance institutions are unwilling to tap the rural market. These deficiencies have downgraded the small-scale peasant economy to an increasingly unfavorable role in the process of developing a modern market economy. On the one hand, prices for production materials like seeds, agricultural plastic films, chemical fertilizer, pesticides, water, electricity, and mechanical harvest and agricultural products are not determined by peasants themselves but by external forces on the basis of industrialized production. On the other hand, it is becoming increasingly difficult for products produced by peasants in scattered areas to enter the increasingly standardized, large-scale modern market system. Peasants with relatively difficult access to information fail to keep up with the rapidly changing market, and an insistence on tradition curbs their ability to plan in the long term. Furthermore, there is an absence of effective “connection mechanisms” between individual peasants and the market in terms of information and logistics, which can block off trading channels.

These problems have become more and more acute since China’s accession to the WTO in 2004. Since then, agriculture has undergone the most drastic changes in China. In accordance to the protocol on China’s WTO accession, China must drastically reduce tariffs on agricultural products, cancel the quota for some products, cancel import subsidies for agricultural products, and first stop increasing and then reducing support for domestic products. These policies for opening up markets have brought a large number of low-cost and technically sophisticated agricultural products into China’s agricultural market, leaving a strong impact on peasants focusing on individual small-scale production.

2. Governmental Solutions

Targeting agricultural issues, the central government has issued five “No. 1” documents consecutively from 2004 to 2008, proposing a series of policies to raise peasant income, and promote agricultural production. These measures have reinvigorated

an agricultural economy that had suffered from long-term stagnancy since the mid-1990s, and a trend of continuously falling growth in peasant income since 1996 has been turned around, with a growth rate rarely seen over the last eight years (6.8%).

In spite of the government increasing policy support for agriculture, the difficulty with financing in the countryside, especially for small-scale peasants, remains unsolved. Although the central government has made proposals to reform the financial system in the countryside, specific measures addressing peasant loans have not been taken. The emphasis, up until now, has been on intensifying the reform of RCCs. The reform of RCCs, which has intensified since 2003, has been unable to make much progress in terms of setting up loans in the countryside. There are only a limited number of loan products designed for peasants, which are very small in scope. To intensify loans management, credit unions usually set up loans archives, with loans mainly offered to credit clients, who only account for a very small percentage of the peasant population in a given area. In addition, in order to ensure profit, many RCCs hold a very prudent attitude towards offering loans to credit clients, as reflected in the limited choices of loans offered to clients, and such loans cannot meet peasants' needs for expansion and reproduction.

At the same time, if healthy market channels cannot be created for peasants, peasants who embrace the individual production will always be at a disadvantage under intense competition. The "peasant and enterprise" model, through which a leading enterprise will guide the peasants in increasing household income, was once advocated vigorously by the government as a "perfect solution" for economic development issues in rural areas. In the "No. 1" document issued by the central government in 2004, it is specifically proposed to "increase support for leading enterprises to a comparatively significant extent".

However, inequality between peasants and leading enterprises that are in control of the market has meant that enterprises tend to enjoy the final say, often sacrificing peasants' interest in an attempt to maximize their own profit. Disputes between leading enterprises and peasants abound. For example, farmers breeding milk cows in Zhaodong city, in Heilongjiang Province would rather throw away their milk than sell it to a leading enterprise that attempts to push down the purchasing price. Clearly, we need a new model to help peasants solve these problems.

3. The GEI Model

As a non-governmental environmental organization, GEI firmly believes that solving environmental problems has to go hand in hand with solving social and economic issues. The southwestern areas inhabited by ethnic minorities are the areas with the richest biodiversity in China. In recent years, with the development of industry and tourism, the biodiversity protection in these areas has fallen under enormous threat. However, in working to solve the problem of protecting biodiversity, merely explain-

ing to local people the importance of environmental and biodiversity protection has had limited effect—their prime concern, understandably, is how to feed themselves and raise their families' income. Therefore, it is the belief of GEI that efforts to achieve environmental protection in these areas, must also adequately address the issue of rural development. Measures should be taken to create a sustainable and environmentally friendly rural development model, by firstly helping peasants solve the development issue, so as to attain the objectives of protecting the environment and biodiversity.

3.1 Project Background

Changshui, located at the foot of Jade Dragon Mountain in Lijiang, Yunnan Province, is a beautiful Naxi village. There are a total of 531 households and 2 043 villagers in the village,²⁵ of which over 95 % are Naxi. The rich Dongba cultural heritage of the Naxi and the mysterious Jade Dragon Mountain have made Lijiang one of the hottest tourist sites in China. However, the Changshui village, at a distance of less than two kilometers from the ancient town of Dayan, which is a famous tourist spot in downtown Lijiang, has not benefited greatly from Lijiang's booming tourism industry. By the end of 2003, the per capita income in the entire village was only CNY1 987, and most villagers were still relying heavily on traditional agriculture, with a very limited selection of agricultural products (mainly wheat, maize, potato and cole). Their annual income from each *mu* of land (approx. 0.667 hectares) was only about CNY800.

Poverty and underdevelopment often go hand in hand. To cut expenses, local villagers have tended to chop firewood from the Wenbisha Mountain behind the village as their main source of domestic fuel. Calculated on the basis of four people in per household, an average of 4.2 tons of firewood is consumed by each household every year, and the whole Changshui village will consume about 2 230 tons of firewood each year, which not only damages the forestry resources on the Wenbisha Mountain, but also causes indoor air pollution in burning firewood and thus poses great danger to rural people's health.

Local governments have made unsuccessful efforts to develop the economy in this region. In 2003, the Huangshan township government (in the Lijiang area) tried to help peasants develop the breeding industry, by issuing credit union loans in order to help peasants purchase 100 Holstein cows. The township government hoped that peasants could pay back the loans by selling dairy products. However, due to a lack of breeding experience and relevant technical training, only a limited number of

25 The Chinese word for village, *cun*, could refer to either a "village" in the traditional sense, or the "village" level of government. In this case, the area referred to as Changshui village (*changshui cun*), includes three villages, Upper Changshui Village, Lower Changshui Village and Middle Changshui Village.

cows grew to a mature age, which made it impossible for most peasants to pay back their loans. What's more, these cows had caused a number of unforeseen environmental and health problems. For instance, each cow produced about 50kg worth of feces each day, disposal of which became a very cumbersome task for the peasants.

At the same time, the local RCC had adopted the method of archiving credit clients, classifying peasants in terms of their credit grades (A, AA, and AAA). Based on their credit grades and against the assurance of five peasant households, qualified peasants were offered a one-year loan at a sum ranging from CNY2 000 to CNY20 000. The loan interest was set according to credit registration and the central bank's stipulation at 30% above the benchmark interest rate. Under such conditions, peasants would be hard pressed to gain the financial means required to expand production and develop modern agriculture.

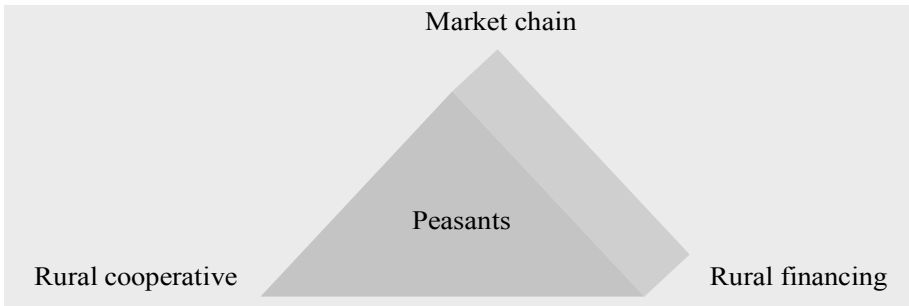


Some peasants in Chang Shui still use firewood for cooking

The case of Changshui village typifies the problems faced in China's rural development. These include a lagging mode of production, a lack of necessary financial support and technical expertise and insufficient understanding of the market economy. A project carried out here, if successful, will greatly contribute to the promotion of a new rural development model on a larger scale later. To this end, at the beginning of 2004, GEI initiated a project on "sustainable development in rural China," and, in the process of carrying out this project, has gradually combed rural finance, peasant organization, and market chains to set up a "three-in-one" model for solving the issue of sustainable rural development.

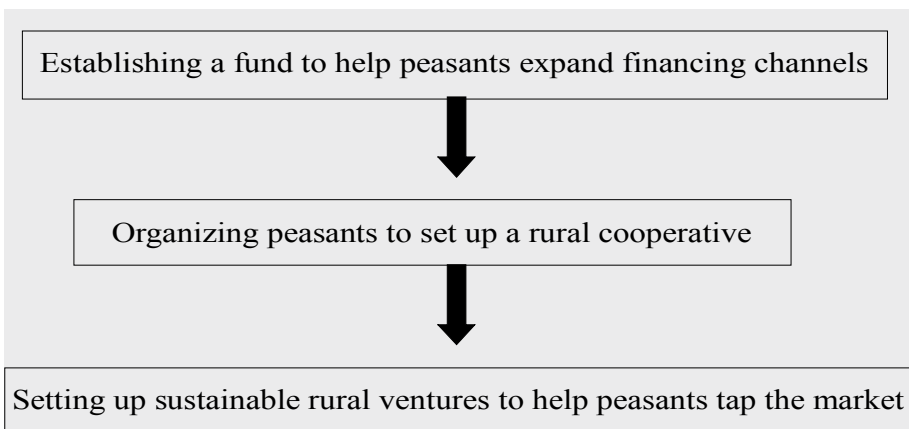
3.2 Establishing the “Three-in-One” Mode

The “three-in-one” mode involves expanding financing channels in rural areas, setting up peasant cooperatives, and creating relevant market channels in the project area. Our objective is to expand the financial and market channels by reforming the organizational structure of the original individual peasant production model and providing effective technical support.



The process of establishing the model involves three steps, as demonstrated in the chart below.

The model centers on rural development issues, focusing simultaneously on “capital, organizational structure and markets,” and provides a comprehensive set of solutions for sustainable development in rural China.



At the beginning of 2004, the sustainable rural development project team at GEI came to the Changshui village. At the time, peasants were involved in rearing cows, a largely unsuccessful endeavor (some peasants were depressed by failures in cow breeding, while others were troubled by the difficulties in the disposal of cow feces).

Our project team started by helping peasants build biogas tanks in order to address the problems of cow feces pollution and domestic fuels, and begin to develop a new kind of livelihood for the peasants. Before 2003, the local government and some international organizations had built 53 six-cubic-meter water pressure biogas facilities in Changshui village.

The six cubic-meter space was not enough to dispose of all feces, and the biogas technology used was already lagging behind, which was not only difficult to manage but had to retire for becoming nonfunctional after being used in service for some time. After intensive surveying, GEI introduced to Changshui villagers a floating biogas tank that produces more biogas and is equal in cost but easier to maintain than the previous tank. Practice has shown that after four years, the biogas tank can maintain a steady rate of biogas production. In the process of building biogas tanks, much importance was placed on capacity building for peasants. This was done by organizing technical experts to hold training sessions on biogas tank construction and maintenance for peasants, publishing biogas technology manuals, and cultivating leading peasant technicians, who later found community resource service teams to continually provide biogas maintenance and construction services for peasants and became the major force in the local development of biogas.

The advanced biogas technology introduced by GEI mitigates the problem of environmental damage caused by feces and the problem of fuel for peasants, while at the same time providing sufficient organic fertilizer for planting organic vegetables. All this led us to begin developing organic agriculture in Changshui village.

Lijiang, acclaimed by tourists from China and other countries as “the last unpolluted paradise,” is a natural base for planting organic vegetables. GEI’s proposal to develop organic agriculture received enthusiastic support from the local government, and three peasant households have joined in our model project and started building greenhouses and planting organic vegetables under the guidance of technical experts. We have, at the same time, carried out work to obtain accreditation for the organic vegetable-planting base at Changshui village to bring our products up to the requirements for organic products as soon as possible.

By 2005, the average revenue per *mu* of land for the three vegetable planting households reached CNY7 500, almost ten times what households could make previously, which serves as a major impetus for other peasants to participate in our model project. GEI also acquired the certificate for organic products for the 1 340 *mu* of farmland in the Huangshan township of Lijiang issued by the Organic Food Development Center, SEPA of China (shortened as OFDC), in 2005 after a two years’ transition of the land condition and farming practice. However, while moving on with the various activities to push the development of Changshui village, we also began to encounter the fundamental problems constraining the economic development in rural areas, such as the lack of capital, organization and markets.



The floating biogas tank GEI installed for Changshui peasants



Harvest of organic vegetables at Changshui

Before beginning to carry out the project, GEI had already made attempts to introduce to Changshui villagers the idea of operating the finance on market mechanism. Our projects on biogas and organic vegetables are founded on joint contributions from GEI, the local government. The project is not free to peasants, making them participants in the project and thus increasing project efficiency and profit sustainability. At the same time, building a 10 m³ floating biogas tank cost CNY2 000, and the cost of building one *mu* greenhouse was close to CNY22 000.

According to the principle of equal one-third contributions from GEI, the local government and peasants, peasants were required to make a small financial contribution to participate in our project. In the beginning, the proposal was not widely accepted by villagers as they were accustomed to receiving free donations from the government and international organizations, and many village cadres also did not think our practice would work. Our only recourse was to patiently explain to peasants our long-term motivation in designing the project this way.

At the same time, we also started exploring a new financing mechanism to ensure peasants could get corresponding financial resources. We cooperated with the local RCC to found the "Guarantee Fund", through which peasants could get loans from the RCC on a basis of five households vouching



Greenhouses GEI built for Changshui peasants

for one, and we could maintain the Guarantee Fund by charging a certain percentage as the guarantee fee. After the issue of capital was solved, we started to set up a peasant cooperative organization. At the end of 2005, when we started discussion with peasants on founding a peasant cooperative for the first time, some peasants had no idea what a cooperative was even for. After intense training and capacity building, in 2006, GEI assisted Changshui villagers in founding the “Yulong County Xiachangshui Farmer Cooperative for Plateau Organic Vegetables”. After the Law of PRC on farmers’ Specialized Cooperatives was officially enacted on July 1st 2007, the cooperative became the first farmers’ specialized cooperative to be officially registered in Lijiang. Aided by both GEI and the cooperative, the number of organic vegetable farmers in the Changshui village grew from three to thirty-six, with the cultivation of sixty *mu* of farmland and an annual production of nearly 80 thousand kilograms.

Nevertheless, a conflict arises between the rapid expansion of organic vegetable planting scale and the small-scale local market for organic vegetables. Besides, as planting organic vegetables should meet more strict requirements than ordinary farming practices, the production costs were also significantly increased. Thus, vegetables had to be sold at higher prices in order for peasants to generate profit, which in turn ran in contradiction with the local consumption capacity. Therefore, effort had to be made to help peasants expand the market out of Lijiang. To solve this problem, GEI had begun marketing with the local cooperative as early as in the phase of project operation. Given the limited timeline for the project, as the project neared its completion, we began to consider the possibility of founding a company exclusively responsible for sales. At the end of 2006, GEI cooperated with a group of investors sharing the same philosophy and objectives to officially register and set up the “Lijiang Snow Mountain Organic Food Corporation”. The corporation provides technology to, arranges planting plans and species for, purchases and sells organic vegetables planted by the peasants belonging to the cooperative. The produce generated from the farmers’ hard work made its way to big markets in Beijing, Guangzhou, and Shenzhen through the corporation’s sales channels. From traditional agricultural planting to planting organic vegetables involving comparatively sophisticated technology, the annual income of Changshui villagers from one *mu* of farmland was raised from seven or eight hundred *yuan* in the past to ten or even fifteen thousand now.

Up to now, GEI has completed the establishment of a three-in-one model, with each party in the model transforming into a running entity or an operative mechanism.

Based on the foregoing analysis, we can see each part of the three-in-one model serves to solve a specific problem. Furthermore, all parts of the model support each other and thereby GEI can propose a comprehensive set of solutions for rural problems. Practice shows that the problems faced by peasants are never isolated. Prob-



lems like environmental protection, economic development, capital, organization and markets go hand in hand, and in order to address the problem of sustainable development in rural China, solutions that acknowledge the interconnectedness of these problems must be taken into account.

3.3 Project Outputs

The outputs of this project could be illustrated by a set of numbers: using biogas saves nearly CNY1 000 in fuel cost for per household; 4.2 tons of firewood fuel are saved each year, which is equivalent to eight *mu* of forest protected as calculated on the basis of 500 kg wood produced each year on one *mu* of land; organic vegetables have generated an average annual income of CNY10 000 for each *mu* of land, 12.5 times that of planting traditional agricultural crops.

However, these figures only reflect a small portion of the project’s benefits. More broadly, as a kind of clean energy, biogas helps farmers solve the problem of animal feces pollution and reduces indoor pollution caused by firewood burning and health hazard thus caused. Likewise, planting organic vegetables reduces earth and underground water pollution caused by pesticides and fertilizers, greatly improves food safety, and brings the Changshui village on the track of sustainable development. The project is a win-win solution to environmental, social and economic problems. For the project’s executive team, the most valuable project achievement is a transformation of thoughts and ideas among Changshui villagers over the years, from passively accepting donations from the local government and external organizations to actively getting involved in market competition. We believe that the market economy awareness among Changshui villagers will bring them more wealth in the future.

3.4 Experience and Lessons Learnt

„Intimate contact” with Changshui villagers for three years has given us an idea of the complexity and difficulty of cooperating with farmers. Although we have mobilized Changshui farmers in planting valuable cash crops and have achieved preliminary success in attempts to raise farmers’ income, we also realize that, due to the

multitude of differences in state policies for different rural areas and development in various regions, any method for solving problems should be taken in consideration of actual local conditions and circumstances, and negotiations should be held with peasants participating in a project to determine what to do and how to do it. For example, in a project for sustainable rural development carried out in Tibet, we have found that very little capital is required for rural development there thanks to preferential financing policy for Tibet by the central government. Our task, therefore, is focused more on helping farmers learn how to use these preferential financing policies for economic development.

Furthermore, we have also noticed that in rural development work, caution should be exercised to avoid simple donations and efforts should be made to perfect the financing mechanism, making farmers aware of the idea that money from external organizations should be paid back and thus improving their efficiency in using such capital.

References

- LIU BIN, ZHANG ZHAOGANG, HUO GONG. 2004. Report on the Issues of Agriculture, Rural Economy, Rural Inhabitants in China. Beijing: China Develop Press.
- TENG ZHENGHUI. 2003. Finance Policies Tools to Eliminate Poverty, *Business Age*, 20.
- Yunnan Provincial Statistics Bureau. 2003. Report on National Economy and Social Development Statistics in Yunnan Province, http://www.stats.yn.gov.cn/ynstjjwz/468459023_6418703360/20061222/95568.html.
- ZHANG HONGYU. 2004. China's Rural Financial Organizational System: Performance, Deficiency and System Innovation. *Rural China Observer*, 2.
- Rural Development Institute of China Academy of Social Science, Rural Social Economy Survey Division of National Statistics Bureau. 2006. 2005–2006: Analysis and Forecast of Economic Conditions in Rural China. Beijing: Social Science Literature Press.
- Rural Development Institute under China Academy of Social Science, Rural Social Economy Survey Team under National Statistics Bureau. 2004. 2003–2004: Analysis and Forecast of Economic Conditions in Rural China. Beijing: Social Science Literature Press.

b) The Nanling Action Team

To explore a Road Map to Sustainable Development and Harmony between Man and Nature

Yang Jing

About Nanling Action Team

Founded in January 2007, Nanling Action Team (南岭会) is a local environmental NGO based in Guangdong Province. We are concerned with the conservation of wildlife and wildlife habitats in the nature reserve area in Guangdong – Nanling (南岭).

To identify the way of living of the local habitants and its impacts on wildlife and the environment, we conducted a number of fieldworks in Nanling. We discovered that the damage to the environment is mainly caused by the local habitants who have no better alternative in their pursuit of living.



Currently, we adopt the “Community Support Agriculture” (CSA) or the so-called “Social Organic Farming” approach in an attempt to link up the needs of both rural communities and urban consumers. We aim to promote a sustainable and ecological use of the arable land in the reserve area and encourage the local farmers not to use pesticides and chemical fertilizers in order to achieve the land preservation. Besides, we strive to promote the awareness of environmental protection in urban areas. We encourage the health-conscious consumers to buy the green products from natural reserve areas as such of Nanling and make direct contact with the farmers. We advocate changing the concept of consumption and building a healthy and sustainable

way of living and a “fair trade” consumption structure, which helps to reduce the exploitation of farmers by traders. The improvement in income can help the farmers become less dependent on using the natural resources for making a living and thus curtail the damaging practices of logging and illegal hunting.

We expect:

By this approach, we can effectively integrate the “protection for the natural environment of Nanling and especially the wildlife habitat in the reserve area” with the “sustainable development of rural communities”.

Meanwhile, we also seek to explore more practical solutions.

We believe:

- Real change can only come through practical action
- Mass participation, all-round thinking and striving for effective solutions

We advocate:

Environmental protection in advance is better than remedy in the aftermath. If remedies are taken only after damage has incurred great losses to the environment, it will be too late, if not impossible, to restore. Even a great deal of efforts is made, the result may end up in vain.

The typical example is the water treatment project of Huaihe River. More than 4 billion yuan has been spent so far. But disappointedly, not even a trace of improvement has been seen. The result is very discouraging.

Nanling Action Team will keep on inviting urban consumers to visit the Nanling Nature Reserve for experiencing the natural beauty and remind them to: „treasure it, protect it, do no harm, at the very beginning of its beauty!”



About Nanling Action Team's Current Projects

1. Nature reserve project

Since March 2007, we have started fieldwork investigation in parts of the nature reserve area in Shaoguan (韶关). We have also identified our first co-operating farmer called 'Guangtou' ('bare head') in Luokeng Provincial-rank Nature Reserve to launch organic farming in the suitable mountain fields.

The Luokeng Nature Reserve is the habitat of the Chinese crocodile lizard (*Shinisaurus crocodilurus*), an animal under first-class national protection. To protect their habitats and breeding is the prime mission of the reserve.



2. Rural development work in the neighboring areas

In 2007, we started our fieldwork research in the village areas nearby Guangzhou. We also organized consumers to take part in short trips to the rural areas (participated by 22 people so far).



3. Urban farming project

We have been running an urban farming project since February 2008 by renting a small piece of farmland in Guantang Village in Panyu City (番禺). We also subleased parts of the farmland to the neighboring dwellers to experience the pleasure of farming.

4. Urban consumers' DIY activities (31 participants)

We promote an environmentally friendly and healthy way of living and the additive-free eating concept, encouraging consumers to adopt DIY for food and clothes. DIY for a better life!



We need your concern and support:

We are recruiting volunteers!

It seems that the majority of activities of Nanling Action Team are related to eating and drinking. But to make a change, it's not just about a dinner party. Environmental protection is not simply a talk. It needs the concerted efforts and commitment by everyone of us!

There is still plenty of work to do. We need more people to play a part in it. If you are interested in making contribution to protecting the environment and aspiring for something different, please contact us: office@nlat.ngo.cn

As a volunteer of Nanling Action Team, you will have the opportunity:

- to participate in the fieldwork investigation in the nature reserve area
- to participate in planning and organizing various activities
- to help improve the livelihood of the people in need
- to save the homes for wildlife and plants
- to help conserve a clean land for our next generation



For more information about us, please visit:

Nanling Action's blog:

<http://blog.sina.com.cn/nlatngo>

Nanling Action's online forum:

<http://q.blog.sina.com.cn/nanlinghui>

Co-operating partner:

„Zhen Yi“ – Health Life Online Shop:

<http://shop36306081.taobao.com/>

c) Shanghai Green Oasis

The Shanghai Garbage Project

Analysis of the Disposal of Garbage in Shanghai

Li Bing, Hu Xiaoqin

Shanghai consists of 16 administrative districts and three counties in the outskirts of Shanghai. The city covers 6340.5 square kilometers. Shanghai, with a perpetual population of 1.778 million is China's biggest city and most important economic center. According to the goal of the Overall City Plan of Shanghai(1999–2020), it will be labelled as one of the international economic, financial and trading centers by 2010 and the infrastructure framework of a modernized international metropolis will be shaped by 2020.

With the sustainable development of national economy and cities' establishment in Shanghai, the output of all kinds of garbage is increasing rapidly as well. It is showed by the data from Urban Amenities Authority of Shanghai that the output of daily average MSW in Shanghai has exceeded 15,000t in 2005. The constantly increasing garbage has been a social problem polluting the environment, disturbing people's life and even hindering cities' development.

Current State of Garbage in Shanghai

According to the statistics from EPA, the output of household garbage reached 6.783.000 tons, of which 5,219,000 tons had been dealt with appropriately (1.096.000 tons incinerate, 730.000 tons composted, 10.600 tons recycled and 3.287.000 million tons landfilled). The harmless disposal rate of MSW in the city accounted for 76.95%.

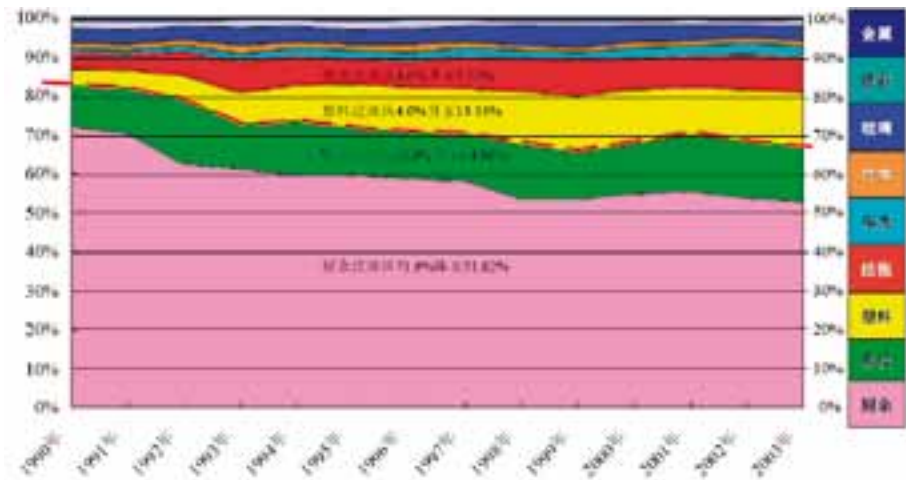
„At the end of the year 2008, the declare amount of construction waste was up to 35.22 million tons, while the declare rate to 88 % .The main garbage was disposed at the city outskirts and by some companies such as Jia Shan (Zhejiang) and Eastern Dredging .The amount of qualified units that are approved accounted for 81 %.”²⁶

The Features of MSW in Shanghai

- high water containment;
- low heat value;
- multi-organic components;
- the recyclable and reusable material is low;
- seasonal variation is very large.

²⁶ Prevention and Treatment on Solid Garbage Pollutant in Shanghai, 2008, <http://www.sepb.gov.cn/news.jsp?intKeyValue=17902>

The Variable Trends of the Components of MSW in Shanghai



Different types of garbage (right side of chart):

- metal/solid waste
- debris/slag stones
- glass
- wood
- fabric
- Paper Garbage (rises from 4.0% to 9.23%)
- Plastic Garbage (rises from 4.0% to 13.33%)
- Fruit Peel Garbage (rises from 10.8% to 14.08%)
- Kitchen Garbage (reduces from 71.9% to 51.82%)

It is shown in the figure that the proportion of food waste declined yearly from 1990 to 2003, while that of plastic and paper increased evidently, at the same time that of woods, glass, slag stones/metals and other ingredients changed little. Currently, perishable organic wastes almost accounted for 70%, yet plastic, paper, glass, metal and other usable material accounted for 25%. Because some waste and old goods were sold directly to acquisition personnel, the real amount of plastic, paper, glass, woods and metal in the MSW is larger than measurements.

The Situation of Garbage Dump

The methods of treating household garbage Shanghai has put forward include: Landfill, incineration, and biological treatment.
Daily Output of Household Garbage

Daily output of household garbage per capita reaches 0.84 kg, and is assumed to reach 1.12 kg by 2010.

According to the report of Shanghai eleventh five-year plan of environment protection which was published in May, 2009, the percentage of garbage disposal with standard in Shanghai is 77 % in 2008, most of the rest 23 % were sent to the land-filling sites which were built before the environment protection standards were published. Up to the year of 2010, the aim of percentage of garbage disposal with standard is 80–85 %, more work need to be set up to shorten the gap, and to reduce the pollution which was caused by old and sub-standard disposal facilities.²⁷

Progress of Government

In the past, there were only some very simple household garbage disposal facilities in Shanghai, and the government kept improving the situation. As mentioned above, a modernized facility system which is a blend of land-filling site, incineration plant, and biological treatment plant was built. Examples are as below:

Land-filling Sites

The 4th phase of Laogang land-filling site covers 361 ha. and is located 60 km from downtown area. The capacity of these land-filling sites is 90,000,000 ton, innocent treatment capacity reaches 6300ton/day which is equal to 1/3 of the total household garbage in Shanghai.

Laogang Land-filling site was built in April, 1989, during that period of time, “the current environment project standards were not published, and impermeable membranes and leachate treatment system were not used in most land-filling sites (leachate is a kind liquid which is poisonous, water polluted).”

Related government department has paid attention on this situation and experts were organized to solve problems.

„In leachate treating, the 4th phase of Laogang land-filling site is trying to reduce the producing of leachate, and to lay double HDPE impermeable membrane at the bottom of land filling area which can orderly catch and treat high pollution leachate to avoid polluting groundwater.

After garbage was land filled, it will fermented to biogas. When garbage was land filled, biogas network will be constructed to make full use of the biogas. After calculated, more than 20000 kilowatt hour can be generated by the biogas pro-

27 Lu Sipin, Shanghai Expo Environmental Evaluation Report in China, 2010, <http://www.sepb.gov.cn/platform/UserFiles/File/2009-08-25-11-10-27-894+08007956875821550011032.pdf>, and <http://www.shcg.gov.cn/GCMS/Common/FileUpload/UserImages/2006271029101248094162.doc>,

duced from one ton land filled garbage which is of impressive additional economic benefit.”²⁸

It is reported that after 50 years, Laogang land-filling site will become a golf course which is encircled by lots of big trees, this can not only purify air, but also reduce the pollution caused by land filled garbage.

Incineration Plant

In 2002, Yuqiao Incineration plant was built in Pudong district, which is the 1st kiloton incineration power plant, which can treat around 1100ton household garbage, and the annual power generation is 100 million kilowatt hour.

Another environmental incineration plant that generates electricity with abandoned resources was founded in 2003 in Jiangqiao Town, Jiading District, Shanghai. With scientific scheduling the garbage burning volume reached nearly 2,000 ton while electricity power generation capability amounted to 2 billion kwh in 2006, the greatest of its kind in China.

But: “Incinerator is a source of atmospheric pollution, especially in its by-product dioxin, a persistent organic pollutant (POPs) and carcinogen which is accumulative in the biology chain. Shanghai government abide by national emission standard, similar to that of Europe, and require that each factory must install on-line monitor equipments for real-time monitoring of main air pollutants. Besides, law enforcement officials launch surprise inspections of toxin emission every month. (...)

Nevertheless, the public express worry about the safety of incinerators, esp. new ones. Many residents who live near those built and to-be-built incineration plants convey their anxiety on the Internet.”²⁹

Mechanical Biological Treatment Plants

Meishang MBT plant was built and put into operation in May, 2003. With 139,000 square meters, it has processed 2.21 million tons of household garbage in six years. „As a technology suitable for sustainable development, Shanghai goes ahead in the practice of mechanical biological treatment. In recent years Shanghai has built mechanical biological treatment (MBT) plants in both Pudong and Putuo Districts, and is planning for another two in Baoshan and Chongming Districts.”³⁰

MBT acquires mechanical methods to the assortment, recycling of city household garbage, and transfer it into organic fertilizer through composting fermenta-

28 Xi Yuning, How Does Laogang Landfill Plant Turns Harm into Benefits?, Peoples Daily, <http://www.chinaeol.net/news/view.asp?id=49848&title=%CE%DB%C8%BE%B7%CO%D6%CE&catid=6>

29 Prevention and Treatment on Solid Garbage Pollutant in Shanghai, 2008, <http://www.sepb.gov.cn/news.jsp?intKeyVal=17902>

30 Ibid.

tion technology. Therefore, it is capable of the secure treatment of 280,000 tons of household garbage as well as the generation of 41 million kwh electricity. However, we ought to keep in mind public doubts about the influence of such plants on people's health as well as the residents' complaints on the stink of garbage expressed on the Internet.

Existing Problems and Outlook

There are still some problems concerning the current state of household garbage treatment in Shanghai city. It mainly consists of the following:

- 1) Household garbage is growing rapidly in volume while treatment facilities are comparatively lagging in phase in recent years. 23% of solid garbage in 2008 surpasses the treatment capability and lacks harmless treatment.
- 2) The treatment technology is relatively falling behind. Not only this leads to failure of timely and effective treatment but also to public doubt about treatment plants. So we should speed up our talent development strategy, keep pace with advanced technologies abroad in order to enhance technologies and management from the garbage production process to the treatment session.
- 3) The present transportation of urban household garbage takes more than 120 kilometers through rivers to Laogang Landfill Plant. With so long a distance and so much time, and a route vulnerable to unfavorable climate like fog, typhoon, storm and high water level, it is hard to process all the garbage the same day garbage is produced. To make it worse, the wharf for garbage transportation will be demolished gradually according to the Comprehensive Environmental Improvement Project of Suzhou River. This brings great challenge to current transportation since the re-building of an organized land transportation system requires no short time."³¹
- 4) The administrative system fails to catch up with the 'harmless, decreeing, resourceful treatment' standard.³² As garbage landfill plants, incinerators and MBT plants expand both in volume and amount, the treatment and recycling methods have been broadened. Nevertheless, the decreeing goal of garbage treatment has not been sufficiently promoted.

The government banned on free plastic bags on June, 1, 2008. Thus all retail sites like supermarkets, malls and pedlars' markets must implement compensation for use system and are forbidden to provide free plastic bags. Nearly 60% of consumers have begun to take their own shopping bags according to statistics from Shanghai Environmental Protection Bureau. This smart intervention greatly reduces usage and

31 Current State and Countermeasure of Household Garbage Treatment in Shanghai City. <http://www.kechixu.com/web/Solution/SolutionInfo.aspx?id=426>.

32 Adoption of Marketing Measures to Resolve Household Garbage Treatment In Shanghai City. <http://www.cn-hw.net/html/32/200609/60.html>.

discarding of plastic bags and inspires consumers' environmental awareness. UNEP believes that as long as Shanghai is determined and far-sighted, it is capable of realizing a zero garbage society.

Not only that the government can work out goals to reduce total garbage volume and the amount per capita, but also they should promote the idea of garbage assortment in communities, the idea of re-assortment in the cleaning, transportation and recycling process and turn it into useful resource once again. Assorted garbage collecting process brings social, economic and ecological benefits: it reduces treatment volume and treatment facilities, lowers treatment cost and decreases land consumption.

Garbage from Expo Site

Shanghai has promised 100% collection and 50% recycling of construction garbage and household garbage from Expo Site in *Shanghai Expo Environmental Evaluation Report in China, 2010*. The garbage will be transferred to municipal garbage treatment system for recycling or safe treatment after screening and assortment. Shanghai Expo Committee is working on garbage reduction measures and management plans for Expo 2010.

NGO's Role

Lu Sipin mentioned "to actively promote participation of non-governmental organizations" in *Shanghai Expo Environmental Evaluation Report*. He also said that NGOs have professional knowledge, publicising skills and creativity, and volunteer-organising experience, which makes them excellent partners in public participation promotion program for the Committee. NGO is an major form of public participation. Healthily-developed environmental NGOs and social groups play a significant role in enhancing public environmental awareness. Expo 2010 comes up a catalyst to expedite their development.

It is assumed that visitors to Expo 2010, Shanghai would exceed 700 million. One bottle of water for one person would make an impressive number of bottle garbage. Therefore, Shanghai promises to facilitate Expo Site with drinkable water and encourages visitors to take portable cups. If all visitors participate in the bottle-taking activity, 700 million non-biodegradable bottles would be reduced during the Expo. Promotion of this kind can not only increase public awareness on water and garbage issues in China, but also contribute to more communication and cooperation between the Committee and environmental charity organizations.

"Perhaps the traditional top-down education system is not the most effective to promote public participation in contemporary China. So new NGOs and social groups should be encouraged to launch creative and inspiring activities to attract citizens. By encouraging active fulfilment of responsibility in citizens and publicising the idea of less, reasonable and environmental-protective consumption, garbage per capita can be reduced to its minimum.

Shanghai Green Oasis Ecological Conservation and Communication Center (*briefly, Oasis Ecology*) was established in November 2004 by ecological specialists and devotees from Wildlife Conservation Society (Shanghai). *Oasis Ecology* is the first officially registered environmental NGO in Shanghai under Shanghai Civil Affairs Bureau. It has a team with strong professional backgrounds. Since 2005, we have carried out various of public welfare activities. We conduct propaganda about environmental protection and hold sodalities not only in schools and communities, but also in enterprises. Furthermore, we create opportunities to give residents chances to participate in these meaningful activities in person. Today, we have already had over 600 registered volunteers. They engage in the public benefit activities and make appeals to their family members and friends to show more solicitude for our environment.

In 2008, Oasis Ecology began propelling the project about garbage classification and reduction. Cooperating with Shanghai City Appearance & Environmental Sanitation Bureau we held family activities in New Era Kindergarten in Minhang District, gave lectures about energy saving and emissions reducing in New Era Housing Estate and advocated energy conservation and cyclic utilization in CaoYang Community.

From May 2009 till now, Oasis Ecology cooperate with CaoYang community to give a course of lectures about garbage classification in CaoYang residential district. Most of the communities in CaoYang district have been equipped with the relate facility and transportation net work. But because of the lack of publicizing information, the inhabitants cannot put the garbage into the right bins. The non-benefit lectures held by Oasis Ecology pass on the significance to them and give them correct guidance, to which they meet with a quick response. Now, the garbage classification in CaoYang Community is being improved step by step. We believe what we have done in these projects can play an exemplary part in other communities.

Commonweal Organize can attract more citizens to take part in public benefit activities. They are absolutely necessary for the government to realize the goal about garbage reduction and non-garbage.

References

- 1 Environmental Impact Assessment Report about EXPO 2010 Shanghai China Lu Sicheng (United Nations Environment Programme), UNEP (中国2010年上海世博会环境评估报告), 卢思骋 (联合国环境规划署)
<http://www.sepb.gov.cn/platform/UserFiles/File/2009-08-25-11-10-27-894+08007956875821550011032.pdf>
- 2 Shanghai 2008 Solid Waste Pollution Prevention and Control Report, Shanghai Environment (上海市2008年固体废物污染环境防治信息》上海环境网)
<http://www.sepb.gov.cn/news.jsp?intKeyValue=17902>
3. Shanghai Downtown Domestic Waste Treatment Status and Countermeasures Program, (上海市区生活垃圾处理现状和对策方案》持续中国网)
<http://www.kechixu.com/web/Solution/SolutionInfo.aspx?id=426>

- 4 Adopt a Market-based Solution to Solve the Problem of Waste Disposal in Shanghai (采取市场化方式解决上海生活垃圾处理问题), 环卫科技网, <http://www.cn-hw.net/html/32/200609/60.html>
- 5 The CPC Shanghai Municipal Environmental Sanitation Authority (Shanghai City Management & Administration Execution), work summary for 2005 & work points for 2006 (中共上海市市容环境卫生管理局(上海市城市管理行政执法局 委员会)《上海市市容环境卫生管理局》上海市城市管理行政执法局2005年工作总结和2006年工作要点》
<http://www.shcg.gov.cn/GCMS/Common/FileUpload/UserImages/2006271029101248094162.doc>
- 6 How Shanghai Old Harbor Landfill make the harm into beneficial?
Xi Ningning, PEOPLE NET, People's Daily (上海老港垃圾填埋场是如何做到化害为利的?), 宁宇, 来源: 人民网, 人民日报.
<http://www.chinaeol.net/news/view.asp?id=49848&title=%CE%DB%C8%BE%B7%C0%D6%CE&ca%taid=6>
- 7 <http://news.sina.com.cn/c/2006-08-13/08349734353s.shtml>

d) Aktionsgemeinschaft bäuerliche Landwirtschaft (AbL) – The Association for farmer's agriculture *Berit Thomson*

Food Safety/Sustainable Agriculture: Description of the Problem/Topic – Why We are Active?

Our agricultural policy in the European Union (CAP/Common Agricultural Policy) is focusing on an export-orientated agriculture.

1) Main instruments are

- a) Design of agricultural payments: The agricultural budget of the European Union (27 member states) is nearly 50 Billion Euro (2005). Of this payments 42.1 Billion Euro are not concerning social and environmental aspects. It advantages rationalized farms. Export subsidies e. g. (2.5 Billion Euro of 42.1 Billion Euro) lead directly to dumping on the world market. Where as only 7.7 Billion Euro are focusing rural development goals.
- b) Design of markets: E. g. dairy market; the agricultural policy is organizing overproduction on the dairy market in Europe because they are extending the dairy quota although the demand did not increase. This overproduction cause a reduction of the milk prices – which is the declared aim of the policy – and in the long term the policy plans to abolish the quota and liberalize the dairy market. In Germany the dairy companies are paying there farmers 25 Cent per kg of milk in the average where as the production coast are 40 Cent per kg. This situation exists in nearly every member state of the EU. If this situation does not change one third of the 100.000 dairy farmers in Germany will go out of production till the end of this year. This agricultural policy strengthen an industrial model of agriculture: high decrease on farms, cut of jobs, high input agriculture (resources), loosing biodiversity, destroying markets in e. g. Developing Countries, climate change, no high quality food...

2) What are our aims?

We want a political framework for a regional orientated agriculture as a premise for food safety/sovereignty and sustainable agriculture:

Agriculture is more than a branch of the economy. It serves a wide range of purposes, especially for people living in rural areas and for nature. National and international agricultural policies must therefore include farming in this multi-functionality and diversity. Politicians have an obligation to design markets in such a way that all these functions are wholly supported. We have developed **principles for agricultural policies**, using this as a base.

The principle of ...

... **social agriculture** means that agriculture produces high-quality food, preserves and creates jobs in rural

areas, and offers people the opportunity to earn a living.

... **environmental protection** means that producing food and energy from renewable resources must preserve biodiversity, and that air, soil and water are used sparingly. When renewable resources are used to produce bio-energy, the production of food must remain a priority.

... **the right to a GMO-free life** means that farmers and consumers must have unlimited opportunities to make or consume their products without the use of genetic engineering.

... **a secure supply of food** means that people should have access to food that is healthy, culturally appropriate, is nutritional and of a wide variety and is thus of high quality.

... **regionalism** means that local and regional markets are a priority, because farmers can obtain fair prices for quality products mostly on the microeconomic level. That is a way to strengthen the regional creation of value and support rural economic development.

... **of international responsibility** means that national agricultural policies must be shaped in such a way that they do not harm agricultural producers from other countries, for example through dumping prices.

Our principles coincides with the result of the IAASTD Report (International Assessment of Agricultural Knowledge, Science and Technology for Development) worked out by 400 independent scientists worldwide which has been released in 2008. According to that small-scale and peasant farmers are the future!

3) How do we try to reach our aims?

We have to organize a strong lobby to move the policy in our direction. Our Lobby is small because the AbL has 5.000 members – conventional and organic farmers. Altogether we have more than 300.000 Farmers in Germany. Most of them are organized in the big farmer union “Deutscher Bauernverband” which is traditional and ongoing focusing on an industrial and export orientated agriculture and working together with the food industry.

Two strategies of our work:

The dairy farmer movement: The European Milk Board lobbies for milk producers in Europe. The Board has members in 14 European countries, representing about 100,000 milk producers (30.000 of them in Germany). They stand for forward-looking, sustainable milk production in every region of Europe that enables farmers to earn a decent living from their labour. The basic prerequisite for this is a milk price

that covers the average milk production costs. They work together for a regulation of volumes that must be made flexible immediately; the yardstick for quota adjustments must be a cost-covering milk price. Last year they organized a milk strike and got 40 Cent per kg, but the policy did not move to design the necessary framework. With very powerful actions and demonstrations they still working together to move the policy – maybe there will be another milk strike. AbL is supporting this dairy farmer movement.

Networking with development, environmental, consumer protection organizations: The civil society is working together to readjust the agricultural and trade policy towards an environmentally and developmentally compatible policy allowing family farms a future. Common campaigns, position papers, etc. The basic of this networking is the dialogue to identify the common concerns.

4) How effective are we (impacts)?

The dairy farmer movement became very powerful in the last year and due to the dialogues we are going to combine the networking activities and the dairy farmer movements to achieve a high awareness in the society.

This will be our main aim in the future.

For further information:

- www.abl-ev.de/
- www.europeanmilkboard.eu/
- www.forum-ue.de/
- <http://www.epfs.eu/content.aspx?l=002&lang=ENG>
- IAASTD-Report: www.agassessment.org/

e) Consumer Protection Initiative

Nika Greger

1) Consumer Protection – What is the Need?

Never before have consumers been faced with a broader range of offers and decisions to be taken than today. Goods are traded across borders, services are offered internationally. The liberalization of public utilities and services, once provided by the state or monopolies, has created completely new – and intransparent – markets. Finding your way around in this oversupply is getting harder by the minute.

Consumer protection begins on a small scale, with everyday and essential issues: food safety, health, protection against fraud. Consumer protection is a task which affects virtually all aspects of life.

Preventive consumer protection means planning ahead and acting in advance to prevent a disadvantage or risk to consumers. This can only work in a global market if suppliers understand that consumer protection is a quality characteristic – and if consumers are aware of their responsibility as consumers!

2) Where Do We Stand?

In Germany there is a Federal Ministry of Food, Agriculture and Consumer Protection. This is an important step into the correct direction. But on the broader scale, what is still needed is a fundamental reorientation of economic policy. The consumer's voice must be heard more in the political decision-making than it has been the case to date.

Generally speaking, there are enough consumer protection laws in Germany. But having consumer rights on paper is only one side of the story. Without effective legal implementation and well-informed consumers who know and demand their rights, even the best laws are worthless.

Therefore we act on three levels:

- we put consumer issues on the political agenda,
- we promote good, independent consumer advice and
- we inform consumers on how they can actively influence markets through their daily decisions.

3) The Responsibility of Consumers

Consumer protection is about much more than achieving the best product at the lowest price. Which product really is worth its price? In a globalized world the question of "value for money" opens up new dimensions. It may be concealed that a product can only be offered at the lowest price because it was produced by children. Or that a lower price is achieved at the expense of the environment.

The globalization of the markets makes consumer protection a global task in which economic aspects play a role just as much as ethical, ecological or development policy issues. Consumer protection means accepting responsibility. This is a challenge for industry, politics – and for consumers themselves. Because consumers can influence whether a product is successful on the market or not high standards can only be set and maintained if consumers play an active part. And this is precisely what is meant by sustainable consumption.

4) Sustainable Food Production and Consumption

Some concrete examples of our work:

No to GMOs

We want GMO-free agriculture and believe that regions and countries should have the right to ban GMOs. Strict rules to prevent contamination are necessary. Currently, labels for animal products, like eggs, milk and meat, do not specify whether the animals were fed with genetically modified plants. We insist that consumers have the right to know when they are consuming GM products even indirectly, so we continue to fight for a regulation on the labelling of products from animals that are fed GMOs.

Local Consumption

We favour consumption of locally produced food as much as possible. Plant and animal varieties that are adapted to specific areas should be promoted. Local and regional marketing of quality food needs more support from the EU.

Intensive Farming and Subsidies

We believe that the objectives of farm subsidies must change. They must support sustainable practices that respect environmental and animal welfare criteria, conserve the rural environment and increase rural employment. Farming practices that harm water, soil and food quality must be phased out, and agro-industry and factory farms that damage the environment must be penalised, not subsidised, following the “polluter pays” principle. That way, organic products that contribute to a healthier diet, reduce costs for the public health system and repair environmental damage would no longer be more expensive.

5) Organic Agriculture – a Benchmark for Sustainable Development

Over the past decades organic agriculture has become a benchmark for sustainable farming practices and responsible consumption of food. Organic farming includes the protection of nature and animals as well as the conservation and use of biodiversity.

Consumers in Europe have rewarded organic farmers with realistic food prices for their efforts to reintegrate important aspects like public health, local food culture and animal welfare in their production practices. The development of organic markets is a success story in Europe.

Organic Food – a Reference for Quality

Frequent food scares provoked by factory farming have made consumers suspicious of conventional food. However, stricter food safety rules tailored for the food industry have not solved the problem of a generally decreasing food quality. Organic food has become an unquestioned reference for a reliable food quality. It offers better taste and nutritional value. It does not carry residues of pesticides and other chemicals. And it excludes the use of GMOs.

Responsible Consumption – a Growing Challenge

Organic food must not be discounted. It must stay a benchmark and a reference for sustainable farming practices and consumption patterns. The real costs of healthy food must become more transparent for everyone. Organic farmers and consumers should actively oppose the race to the bottom in food prices, conventional and organic. Farmers and consumers must take care of short distance marketing. In order to get fresh and healthy food, consumers must demand to know where their food comes from. Farmers must get better organised in processing and marketing their food through food chains which do not practice dumping. Organic food should not become the decoy of food discounters or a window dressing to hide their dumping practices.

6) Labelling for more Transparency

In order not to further confuse but to enable consumers to make the right choice when buying their food and in order to build up markets for quality products, efficient inspections and controls and readable labelling are essential. Current control systems focus on food safety and exclude aspects of sustainability and wholesome quality of food. What we need is a global proactive food quality approach. Consumers need simple and relevant information for their choice. In order to counter-act the current rise in obesity, nutritional labelling on processed food must be clear and understandable.

f) First Steps in Standards Representation: a Guide for Consumer Organisations³³

Chris Evans, Bruce J. Farquhar

(with input from staff and members of Consumers International, CI)

What this Guide is for

The aim of this guide is to provide guidance to consumer organisations to assist and encourage them to become involved in the development of Standards. The content of this guide is largely based on the experiences of consumer organisations that have already become involved in developing Standards at the national level. We have drawn on case studies that were collected as part of Consumers International's Decision Making in the Global Market programme. Emphasis in this guide has been given to providing basic 'first steps' information and has been structured around the assumption that consumer organisations have serious constraints on time and money and that there are many competing demands on the resources of consumer NGOs. This guide is intended for the staff and volunteer workers of consumer organisations. It can be used as a step-by-step introduction to the theory and practice of consumer participation in Standards making. The length of this guide naturally restricts how much detail we can go into on individual topics. However, you will find references for sources for further information in all sections. There is a wealth of information out there and you should use this to support your efforts. Help is also available from Consumers International. National consumer organisations in Europe can also obtain help from ANEC, the European consumer voice in standardisation. ANEC is funded by the European Union (EU) and the European Free Trade association (EFTA). Although EFTA only services their European members their website is useful and could be of benefit for consumer organisations around the world.

33 We would like to thank the Consumer International (London) for the permission to reprint this text. *First steps in Standards representation: a guide for consumer organisations* (Sept. 2005) has been prepared as part of Consumer International's (CI) Phase III of research for its Decision-Making in the Global Market programme. The programme commissioned case studies on national level Standard-setting processes from national consumer organisations to gather evidence on how to improve consumer participation in Standard setting and indicate good and bad practice. The case studies and the lessons learnt from them have served as a basis for writing this manual. The names of the eight organisations and the case studies are listed as an appendix on page 15 of this manual. The Decision Making the Global Market programme is supported by the Ford Foundation. The views expressed in this manual do not represent the views of the Ford Foundation.

What are Standards and why are they important?

Standards are hugely important for consumers. Consumers assume that the products they buy are safe, but safety is almost certainly specified in a safety standard. Most consumers take for granted that washing instructions are consistent between the different garments they buy and that electric plugs are a good fit into the corresponding sockets, and so on. All of these convenient features are underpinned by Standards.

New Standards are constantly being developed and established Standards are frequently amended. Consumer organisations can be involved in this process. Alongside industry and regulators, consumers are the principal stakeholders in Standards-making.

The term 'Standards' is used to convey a variety of meanings. In this guide we are dealing with national published Standards such as a British Standard (BS...), Malaysian Standards (MS...) and International Standards (ISO, IEC ...) etc. In Europe, many of the national Standards are developed through the regional standards bodies. The term Standards can however also be used more broadly to describe a Code of Conduct, an industry self-commitment or any other form of agreed specification.

Standards were originally published to ensure goods and services could be manufactured and used in different countries and within a product range and have had an impact on competition and efficiency. They are increasingly being promoted as the way to reduce barriers to trade that stop goods and services being freely traded around the world.

National Standards Bodies

Most countries have their own national standards making body. These bodies normally have the following roles:

- they write and publish their own national Standards
- they represent their country at regional and international setting forums
- they hold a reference library of national/regional/international Standards
- they sell copies of Standards.

The use of Standards may be voluntary or governments may require their use by referencing them in regulation. Under the World Trade Organization rules governments are required to base their national regulations on international Standards, as much as possible.

Partly because of these rules and also because of the general globalisation of trade, Standards are increasingly being written at the international level. You may find when if you approach your national standards body about a specific issue that it is not being dealt with in a purely national Standard but in an international Standard.

The role of the national standards body is not to write the standard itself but to co-ordinate a national view to be represented by its delegation to the international standards body.

International Standards Bodies

There are four international Standards making bodies who deal regularly with consumer issues:

- IEC** – International Electrotechnical Commission
- ITU** – International Telecommunications Union
- ISO** – International Organization for Standardization
- CODEX** – Codex Alimentarius Commission.

EC Standards cover electrical equipment, ITU Standards cover telecommunications equipment and ISO Standards cover the remaining products and services. Codex Standards cover food. ISO and IEC are made up of national members (DIN, the national member Standards Body for Germany, ZABS for Zambia etc) and it is representatives from the membership that make up the individual committees that write Standards.

In some countries, food and telecoms Standards are treated differently and are not the responsibility of the national standards body.

Some typical examples of Standards include:

- IEC 60335** – covers the electrical safety of household appliances
- ISO 9000** – covers quality management and quality assurance Standards
- Codex STAN C1** – Cheddar cheese.

The work of ISO and IEC were one of the focuses of Consumers International's (CI) Global Governance project. Information about participating in other standards-setting bodies is available from CI and other sources. For example, CI has written a training manual specifically aimed at participating in the food standards development work in Codex Alimentarius (see box).

a) Sources of further information about ISO, IEC and their national members

- **International Electrotechnical Commission IEC** www.iec.ch/
Note. This site has a search facility and offers a 'PREVIEW' of published Standards
- **International Organisation for Standardisation ISO** www.iso.org/

List of national standards bodies

On behalf of the WTO, ISO periodically publishes a Directory of standardising bodies that have accepted the WTO Agreement on Technical Barriers to Trade (TBT). This list is a good way to start to identify standards bodies in your country. ISO and IEC also publish lists of their members on their websites. www.iso.ch/iso/en/commsmarkets/wto/pdf/scd2005-1-en.pdf

b) Sources of further information for participating in other standards bodies

Codex Alimentarius Commission

www.codexalimentarius.net/web/index_en.jsp

Note. This website has a search facility and permits free-of-charge downloading of its published Standards.

NGO Participation in Codex

www.codexalimentarius.net/web/ngo_participation.jsp

Codex Alimentarius: a set of three resource manuals

Three resource guides, in one publication, that cover different aspects of consumers involvement in Codex Alimentarius (1: *Codex for Consumers*, 2: *Demystifying the different codex committees*, 3: *Participation of consumer organisations in Codex Alimentarius*. Published in 2000. Available from CI website at: www.consumersinternational.org/food

International Telecommunication Union (ITU)

www.itu.int/home/index.html

Why consumer organisations should be involved with writing Standards

Standards are written by stakeholders, not by some anonymous government or industry body.

Usually, the process begins because there is a problem to be solved and the Standards-making route has been seen as one able to provide a solution. Standards are usually written by a group of people, who represent various stakeholders or are experts in a particular field, often described as a committee or working group.

Not surprisingly, the first people to volunteer to take part are usually those who have the problem to solve. If such a group of people was unbalanced, ie biased to just one stakeholder sector, then it would not be surprising if the Standard that was drafted was biased towards the needs of that particular stakeholder group.

Often, this will not matter. For example, if a Standard was needed to regulate the dimensions of railway tracks then stakeholders biased towards the needs of the railway industry would probably be sufficient to ensure a good Standard was written. Conversely, if a Standard was needed to support the regulation of trade to consumers then a Standard written by stakeholders who all represented industry is less likely to be balanced to the needs of all stakeholders. In such circumstances, a better Standard is likely to be created if the people writing that Standard included representatives from the regulator (probably government) and end users (perhaps a consumer NGO).

Consumers could leave the writing of the Standards that impact on the products and services they use to others. Although this is often what happens, there are at least three categories of Standards where consumer representation clearly should be sought:

- an existing Standard that impacts on consumers is unfairly weighted against them
- the Standard covers an area of high risk to consumers
- the Standard is being written on a topic that is high priority for the consumer organisation -perhaps in an area where it has been campaigning.

The case study below from “Which?” demonstrates the positive impact consumer organisations can have in writing standards.

Experience from a UK consumer representative

Consumer Association “Which?”

Several years ago a UK consumer representative working for the Consumers’ Association (now Which?) proposed a change to an existing Standard, in order to eliminate a safety hazard on a washing machine. That change was agreed by the European regional Standards making body (CENELEC, who publish some of the ‘EN’ Standards). By 2005 all 14 million washing machines sold in the European Union had had that hazard removed. And all because of the work one consumer representative and just three meetings!

Sources of further information

Your voice matters – Why consumers need to participate in standards-making... and how to get involved

This brochure from the Consumer Policy Committee of ISO, ISO-COPOLCO, provides a good basic introduction to how standards at all levels can improve from consumers’ input in their development, and why it is so important for consumers to participate actively in the standards-making process. It describes the role of consumer representatives in ISO work and lists the particular benefits of consumer participation.

www.iso.org/iso/en/prodsservices/otherpubs/pdf/copolcoyourvoicematters_03-en.pdf

How standards are written and how to get involved

Who writes standards?

National Standards are written within the committees established by the national standards bodies. International standards are written within the Technical Committees and Working Groups established by the international standards bodies.

At the national level all stakeholders should be able to participate around the table. However at the international level the participants are national delegations

of members who have chosen to participate in that technical issue. The national delegations are formed by the national standards bodies who are responsible for ensuring that their delegations represent the national interest of all stakeholders in their country.

Some international organisations such as Consumers International also have the right to participate directly in Technical Committees at the international level, as observers (ie they do not have a vote).

Understanding the Standards Making Process

Standards making is governed by strict rules and processes. Taking an informal approach or trying to speed the process up by cutting corners is usually counterproductive. Most national standards bodies that are also members of ISO and IEC follow the same standards development process contained in the ISO and IEC Directives.

This is a seven-stage process:

- Stage 1: Preliminary stage
- Stage 2: Proposal stage
- Stage 3: Preparatory stage
- Stage 4: Committee stage
- Stage 5: Enquiry stage
- Stage 6: Approval stage
- Stage 7: Publication stage.

The best source of advice on the rules is the relevant national standards body. They exist to facilitate Standards making. Some national standards bodies offer regular programmes of training on rules and procedures. Failing that, the Secretary of any Standards-making committee can always be canvassed for advice on rules and procedures – after all, they are there to see that the rules are adhered to anyway.

The Secretary of the Technical Committee you wish to participate in should be a good starting point. Understanding the rules not only reinforces the confidence of the consumer representative but also ensures that they can take action should others try to break the rules. Some stakeholders with a substantial vested interest in the outcome of Standards-making may sometimes attempt to take unfair advantage by abusing the rules.

Normally the rules also provide a means of appeal. The provision of such a procedure is important and should be invoked when necessary. Examples of where this might be necessary include circumstances where proposed outcomes are being unreasonably biased due to excessive pressure from a sub-group of stakeholders.

Active Involvement in Standards-making

To start to become more involved in standards setting national consumer organisations should seek a meeting with their national standards bodies to discuss their interest and the opportunities that exist for support and participation.

If a deficiency in a Standard has been identified, the minimum that any consumer organisation should do is draw it to the attention of the national standards body. This should always be done formally, in writing. This is the best way to ensure that the topic is dealt with properly rather than filed and forgotten. Any submission should use the template provided by the standard body to submit comments whenever possible and be fully detailed, ie include the full Standard number, the clause number, a detailed description of the problem and, if possible, a proposed solution. A copy to the Chairman and Secretary of the relevant Technical Committee is also useful.

Always offer to meet the committee who would be responsible for dealing with the issue. A meeting provides a number of opportunities and, most importantly, it ensures the committee fully engages with the topic. It also makes it more difficult for them to say 'no change to the Standard'.

Getting a Seat at the Table

The real starting point to more active involvement is getting a seat at the table. All Standards bodies that are members of ISO and IEC have signed up to the Code of Good Practice for the Preparation, Adoption and Application of Standards as contained in Annex 3 of the WTO's Agreement on Technical Barriers to Trade (TBT). This code of practice requires the standards bodies to comply with transparency provisions made within that code and must involve all stakeholders.

ISO and IEC statement on consumer participation in Standards work

The ISO and IEC have made several recommendations to their members about consumer participation in Standards work and require their members to allow consumer representatives to participate in their work (see: www.iso.org/iso/en/prodsservices/otherpubs/pdf/copolcoparticipation_2001-en.pdf)

The statement acknowledges that 'Standards, either international or domestic, should be developed based on a consensus among all interested parties, including manufacturers, users and consumers.

The statement goes on to make a number of recommendations to the members of ISO and IEC, the aim of which is to help promote greater consumer participation in the standardization process. These recommendations address for example the need for national standards bodies to

- support ISO and IEC initiatives aimed at encouraging consumer representation in standardisation.¹
- have consumer participation in drawing up their standards work programmes and in relevant policy matters
- inviting consumer interests to participate in all national technical committees dealing with standards projects of consumer interest.

- enable consumers to participate in priority areas of consumer interest if no external funding is available
- seek the active participation of consumers in national delegations to international Technical Committees primarily of interest to consumers
- provide guidance and training to consumer representatives on technical issues.

In some countries, particularly where civil society is weak or where there are several NGOs competing to represent consumers, it may not be so simple to assert this right. To begin with, it may be necessary to submit a series of requests and to bring pressure on the Standards-makers through lobbying or pressure on government. It is always useful to try to build a relationship with your national standards body and agree how you may better work together and provide a consumer perspective to standards being developed in your country.

Representing consumers in Standards-making must be recognised by the consumer organisation involved as a privilege that brings responsibilities. For example:

- The rules of some Standards-making bodies require that the early work on drafting a Standard is conducted in private and that the content of such discussions remains confidential to the meeting participants. Such rules are not usually intended to suppress transparency and free speech so much as to provide a forum in which commercially confidential information can be tabled and used to inform discussion. Such meetings would not normally be open to the public and documentation would not be available in the public domain until drafting the Standard had reached a certain level of development.
- If the organisation is the only one representing consumer interests then it must ensure this is done on behalf of all consumers, and not just the active members of their own organisation. Consequently, they must actively liaise with other consumer organisations to ensure that all views are considered and used to shape the overall views submitted as part of the Standards-making process. One way to achieve this is to persuade the national standards body to create a consumer consultative process as part of its rules.
- Often, the first involvement that a consumer organisation has in Standards-making is in assisting the process of writing specific Standards. Consumer organisations should seek a role in determining the policies of their national standards body, perhaps by achieving a position at decision making or Board level, to ensure that consumer is taken into account when developing relevant standards.
- Membership organisations are well placed to propose new Standards or amendments to existing ones. The best organisations take a proactive role in this. Consumers are less well served if their organisations are merely reactive when it comes to Standards-making.

First Steps

If the most appropriate consumer representative has no experience of Standards then it is likely that they would need to participate in a number of meetings before their confidence and knowledge has risen to the level where they can expect to make an effective contribution.

This can be made easier in two ways:

- **Go with a friend.** Find out in advance of the first meeting who the other members are (the secretary will be able to tell you). Pick one who is likely to be more sympathetic to the consumer viewpoint and ask them if they would be prepared to act as a mentor (not a guardian!).
- **Be an observer.** If that approach is impracticable, then an alternative is to ask whether the new consumer representative can, in advance of taking up their duties, sit in on some other Standards making committees as an observer.

Further Preparation for the First Meeting

Make sure you are familiar with the recent history of the meeting. The secretary should be able to provide you with the necessary information. Do some additional background research and build up a network of contacts who you can consult from time to time.

Make sure every document listed on the meeting agenda has been obtained, read and understood. Decide what the appropriate response is for each of those agenda items.

Sources of supportive data include: survey data, accident statistics, ergonomic data and consumer usage information.

Look for people who are likely to be sympathetic to consumer issues, call them in advance of the meeting and introduce yourself. Have a colleague act as the 'opposition', in order to get some practice at dealing with the counter arguments. Practice techniques for dealing with adversity – be open-minded and remain objective, seek alternatives but do not rush to offer a compromise.

Managing Expectations

It is important that would-be consumer representatives know what to expect from the Standards-making process. At its very best, this process provides a real opportunity for a consumer concern to be embodied in a Standard.

Long-term Commitment

Usually the pace of change is slow. At face value, Standards-makers try to work in open and transparent way and in a consensual atmosphere. These are welcomed by consumer organisations yet all these features act against speeding up the process. Creating a new Standard from scratch internationally normally takes at least three years.

Lots of Meetings

There can be many meetings, often seemingly going back over the same topics. Missing meetings is a risk as the progress achieved at previous meetings might be undone if there is nobody there to defend it.

Skills, Knowledge and Experience

Effectively working in Standards-making will call upon a range of communication skills, technical knowledge and experience of working within strict procedures. Standards making is not a role where a 'well meaning amateur' is likely to be very effective. A consumer representative is not required to provide technical solutions to every problem. However, consumer representatives can highlight problems that are of particular detriment to consumers.

Representation Needs to be funded

It costs money to be involved in Standards-making. There usually is no charge to join the Standards making process (however, more and more Standards making bodies seem to be charging, especially in countries like the US, Brazil and Sweden). But everything else costs: staff time, back-office support, travel expenditure, background research etc. Some authorities do recognise the value of Standards making and provide some funding support.

The Empty Commitment to Engagement

The invitation to join a Standards-making body may have come simply because the meeting host was required to demonstrate that all major stakeholders were involved in the process. Once the goal of having a consumer representative attend the meeting had been achieved there was no further need of the consumer representative and substantive input from them would not be encouraged.

What can Consumer Representatives expect from a National Standards Body?

The national standards bodies that are the Members of ISO and IEC have together agreed a policy statement on consumer participation in standardisation work (see box above). This statement can be used by consumer organisations when they approach national standards bodies with a desire to participate in their activities. The ISO code of ethics commits its members to organise national input in a timely and effective manner, taking into account all relevant issues at national level and to take appropriate measures to facilitate the participation of consumers and other parties from civil society, small- and medium-size enterprises and public authorities.

Consumers International members in Pakistan and in Latin America identified the steps that are needed in order to allow the consumer organisations to become more engaged in the work of their national standards bodies.

These included:

- identification in the national standards body of a consumer liaison officer
- better exchange of information between national standards bodies and consumer organisations on the standards work programme
- national standards bodies should participate actively in the consumer policy committee of ISO, ISO-COPOLCO
- national standards bodies and consumer organisations should work together to seek funding to support the sustainable participation of consumers in standards work.

Sources of Further Information

Governance in the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC)

Available on CI website at

<http://www.consumersinternational.org/Templates/Internal.asp?NodeID=93594&int1stParentNodeID=89651&int2ndParentNodeID=89699>

ISO Code of Ethics

www.iso.org/iso/en/aboutiso/ethics/ethics.html

ISO and the Consumer

A brief explanation of the favourable impact that consumer involvement has had on ISO's activities

www.iso.org/iso/en/prodsservices/otherpubs/pdf/copolcobrochure_2005-en.pdf

How to be an effective Consumer Representative

Taking part in meetings

The following section deals with the practicalities of participating in standards meeting. For further information, please contact: ValShepherd at: val.shepherd@bsi-global.com

Identifying the Consumer Interest

Remember the basic consumer principles arising from John F Kennedy identifying the four basic consumer rights in his Special Message to the US Congress on Protecting the Consumer Interest (1962):

- the right to safety
- the right to be informed
- the right to choose
- the right to be heard.

The consumer movement, through Consumers International, has added four more rights:

- the right to satisfaction of basic needs
- the right to redress
- the right to consumer education
- the right to a healthy and sustainable environment.

Together these eight rights are reflected in the UN Guidelines on Consumer Protection and form the basis of determining the consumer interest by Consumers International and consumer groups worldwide. Consumer representatives can translate these rights into Standards-making policy aims that are practical and understandable:

- improving consumer safety for all
- preventing accidents and mitigating the effects of accidents
- reducing risk
- promoting and maintaining health and hygiene
- promoting proper consideration of issues relating to vulnerable groups
- enhancing product/service performance within an overall framework of sustainable production and environmental protection
- promoting usability and the principle of design for all
- preventing exclusion of particular user groups, wherever possible
- improving product/service information for consumers
- facilitating consumer choice.

Clearly, the exact consumer interest needs to be determined on a case-by-case basis by the consumer organisation concerned.

The Consumer Representative's Role at a Meeting

The main part of a participant's work is assisting in the drafting of Standards and commenting on drafts. As part of this process the better briefed they are, the more allies they have built up and the more understanding they have of what others in the group are trying to achieve, the better.

It is important to remember that consumer representatives are there to represent the consumer interest. There will be others on the committee to consider manufacturing and other detailed technical points. Consumer representatives should try to avoid being drawn into the committee's operational details. Their job is to concentrate on how the Standard affects the consumer. The national standards body's editing staff will deal with editorial details.

Participating in discussions should be active and positive. Consumer representatives who simply offer blanket criticism of what is proposed are not as effective as those who are able to suggest positive solutions and build a case for change. Committees should not be viewed as an 'us and them' situation. Consumer representa-

tives should be prepared to discuss their position, respond to questions about it and be prepared to listen to other arguments and respond accordingly. Adoption of this engaging approach leads to gaining respect from other committee members; this in turn leads to becoming an influential member of the committee.

On larger issues they should ask for more time to consider the item and bring the proposal back to colleagues or other experts to help arrive at a position. It is important to check that the minutes of the last meeting are a correct record of what was said and that actions agreed have been captured in the minutes. This latter point is important as it provides an excellent way to ensure the meeting covers the topic areas that matter for consumers.

Commenting on Standards

There are strict rules and procedures governing how Standards are produced. These rules include the frequent need to circulate documents for comment.

If comments are required on a draft Standard, these should be submitted as written documents. Comments routinely need to respect the format provided by the standards body concerned which will not tolerate the use of a different format. It is easy for verbal comments, made only in meetings, to get lost. Submitting in writing allows others to view, consider and either support or object to the views given. Overall, such submissions ensure that they get discussed.

Once the drafting stage is over and you are responding to a formal draft for public comment, it is essential that comments be given in writing under the appropriate heading. Any submission should use the template provided by the standards body to submit comments. And, where appropriate, should include a detailed description of the problem and, if possible, a proposed solution.

It is sensible to share those comments with other organisations as well as informing other sympathetic contributors.

Consumers can sleep soundly in Kenya – Case Study

In 1998–9, Consumer Information Network [CIN] was involved in a confrontational situation with the Kenya Bureau of Standards [KEBS] over the quality of mattresses. CIN was a member of the KBBS Technical Committee on Foam Mattresses dealing with setting Standards for the quality of mattresses sold in Kenya. CIN had received many complaints from rural and urban consumers. The most common complaint was that the mattresses did not last long as they were supposed to and were below the required standard. The description on the tags attached to the mattresses did not match with the permitted density allowed by the Kenyan standard. CIN conducted an independent study and assessment of the quality of the mattresses. The results indicated that these mattresses did not reach the Kenyan standard. CIN decided to take the case further and queried KEBS to explain why they were allowing substandard products to be sold. CIN

argued that KEBS had the statutory obligation to ensure that only quality and safe products were allowed in the market place. KEBS did not accept this criticism in good faith and decided to expel CIN from the Technical Committee meetings. CIN complained to then Minister of Trade and Industry. He sided with KEBS and was backed by the mattress industry. CIN then appealed to the President of Kenya who demanded to know why KEBS had acted against CIN. The matter was solved after the intervention of the President and CIN was reinstated on the committee. Since that time, CIN has been well respected as a consumer advocate at KBBS and has been involved in setting several Kenyan Standards with CIN members attending Technical Committees at KEBS.

Compiled by John P Kinuthia of CIN

Ten principles to apply to Standards making

1. Preparation is vital

Know the rules, read the papers.

2. Find a friend

Confidence building is important, find help to learn the ropes and provide guidance in those early meetings.

3. Secure funding for the longer term

Involvement costs money and Standards can take years to write.

4. Learn to compromise

Stubborn consumer views, especially negative ones, are rarely persuasive.

5. Know the consumer context

Use the consumer rights to help frame your policy aims.

6. Prepare a robust case

Do background research, get hard data – don't campaign on a hunch

7. Make sure the national standards body recognises that consumers are major stakeholders

Request a seat on the Board; seek a role at policy-making level.

8. Avoid empty commitment

Make sure the host organisation will permit your voice to be heard.

9. Submit comments in writing

Written comments cannot be ignored or forgotten.

10. Be there!

Standards have a huge impact on consumers. Who better to write them than you?

Sources of further information

The consumer and standards – Guidance and principles for consumer participation in standards development

www.iso.org/iso/en/prodsservices/otherpubs/pdf/standardsandconsumer.pdf **UN**

Guidelines on Consumer Protection

www.un.org/esa/sustdev/sdissues/consumption/cpp1225.htm

Consumers International position papers

CI has a number of its position papers that identify the consumer interest in specific standards projects it is engaged on. These can be accessed at:

www.consumersinternational.org

ANEC Position papers

ANEC, the European consumer voice in standardisation, maintains a website where it presents its position papers and other documents that help identify the consumer interest on specific issues. www.anec.org

Appendix

National case studies

Organisation Name	Case Study Topic
Association des Consommateurs du Mali (ASCOMA), Mali	Voluntary standards and the importance of consumer support
Consumidores Argentinos, Argentina	Standard setting processes: Domestic electrical Appliances
Consumidores y Usuarios Asociados (CUA), Uruguay	Pesticide Standards Case Study
Edward Groth, United States	The Administrative Procedures Act in the United States
Sdružení českých spotřebitelů/Czech Consumer Association, Czech Republic	National decision-making processes and interests in the sector of foods
Voluntary Organisation in Interest of Consumer Education (VOICE), India	Standard setting for bottled water in India
Yayasan Lembaga Konsumen Indonesia (YLKI), Indonesia	Standard setting for processes in Food
Zambia Consumers Association (ZACA), Zambia	Decision making process, Zambia Bureau of Standards

Climate

a) Neither Black nor White: Mangrove Conservation with Chinese Characteristics

Liu Yi (China Mangrove Conservation Network)

Fenglinwan, a bay near Xiamen City, Fujian Province, used to be home to the largest area of mangroves in the region. However, beginning in the 1960s, a large campaign to reclaim land from the sea almost erased all the mangroves. Following the reclamation in the bay, just a few mangroves remained in the village of Dongan. In the late 1980s, a farmer in neighbouring Jimei village noticed that there were many crabs in the areas where mangroves still grew, and he correctly surmised that there was a healthy relationship between the mangroves and the crabs. At that time, crab was a local delicacy with market prices ranging from 15 to 20 Yuan per kilogram. The villager decided to grow mangroves in another part of Fenglinwan and between 1989 and 1996, he successfully planted 50 mu (1 mu = .1647 acres) of mangroves, with seedlings collected from the original mangroves that remained in Dongan Village. With his gradually improving planting skills, the area of mangroves grew quickly, together with his income. As mangroves became his source of income, he started to patrol the mangroves regularly to prevent others from damaging them. When other villagers saw the profitability of the mangroves, they joined him in cultivating and protecting this unique coastal ecosystem. Today there are about twenty families from Jimei Village who are in the mangrove-crab business, with the total mangrove area reaching nearly 120 mu. A 1992 national policy granted families exclusive user rights of the mangroves, giving them full access to the profits from crabs and other aquatic products.

Seeking Solutions for Disappearing Mangroves

Southwest China could be dubbed the mangrove hotspot of northeast Asia, with 22,300 hectares of mangroves along the coasts of Hainan, Guangdong, Guangxi, Fujian, Zhejiang, Hong Kong, and Macao. China's mangroves are home to 2,305 identified species of animals and plants, including 43 percent of total mangrove species in the world. One-third of China's mangrove species are on the International Union for Conservation of Nature's red list and mangrove areas have shrunk by 55 percent over the last 50 years. Three major historical events have led to the destruction of the mangroves in China: (1) land reclamation projects in the 1960s; (2) reclamation of tidal flats and deforestation for aquaculture in the 1970s and 80s; and (3) urbanization from the 1990s to the present.

The Chinese government and a handful of local nongovernmental groups are beginning to take action to protect and expand mangrove habitats. Mangroves, which

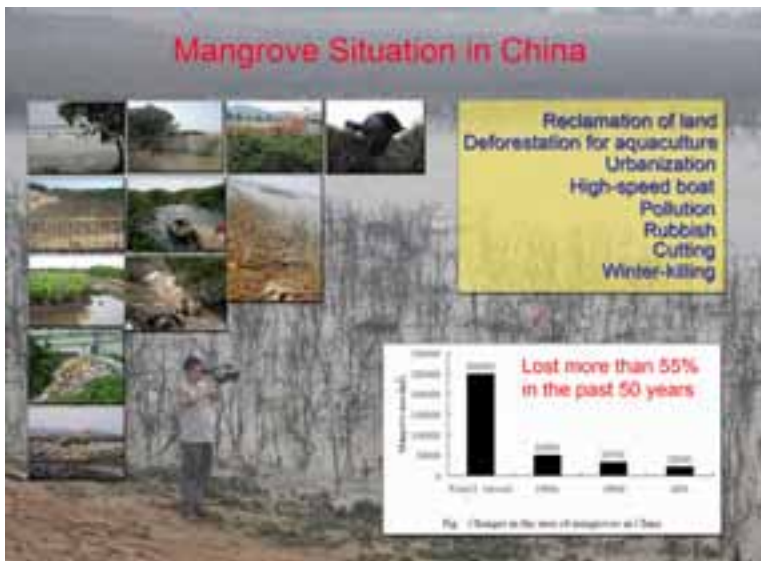


Fig. 4 The mangrove situations in China



Fig. 5 China Mangrove Conservation Network

are trees and scrubs that thrive in salty waters, protect shorelines from wind and sea surges, purify water and serve as vital habitat for birds and seafood.

The China Mangrove Conservation Network (CMCN) – a former student environmental group that has become a professional conservation organization—believes success of any mangrove protection effort hinges on whether it addresses the core needs of all stakeholders depending on this unique coastal ecosystem.

For seven years CMCN has been conducting campaigns that have been promoting research, encouraging mangrove rehabilitation and providing public education, community development and training to restore and sustainably use mangroves. CMCN runs 20 ongoing projects on four key topics: (1) sustainable development education, (2) capacity building for communities, (3) mangrove rehabilitation research, and (4) ecological recovery. The various programs have involved dozens of nongovernmental groups and replanted more than 200,000 mangroves (See Box 1).



Fig. 6 The project introduction of CMCN

Expanding the Role of Public Participation in Research and Conservation

Scientific research is an effective tool for finding the root causes of environmental problems and their solutions. Research can help communities restore mangroves by increasing the survival rate of planted trees, improving biodiversity, and managing mangroves sustainably. Central in the research is to create an understanding of how people and the mangroves can become a balanced ecological community. Such information can greatly enhance the conservation work of nongovernmental organizations (NGOs) like CMCN.

CMCN has taken advantage of its connection with universities and research institutions to become a professional NGO that carries out effective campaigns and pos-

sesses a strong research capacity. A major challenge to this kind of work within NGOs is the public perception (including many of our volunteers) that research is a job for experts. In a role that is perhaps unique among Chinese NGOs, CMCN promotes the concept of “scientific research for all” by designing research projects in which the general public can participate, enabling them to fulfill their own scientific interests in the process.

Over the past seven years, CMCN research and project activities have reached almost all the regions in mainland China where mangroves grow. We have studied the ecology of mangroves including the flora and fauna in mangrove ecosystems, the pests, the water quality, and the soil. We also study the techniques of mangrove planting and nursery. Some of our long-term research projects include: the biodiversity and seasonal change of mollusks in 13 typical mangrove forests in China, the observation of bird communities in mangroves, and the monitoring of mangrove rehabilitation efforts. From May 2003 to April 2004, CMCN organized hundreds of volunteers to assist in a yearlong observation of rehabilitation activities on the Dayu Island of Xiamen. The results provided useful information to the efforts of mangrove recovery, the selection of different types of mangroves, and promising techniques for transplanting and seedling care for mangroves.

The results of the Dayu Island study revealed that the survival rate of transplanted mature mangroves is low (20 percent). Transplanting also costs more than ten times that of planting young seedlings. This study directly confronts the practice of many urban development projects in China that try to transplant mature mangroves. The study did caution, however, that while young seedlings have relatively higher survival rates, their death rates increase significantly in the winter if not properly maintained. Besides the insights this study provided to urban planners, this project also demonstrated that the general public can participate in meaningful scientific research work.

Effective Education Projects That Emphasize Actual Needs

Public awareness of the vital ecological function played by mangroves and the need for conservation is still very low in China. Sustainable development education is a direct and effective way to raise the awareness of stakeholders who could be involved in the protection of mangroves.

Meeting Actual Needs

CMCN’s educational projects always follow the principle of meeting the actual needs of the various stakeholders. For example, past experiences show that the environmental education models adopted in urban areas are not suitable for many rural communities, especially remote mountainous regions, such as Baise in Guangxi Province where there is not even access to electricity. For such groups there is little point in education about ozone depletion or plastic bag pollution when they are completely disconnected from the consumer market.

In 2004, when CMCN was doing education work on mangrove conservation in Hainan Province, the local elementary schools informed us that they were willing to compile educational materials for their students, but they lacked the expertise and resources. As we had realized through our longtime environmental education experience, people in different regions and age groups have very different needs in terms of the type and content of environmental education. For example, children between the ages 6 and 9 do not like the conventional textbook approach, but prefer fairy-tale style textbooks and participatory experiences.



Fig. 7 The cover and illustration from "Son of the Sea"

Therefore, CMCN produced a mangrove conservation textbook especially designed for young children called "Son of the Sea." (See Figure 8). The 12 chapters in this fairy tale book each cover a separate theme and are filled with colorful illustrations, games, experiments and questions that facilitate learning through "playing." We have produced and provided the schools at no cost 5,000 copies of the textbook and 200 copies of the teacher's manual. CMCN also has trained teachers and volunteers to guarantee the frequency and quality of the weekly course.

Sustaining Effect

Conventional environmental education is often just outreach in public places using educational boards and leaflets, or ad hoc lectures and teach-ins that have no sustainable effect. Such approaches usually only raise people's curiosity instead of spreading a green message they can actively sustain.

To make environmental education more sustainable and effective, CMCN has tried many approaches including: establishing mangrove education centers and foundations, initiating online educational platforms, training volunteer eco-tour guides, and producing educational textbooks.

Drawing on five years of experimentation with education work, in 2006, CMCN repackaged its various environmental educational initiatives under a broader initiative—the Sustainable Mangrove Developmental Education Project (SMDEP). SMDEP not only includes environmental education, but also covers relevant social and economic issues. One of the main features is empowering participating stakeholders to spread the green message during activities.

In terms of environmental education, SMDEP targets all stakeholders. Besides conducting yearlong activities in 20 trial schools and 5 demonstration schools, which included training 100 teachers and volunteers, CNCM designed different education approaches for different target groups so that the “sustaining effect” principle will be followed. For example, in elementary schools time slots are generally divided into “class time,” “between-class time,” and “after-class time.” CMCN’s environmental education solution fully covers the three time slots. In class, CMCN trained teachers and volunteers to teach the environmental textbook once a week at trial schools. Between class time slots, CMCN promotes environmental activities such as plant adoption, environmental poster design, environmental broadcasting and photography through small grants and education centers. After class, CMCN helps the students conduct research-based studies that are relevant to conservation. The yearlong project has demonstrated that this approach achieves the goal of being sustainable and effective.

Lasting Results

Of one thousand students that used the “Son of the Sea” textbook, the majority of students, teachers and schools gave very positive feedback on the trial. At the end of 2006, CMCN’s Sustainable Mangrove Developmental Education Project was granted the “Asia Good Practice ESD Practice Project Award” by the United Nations Ten Year Sustainable Education Program. The yearlong environmental education trials in the 20+ schools generated a large amount of writings and drawings from participating students, which generated news media reports and attention from government departments, research institutes and other NGOs.



Fig. 8 The method of mangrove SDE in schools

Community Development: A “Win-Win-Win” Solution

Community development is the most direct way to solve the mangrove issue and achieve a winning solution for the economy, society and environment. Almost all environmental problems are combinations of larger problems of the community, which usually can be summarized as economic development at the expense of the environment, or developing in an environmentally unsustainable way. In order to solve these problems, we must start with community development to promote sustainable, alternative development models.

Living by the Mountain: Intensive Aquaculture versus Mangroves

One Chinese proverb states that “if you live by the mountain, you rely on the mountain to live.” Before the 1960s, Chinese fishers living around the mangroves survived on wild catches, which put relatively limited pressures on the mangroves. However, as the population grew and development became more resource intensive, exploitation of mangroves also intensified in China. Many unsustainable development models, such as clear-cutting mangroves for aquaculture, started to appear. Intensive aquaculture not only destroys the foundation of the original wetland and the mangroves, the highly-concentrated wastewater it generates is often discharged directly into the mangrove areas nearby, seriously polluting the water.

As the soil that mangroves live on is often acidic, and therefore unsuitable for aquaculture, many aquaculture farms witness continuously declining output every year. In many places in China and Southeast Asia, aquaculture farms are abandoned in just a few years. Farmers would then fell more mangroves to start new aquaculture farms. Between growing seasons, the fishermen often dig out the soil of the wetland and “sterilize” it by basking it in the sun and mixing it with lime and pesticides. This practice aims to protect aquaculture from diseases and pests and extend the life of the fish farm by raising the pH of the water, but such “cleaning” processes severely degrade the soil and affect surrounding ecosystems.

Intensive aquaculture in mangroves itself is highly risky: In years without natural disasters, the farmers might gain tens of thousands of dollars, but when faced with disease outbreaks or hurricanes, their losses can also reach tens of thousands. Farmers thus aim to maximize profits quickly and serve their immediate interests, for “If I cannot feed myself, how do I care for the environment?” Therefore, simple environmental education and outreach will not work in fishing communities. The real solution in such a situation is to give them what they need—more money—while at the same time protecting the mangroves for their own interests.

Searching for Solutions

CMCN has realized the importance of community development since 2003. Over the past few years CMCN staff and volunteers have started a nationwide search for cases of sustainable community development, evaluated them, and promoted the most

promising ones. We have found several such cases including the Jimei Fenglinwan Mangrove case that opened this article and the Guangxi Duck Egg case. (See Box 2). Currently, CMCN is trying to promote the Guangxi Duck Egg model in other places. We also operated a “Beautiful Backyard Action” in Longhai, Fujian Province, following the model of community development. There are many mangroves in Nan branch river of Jiulongjiang River in Longhai in 1980s. But because of the High-speed boats and economic development, almost all of the mangroves were disappeared.



Fig. 9 The method of community development in mangrove area

So we operated the “Beautiful Backyard Action” with three steps in 3–5 years to promote the local community development. First of all, reforest the mangroves; Second, increase the public awareness on mangroves conservation and public participation; Third, develop with the Sea-duck Egg project or other sustainable community development projects here. Our model of community development uses the economic interests of local fishermen as a starting point.

Ecological Recovery: Afforestation, Monitoring and Maintenance

The problems facing mangroves are not simply low public awareness. A bigger problem is that there are increasingly fewer suitable locations for mangroves to flourish.

If relying on natural recovery, mangroves in China could not recover to their 1950 level in 200 years. Therefore, afforestation efforts based on science are imperative.

The Chinese government has recognized the crisis and has started taking action. The State Forestry Administration promulgated the National Wetland Protection Action Plan and the National Wetland Protection Blueprint in 2000 and 2004. Besides conserving the existing 22,300 hectares of mangroves, it also plans to increase them by 65,900 hectares through rehabilitation before 2030. Since the end of the 1990s, some large mangrove reserves, such as the Zhanjiang National Mangrove Nature Reserve and Hainan Dongzhaigang National Mangrove Nature Reserve, have taken on large-scale rehabilitation actions. Some municipal governments have also prioritized the protection of mangroves under their jurisdiction. For example, in 2007, the Xiamen government set aside 100 million Yuan to recover 2,000 *mu* of mangroves. Scientific research plays a key role in the survival rate and biodiversity of mangroves as it determines the selection and combination of varieties, the adoption of proper techniques and the maintenance after.

For the past 7 years, CMCN has been promoting public efforts of mangrove rehabilitation through research, compiling scientific literature reviews and expert interviews. The resources were then freely provided to our partner institutions with some funding and training. We also assisted different groups in obtaining seedlings and organizing volunteers to participate in tree planting. So far, CMCN and its partners



have planted 200,000 mangroves in 5 southeastern provinces, with a survival rate higher than 90 percent.

Tree planting is just the first step of rehabilitation: Monitoring and care afterwards is crucial to survival, which is why CMCN has initiated long-term monitoring and care on Dayu Island and Jimei.

The Future of CMCN and China's Mangroves

After decades of exploitation, it is now time that the mangroves be protected and restored. Fortunately, China has established 23 Mangrove Nature Reserves (including 6 national-level reserves), which cover about 75 percent of China's mangroves. Relevant government departments have begun to pay more attention to the issue, and social groups are starting to exert more influence.

The future work of CMCN will be challenging, but we plan to continue campaigns that raise public awareness of mangrove conservation and conduct projects that both protect and rehabilitate mangrove ecosystems while simultaneously promoting community development. We hope to strengthen our network by constructing an interactive online network of non-governmental mangrove protection groups. Together with these groups we will conduct more basic research on mangroves that will help inform the development of regulations to promote mangrove conservation and push to establish a national mangrove destruction alert system. CMCN will also be seeking partners to explore the relationship between mangroves and climate change.

BOX 1: History of China Mangrove Conservation Network

China Mangrove Conservation Network (CMCN) was originally a mangrove program under Green Wild, a student organization established in 2000 at Xiamen University. In 2001, Green Wild established a mangrove team to protect mangroves in Xiamen and nearby areas. In 2003, this team was renamed the Mangrove Program, and expanded the protection area to all of Fujian Province. In 2005, the program reoriented itself, and was renamed again as China Mangrove Conservation Network, in order to construct a cooperation mechanism among mangrove protection forces within the country.

CMCN has nearly 40 cooperative nongovernmental organizations (including NGOs, communities, schools, nature reserves, and research institutions), 3,000 volunteers, and 150,000 network members. During the last 7 years, CMCN and its cooperative organizations has hosted thousands of activities, planted 200,000 mangrove seedlings, launched nearly 300 sustainable development education sessions, established 20 demonstrative education schools for sustainable development of mangroves, and printed a series of educational materials.

CMCN has received wide recognition for its work and won two Ford Conservation & Environment Grants in 2004 and 2006, as well as an award from the Whitley Fund for Nature from Britain in 2008.

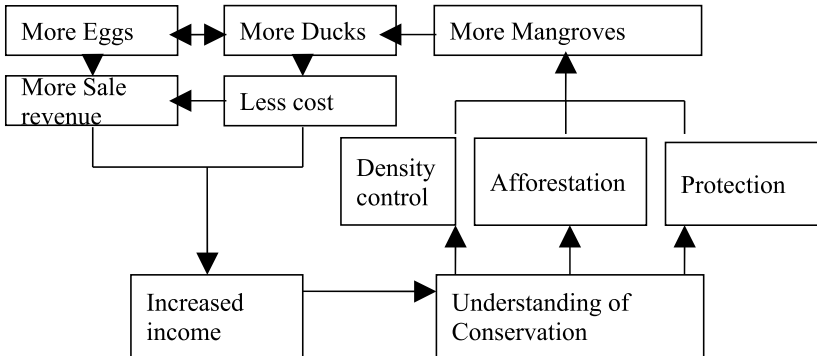
BOX 2: Duck Egg Model

Guangxi Duck Egg Case: “Red-heart Egg” Prompts Mangrove Conservation

Red-heart salty egg is a famous local delicacy of Fangchenggang in Guangxi Province and mangroves play a crucial role in the production of these eggs.

The local fishermen put ducks in the mangrove area. As the mangrove ecosystem provides the ducks with a rich supply of small fish, shrimps and seashells, the fishermen do not even need to buy feed, which significantly reduces costs. In addition, the mangroves have a water cleansing function, which makes the ducks and their eggs Organic Foods with very good taste and nutritional content. Even though the eggs are three times more expensive than regular eggs, the sales are guaranteed.

In Fangchenggang, local fishermen understand that the mangroves have their own carrying capacity, which should not be over exploited. Only a suitable number of ducks can ensure the quality of their eggs. In order to profit more from the eggs, the fishermen both protect the mangroves and have made efforts to expand the size of local mangroves.



b) Chinese Youth Respond to Global Warming with Local Action

Huo Weiya, China Dialogue

Chinese youth, mostly college students, began to take action in addressing climate change beginning around 2007. The subject of climate change has attracted most of the resources of the Chinese youth environmental movement, and marks the first large-scale involvement of Chinese youth in a single environmental issue.

This article will first cover the previous two years of youth involvement in climate change action inside of China, and then provide a focused analysis of why Chinese youth were able to respond to this issue so quickly. The author feels that, in the context of the general development of China's environmental movement, Chinese youth have made great progress since the 1990s. The accumulated talent and resources are the most important elements enabling China's youth to provide such a rapid response to the issue of climate change.

Background

China signed the Kyoto protocol in May 1998 and ratified it in August 2002. While this did not attract much attention from the Chinese citizenry, on June 4, 2007 the Chinese government announced its "National Climate Change Program", which caused public attention to the issue of climate change to grow rapidly. As a developing country, China has no responsibility to reduce emissions during the Kyoto Protocol's first commitment period from 2008 to 2012. Instead, China is obligated to strengthen its capacity-building and public awareness towards climate change, the details of which are laid out in the National Climate Change Program.

The active approach of the government, as well as the performance of some environmental NGOs such as the World Wildlife Fund (WWF) and the Heinrich Böll Foundation, worked in concert to create a high degree of concern towards climate change. In fact, 2007 became known as the "Year of Climate Change", which is quite fitting, for it was in this year that Chinese youth came into contact with and became thoroughly involved in the issue of climate change.

Local Action

On June 4, 2007, the Chinese government issued its "National Climate Change Program", and social concern for climate change began to grow quickly. It was under the context of these developments that the fourth national China Environment Forum (CEF, www.cef.ngo.cn) was organized and held by Chinese college students. The CEF was founded by university students in 2003 with the goal of saving energy and reducing emissions to combat global warming, as well as exploring the duties of young people in responding to climate change. This marked the first time that Chinese youth discussed climate change on a national scale. The forum served not

only to widen participation of Chinese youth in the climate change movement, but also gave birth to the China Youth Climate Action Network (CYCAN, www.cycan.org) in August 2007.

Following this, climate change was the central focus of both the fifth CEF in 2008 and the youth symposium of the annual forum on NGOs and sustainable development held in November of the same year. These three national forums greatly raised the degree of attention paid by Chinese youth towards climate change, and made it the hot topic of the youth environmental movement.

Established in 2007, the China Youth Climate Action Network is currently carrying out surveys of youth awareness of climate change, green campus activities and other climate change projects.

The first phase of the Green Campus Project, lasting over two months from March to May of 2008, selected 23 pilot college and university campuses nationwide for college students to carry out surveys on climate change awareness and research campus energy consumption (like Anhui Agricultural University, Nanjing University of Information Science and Technology in Jiangsu, East China Normal University in Shanghai, Shandong University Building in Shandong, Northeast Normal University



in Jilin, Northeast Forestry University in Heilongjiang, China Youth College for Political Science – Beijing, Xi'an University of Technology – Shaanxi, Northwestern Polytechnical University -Shaanxi, Southwest University for Nationalities-Sichuan, Chongqing University, Yunnan University, Guangxi University for Nationalities).

In recognition of the special characteristics of energy consumption on China's campuses in order to make the research easier, CYCAN offered funds, technology, and experience to support the student environmental organizations collecting data at the pilot campuses. After completing data collection, Peking University's CDM club (dedicated to climate change, in particular the CDM student research group), used a scientific filter to select and use the survey data for 13 campuses as its base, and used it to compose the "Green Campus Project Phase One Report". The report argues that, firstly, from the perspective of environmental management, campuses should improve their electrical systems, go from a uniform electricity pricing system to a differential pricing system, and pay a higher price for electricity once they've passed a certain quantity. Secondly, regarding electrical facilities, the campuses ought to reduce their high electricity consumption rates, raise efficiency, and improve their inefficient electrical equipment. Thirdly, regarding the power structure, the campuses should move away from solely coal-fired electricity and try using renewable energy sources such as solar power.

Phase two of the Green Campus Project began in September 2008. With 29 new pilot campuses, CYCAN would create a database by using continuous data observation to track the condition of energy consumption on China's campuses. They hoped to change the status quo of China's colleges and universities indifference towards climate change, induce campuses to strengthen their energy resource management, conserve energy, use sustainable energy and other measures to address climate change.

In addition to CYCAN's national network, Chinese youth have also used other means to participate in discussions and actions on the issue of climate change.

In 2007, the Green Camel Bell and the Green Field oil and environmental networks and three other youth environmental organizations participated in compiling China's first civil society report on climate change, "A Warming China: Thoughts and Actions for the Chinese Civil Society". The report was issued in December of 2007, and announced five positions for Chinese civil society on addressing climate change.

In 2008, 12 schools from across the environmental community received funding from the WWF to "strengthen the protection of wetland ecosystems and actively respond to global climate change" by carrying out survey research on the relationship between climate change and wetlands in different parts of the country.

Since 2004, Greenpeace's Solar Generation China project has organized Chinese youth to get involved with climate change issues. It has organized a series of

exchange activities, increased youth awareness of climate change, and sent youth volunteers to participate in the 2006 United Nations Climate Change Conference held in Nairobi.

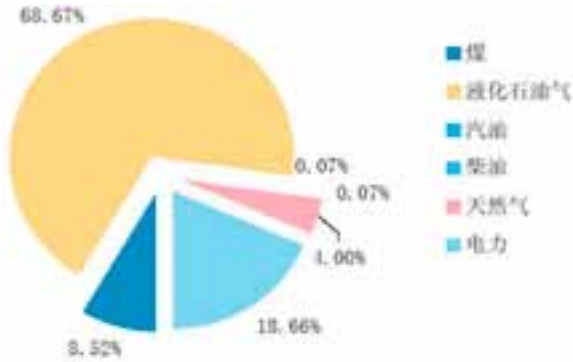


Fig. 5-1

Different contributions of fossil energy for greenhouse gas emission sources of school in 2006

- Coal
- LPG (Liquefied Petroleum Gas)
- Petrol
- Diesel
- Gas
- Electricity

图5-1 2006年全校温室气体排放量不同化石能源贡献度



北京交通大学清洁能源研究中心(CDM Club, 6E Plus)

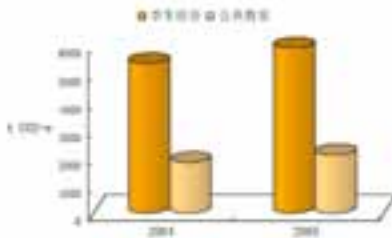


图 2004年与2005年学生宿舍和公共教室耗电排放二氧化碳量

CDM Club Peking University

CO2 emission from electricity consumption in students' dormitory and classroom in 2004 and 2005

- (dark colour) Student dormitory
- (bright colour) Classrooms

Some youth environmental groups also independently engage in climate change activities within their campuses.

Peking University's Clean Development Mechanism Research Seminar (CDM Club, 6E plus) was established in October of 2006. That year, a group of Peking University students participated in the school's first BELL Green Showcase Course (the course was introduced in 2000 by the Publicity and Education Center of China's Ministry of Environmental Protection), a research course on the Clean Development Mechanism, organized by the CDM. After the end of the course, the CDM group was interested in continuing research on the CDM process and in October 2006 established the Peking University Clean Development Mechanism Research Club, located in a high-

end research-based academic community, with the primary purpose of carrying out further research on the clean development mechanism. They began work in 2007 and after six months of effort the Peking University inventory of greenhouse gas emissions (here only carbon dioxide emissions) was completed (see chart below).

In 2007 the China University of Mining and Technology's Luyuan Roots and Shoots environmental group created the first energy consumption map for China's universities, with differences in energy consumption labeled in different colors (see below).



Green Olympics – Energy Efficiency in Schools

Motive

Chinese youth, and college students in particular, have within two years utilized their learning of climate change issues and actions to mobilize the interest and attention of many people, and the resulting effects have had myriad causes.

The first element is that climate change issues of general concern have entered the public eye and influenced public opinion. This effect is part and parcel of the Chinese government's active efforts in 2007 towards the problem of climate change. Though China is regarded as a developing country, in 2007 it took the lead in issuing the first "National Action Plan on Climate Change", which mapped out how China would deal with climate change over the next few years. In the business world, investments in new energy, venture capital investments in the environmental protection sector, CDM projects and other developments continued unabated. All of this public opinion created a good atmosphere for attracting Chinese youth to get involved in climate change issues.

The second element is the promotion of environmental protection NGOs. In recent years, despite a legal and institutional environment not exactly suitable for the development of environmental NGOs, the reality is that their number, scale and

capabilities have all taken a small step forward. International and local environmental NGOs formed an action network to take concerted steps, not only organizing several learning activities but also declaring the position of Chinese civil society on the problem of climate change. These activities involved the participation of and had a relatively large impact on young people. More importantly, Chinese youth and their related organizations are an indispensable part of China's environmental protection NGOs, and the effectiveness and impact of their cooperation can promote China's progress on climate change.

The third element is the foundation that the Chinese youth environmental movement has established over the last decade plus. Since 1996, Chinese youth have played an increasingly active role in the development of China's environmental protection movement. Besides joining in the activities of more established organizations, self-organized projects have seen their influence gradually spread and have inspired increasing numbers of young people to get involved. The university students' "Green Camp" movement has been extensively studied as a model throughout China since 1996; many students have self-organized Green Camps and invited outside youth to join in. Furthermore, national youth environmental protection forums have been held annually, providing a human-resource and networking infrastructure to Chinese youth that wish to tackle the problems of climate change. The development of the Chinese youth environmental protection movement over the past 10 plus years has been essential to the capabilities of Chinese youth in 2007 to rapidly organize networks and initiate nationwide projects.

Finally, despite the effects of the financial crisis, climate change is still a frequent topic of international discussion and one in which youth are playing an increasingly active role. To a certain degree, this is stimulating Chinese youth and attracting them to go abroad to participate in international exchange activities and maintain cooperation with the international community; the international outlook of China's youth is gradually increasing.

This is how China's youth, mainly college students, have been able to within a short period of two years become familiar with the issues of climate change and generate strong participatory interest; these dynamics will continue to promote Chinese youth action on climate change issues.

c) Who will Pay for Climate Change Mitigation Products/Services in Southwestern China Nature-Based Destinations?

Yan Jiong, Adriano Profeta, Jan Barkmann, Rainer Marggraf

Introduction

The purpose of the study is to get a better understanding of China domestic consumers' segmentations based on their preferences for sustainable tourism services that include local climate change mitigations measures. Consumer segmentations will also be helpful for identifying the potential groups which will likely to purchase climate change mitigation products/services in Southwestern China nature-based destinations. In spite of the tremendous environmental medium and long-term effects of a booming tourism industry in China, tourism research has largely ignored demand side factors. With an emphasis on the climate change implications, our contribution is a first step to close this gap.

In this study, we organized a survey with 616 Chinese citizens. The investigation was conducted in two national tourist source areas: Chengdu (~10 million citizens) and Beijing (~14.8 million citizens). The provincial capital city of Chengdu (Sichuan Province), one of the biggest urban agglomerations in southwest China, represents a local tourist source area. Beijing represents tourists from East Coast agglomerations.

Results

Respondent basic information: 49.8% of respondents were from Chengdu and 50.2% from Beijing. A gender ratio of 53:47 (male: female) was achieved. The respondent mean age was 39.9 years; mean monthly income 3,537 RMB (~354 €). Average annual travel expenditures were ~3,500 RMB (~350 €). Half of respondents held a formal educational qualification equivalent to a bachelor degree or above. Around 90% of respondents regard themselves as "middle-class" or "upper-class".

Factor analysis singled out the following three attitudes toward sustainable tourism dimensions: *Conservative sustainable development*, *concern for socio-ecological development* and *sceptical attitude* (see Table 1). On average, respondents state high agreement with the two 'positive' attitudes (dimension mean raw score: 4.2 and 3.9). For the negative *sceptical attitude* dimension, the average dimension mean raw score was 3.0.

Table 1 Attitudinal dimensions and items

Attitude towards sustainable tourism dimension	Item	Factor loading	Cronbach's Alpha	Mean (raw score) ± SD
Conservative sustainable development (positive)	I would be very sad if local cultures in southwest China would lose some of their originality because of tourism development.	0.695	0.688	4.2±0.46
	If I know for sure that the facilities in a tourist site benefit the local environment, I would pay more for such facilities.	0.651		
	My friends and family expected me to feel responsible for maintain the attraction of the site.	0.645		
	Local government should make sure that growth of tourism in southwest China does not damage natural and cultural heritages.	0.606		
	Having garbage cans is important to protect the beauty of the natural and cultural attractions in southwest China.	0.476		
Concern for socio-ecological development (positive)	Making sure the members of local community can run tourism related businesses is essential for harmonious tourism development in southwest China.	0.72	0.511	3.9±0.55
	Without a scientific conservation program in place, many natural destinations in southwest China are in danger of losing their natural attractions.	0.562		
	It would be a shame if the local people in southwest China would not benefit the most from tourism development in that region.	0.458		
	I am really afraid of losing the future opportunity for travel enjoyment in southwest China if the tourism development is not done in a sustainable manner.	0.415		
	In my opinion, extra charge for tourism services such as green buses is just an excuse to charge more (rip off tourist).	0.69		
Sceptical attitude (negative)	It would be a big financial burden for me to pay more for tourism.	0.637	0.441	3.0±0.62
	In many scenic and historical/cultural sites, restrictions of entering certain area and stepping on/touching objects are a nuisance for me.	0.598		
	Putting a lot of members of local communities in charge of tourism businesses can have had impact on service quality and trip experience.	0.461		

Five tourist segmentations/groups:

The analysis identified five tourists segmentations/groups which demonstrate different economic preferences.

- **Group 1** the *realistic sustainable tourism consumers*. It is the youngest group (37.67) with the highest monthly income (3 696RMB), travel expenses (3 778.83RMB), and education level (1.65), as well as the 'most male' proportion (0.55). This *realistic sustainable tourism consumers* is the group which has the highest monthly income and willing to pay most for sustainable tourism products/services.
- **Group 2** is the *nature appreciation consumers* which comprises 24% of respondents. The members of this group dislike *sustainable tourism services*, showing a negative marginal willingness-to-pay of -1 174RMB (~117 €). Group 2 respondents also dislike *tarnished nature experiences*. The *cost* attribute plays a minor role for these respondents. Compared to the other groups, the *nature*

appreciation consumers group is very much in favour of untarnished nature experience and natural attractions.

- **Group 2** belongs to the younger segments (38.9). Its members have annual travel expenses of over 3 500 RMB. Of all five groups, this group has the highest self-perceived social status (2.82), the lowest *sceptical attitude* (7.06), and the lowest proportion of Beijing citizens (0.42).
- **Group 3** is the *cost sensitive sustainable tourism consumers*, consisting of 13% of the sample. This group prefers lower travel *convenience* levels when traveling. Like groups 1 and 2, group 3 is highly interested in *natural* and *cultural* attractions. In addition, group 3 shows the highest preference for *sustainable tourism services*. However, the members of this group prefer more crowded to more lonely destinations as expressed by the *tarnished nature experience* attribute. Similar to group 5, this segment is strongly affected by high prices (*cost* attribute). Due to the high sensitivity to *cost*, the marginal willingness-to-pay for *sustainable tourism services* is lower 464RMB (~46 €) than for group 1.
- **Group 3** has the lowest monthly income (2 939RMB) and travel expense values (2 720RMB), lowest education level (1.47), and self-perceived social status (2.61). Furthermore, it is the most sceptical segment (7.57). With the lowest income, highest sensitivity to trip cost and the second highest positive willingness-to-pay for sustainable tourism services, this group can be described as *cost sensitive sustainable tourism consumers*.
- **Group 4** (13% of the sample) is a *convenience and cultural attractions appreciation consumers* group. It has the second highest preferences for travel *convenience* and *cultural attractions*. This group also prefers less *tarnished nature experience*, *less developed sustainable tourism services*, and has no interest in *natural attractions* at all. This group has a strongly negative marginal willingness-to-pay of -1 577 (~158 €) for *sustainable tourism services*.
- **Group 4** is the second eldest segment (44.8) with the second highest travel expenditures. It also ranks second in self-perceived social status. This segment exhibits the highest agreement with the *conservative sustainable development* dimension (13.11), and with *concern for social-ecology development* (8.73).
- **Group 5** is *convenience and cost sensitive consumers*. Even more pronounced than group 4, group 5 shows high preferences for travel *convenience*. This group reveals the highest sensitivity to trip *cost*. The respondents shows the highest disapproval of *sustainable tourism services* resulting in the highest monetary rejection of -1 749RMB (~175 €). This group also rejects *tarnished nature experiences*, but has no interest in *natural attractions*.
Group 5 is the eldest segment (50.9), and has the highest proportion of Beijing citizens (0.59). The group has the second lowest annual travel expenditures (3 004RMB) and education level (1.52).

Discussion and Conclusions

Concerns about climate change aspects are mainly incorporated in the sustainable tourism service attribute in our study. Increased usage of "green bus" and bio energy could reduce greenhouse gas emissions and lead to higher energy efficiency. Thus, the sustainable tourism service attribute is directly related to several climate change aspects.

Two segments, the *realistic sustainable tourism consumers* (group 1) and the *cost sensitive sustainable tourism consumers* (group 3), demonstrate positive willingness-to-pay for *sustainable tourism services* (~129 € and ~46 €). These two segments comprise 56% of respondents. Confirming the initially negative results from the non-segmented model, respondents from the other three segments (group 2, 4 and 5: 44%) reject *sustainable tourism services* rather strongly. However, these respondents do highly appreciate *natural and cultural attractions*, or at least prefer less *tarnished nature experiences*.

The profile of the *realistic sustainable tourism consumers* differs markedly from a 'small environmental footprint' segment in a recent Australian segmentation study (Dolnicar & Leisch, 2008). The members of the Australian segment were on average the oldest group, and consisted of a majority of women (60%). This group also had a lower than average income. Echoing the socio-demographic profile of Beijing ecotourists described by Li & Cai (2004), our *realistic sustainable tourism consumers*, however, tend to be better educated, have a higher income, and are more predominantly male. Similar to the Dualist and Libertarian segments in Blamey & Braithwaite (1997), the *nature appreciation, convenience and cultural attractions appreciation*, and the *convenience and cost sensitive consumers* (groups 2, 4 and 5) also have relatively higher income and older respondents.

Nature-based destinations in southwest China include three generalized types of destinations: publicly operated nature reserves and national parks, and "ownership transferred" scenic destinations (Cheng & Wang, in print; Ma et al., 2009; Nianyong & Zhuge, 2001). Currently, these destinations have not developed specific supply profiles. Competing aggressively for market share, they are indiscriminately targeting all tourist groups. For nature reserves and national parks, this tends to exacerbate conflicts between the conservation objectives and the economic objectives of their operators (Cheng & Wang, in print; Ma et al., 2009; Nianyong & Zhuge, 2001).

Our findings suggest that scenic and biological resources can be more wisely managed, and investments more wisely allocated than currently done. Although 56% of the sampled middle-class respondents prefer additional *sustainable tourism services*, there is lack of supply to cater to their demand. The current development of sustainable tourism/ecotourism in southwest China is characterized by small scale efforts, and suffers from a poor image and low economic benefits (Cheng & Wang, in print). Nature reserves and national parks as well as other naturally or culturally sensitive destinations should primarily focus on the young, well-

educated middle-class with a higher income. This group will most likely respond positive to improved *sustainable tourism services*, and generate tourism revenue without unnecessary sacrifice of scenic and biological resources.

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References

- Blamey, R. K. & Braithwaite, V. A. (1997). A social values segmentation of the potential ecotourism market. *Journal of Sustainable Tourism*, 5(1), 29–45.
- Cheng, L. & Wang, T. Z. (in print). Analysis on the future policy tendency of ecotourism management based on the appropriation of benefit in western China. *Society and Natural Resources*.
- Dolnicar, S. & Leisch, F. (2008). Selective marketing for environmentally sustainable tourism. *Tourism Management*, 29 (4), 672–680.
- Li, Y. & Cai, Y (2004). A study on ecotourists' behavioural characteristics in Beijing: a case study in Baihuashan nature reserve. *Geographical Research*, 23(6), 863–874. (in Chinese).
- Ma, X. L., Ryan, C. & Bao, J. G. (2009). Chinese national parks: differences, resource use and tourism product portfolios. *Tourism Management*, 30, 21–30.
- Nianyong, H. & Zhuge, R. (2001). Ecotourism in China's nature reserves: opportunities and challenges. *Journal of Sustainable Tourism*, 9(3), 228–242.

d) Amity's Efforts on Climate Change and Energy Issues

Xu Qingke (Amity Foundation)

Amity has paid attention to environmental protection work for about thirty years. We combat land degradation through our desertification prevention program in Ningxia and Inner Mongolia Autonomous Region, and we conserve natural grassland through grass planting and grassland enclosure projects. Our efforts were made to promote local people's active and effective participation in the management of natural resources. Global Climate change has been a great issue of global concern and it is also our focus. I just make a brief introduction of our efforts on climate change and energy.

Description of the Problem/Topic. (Why are we Active?)

IPCC assessment Report 4 has proved that warming of the climate system is unequivocal, and Greenhouse Gases (GHS) emitted by human activities contribute about 90%. Over the last 100 years, the earth has warmed 0.74°C. Even if the concentrations of all GHGs and aerosols had been kept constant at year 2000 levels, a further warming of about 0.1°C per decade would be expected. At the end of the 21st century, projected global average surface temperature rise by 1.6 to 6°C for six different emission scenarios. If the trend can't be controlled, and icecaps continue to melt, the sea level will rise by several meters. Under the influence, extreme climate events will haunt and constantly lead to natural disasters, that will threaten not only species survival, but also human health.

Human activities result in emissions of four long-lived GHGs: CO₂, methane (CH₄), nitrous oxide (N₂O) and halocarbons (a group of gases containing fluorine, chlorine or bromine). Atmospheric concentrations of GHGs increase when emissions are larger than removal processes. The atmospheric concentrations of CO₂ and CH₄ in 2005 exceed by far the natural range over the last 650,000 years. Global increases in CO₂ concentrations are due primarily to fossil fuel use, with land-use change providing another significant but smaller contribution. It is very likely that the observed increase in CH₄ concentration is predominantly due to agriculture and fossil fuel use. The increase in N₂O concentration is primarily due to agriculture.

About 54% civilians in developing countries have no access to high quality modern energy and fuel, and they rely on wood, dung, crop residues and other traditional fuel for cooking and heating. Indoor pollution due to solid fuel was listed as one of the top ten human health risks, and it is the fourth death cause in developing countries. Moreover collecting firewood put great burden on women.

The situation of climate change and energy use has great influence on human being's survival and development. Considering the situation, Amity established its objectives in the area of climate change and energy .

Our Objectives

Promote public and decision-makers awareness of climate change; Help vulnerable natural ecosystem and community's adaptability of climate change; Mitigate climate change and reduce Greenhouse gas emission.

Strategies and Working Methods

Work of Amity foundation mainly has been focusing on impoverished Midwest regions for years. People in poor communities especially high risk areas make slightly contribution to greenhouse effect, but could be particularly vulnerable when facing climate-change. Based on the fact plus Amity experience and capability, our work at climate-change and energy aspects take joint development and close coordinating into account our strategies, special attention is paid to the vulnerable living and emphasis on satisfying primary need from remote community group.

Advocate:

Advocate public to make sustainable consuming and live style, help governments make more efficient policy to promote energy efficiency. Promote rural community and urban community's awareness of climate through training, community publicity and other means. Promote urban community's awareness of organic agriculture in order to boost consumer's support to ecological agriculture, channel products supply and demand.

Mitigation:

Extend renewable energy, reduce greenhouse gas emission, and also reduce air pollution. Especially in vulnerable rural areas in western China, people's expenditure on fuel decreased, while the community's adaptability to climate change enforced.

Implement reforestation work, especially in the upper reaches of large river. That not only increase carbon sink, but also can contribute to combat soil erosion.

Extend ecological agricultural production system, increase fertilizer efficiency, especially Nitrogen fertilizer efficiency. Use more organic fertilizer, and improve crop specially rice management system. Through these measures, N₂O, CH₄ emission from agricultural will decrease.

Adaptation:

Conduct work on disaster prevention and disaster reduction, switch our efforts to disaster prevention and rehabilitation, and enhance community's adaptability to face extreme climate events;

We built drinking water systems for people in remote areas who have difficulty in safety water access, that can satisfy community people's basic needs;

Protect agricultural genetic resources, maintain traditional agricultural knowledge, and increase agriculture's adaptability to climate change;

Reduce human and livestock's pressure on natural resources, and restore ecological balance. Increase people feed livestock in pens instead of herding, and plant grass that will reduce pressure on grassland and maintain its productivity.

Apply community based natural resources management. Community members can participate in the process of management and decision making in order to protect their own interests, and make use of natural resources sustainable. That can make balance between community development and natural resources protection and enhance local community's ability to adapt climate change.

Impact and Results

Advocate:

Public's awareness of global warming was promoted. We have held walking activities around Xuanwu Lake in Nanjing on car-free day together with other NGOs.

Mitigation:

Solar stoves, biogas system, domestic photovoltaic power system and other renewable energy installation were extended. Immediately benefited farmers or herders' living conditions were improved, and their expenditure on fuel decreased. Solar stoves we delivered in Qinghai-Tibet Plateaus, Gansu and other places, also biogas system we built in Southwest China and Northwest China have contributed to Greenhouse gas emission.

Thoughts of organic agriculture and organic agriculture production have been extended. We developed organic chicken, organic potatoes in Inner Mongolia and developed organic berry in Jiangsu Province.

Adaptation:

Vulnerable community's adaptability to extreme climate events was increased. People affected by floods or other disasters will be helped. Amity has provided aids to people affected by floods in Hunan Province in 2006.

Grassland, forests and other natural resources were protected, and local community's management of natural resources was improved. Land degradation was controlled through buckthorn planting and enclosure.

Water drinking issues of people in far community were tackled through drinking water projects such as drinking water system we have done in Guizhou Province and Inner Mongolia.

**e) Green Budget Germany/Forum for ecological-social market economy –
Climate Change Work from a European Perspective**
Damian Ludewig (Green Budget Germany and FÖS)

Climate change is one of the biggest environmental, social, and economic threats our planet has ever faced. It is closely related to other severe environmental problems such as the loss of biodiversity and overuse of natural resources, which then lead to further problems. Green Budget Germany is working to develop various ideas geared towards tackling the problem of climate change. Our main goal is an Environmental Fiscal Reform including the further development of the Environmental Tax Reform, dismantling environmentally harmful subsidies and tax exemptions.

Climate Policy in Germany

German climate policy is based on international and EU conventions. As part of the EU burden-sharing under the Kyoto Protocol, Germany committed itself to a total reduction of 21 % of its greenhouse gas emissions as against the levels of 1990. This goal should be reached by 2012. The Federal Government has also committed itself to cut its greenhouse gas emission by 40 % (compared to the 1990 baseline levels) by 2020, if the EU Member States agree to a 30 % reduction of European emissions over the same period of time. Germany likes to see itself as a pioneer in climate protection.

The national “Integrated Energy and Climate Programme” from 2007 sets out the main elements of German climate policy. The measures mentioned there should help to reach the 40 % goal. Like many other NGOs and the German Green Party, we think the Programme is not ambitious enough. Even the Government admits that the measures are not sufficient to reach the goal but it does not say what actions will be taken to “fill the hole”.

In Germany, unlike in many other countries, people do not see the impacts of climate change in their everyday life. There are many non-profit environmental organisations actively operating in Germany. There is an umbrella organisation “Klima-Allianz” where 100 different groups – NGOs, churches, trade unions, youth associations – have found together to make their voice heard. But still mobilizing big masses is not to be seen. There is a wide general acceptance for climate protection, but also strong lobby against big changes in energy, transportation and aviation sector. German state spends from 34 to 42 billion Euros for environmentally harmful subsidies every year. Although Environmental Tax Reform with a higher petroleum tax was introduced in 1999, still two thirds of the state budget is financed by income taxes and other taxes related to work and less than 10 % by environmental taxes. German

taxation system keeps making work more expensive; at the same time exploiting of nature and harming the climate still are relatively low priced.

The economic crisis has not made fighting the climate change more popular in Germany. The new government made clear that fighting the economic crisis will have the highest priority in the coming years. Green Budget Germany advocates combining these two objectives – our proposals both help protect climate and give an economic stimulus.

Comparing Germany and China

Both China and Germany are in the “Top 10” of countries emitting the most CO₂, China being number one, followed by the U.S. However, if we look at the statistics of emissions per capita, we will see that Germany is way ahead of China. In the past years China has shown its willingness to cooperate in climate protection to some degree and it has its own national programme with some ambitious goals. China’s emissions rates have been growing steadily. It is crucial to get the two biggest polluters – China and the U.S. – to cooperate in environmental matters and sign the international conventions.

China’s GDP per capita is very low, so economic growth will be its primary target in the coming years. The large-scale pollution of the environment has already become an obstacle for the wealth in China and the situation is getting worse. The developing and transition countries are making their own existence impossible by ignoring climate protection. One of our theses is that economic growth and climate protection should not be seen as antipodes. Sustainable growth can be achieved by advocating green technology, for example. The only form of economic growth that our planet can handle is green growth

International Conferences

Climate change does not have any national borders – no country can fight it alone. There has to be international agreements and conventions which make all countries do their share for climate protection. The Kyoto Protocol is a good starting point where we can build upon. Kyoto Protocol ends in 2013 so the next big task for the international community is to draft a new convention ambitious enough – and get the most polluting countries to sign this time. The EU and Germany would welcome a new protocol; the biggest opponents are the United States and China. Industrialised countries, Germany included, must commit themselves to financing the adaptation to climate change in developing countries. Inside EU the East European countries are the ones most opposing new CO₂ reductions. Climate change is not a scientific theory any more, it is a wide acknowledged fact that climate is changing because of people’s behaviour. Now counter-actions must be taken.

About Green Budget Germany

Green Budget Germany (GBG) was founded in 1994 on the one hand to draw attention to climate change, on the other hand to spread knowledge about possible “counter-actions”. GBG is a non-profit NGO located in Berlin, Germany. Our focus is on Market-Based Instruments (MBI) which have shown their effectiveness in climate policy. MBIs serve to incentives higher energy efficiency and the reduction of CO₂-emissions in all relevant sectors. One of the main goals of GBG was realised in 1999, when an Environmental Tax Reform was introduced in Germany. Since then, the scope of GBG has been extended to include all elements of market-oriented eco-fiscal policy – environmental taxation, emissions trading, removal of environmentally harmful subsidies, promotion of renewable energies, and green growth.

GBG is active in developing new concepts for economic environmental policy instruments, evaluating existing and already implemented instruments, and finding ways to improve them. Most importantly, GBG is also actively disseminating these new ideas through publications and conferences. Our work on the entire array of MBI for environmental policy has rendered Green Budget Germany a competent voice in the MBI policy debate all over the world. One of our prime concerns is the improvement of communication and public awareness of environmental fiscal reform.

Our Aims

GBG believes that in order to meet the global challenge of climate change and the threat it poses to our natural environment, governments have no choice but to use all the instruments they have at their disposal: regulation, command and control, environmental agreements, and even campaigns calling on the public to make voluntary changes to their lifestyles. But GBG advocates Market-Based Instruments as the most efficient and effective way in fighting climate change. No other instrument unites the two goals of sustainable development and economic competitiveness. In short, our primary objective is the internalisation of the externalities so that the prices reflect real environmental and social costs.

Our most important current demands, particularly in the German context, are: 1) a wide Environmental Fiscal Reform (EFR) including further development of Environmental Tax Reform (ETR) and dismantling of environmentally harmful subsidies and tax exemptions and 2) extension of the EU Emission Trading Scheme (ETS) to include other sectors, more restricted certificate allocation, and auctioning of emissions certificates.

We are open and prepared to compromise as regards the use of revenues raised from these measures. One possibility we very much support is the recycling of revenue, returning it to taxpayers and citizens by means of tax cuts and social insurance payments, or by way of an individual eco- or climate-bonus. Some of the revenues should also be used for environmental projects.

Environmental Fiscal Reform

Eco-tax and Environmental Fiscal Reform are geared towards the achievement of long-term environmental goals, while maintaining international competitiveness. GBG believes that the setting of prices of goods and services for producers and consumers is not governed by some law of nature. The prices reflect authoritative government actions, and rightly so, as there are market failures in several areas. Therefore it is totally legitimate for the state to compensate for these market failures through taxes or subsidies. The failure of the government is, however, often at least as severe as the market failure it is trying to compensate for. Despite the notoriously scarce government funds, the German state still dispenses from 34 to 42 billion Euros for environmentally harmful subsidies each year. This leads to unnecessarily high national debt, high tax rates or other levies, and, in the end, means that the environmentally harmful behaviour is being cheapened and rewarded: plane tickets, company cars, nuclear energy, and industrial agriculture are not macro economically cheap, but are receiving massive subventions from the government, leaving the real costs to be paid elsewhere. It is difficult to disestablish subsidies that have once been allowed, even though, in the end, only few companies gain great profits from these subventions, while the costs are being carried by the general public.

Diesel Subsidies

At the moment, diesel has a tax advantage of circa 16 cent per litre compared to petrol. From an environmental point of view, the privileged position of diesel cannot be legitimated. GBG demands a gradual adaptation of a more socially and economically sustainable fuel tax. One possibility is compensation through motor vehicle tax or a lower tax for trucks.

Tax Exemption for Kerosene

As of now there is no fuel tax for air traffic, even though airplane travel is the most harmful means of transport from a climate viewpoint. For this reason GBG considers an international kerosene tax necessary.

VAT Exemption for Passenger Transport in International Air Traffic

Airplanes benefit from the VAT exemption for means of transport. Were these exemptions to be abolished, the use of air traffic could be reduced. This would contribute to the protection of the environment and produce additional revenues of 500 million Euros.

Commuter Tax Relief

Commuter tax relief gives an incentive for travelling to farther working places, and thus compounds environmental pollution. In addition, only those who pay taxes profit from commuter tax relief and it is therefore not only environmentally harmful,

but also socially unjust. Commuter tax relief should be rearranged in a way that takes into account both environmental incentives and social justice.

Exceptions to Eco-tax

Hitherto many industry sectors are exempted from the eco-tax, including the manufacturing industry, agriculture, forestry, and fish farming. In these sectors, severe economic consequences of environmental tax reform were feared. After ten years it is clear that the fears have been unjustified, and they should be cleared out and the exceptions abolished.

Agricultural Subsidies

At present intensive agriculture is heavily subsidised although it is readily apparent that it threatens biodiversity. This leads to far-reaching environmental damages. No need mention that these subsidies should be abolished. GBG proposes, for example, levies on fertilizers and pesticides, which could be implemented gradually and the revenues should flow back into the agricultural sector. That way, the tax would be neutral, in respect of revenues and loss of income, and competitive disadvantage could be avoided.

Promotion of Renewable Energy

The German Federal Government already subsidises the construction and research in the field of renewable energy. However, further means should be provided.

Subsidies for Nuclear Energy

While coal and gas-fired power plants have to pay for their raw materials and are, at the same time, burdened by emissions trading, the nuclear power plant operators are making large profits due to the increased price of electricity. A tax for nuclear fuel could transfer these additional profits from power plant operators to the state in the form of 3.5 billion Euros. Additionally, all subsidies for re-research in the field of nuclear energy must be abolished.

GBG and Emissions Trading in the EU

Emissions trading in the European Union began in 2005, concerning 2/3 of all facilities in electricity generation and the four industry sectors with largest CO₂ emissions (steel, construction material, ceramics, and paper). Every production plant in these industry sectors was given a certain amount of certificates that contain the right to a CO₂ emission of one tonne. If the number of certificates is inadequate, companies can buy the rights to emit additional CO₂ from less emitting companies. Unless the company buys more certificates, it will be penalised.

This kind of trading of certificates will lead to higher economic efficiency. This is true, although all companies, whose costs for saving CO₂ are higher than the costs

of buying certificates, buy them instead of conserving nature. But as long as the avoidance costs of CO₂ are lower than the price of the certificates and profit can be earned by selling certificates, the companies have an incentive to cut down their CO₂ emissions. In this way, savings in CO₂ emissions will be carried out in those places where they are the most economically cost-efficient alternative.

There are, however, various problems regarding EU emissions trading. There is too great an amount of certificates given out and there are too many exceptions e. g. for Eastern European countries. In addition, neither all relevant industry sectors nor all greenhouse gases are included. There are also failures in auction arrangements and in the allocation of certificates.

GBG is satisfied with the fact that the European Union has assumed the role of a forerunner in emissions trading. The EU must now live up to this position by strengthening the regulations on emissions trading. Unfortunately, a chance for this was lost with the Climate and Energy Package 2008.

First and foremost, the upper limit for emissions has to be lowered. As of now there is little evidence of success in emissions trading, because the certificates were given out too generously, and, until 2013, at no cost. Moreover, methane and nitrous oxide should also be integrated into the emissions trading scheme, and certificates should be allocated more carefully within the industry sectors so that no environmentally harmful incentives are created, e. g. for building new coal power plants.

The inclusion of shipping traffic, road traffic (particularly the transport sector), as well as agriculture to emissions trading must be considered. One possibility to include the road traffic sector into the emission trading is to allocate emissions rights to fuel distributors, meaning mineral oil corporations. They would then have to give out certificates for the multitude of fuel imported into the EU. This way, the prices would eventually be passed on to consumers.

Exceptions to rules should be avoided as much as possible. Furthermore, the profits of the auctioning off of certificates have to be used solely for the protection of the environment. In total, auctioning should be used rather than giving away or bargain-selling certificates.

Our Methods

Green Budget Germany is working in various ways to advocate the use of Market-Based Instruments. We participate in the development of the German and European Eco-tax Reform through our own contributions, but mainly by communicating the basic principles and arguments in the business, scientific, and political communities. We are conducting studies and issuing other publications, organising conferences, workshops, and expert discussions, as well as doing lobby work in order to reach our aims.

Publications

Among other publications, we publish newsletters in German (“FÖSNews”) and in English (“GreenBudgetNews”). Both newsletters contain current information about environmental tax reform in Germany and elsewhere.

Green Budget Germany has also conducted various studies, commissioned by the German Federal Ministry for the Environment, Greenpeace, WWF, Deutscher Naturschutzring (DNR), etc. In 2008 GBG conducted a study for Greenpeace, entitled “Modernisation of Company Car Taxation”. In the same year two studies were conducted on environmentally harmful subsidies. The first focused on the threats of erroneous subsidies to biodiversity and was commissioned by DNR. The other subsidy study focused on environmentally harmful subsidies in Germany and was commissioned by Greenpeace. This year we analysed the German and the EU economic stimulus packages regarding their impact on sustainability and climate change and wrote two studies about nuclear energy in Germany, one of them, entitled “State Aid to Nuclear Energy: 1950–2008” will soon be available also in English.

Conferences

Conferences are one very important part of our work. It is often the best way to bring together the different stakeholders: NGO representatives, politicians, scientists and business men. We have organised quite a few different conferences and seminars, here are the highlights of the past years: In 2007 GBG organised The Eighth Global Conference on Environmental Taxation, entitled “Innovation, Technology and Employment – Impacts of Environmental Fiscal Reforms and other Market-Based Instruments” in Munich. GBG was the first NGO to organise the event. The conference was a tremendous success with over 300 participants from every continent. In 2008 we organised a launching conference for Green Budget Europe in Brussels and it was the first step on the way to European co-operation in the field of Environmental Fiscal Reform. In 2009 a GBG conference about the current economic crisis was held in Berlin. The main topic was how to find an ecological way out of the crisis and challenges and opportunities of Environmental Fiscal Reform. In October 2009 Green Budget Germany organised a conference looking at “economic instruments in environmental protection and social justice – European examples and German perspectives”.

GBG in Europe

Green Budget Germany is also actively networking on the international level. We are working closely with the European Environmental Bureau (EEB), as well as with other German and European environmental NGOs. Encouraged by Green Budget Germany’s experiences as a specialised NGO, a European-wide umbrella organisation was founded in 2008 in Brussels. This new organisation, called Green Budget Europe (GBE), aims to promote Environmental Fiscal Reform and Market-Based Instruments

in the European Union and beyond. The primary objective of GBE is to enable the EU and its member states to fulfil their climate targets, and thus to avoid global warming in excess of 2 °C. At the moment GBE operates as a project within Green Budget Germany. It functions as a high-level platform and a competence centre for economic instruments in environmental policy in the European Union, and brings together politicians, representatives of business and NGOs, as well as the research community.

Green Budget Germany in Developing Countries

Green Budget Germany is also active outside of Europe: Developing countries in particular are suffering from the exploitation of natural resources – directly, from their quarrying, but also indirectly, through climate change. At the same time there are few financial instruments available in developing countries. For this reason, from viewpoints of nature conservation, well-being of people, and public finances, an Environmental Tax Reform in developing countries is appealing.

EFR can have direct effects on poverty reduction, helping to address environmental problems by influencing behaviour through price mechanisms and/or paid licences. It can also have an indirect effect by generating resources for anti-poverty programmes in areas such as water supply and sanitation, or for pro-poor investments in health and education, for instance. For all these reasons we want to foster discussion on Environmental Fiscal Reform in developing countries.

Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) and GBG together have developed a concept for a training seminar for Policy Makers, Administration Officials, and NGO representatives in developing countries (EFR-Training). The main goals of the seminar are to bring about understanding of EFR concepts and definitions, its benefits and limits, as well as increased capacity to discuss and design appropriate EFR strategies. The seminar employs innovative methods and uses all available opportunities for interactive group work. It takes a practical approach to EFR. Conclusions are worked out through joint debate rather than on the basis of 'ready-made' teaching messages. Using a range of materials, participants design and 'test' EFR elements in a number of different contexts.

In GBG we do not see economic issues and well-being of our planet as antipodes; we believe combining them – through Market-Based Instruments, like environmental taxation – leads to the best, sustainable result. The industrialised countries should take the lead in fighting climate change but the best practises should be transmitted to developing and transition economies as well. We cannot ignore climate change anymore and we cannot afford to leave the best instrument to tackle it unused.

III. Problems, Working Methods and Strategies

Introduction

Nora Sausmikat

This part of the proceedings was meant to collect the results of the three parallel working groups. The participants were asked to work on the following questions:

- How do you analyze the situation (in your respective field – water/food/climate)? What is the need?
- Where do we stand and what is the government doing?
- Why is your organization doing its work? Where do you see your responsibility?
- What is the most important reason for getting active in your respective field? What is your focus?
- How could we change the situation?
- Which methods are you using – are there some best practices or lessons to be learned?
- What are common concerns and in which areas or topics could we co-operate in the future?

Additionally, the participants were asked to write down their personal reflections or try to formulate lessons learned. Here we have printed a selection of these texts in chapter III.

a) Reflection on Water Group

Michael Bender, Ran Liping

From Chinese perspective:

In Hougan Village, Wuhu City of Anhui Province have been polluting the body of water, which posed a serious threat to the villagers' livelihood and health. The Green-Anhui Environmental Development Centre initiated cooperation between community representatives and the media, to collect evidences and advocate progressively, until it reached its goal to relocate these three factories.

To be concrete: Through correct strategies, active community partners, approval from government and cooperation with media, the Chinese civil societies could succeed in overthrowing projects launched by polluting enterprises. Environmental groups should do down-to-earth work in the heart of the communities.

In China, it is necessary to reduce the cost of processing drinking water and facilitate the cooperation between water company and the local communities, for which the water companies provide subsidy on chemical fertilizers to the local residents.

From German perspective:

In Eastern Germany the heavy pollution of rivers, lakes and groundwater was the most critical water issue. After the wall came down new challenges emerged like big inland navigation projects that pose a threat to hydro morphology.

The main challenges are:

Nutrient pollution, biological continuity and river morphology and still chemical pollution but on a far less dramatic level are the most relevant water management issues in Germany.

At regional level:

Mining industry has a big influence on water resources in some regions. Coal Mining destroys groundwater aquifers whereas salt intrusion from Kali Salt mines heavily damages the river ecology of the Werra/Weser river.

At international level:

With the European Water Framework directive there is a common water management policy in place all over the European Union. In Southern Europe Water scarcity is a big issue. International River Basin Commissions discuss common problems of countries through workshops and exchanges, such as water and electricity, clean water, rain water collection for flushing, etc.. Environmental NGO's often have official observer status.

Conclusions:

1. Common concerns of EU-China civil societies
Pollution on body of water, drinking water safety, safety of water ecology, government and advocacy work, cooperation with media.
2. Common Strategies
NGOs' cooperation with media: NGOs and media are natural partners; they can be mutually benefited from monitoring and working on the water issues;
Joint participation of NGOs and the communities: communities are the essential player of the environmental issues and they are crucial in the water resources projects. Their participation must not be overlooked and their active engagement must be secured.
3. Differences
The distribution of China's water resources, the large difference between the awareness among Chinese and European communities;
The lack of resources and work partners of Chinese environmental NGOs;
Among the water resources projects, the Chinese NGOs are not equipped with enough technical skills and are therefore limited by their own capacity. The technical level needs to be enhanced.
4. Potential cooperation, priority for future
Information sharing: Chinese environmental NGOs used to have more contacts and communications with American NGOs and relatively limited exchanges with European NGOs. EU-China NGOs' communications and cooperation should be improved. Among the Chinese environmental NGOs, they is a water environment network, which runs a regular newsletter to report on current works, and it looks forward to exchanging more internal work experience with their European counterparts.
Experience on advocacy, joining forces: European groups might have different advocacy strategies from the Chinese groups and it would be helpful to learn from each other.

b) Food Safety/Sustainable Agriculture Group
Reflections on Food Safety and Food Security
General information and Brief Comparison of the Agricultural Sector in China and Europe
Thomas König, Berit Thomson

In order to provide some reflections on the issue 'Food Safety and Food Security', first some highlights of the agricultural sector in China and Europe should be described briefly.

Europe in this regard refers to the European Union having the Common Agricultural Policy (CAP) in force. In the 27 Member States of the European Union about 500 Mio. People are living, the tendency is stable or regionally slightly shrinking. In comparison, China's population accounts for 1.3 Billion inhabitants with more than 700 Mio. People living in rural areas, the tendency is increasing, in urban areas particularly.

Europe's agriculture is dominated by middle and large-scale farms (average 27 hectare – USA 121 hectare) but still small scale farms exist. The agricultural and trade policy is highly export orientated. The degree of self-sufficiency of major products is above 100 % which was even higher in recent years. The CAP sets the legally binding rules and supports the development of the agricultural sector with an annual budget of app. 50 Billion Euros (2005). For many years the common agricultural policy was the most jointly developed policy within the EU with the largest budget. Out of this budget, the EU provides an amount of 2.5 Mio. Euros of export subsidies and 7,7 Mio. Euros are dedicated to rural development goals within the European Union. According to official sources both, European policy and funding will focus more on sustainable agriculture combined with climate change issues in the years to come. But at the main time the instruments of the agricultural policy are strengthening industrial orientated farming systems. As far as agricultural policy advocacy is concerned there are three major groups actively involved: 1. Farmers associations representing the majority of the large-scale farms, advocating for a high level of direct payment to farmers, 2. Civil society groups like "Arbeitsgemeinschaft bäuerliche Landwirtschaft (AbL)" or the European Federation of Food, Agriculture and Tourism Trade Union (EFFAT) advocating for a more sustainable agriculture in ecological and social terms, and 3. Consumer associations representing the consumers' interest for healthy and safely food. All three groups work at national or even European level to get more influence. Networks are highly required – but sometimes it is not very easy to work with.

China's agriculture is concentrated on a relatively small share of the country's area and the production there is very intensive and high productive. The degree of

self-sufficiency of major products reaches nearly 100 %, apart from soya beans. The national government pays a high attention to the agricultural sector for instance by cutting taxes for farmers and supports farmers in different ways. The political goal is quite clear: to reach a 100 %-self-sufficiency of most of agricultural produce. Exports of food don't play that role in China, only a few market niches (ecological green tea) are covered by Chinese food exporters. However, the challenge is that the population increases steadily and the number of farmers is shrinking at the same time. Furthermore the general political goal of further economic growth has to be mentioned in this regard; the agricultural sector has to fit into this frame.

Both agricultural systems are part of the WTO-trade rules but with a different impact. European agriculture became a controversial target of the General Agreement on Tariffs and Trade (GATT) and the Doha Development Agenda. China in comparison is much more interested in other topics than food.

Comparing both agricultural policies in very general terms, the following issues could be highlighted:

- Chinese food production has to increase to feed the growing population; European food production decreased in the last years, because the population remains the same and in order to cut down the costs of overproduction
- In Europe several stakeholders are influencing the agricultural policy (industry, farmer associations mainly)
- In China non-governmental stakeholders have less influence on agricultural policy

NGOs – Their Performance and Actions

As a result of the presentations in the workshop it turns out that nearly all groups from Europe and China have in common that they have individuals and organizations as members, they generate their budgets from member fees and other funding sources – mainly project-based – and all are looking for cooperation partners. In Europe, quite a number of these organizations receive project funds from the European Union, which was very surprisingly for many of the Chinese participants. Why does the EU provide financial sources to institutions those criticize EU-policy in return, was one question of interest. However, the target groups seem to be different. While the European groups address their work to policy makers by advocating their members' interest, the Chinese groups focus more on individuals. Some NGOs concentrate on farmers to improve their situation, for instance by providing assistance in generating new market channels. The consumers in urban areas are other important target groups for many Chinese NGOs. Awareness raising activities and education programs play an important role among their activities. Some are very good linked with universities; one reason might be that quite a lot of groups are initiated and run by young staff that still has a close relation to the universities where they graduated recently. In addition to that, many groups manage their work with a few people in the office, but quite a number of volunteers support the NGO.

In comparison to the European NGOs attending the EU-China Civil Society Forum it should be emphasized that Chinese NGO activities are strongly oriented to local target groups. This is very much related to the national regulations for NGOs. If a group likes to register as a non-profit organization (any taxes to pay), they have to find a public body as a kind of 'mother organization'. These institutions normally work at provincial or county level; consequently the NGOs should operate accordingly. Speaking more generally, it is easier for NGOs in China to be accepted by the responsible governments, if they address their concerns to local needs and express locally grounded complaints. By doing so, Chinese NGOs could disprove a widely spread prejudice in Europe that confrontational campaigns do not happen in China: as far as a precise cause is taken as an opportunity to carry out protests, it can happen. Some Chinese representatives said that sometimes big international NGOs like Greenpeace are pressured even more to apply constructive criticism because they are in the focus of governmental control.

For both, Chinese and European groups, media and information campaigns are considered to be the most successful strategies in enforcing interests. At workshops, representatives from the government are invited depending on the subject matter. Hong Kong based organizations are generally speaking more radical and do cooperate with different stakeholders (including the official trade union and academics). Common topics regarding food safety and food security were the ranking of GMO food, the interest in organic farming (green food, pesticide free food).

Conclusion and Perspective

Topics: Food safety and food security has been proved as a point of common interest for European and Chinese NGOs. However, the focus is slightly different. Scandals with contaminated food happen everywhere and became the concern of NGOs all over the world. Apart from this, the issue of genetically modified organisms (GMO) in food was identified as another important issue. In China food security has the additional challenge providing sufficient food for a growing population. The discussion about ecological agricultural on the occasion of the workshop was very interesting. The wording being used was very similar but the concept behind is quite different. This doesn't seem to be a matter of translation only.

NGO activities: NGOs in China and Europe working on food safety and security have a number of things in common (similar topics, sometimes target groups) but they also operate differently which is not very surprisingly. For instance, a very different conception occurred concerning the relationship between farmers and NGOs. While Europeans did not understand the distant relationship between NGOs and farmers, the Chinese did not understand the advocacy work of NGOs in Europe who claim to "give the farmers a voice".

The workshop was a brilliant opportunity to know each other and to get an impression of opportunities and restrictions that NGOs are facing in their countries.

Furthermore it was interesting and necessary to check whether perceptions of foreign NGOs are realistic.

In summary, the EU-China Civil Society Forum participants concluded to have a successful first meeting in terms of knowing and understanding each other. Being aware of the fact that Chinese and European based civil society groups are part of global players, all participants expressed their wish to continue the process of mutual understanding. One focal point of a further cooperation could be the start of an EU-Chinese Agricultural Dialogue. This dialogue could focus on a mutual understanding of the groups involved rather than on elaborating common policy positions.

c) Reflection on Climate Change Group

Franz Halbartschlager, Claudia Schürz

In the round of introduction the participants should answer the following question to get to know each other/activities better:

- Who we are and what we are doing (as project officers of Civil Society Organisations)?
- What are our aims and strategies relating the topic Climate Change?

There is a big variety of Chinese organisations represented in the workshop. Climate Change is not the high priority of these organisations, but topics which are related to Climate Change (e.g. sustainability issues, saving of wildlife and environment, energy) are important working areas of most of the organisations.

As fields of common strategies and possible cooperation the community based approach was identified as a common strategy: In the workshop we have discussed about the potential and the sharing of experiences on a community based approach on awareness-raising and education on Climate Change; a number of participants (e.g. many environmental initiatives in China) are focused on this approach.

Also, international networking on Climate Change was a second framework of discussion. How we could start the networking process? There were some first ideas formulated, e.g. writing articles in newsletters, on websites or other forms of publications of participating organisations.

IV. Individual Reflections on Differences between Chinese and European NPOs/NGOs

This chapter collects some of the individual reflections on this experiment to connect two different civil societies. The first essay is written by Berit Thomson who wanted to document her experiences in China also for her organization at home.¹ The following short reflections of the five authors Franz Halbartschlager, An Xin, Klaus Heidel, Thomas König and Tian Qian, display some of the lessons already learned, describe highlights and name possible improvements.

a) The Sky's the Limit in China

Berit Thomson

How, despite difficulties, the farmers strive for self-sufficiency and the civil society movement gains power.

In Feng Village's town hall, a village in the south Chinese province of Guangzhou, a small group of old women gossip in a confused and agitated manner, gesticulating with their hands and then falling silent again. Li Bo from the environmental organisation Friends of Nature translates: "Their families have had their leaseholds taken away from them. Their children have moved to the towns in order to earn money." A farmer recounts that she received 30,000 RMB for selling 0.8 hectares of land. This is approximately 3,100 Euros. She tried to negotiate for at least a little more, but was told: Either take the money or leave it. The new landowner is now the university, the South China Agricultural University.

Feng Village is a station on the information tour titled "Global Concerns – Global Cooperation?" the Asian Foundation for the EU-China Civil Society Forum and the Chinese partner Friends of Nature. For two weeks, Chinese, Austrian and German representatives from non-governmental organisations had the opportunity to share information and experience.

1 This paper can also be downloaded on our webpage www.eu-china.net – see http://www.eu-china.net/web/cms/upload/pdf/materialien/eu-china_2009_hintergrund_13.pdf.

Genetic Technology Alongside Organic

A student at the South China Agricultural University runs through a paddy field. The clayey earth squelches under foot. He describes the universities ecological rice cultivation tests. Ducks devour the insects at certain growth phases and poultry manure is used as an organic fertiliser. That way it's possible to avoid using pesticides and artificial fertilisers. Lower rice profits would be supplemented by the additional sale of organic duck meat.

He also points out the open land tests for genetically modified rice, corn and bean plants with the same enthusiasm as he had previously spoken about the ecological farming. A Chinese environmental activist asks him: "How is pollution prevented?" Student: "We have our methods." Environmental activist: "And what are they?" The student gesticulates with outstretched arms and says: "With a wall." Regardless of the effect, there were no walls to be seen in the fields. The genetic engineering tests were also not displayed. Chinese politeness prevents any further critical inquiries.

"There won't be any intense public debates about genetic engineering", said Fu Tao from the English-speaking online forum "China Development Letter". "We are aware that tests are being carried out on the cultivation of genetically modified plants. Therefore, in the event of government authorisation, the companies will be ready to go".

Migration to the Towns

Chinese villages can be found nestled in green paddy fields. The inhabitants appear to comprise mainly of old people and children. They sceptically observe the visitors with their digital cameras. According to official records there are 200 million migrant workers in China. At the end of the 70's a figure of 30 million was being discussed. Experts estimate that 90 per cent of the migrant workers are in fact farmers. The Chinese non-governmental organisation Global Environmental Institute (GEI) justified migration from the countryside to the towns by stating that the average salary in the towns is approximately three times higher than that of the rural areas. Very few farmers have an academic degree. Therefore, they end up earning poor wages in factories. "This work is dirty", said Li Bo.

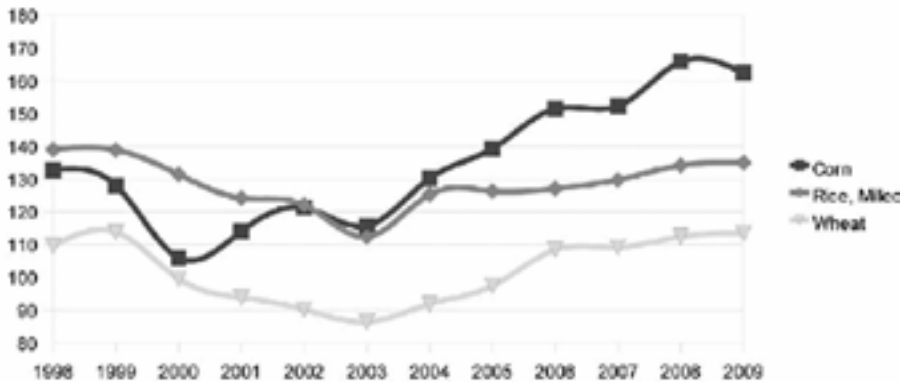
The migrant workers move in part for more than 10 years to the towns and return home when their children are older. "The variety of land reforms is a problem for the farmers. They have to constantly adjust to new situations and don't know what to expect next", said Li Bo and adds: In addition, there is hardly any market transparency and it's also difficult for them to realise adequate prices for their products.

The German agricultural engineer Thomas König from the Centre for International Migration and Development (CIM) has the impression that, despite everything there is no fluctuation in agricultural production. He's been living and working in the southeast interior province Jiangxi since the end of last year and says: "Acreage here is extremely intensively utilised, there are no fallow fields as in Germany." If the

farmers don't use the fields themselves, then they are mostly leased. After all, 700 to 800 million people still live in the countryside and farming is an essential revenue and supply source.

Small and Efficient

According to the U.S. Ministry of Agriculture the average farm size is 0.6 hectares. If the figures from the USDA (United States Department of Agriculture) are correct, then production of the main cereal crops wheat, corn and rice have increased within the last years (see diagram). China has been a net exporter for years with the exception of the financial year 2003/04, when more rice and wheat were imported than was sold on the world market and as well, wheat in the financial year 2004/05.



Milk production has also continuously increased to 37.8 million tons in 2008/09. Ten years previously it was only 8 million tons. Similar to the years before, in 2008/09, whole milk powder and fresh milk have an export surplus of 19,000 tons and 29,000 tons, whereas an import surplus of 52,000 tons has been ascertained by skim milk powder. If these surveys are at least somewhat accurate, then the statements of some market analysts must be critically questioned if China is once again to become an important consumer of agricultural products on the world market.

To enable this development, in 2003, Beijing's leadership abolished agricultural taxes and increased purchasing prices. In addition, converting fields to building land has been banned. At least 95 per cent of agricultural products should be self cultivated. This is the way China's government wants it, hence, intermittently working with export restrictions.

"In order to make life in the countryside more attractive, investments are pouring in through the state programme "New Socialist Countryside" for, for example, small biogas constructions enabling gas production" As a prerequisite for this construction the families have to keep one or two pigs, and it's already working", said Thomas

König. He knows about a report by the Asian Development Bank, that alone in 2007, 24 million of these constructions were built nationwide.

The New Movement

The information tour has not only pointed out the problems but also the potentialities involved in small-scale farming structures in China. And one more point: A new movement is growing alongside the well-known environmental sins. 16 years ago Friends of Nature, the first environmental organisation was founded. Today, there are approximately 2,000 non-governmental organisations being financed by the government or foreign sponsors. Almost 20 per cent thereof are student movements. The student volunteering commitment seems remarkable. They critically tackle the problems of topics such as climate change, water pollution control or farming. Even when for most of them their future occupations won't be in civil society, thus, this knowledge reaches management levels in the government and the business world.

How does the working group for rural farming (Smallholder Family Farming Organization, AbL) work?

The AbL is a non-governmental organisation which represents rural political interests, and members of the AbL include both conventional and ecologically worked farms. At the end of the 70's a group of farmers merged and founded the AbL in Germany. The main reason for this was that the predominant German farmers' organisation (DBV) principally represented the interests of the food industry and the large-scale structured, rationalised agrarian companies, but not the farming population which predominantly manages small, medium-sized, labour intensive and ecologically compatible enterprises.

Farmers can become a member of the AbL by paying an annual subscription fee. At the annual general meeting the farmers vote every two years for the AbL's managing-committee, which consists of farmers who work out the positions and political strategies. The AbL management and employees implement the managing-committee's strategies. The farming community knows which basic conditions are most necessary in agrarian politics in order to operate their farms effectively and on a long-term basis. At any rate, it is important to genuinely incorporate the farmers when working on agricultural issues.

Working with other Civil Social Groups

What distinguishes AbL's work in the first place is the exchange and approach of identifying mutual operations for proceeding together with representatives of other civil social groups from environmental and animal protection, consumer protection, development policy, human rights or unions.

Through this a socially broad and strong lobby can be formed.

An internationally prepared scientific study provides particular background information about the civil social cooperation in Germany: International Assessment of

Agricultural Knowledge, Science and Technology for Development (IAASTD) <http://www.agassessment.org/>. This study was, among others, commissioned by the World Bank and was published in spring 2008. The over 400 authors were clearly critical about the direction of the agrarian and trade policies in many countries of this world and they have called for a world-wide reversal to rural and adapted farming in order to face and overcome the challenges of hunger, the increasing world population, climate change and oil shortages of the future.

This study could provide a basis for a more in-depth dialogue between Chinese and German/European organisations concerning the farming issue. In any event, it is of great interest for the AbL to exchange information and experience with organisations in China, thereby becoming aware of the concerns, problems and chances in these countries.

b) Study Trip to Guangzhou, Hainan and Shenzhen

Franz Halbartschlager

For me personally the Study Trip to Guangzhou, Hainan and Shenzhen in June 2009 was very instructive on three levels:

(1) Widening of my Personal Understanding of China

I got the possibility to visit a small part of China on a very informative way. The Chinese organizing group opened a specific world for me. To see, visit and discuss projects (environmental and regional development projects mainly) widened my image and understanding of China, of Chinese society and Chinese developments enormous.

(2) Conceptual Debates

Regarding the conceptual debates with the Chinese participants (mainly project officers in Civil Society Organisations, students, academics) of the different meetings I had the following impression: issues of global relevance like global developments, global alliance against climate change, global solidarity are not in the focus of Chinese Civil Society Organisations; rather it seems to be too broad or too abstract to be discussed: a concrete link to the Chinese reality, to concrete actions on local level or concrete projects were always demanded. Concepts like Food Sovereignty, a very important issue for the European Consumer Education, are not discussed in China or were not known in that group. A general comment from my side is: the Chinese participants are very proud about their country, about success stories, about developments in China; any kind of critic would be seen as impolite or inappropriate. I think the Chinese participants had some difficulties to understand our European approach and were a bit sceptical about that: why are we interested in getting in contact with them? Is there any hidden agenda?

I think for any kind of future exchange and cooperation between Chinese and European Civil Society Organisations it is necessary to make the interests of the different actors and parties clear and transparent, to build confidence and try to understand the framework of work of both sides.

(3) Reality of Chinese Civil Society Organizations

I have learned from the trip that many young, well educated people from bigger cities are engaged in Civil Society Organisations in the field of environmental issues in China. The group was very enthusiastic and ready to take actions. The majority were women, although men were mostly the speakers and in more powerful positions in their organisations, than women.

It was interesting for me to see the role of universities and of student groups in this field. I have interpreted that student clubs a broad field for Civil Society engagement, especially in the field of environmental issues; maybe a study visit on workers or human rights would bring another result.

I have learned that the financial basis of many Civil Society Organisations in China is quite a difficult one and various activities were done on an honorary level, which is impressive. Moreover I was informed that many Civil Society Organisations in China are getting their budgets from US and European funds, which is quite a contradictory situation.

c) My Observations on the Forum of Common Concerns of Chinese and European Civil Society Organizations

An Xin

Dialogue is always needed to spur understanding and create chances for cooperation. This is also true with Chinese and European civil society organizations, which didn't have many chances to meet and talk with each other amid the rapid process of globalization. Some international organizations have played a key role in spreading information between Chinese and European civil societies. However, this is far from enough for the two groups to be well aware of each other's development and thus seek cooperation. Hence the Forum of Common Concerns of Chinese and European Civil Society Organizations – International Workshop on Climate Change, Water and Food Safety, in my opinion, should be much applauded for its uniqueness as well as importance.

Organized by the German Asia Foundation from Europe in cooperation with Friends of Nature from China, the forum had created a platform where grassroots CSOs from both sides met and discussed common concerned issues. As a participant from the Chinese side, I've found it very interesting to learn the experiences of the European organizations, such as how to influence government policies and publics' behaviors. While the differences between European grassroots organizations and their Chinese counterparts are obvious (For example, funding is still the top concern for many Chinese NGOs. But based on my talk with some European delegates, most of them are not worried about funding. Some of them even get funding from the government which is still very rare for Chinese NGOs to have the same practice.), it's also interesting to note some of the similarities. For example, one European delegate talked about the difficulties to attract well-trained professionals to work for NGOs. And I think the situation is the same in China, if not worse.

It is no doubt that Chinese CSOs and European CSOs share many common concerns, such as climate change, water protection, and food safety, the topics we've discussed during the workshop. However, there are also places that they are differed with each other, sometimes to a large extent, such as the working approaches and partner organizations. My observation is that the European organizations' work is often aimed at influencing government policies while the Chinese organizations are more focused on point-to-point charitable support and guidance for public at the community level. And these differences could serve as the starting point for further communications and exchange.

The framework of the forum was very well designed and the questions raised for discussion were very interesting. However, due to limited time, many interesting points were not able to be thoroughly discussed. Hence I would like to suggest that next time the forum be extended to two days or more so that the participating

organizations and individuals could have more time to exchange their work and point of views.

Again thank you very much for inviting me to such a wonderful gathering. I appreciate your hard work and would very much like to learn more about the follow-up activities.

d) The Green Side of Southern China

Klaus Heidel

I.

A muffled roar filled the hot and humid night at Sun Yatsen campus. First I got in mind: cows. But how: cows on a campus? Later I learnt that I heard the Chinese edible frog (*Hoplobatrachus rugulosus*) which is considered to be rather voracious and not at all at risk. What a symbol in this Southern China rainy summer night! Sometimes the somewhat mysterious China seemed to me very loud and rather insatiable. Rampant cities amazed me. Unbelievable modernity. Tailbacks without any end. Why the hell don't they use more public transport – the Guangzhou underground is excellent. On the other hand: frogs on a green campus with old and large trees like a park. The green side of China which we met in June some fifty years after the Peoples Republic foundation.

II.

Tell me something about European NGOs. How strong are they? What are their focuses? Are they successful? What relationship do they have with the European governments? What are their roles in the European Union? And what are the main social challenges in Europe? Questions after questions frankly asked by a very young Chinese activist. No matter that we met for the first time – a senior NGO man from Germany and a young women hailing from the inner parts of China. She asked her questions without much ado while walking together from the hotel to the meeting place. I didn't expect such a curiosity. I didn't expect such a straightforward communication. For a moment it seemed that intercultural encounter could be rather smooth.

III.

The Europeans met some 40 Chinese environmental activists – mostly young women and men, all students or academic people, all of them very committed and full of spirits. They presented their various projects with great enthusiasm. Of course, the Europeans only met representatives of an extremely small minority of the Chinese society – but for this minority "green" seems to be trendy – or even sexy? It's probably no exaggeration to say that there is something growing like a Chinese green youth movement – outgoing, keen to experiment and interested in the world. I was mostly surprised by their readiness to risk a conflict as the moving story on the shark showed us. A hotel intended to slaughter the protected shark. The environmental activists organised pickets in front of the hotel. They succeeded in getting regularly reports from a local newspaper and from a local TV programme. They break the taboo not to blame people publicly – the newspaper and the TV programme showed

the faces of the hotel female staff – rather defenceless people squeezed between the demonstrating young academics outside (who get or will get higher salaries than the poor female staff can ever expect) and the frightening hotel manager behind them.

And this Chinese green youth movement seems to become more and more political. Most of the young environmental NGOs started with a local single issue perspective – might it be the worry about mangroves, garbage at the coast or protected animals. But step by step they asked for the causes of grievances. Thus economic interests, misbehaviour of local authorities and problematic political structures came in their field of vision.

A truly dynamic combination: an identity forming youth movement, ready to risk conflicts, looking behind surfaces and keen to network nationally and globally. This green side of China is one of the most amazing aspects regarding the emerging Chinese civil society.

IV.

The encounter programme put away some European prejudices like the perception Chinese NGOs would be mostly interested in very practical local issues. Mainly senior Chinese environmental activists addressed very essential political issues. To name but a few: China must not copy the western model of production and consumption because China needs a low carbon model of development – not least with regard to global environmental impacts of the Chinese development path. The issue at stake is ecological justice which goes far beyond mere environmental single issues. The environmental crisis has strong social impacts. Dealing with environmental issues means to deal with conflicting social, economic and political interests. There is an urgent need to combine the global agenda with any local approach – local priorities should reflect global concerns. Indeed: Chinese and European NGOs share such deeper insights in the character of global and local challenges in the time of global crises. They encourage strengthening European-Chinese civil society networks. This finding alone made the encounter programme a precious exercise.

e) Fieldtrip was a Highlight – Some Personal Impressions

Thomas König

I was glad to be invited by the Asia House to attend the EU-China Civil Society Forum in Guangzhou. I work as foreign advisor in a Chinese NGO located in Nanchang, Jiangxi Province. Because of my NGO-experiences in Germany and my limited experiences in China it was very interesting for me to take part in this event for two days.

First of all I felt very happy that many people from Chinese NGOs took part coming from several provinces. In addition to that I recognized that most of them are quite young compared to the European delegation. One reason might be that those NGOs represented at that workshop are mainly related to universities where they were founded. Another interesting fact I came to know is that a small number of permanent staff manage a lot of NGOs but they are supported by a number of volunteers. The presentations provided by the Chinese participants indicated that very clearly. Furthermore they described their local challenges and activities very precisely. In comparison, the European presentations had a much broader approach looking from an international perspective the national views played a minor role.

During the first day I had the impression that the meeting serves two purposes successfully: firstly the Chinese NGOs got to know each other much better. Secondly the EU-Chinese Dialogue in terms of intercultural communication started between all participants. After the introducing presentations for all of us we split up into sub-groups. I attended the group discussion on food safety and food security. Although the moderator disappeared in the very beginning somehow the group managed it excellently to introduce and to discuss extensively the Chinese and the European viewpoints on that issue.

The second day was a highlight for me. We visited a site of the South China Agricultural University close to Guangzhou. The university decided some years ago to expand their experiment fields due to two major reasons: 1. the number of students increased steadily and 2. new fields for experiments are required because of new research tasks. Interestingly enough, the new fields cover trials with Genetically Modified Organism and eco-farming next to each other. We visited that particular area because one of the participating NGO works in that village which had to sell their land to the university. Years ago, the villagers had cultivated their land by their own. After selling their land some became field workers on their previously self-owned land to assist students at their experiments. Many former farmers suffer from this situation that's why the local NGO supports them to secure their livelihood. One of the major activities is to advertise the village's agricultural produce (Lychee and other fruits) and to bring potential buyers from Guangzhou city to the village. While visiting the village and talking to the inhabitants I had the impression a really good relation had been developed.

Originally the program outlined to have a two-day workshop in the beginning but the plan changed. But because I could attend the entire for two days only, I personally was very glad about that change. So I could take part at the field trip.

In terms of issues for further discussion I suggest to initiate an EU-China Agricultural Dialogue. According to my experience there are some similarities (the challenging world market), but also some important differences in the national/regional conditions. From my point of view an agricultural dialogue could help first of all to understand each other – maybe in the long run some common positions could be developed.

f) Thoughts on the Exchanges between Sino-EU Civil Society Organizations

Tian Qian

I was really glad to take part in the trip to Hainan Province in June this year (2009), as a part of programme from the EU-China Civil Society Forum. In just a few days, we experienced the differences between us and the enthusiasm amongst us. The questions I have got, after this trip, are “what is the meaning for exchanges between Chinese and European civil society organizations? How do we make exchange more efficiently? And what are the changes?”

Personally, I believe that the exchanges between the Chinese and European civil society organizations are aiming at improving the mutual understanding, learning from each other and looking for opportunities for future cooperation. At individual, organizational and social levels, we come to understand civil society in different countries; from introductions of projects, organizations and personal experiences, we learn about how to run projects and manage organizations. Last but not the least, future cooperation is the topic I look mostly forward to. My professional interest is on environmental protection. With the world’s most outstanding environmental problems of today, especially concerning climate change, we need more than just learning from each other, but concrete proposals for joint actions. For example, clean development mechanism projects, training programmes on climate change, forestry protection, organic farming and eco-farming projects. To exchange with concrete joint actions, would be the most valuable experience for me.

I would like to raise some recommendations, as well as questions, regarding the organizational structure of this forum, the outcome and the improvement plans.

1. How to make field trips more efficient for exchanges?

First, the number of the participants for the exchanges has to be equivalent and their backgrounds should be relevant. Second, the aims and outcomes should be clearly defined. Third, the number of total participants and rundown should be well organized. Also some getting-to-know-each-other activities should be introduced in the beginning of the programme. As we know that the Chinese participants are often less outgoing and shy, some activities to warm up, to turn strangers into friends, would be a helpful step before the actual exchanges.

2. Exchanges through internet?

Newsletters, blogs, MSN and emails are extensively used and making our long-distance exchanges possible. But what kind of sharing is needed? How to avoid ending up as a lifeless address book? Do we want more intellectual discussions or just news spreading? Apart from the comments above, I keep thinking of the present Nora gave us at the end of the exchange, the present presenting “change”. It is a belief, as well as a hope. I believe we would bring change and we are striving for it.

V. Cooperation between Chinese/European NGOs – Conclusion and Future Perspectives

Nora Sausmikat, Klaus Heidel

In this final chapter we would like to give a conclusion or reflection on the international networking conference between European and Chinese NGOs. What did we learn from our attempt to build up networks and create a basis for a long-term cooperation?

We can structure the lessons learnt into four different topics or levels: organizational aspects, socio-cultural aspects, topic-wise commonalities and differences, and cooperation questions.

1) Organizational Aspects

Since one of our tasks of the workshop was to identify common issues for potential future networking or cooperation, we have to admit that this question already preselects certain organizations or individuals which would be able to answer it. Members of organizations which are already highly involved in international networking (like Moving Mountains, China Climate Action Network, Global Environmental Institute), are more experienced in international networking than others. Since most of the participants in the June 2009 meeting have been from local grassroots organizations, the necessity to organize internationally was outweighed by the wish to get organized locally.

First of all we can identify several practical problems we had to deal with:

- (1) Language was a big problem, not only concerning translation and direct communication, but also the difficulty in clarifying the meaning of certain concepts through contextual translations (ecological farming, ecological justice etc.).
- (2) Internal Networking: One very clear outcome of this meeting was the need of the Chinese participants to exchange with each other rather than to network internationally. European participants on the other hand had a strong wish to learn more about the Chinese situation. Also, in another context, we had the same experience: Our Vienna workshop (Sept. 09) has shown that a conference with Chinese participants in Europe should provide space for "internal" Chinese discussions for cases where the Chinese participants haven't met each other before.
- (3) Different political systems: The fact, that state control is guiding the preparation of international meetings and conferences determines very much the different extent of openness of the whole process. Organizing an international NGO meeting inside China poses a lot more and difficult questions than organizing a meeting in Europe.

- (4) Exposure trips are much more useful for creating networks and deepening contacts than long conferences. The Global Concern Event in June 2009 has shown that it is necessary first to get to know each other in an informal way (during dinner, exposure trips) before starting a conference like format with sections of working groups.
- (5) Students from universities should be able to learn more about the activities of the Chinese or European NGOs. It turned out, that on both sides nobody really knew anything about the activities of NGOs in both regions. In China, it was proposed that it is also very necessary to let the students understand NGO workers, "why they do what they do".
- (6) Although information on each other's culture could be prepared before such a meeting, it became clear that during the meetings many new questions came up. Therefore, such events should prepare space for flexible "information sessions" where basic knowledge on China/Europe is offered. In China as well as in Europe these requests were very urgent: In China, the European participants came up with basic questions concerning land rights, the economic system, the situation of Civil Society Organizations; in Europe the Chinese had basic questions on the workers unions, the party system or the social security system.

2) Socio-Cultural Aspects

Since the majority of the Chinese participants were very young, the European participants as well as the older Chinese participants naturally had an advising position. Nevertheless, everybody profited very much from the age mixture. Despite the fact that common topics could be identified, the main differences were found in the working methods. Whereas European organizations aim to influence policies, Chinese are much more community focussed. Still, there have been intersections: Some of the Chinese grassroot organizations greatly wished to exchange knowledge on how to organize cross-regional groups, or how to lobby for certain interest groups. As noticed from the Chinese participants themselves, they are very much concerned with local problems which make it difficult to build up international collaborations.

Conversely, the European delegates also had a strong local focus. Since the workshop was designed for groups with the same or similar topics, it aimed at networking and exchanging experiences. For this reason the invited European groups were chosen according to topics currently discussed in both regions. Therefore, the selection of "grassroot" organizations produced such a strong local focus. This was not at all a disadvantage; on the contrary it helped to work on common issues (see next paragraph).

Nevertheless, the discussion on the reasons why international topics and themes are so weakly represented in the agendas of Chinese grassroot NGOs and vice versa (why European organizations are so indifferent towards cooperation with Chinese organizations), could not be finally solved. But it became very clear that there is

a strong interest in fostering exchange and cooperation. Smaller regional Chinese initiatives rely very much on their funding capacities to finance capacity building measures. They can then establish the very preconditions necessary to participate in international discussions – like language training, basic organizational and information structures, and networking methods. The Europeans on the other hand voiced their concerns of work-overload and too few human resources to build up and manage Sino-European partnerships.

Also, some prejudices were addressed: The most different view occurred concerning the images of each other. On the European side knowledge on “autonomous spaces” inside an authoritarian regime was at the forefront of their perception, whereas Chinese participants conceived European NGOs as well financially equipped and rich. Chinese participants learned about the very small grassroots organizations and about very similar problems like funding and human resources.

Europeans on the other hand learned that their image of Chinese grassroots activism is very much influenced by a strong European bias. They highlighted the fact that Chinese organizations had to rely very much on the work of volunteers, and therefore had to struggle with a high fluctuation and less professional staff. They recognized that the difficult bureaucratic procedures involved in becoming a Chinese registered organization does not hinder people in getting organized. What stayed unclear was if this was due to the age of the activists, or perhaps was also related to the education, regional specifics or type of organization. They also learned that it is not always true that Chinese activists try to avoid confrontational campaign methods and mainly focus on charity work, informing the public and capacity building. Although it is said that confrontational campaigns like unmasking polluting companies (*sha ming*) are taboo¹ some of the environmental NGOs applied different campaigning methods – from “*sha ming*”, blacklisting pollution companies to protests in front of restaurants. In contrast, well-known international NGOs like Greenpeace are pressured even more than grassroots organizations to apply constructive criticism because they are in the focus of governmental control.

3) Similarities and Differences

Thirdly, we learned much more about the differences and commonalities concerning problem analysis (water/food safety/climate) and certain characteristics of Chinese and European NGOs.

Common topics regarding water issues were the request for information transparency, the request for awareness raising among the public, and blacklisting companies involved in pollution; in the food safety section common issues were the ranking of

1 See Miriam Schröder, Melanie Müller, „Chinese paths to climate protection“, in: D+C, No. 1, 2009, pp. 30–32 (http://www.eu-china.net/web/cms/front_content.php?idart=1045&idcat=5).

GMO food and the interest in organic farming (green food, pesticide free food). The climate section saw the least commonalities – the only common field of challenges and actions was found in community development (training of politicians, advocating carbon-low life style, alliances with local companies, school partnerships etc.). At the forefront here were the requests for capacity building and vocational training from the Chinese side. During the discussion on climate issues the Eurocentric analysis was challenged by the Chinese.

Differences existed in the conception occurred in the food safety/sustainable agriculture section. Here, the relationship between farmer and NGOs or farmers associations was on the table. As mentioned in chapter two by Thomas König and Berit Thomson, Europeans did not understand the distant relationship between NGOs and farmers, while the Chinese did not understand the advocacy work of NGOs in Europe who claim to “give the farmers a voice”. In fact, the self-organization of small-scale farmers inside the NGO AbL needed to be explained as a very special situation. Still, it seems to be necessary to organize much more exchange on different forms of agricultural economic systems and subsistence strategies, as well as farmer cooperatives or intersections between consumer and farmer organizations.

On the level of formal working methods, an identified common problem was the mobilization of the public, especially in times of economic crisis, and the missing possibilities of participation in drafting policies. Although there have been quite similar problems in realizing the promised stakeholder role in decision making processes (Chinese NGO participated in drafting new environmental and social laws, (see articles by Fu Tao in this volume; European NGOs are included in several policy drafting bodies), there are differences in the self-conception of the NGOs. Whereas many of the young Chinese NGOs conceive themselves as facilitators, many of the European NGOs conceive themselves as stakeholders. Some representatives from older NGOs voiced the wish to learn more about strategies to become serious stakeholders and participate in policy making. Still, the Chinese wanted to know why European NGOs with a stakeholder identity have so little influence on European policies. It was a kind of mutual cognitive process of recognizing the little influence of environmental NGOs in Europe. To underline this statement, one European participant highlighted that 80 percent of the environmental decisions concerning the national situation of its member states were made by the EU-commission, and several European NGOs receive quite a big portion of their funding from the EU. The obvious antagonism was the little influence of NGOs on EU environmental policies. This question could be a topic for future discussions and analyses.

For both groups, media and information campaigns are considered the most successful strategies in enforcing interests. At workshops, representatives from the government are invited depending on the subject matter. Hongkong based organizations are generally speaking more radical and do cooperate with different stakeholders (including the official trade union and academics).

4) Questions of Cooperation

Chinese and European participants of the encounter programme repeatedly expressed their wish to strengthen the cooperation between Chinese and European Civil Society Organizations. Here we want to work on this wish in a more systematic manner. Three subgroups – a Chinese senior group, a Chinese youth group and a European group – met separately in order to collect wishes for further cooperation. The presentation of these collections in the concluding plenary debate showed the amazing likeness of expectations. For the future, the following main ideas and proposals were identified for potential cooperation:

- A *regular information exchange* should be one key element of any further cooperation. European NGOs should present their work on Chinese websites and Chinese NGOs should do so on European websites (proposed by all three groups). This should be complemented by a regular email communication between European and Chinese NGOs (Chinese youth group) and by the publication of reports on the work of Chinese NGOs in European periodicals, and on the work of European NGOs in Chinese periodicals as appropriate (European group). A directory of European and Chinese NGOs with names, addresses, information on respective areas of concern, working methods and so forth, could serve as a basis for this information exchange (European group). A newsletter could be a tool for a “pool of projects” (European group).
- The *encounters* of Chinese NGOs and the network “EU – China: Civil Society Forum” should be organized on a regular basis. Joint meetings, seminars and workshops should be organized as often as possible (Chinese senior group and Chinese youth group).
- The Chinese youth group proposed an “EU – China youth exchange programme” which should be available not only to Chinese NGO youth groups in Beijing and other main cities, but also to young activists in “remote” places and rural areas.
- A NGO *internship programme* could be an excellent tool for mutual learning helping to increase the intercultural understanding (Chinese senior group and European group). The training of NGO staff could be part of this internship programme – or could be linked with this programme in one way or another (Chinese senior group).
- *Thematic networks* of Chinese and European NGOs (like water or climate change) could help to strengthen the work of NGOs. These networks should rely on and include existing regional networks as far as possible (Chinese senior group).
- Chinese and European NGOs could produce *joint reports* on key issues of common concern, inter alia water, climate change, food security and food safety, fair trade comparing the situation in China and in the EU (Chinese senior group).
- Chinese participants of both groups wanted European NGOs to assist Chinese NGOs in a manifold of ways. This *assistance* could include knowledge transfer,

the exchange of experiences with methods and strategies and financial assistance.

- Chinese and European NGOs could stimulate and support *partnership activities* of schools, local groups and so forth (European group).
- The Chinese and European participants agreed that it would not be possible to put the whole impressive wish list into practice immediately. Therefore, it would be necessary to identify proposals (a) which could be realized in a short term period and (b) which need further consideration (and additional funds, of course). Above all, the most important question is: who will be responsible for the implementation of proposals? The plenary left this open-ended question for further considerations and deliberations.

VI. Additional Material

Examples of good Networks – Two Children of Wuhu Ecology Center

No Waste, No Warm

Zhang Huiying

GAIA Introduction

Our name reflects a dual purpose: The Global Anti-Incinerator Alliance mobilizes grassroots action against the spread of incinerators and other polluting, end-of-pipe waste technologies and establishes the movement for environmental justice, local green economies, and creative zero waste solutions. GAIA's more than 500 grassroots members in over 80 countries envision a just, toxic-free world without incineration.

GAIA was formed in a meeting held in South Africa in December 2000, with over 80 participants from 23 countries.

Waste and climate change

People in GAIA recognize that our planet's finite resources, fragile biosphere and the health of people and other living beings are endangered by polluting and inefficient production practices and health-threatening disposal methods.

One of what we oppose is incinerator, which pours hazardous substances into the air and promotes the climate change.



Our ultimate vision is a just, toxic-free world without incineration. Our goal is clean production and the creation of a closed-loop, materials-efficient economy where all products are reused, repaired or recycled back into the marketplace or nature, so also help to reduce climate change.

Strategy Meetings

Create opportunities for collective engagement:

- global and regional strategy meetings
- global days of action against waste and incineration
- No waste no burn
- global/regional thematic campaigns on waste,
- energy and climate problems

GAIA's Victories

Globally, we have built a powerful movement that has grown to include more than 500 organizations and networks in more than 80 countries.

In Argentina, we helped to inspire Buenos Aires – one of the world's largest cities – to adopt Zero Waste legislation that included stipulations for wastepicker cooperatives, thus promoting health & sustainability while protecting the livelihoods of the city's informal recyclers.

In Philippines, we are helping to sustain a 1999 national ban on incineration, which was one of the original rallying victories for GAIA's creation.

In Brazil, GAIA members successfully defended the country's right to ban the import of used tires, thus blocking the flow of this hazardous waste to cement kiln incinerators and winning a major challenge with the European Union at the World Trade Organization.

In Malaysia, we supported a successful campaign to stop the monstrous Broga municipal waste incinerator from being built, after a six-year campaign that involved 70% of local residents, a four-year legal battle, 150 grassroots organizing actions, and a great deal of global solidarity.

In South Africa, we worked with a broad coalition of public interest groups to defeat a huge hazardous waste incinerator that was proposed for the poor township of Sasolburg – a city already plagued by devastating petrochemical pollution and massive unemployment.

In India, we are supporting community-based economic development projects that demonstrate how the principles of reuse can build sustainable livelihoods. One GAIA member's zero waste pilot project has helped to create livelihoods for more than 100 families, and recently led to the state's adoption of a "waste-free Kerala" policy and the UN's creation of a related training program for other tourist destinations.

In the U.S., GAIA is supporting local campaigns against the construction of new waste incinerators, the expansion of older facilities, and the adoption of incentives

for these polluting technologies at the state and national levels. GAIA's members and allies kept incentives for trash incinerators out of the 2007 federal energy bill, while activists in Detroit are working to shut down the country's largest waste burner.

In Australia, local activism encouraged the Bayer chemical company to consider investing in non-burn technologies for the treatment of 4,500 metric tons of highly toxic hexachlorobenzene waste, after the export of this waste to Germany was successfully blocked.

lobally, we are coordinating annual "Global Days of Action Against Waste and Incineration," hosting intensive Zero Waste Fellowships, and helping to coordinate civil society action around major international treaties.

CWIN Program in China

- Started in April, 2009
- Executed by Wuhu Ecology Centre
- Supported by GAIA and GGF
- Committed to build a national network of anti-incinerator and zero waste, in the purpose of caring about climate change and safety for local community environmental health.

Wuhu Ecology Center Introduction

Wuhu Ecology Center is a supportive organization of Green Anhui, aiming at improving the environmental situation in south of Anhui province. It was founded in November 2008, consists of four full-time and a few part-time workers and a number of volunteers. Its working areas ARE: nature conservation, environmental health and chemical poisoning, environmental organizations exchange etc.

CWIN Program Introduction

Objectives:

- Get a summary of incineration and landfill plants in Anhui and in China
- Decrease the gas and solid waste
- Monitor the status of incineration and landfills in Anhui to assess the effectiveness of zero waste efforts
- Initiate the social responsibility of recycling MSW (municipal solid waste) and clean production.

CWIN Program Introduction

Activities

- Investigations on the existing situation of incinerators in Anhui, even in China and provide valid reports related to incinerations both in Anhui and China.
- Create a network to initiate the process. Facilitate the interaction between specialists and the public. Organize workshops to discuss about the stragety

- Translate core GAIA reports and relevant materials and print them monthly
- Establish a website and help it updates. Disseminate information materials to concerned groups or organizations.
- Establish a green journalist salon to advocate waste recycling and advanced technology of waste treatment.
- Post or email information and material to concerned bodies every week.

Support Us

We welcome any public interest organization or individual who subscribes to our mission. Our members are diverse and may have divergent views on other issues, but we are united in our work to end waste incineration and promote alternatives.

You can join us by following ways:

- Be a volunteer
- Share information related with us
- Non-profit advertising or publicity support
- Be a member of our network:

Environmental Education Network (EENOW) for Our World

Wu Xiaohong

**“Environmental education can’t wait!
Let us act now! Let us work together!”**

The Environmental Education Network for Our World (hereafter referred to as “EENOW”) was established in 2005, with a motto of “Environmental Education can’t wait!” Our Chinese name also reflects our mission, namely to study knowledge related to environmental issues, to raise awareness and to cultivate ourselves in behaving responsibly towards the nature and the society.

The EENOW aims to promote the professionalization of the environmental education in Mainland China. In order to achieve this goal, we are working on the following areas:

- To conduct professional investigations and research regarding environmental education in Mainland China.
- To develop education materials, based on local and actual needs.
- To provide consultations and trainings for organizations or individuals which/who are working on environmental protection and community development.
- To promote exchanges between domestic and international environmental education initiatives, in order to gain better understanding and cooperation.

Until now, through our practice, the EENOW has been seeking for efficient methods in professionalizing environmental education.

Between 2005 and 2006, it has worked with Xinjiang Conservation Fund in conducting a research on Xinjiang Province’s environmental education and resources, and exchanged with the local volunteers on issues related to environmental education.

Since 2007, the EENOW has been cooperating with Green Kunming, to provide professional consultations and trainings for Green Kunming’s Project “Kunming City’s Environment Education Training for Teachers and Teaching Practice”. The aim was to enhance the development of Kunming City’s environmental education. The project was introduced by a model of training, practice, reflection and re-training process, to give the trainees a deep understanding of environmental education and enhance their skills.

Currently, the EENOW is reaching cooperation agreements with various organizations, such as Green Oasis (in Shanghai) and the Wuhu Ecology Centre (in Wuhu City, Anhui Province). It also will draft a “Handbook for Beginners of Environmental

Education". The idea of having a practical Handbook is to help educators with necessary theoretical knowledge, as well as practical skills, in launching environmental education.

The EENOW's work has been largely supported by Global Greengrants Fund. It also has built a trusting relationship with the Green Kunming, the Green Oasis, Wuhu Ecology Centre and Xinjiang Conservation Fund. Our work is impossible without these partners' support and trust. Through more in-depth cooperation, trials and innovation at our daily work, the EENOW hopes to further promote the professionalization of environmental education.

A Rap about Pollution in China

Buy buy Benzine

(Lyrics: Sarah Skye Gilbert, score: Peter Harrison)

It's hard to pick a cause when there are so many:
 furless fashion, tree-filled parks, hungry children give a penny
 give your time, your heart, your ear. Every cause, a story:
 in poor schools, hopeless; refugee camps, gory.
 But one such cause spins itself through my mind:
 the tale of Qiugang factory. The people left behind
 as the money rolled in Benzene pumped out,
 and the crops they got white crusties and the greens wouldn't sprout.
 They children got dizzy and the village went dead.
 Fainting, blood cancer- the river ran red, then
 blue then green fish floating belly up.
 Dirty dirty water washed each household cup.
 53 dead and still the factory ran,
 selling Benzene to the faceless man
 that every day gives us dyes and rubbers,
 cigarettes, pesticides and plastic covers.
 Nylon stockings we buy from this man
 that then buys up Benzene as fast as he can.

<Chorus> People dying of cancer, too afraid to flee.
 But we're the ones that make the factory fizz.
 We sit at home and drink our beer and blame big bizz.
 We're the ones that buy buy buy Benzene.

Once 2000 now 1947,
 not even infants fell under protection.
 The factory threw some money towards the dirty crops
 and to keep the people quiet they hired thug cops
 to quell demands for health insurance, waste management
 or if all else failed, banishment.
 No one in the village worked that factory
 except three too poor to fight the killing spree.
 Then one day some volunteers from Green Anhui
 gave the villagers the means to save the day.

Educated the village, helped start a petition
 that was then ignored by the local government's henchman.
 So Green Anhui, that crafty NGO
 used media contacts to change the status quo.
 Qiugang's story hit the central government,
 now the factory pays, but small fees don't dent
 so it keeps operating, maybe closes for a month
 then opens back up and the vile waste comes,
 seeping down into the land, how many must die?
 When the MEP forms, the new minister cries:
 If the factory stays open post-Christmas, I resign!

<Chorus> People dying of cancer, too afraid to flee ...

Now Qiugang no longer has any Benzene.
 The factory's site is far away, safe, unseen.
 But the factory's distance can't erase
 the itemized list of past and future disgrace.
 Decades of years before Qiugang's crops
 are safe and edible, a livelihood lost?
 No! The villagers needing whatever income
 sell polluted vegetables to anonymous men
 when then bike their produce to big city Bengbu
 selling tainted vegetables to me and you.
 Supply-side pollution is never clean-cut
 even rich consumers suffer, eating shit 'til we're fucked.
 But the heartbreaking cornerstone in this tragedy
 is that nothing can replace a dying family.

<Chorus> People dying of cancer, too afraid to flee ...

The song can be heard at:

www.asienhaus.de/public/archiv/buy_buy_benzene_pollution-rap-china.mp3

The text can be downloaded at:

www.asienhaus.de/public/archiv/rap-pollution-china.pdf

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Michael Bender manages projects on the European Water Framework Directive for the German environmental NGO GRÜNE LIGA with focus on the protection of aquatic ecosystems. He also coordinates the water working group of the Forum on Environment and Development. One of the main topics there is the human right for water and sanitation.

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Chen Bingyang is a senior student at the South China University of Technology in Guangzhou. He works with the Dalian Environment and Resources Center as a key volunteer and teaches environmental lessons in primary schools in Guangzhou.

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Bruce Jack Farquhar (born 1964) works as a consultant for a variety of public sector clients. He specialises in product safety, market surveillance, standards, conformity assessment, stakeholder involvement and consumer affairs. Bruce is currently engaged by PROSAFE (Product Safety Enforcement Forum of Europe) as Projects Coordinator. The flagship project is their European Commission funded project, EMARS II, Enhancing Market Surveillance through Best Practice. From 1992 to 1995 he worked as Standardisation Officer for BEUC, the European Consumers Organisation and played a key role in overseeing the establishment of ANEC, the European Association for the coordination for consumer representation in standardisation.

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Fu Tao joined China Development Brief in 2000. His work involved extensive coverage of China's civil society. Since November 2004, he has served as Editor of the Chinese language edition of China Development Brief, which aims at promoting the development of Chinese civil society through independent reporting and information sharing.

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Klaus Heidel is a historian who founded, together with friends, the NGO Werkstatt Ökonomie (WOEK) in Heidelberg in 1983. Werkstatt Ökonomie works on social and economic rights in the world of labour and on the relationship between poverty, wealth and ecology. Werkstatt Ökonomie is doing studies, produces educational material, coordinates campaigns and lobby initiatives. The regional focuses are Europe, Southern Africa and China.

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Li Bo is the Executive Director of Friends of Nature (FON) since 2009. He has been research fellow in the India-China Institute/New York and research associate in Stockholm Environment Research Institute's Asian office in Bangkok. His topics were sustainable livelihoods and China's ecological footprint in the Mekong 2050 scenario study. He worked as coordinator of capacity building component of the sustainable Mekong network, managed Jisha community-based eco-cultural tourism project, and small-grant making on environment justice and legal aid project at the Center for Biodiversity and Indigenous Knowledge/Yunnan. He also worked as consultant for MacArthur Foundation Program for assessment on large landscape-scale conservation in SW China and evaluated the 5-year program of Critical Ecosystem Partnership Fund in SW China Biodiversity Hotspot. Oxfam's China Program on research and evaluation of mainstreaming civil society strategy. Li Bo graduated from Yunnan Nationalities Institute with a Bachelor's Degree of Arts and Cornell University with a Master degree of Sciences.

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Dr. Li Bing (born 1977) has been the Director of Green Oasis Shanghai since 2008. She is Vice Head of the TCM and Natural Medicine Committee of Animal medicine Specialists and a board member of the Shanghai Wildlife Conservation Association (SWCA). In her eight years' experience in management and project implementation in international NGOs she worked, amongst others, on the Transboundary Amur Tiger Conservation Project, the Asian Conservation Communication Programm and Guanshan Nature Reserve Resource Survey.

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Liu Yi has been the Lead Campaigner for the China Mangrove Conservation Network for seven years. In May 2008 Liu Yi became the youngest ever recipient a Whitley Award, which was presented to him by the UK's Whitley Fund for Nature for his work to restore and expand the mangrove forests on the eastern coast of China. He can be reached at: china_mangrove@126.com.

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Ran Liping graduated from the Northwest Normal University, Lanzhou/PR China, majoring in environmental science. In July 2008 she started working for the Gansu Green Camel Bell (GCB) Environment and Development Center. She mainly takes charge in Gansu Water Project and project-related work on climate change. GCB has investigated the source and severity of the pollution of the Yellow River near Lanzhou as well as organised different kinds of forums and training with media and NGOs to discuss strategies for water pollution work.

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Schürz, Claudia

Claudia Schürz (born 1981) is the Coordinator of the non-profit organisation "working globally", which was established in 1996 as a "development policy association" of the Austrian Trade Union Federation. After graduating in Political Science, Russian and Croatian Language she started working to establish an understanding for social justice by focusing global relations. Claudia Schürz works on informational and educational activities, cooperations, exchange projects, and international networking and supports encounters between workers all over the world.

Thomson, Berit

Berit Thomson has been working with AbL (Working Group of Peasant Agriculture) as Senior Advisor International Agricultural Policy and Food since 2004. In 2007/08 she has organised an one year dialogue between dairy farmers in Germany, Africa, Asia (Philippines and Bangladesh) and Latin America to develop common proposals for an agricultural and a trade policy which is supporting family and small scale farmers worldwide.

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Tian Qian is third year postgraduate student from Chinese Academy of Sciences, South China Botanical Garden, Guangzhou. She will work in Wuhu Ecology Center, Anhui province, in 2010. Guangzhou Green Camp: <http://lvseying.guangzhou.blog.163.com/blog#m=0>

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Wu Xiaohong (born 1980) is the Co-Coordinator of the EENOW (Environmental Education Network Of Our World). She is also taking roles as the observer of the Global Green Grants Foundation, the board of the Wuhu Ecology Centre and the China Education Consultant of the Royal Society for the Prevention of Cruelty to Animal (RSPCA UK). EENOW is currently working on a manual of the Environmental Education Fundamentals for Green Kuming and it is trying to promote the professional environmental education in China. They have been providing training workshops and consultations to grassroots organisations.

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Ms Yun Jianli is the president of Green Han River. Green Han River is a environmental NGO based in Xiangfan, Hubei Province. It was registered in September, 2002. She once was the member of the municipal CPPCC of Xiangfan, and member of the CPPCC committee of Hubei Province. She focused on environment since 2000 and founded the Green Han River in 2002. In the past eight years, Ms Yun Jianli put all her attention on environment, she went to the scene of pollution almost 400 times to inspect. She tried her best to promote public participation, fought with companies which polluted the Han River.

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Zhang Huiying (born 1987) is the Program Coordinator of the Wuhu Ecology Center in Anhui/PR China. In 2009 she started working on the China Waste Information Network project (CWIN) by working on waste issues and promoting the zero waste process through environmental education.

Participants' Organisations List

- Amity Foundation, www.amityfoundation.org
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- Beijing Institute of Environment and Development, www.ied.org.cn
- Climate Network Austria, www.klimabuendnis.at
- China Development Brief, www.chinadevelopmentbrief.com
- China Dialogue, Beijing, www.chinadialogue.net
- China Mangrove Conservation Network, Xiamen, Fujian province, www.china-mangrove.org
- China Green Students Forum, www.gsfchina.org
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- Dalian Environment and Resources Center, www.dalianbird.ngo.cn
- EENOW (Environment Education Network of the World), www.eenow.org
- FOES/Green Budget Germany, www.foes.de
- Friends of Nature, www.fon.org.cn
- German Asia Foundation, www.asienstiftung.de
- Global Environment Institute, www.geichina.org
- Green Anhui, www.green-anhui.org
- Green Camel Bell, Lanzhou, Gansu province, www.gcb.ngo.cn
- Green Eyes, www.greeneyeschina.org
- Green Eyes Wildlife Rescue Center www.greeneyeschina.org
- Green League, Berlin, Germany, www.grueneliga.de
- Green Stone Fund, Beijing, www.cn.green-stone.org
- GSEAN (Green Society Environmental Action Network), www.gsean.org
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- Nanling Action Team, www.blog.sina.com.cn/nlatngo
- Pacific Environment, www.pacificenvironment.org
- Promotion Association for Mountain-River-Lake Regional Sustainable Development (MRLSD), Nanchang, China, www.livinglakes.org.cn
- Royal Society for the Prevention of Cruelty to Animals, www.rspca.org.uk
- Shanghai Green Oasis, Shanghai, www.oasiseco.org
- Shanghai Wildlife Conservation/Shanghai Oasis Ecological conservation Center, www.greensocc.org
- SIFE of Sun Yat-Sen University, www.sifechina.org
- South China Institute of Botany, Guangzhou Green Camp, www.scbg.ac.cn
- South China Nature Society, www.greeneyeschina.org
- Südwind-Education and Information on Global Developments, Austria, www.suedwind.at; www.suedwind-agentur.at

- SynTao, Beijing, www.syntao.com
- Weltumspannend arbeiten – Global Working, Austria, www.weltumspannend-arbeiten.at
- Werkstatt Ökonomie e. V., www.woek.de
- Wuhu Ecology Center, www.green-anhui.org
- Xinjiang Conservation Fund, Beijing, www.greenxinjiang.org

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- German Asia Foundation (Essen, coordination), www.asienstiftung.de
- Développement et Civilisations Lebret-Irfed (Paris), www.lebret-irfed.org
- Focus on the Global South (Bangkok), www.focusweb.org
- German NGO Forum on Environment and Development (Berlin/Bonn), www.forumue.de
- IG Metall (Frankfurt/Main), www.igmetall.de
- Informationsstelle Lateinamerika (Bonn), www.ila-bonn.de
- INKOTA - netzwerk e.V. (Berlin), www.inkota.de
- Monitoring Sustainability of Globalization (Petaling Jaya)
- Südasien-Informationsnetz (Berlin), www.suedasien.info
- Southeast Asia Information Center (Essen), www.asienhaus.de
- Südwind-Agentur (Wien), www.suedwind-agentur.at
- Transnational Institute TNI (Amsterdam), www.tni.org
- Vlaamse Noord-Zuid-Beweging (11.11.11) (Bruxelles), www.11.be
- Weltumspannend Arbeiten ÖGB (Linz), www.weltumspannend-arbeiten.at
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EU – China: Civil Society Forum

The purpose of the „EU – China: Civil Society Forum“ is to foster the development of relations between the EU, its members and China and to ensure that their relations promote social justice, contribute to the protection of the environment and strengthen human rights.

The forum was initiated by the „EU – China: civil society partnership for social and ecological justice“ project. The forum:

- Provides information on developments in China, the China policy of the EU and its members and China’s policy on the EU.
- Develops proposals on how relations between the EU, its members and China can promote social and ecological justice.
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www.eu-china.net

- Offers background information, analyses, studies and position papers by civil society organizations on developments in Europe-China relations.
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The quarterly electronic newsletter is available in German and English language. The subscription is free.

www.eu-china.net/newsletter

Global Concerns – Global Cooperation

How European and Chinese NGOs
Can Learn from Each Other

A Documentation – Hainan/Guangzhou – June 2009



In June 2009 more than 40 participants from different Chinese and European NGOs met in Hainan and Guangzhou to exchange their working experiences in the fields of climate change, food safety, sustainable agriculture and water.

This “experiment” produced for the European participants new insights on a very active young environmental and consumer protection movement in China, for the Chinese participants on the work of NGOs in Europe and – last but not least – for both sides on the commonalities and differences between Chinese and European organisations.

This book records the conference proceedings and informs about the ideas for future cooperation between European and Chinese NGOs.



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