DISCUSSION PAPER

A Portrait of China's Climate Policy

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Contents

Introduction

The mounting evidence from various sources on the anthropogenic nature of global climate change and its accelerating impacts, coupled with the Intergovernmental Panel on Climate Change's clear warnings, have focused the world's attention on climate change and energy security. China currently emits about 19% of global CO_2 emissions and is expected to contribute circa 27% by 2030. According to preliminary estimates for 2006, China topped the list of CO_2 emitting countries, surpassing the USA by an estimated 8%.

This paper is critical of China's rising emissions, while also stressing that other aspects of China's situation must be taken into account: economic development, per capita emissions, historical contribution to current global warming, and the fact that China manufactures many goods for export.[1] China's per capita carbon emissions are more than three times less than the EU average, and six times less than the US average. As the world's largest developing country and the world's fastest-growing economy, a dramatic debate currently rages: where will China lead the world's CO_2 emission trends? The country itself is facing unprecedented challenges from the repercussions of its own emissions, as well as from mitigation and adaptation processes. However, China also has a profound opportunity to contribute significantly to the transformation to a global low-carbon society.

"Climate change demands an international response, based on a shared understanding of long-term goals and agreement on frameworks for action."

--- STERN REVIEW: The Economics of Climate Change[2]

This discussion paper elaborates 10 central themes on the measures that China is taking and will take to combat climate change in the dimensions of political and civil society. The paper identifies areas where the EU and China can further co-operate to resolve the shared dilemmas of social and economic development and climate security. The paper aims to facilitate a "shared understanding" between China and its world counterparts, and to thereby help dredge the channel for the passage of a successful and meaningful post-2012 climate change mitigation agreement. And in order to establish a foundation for this "shared understanding", from Theme 1 to Theme 6, official statements have been quoted to give a "portrait" of China's climate policy, for Theme 7 official statements from both China and the EU have been summarized. In themes 8 to 10, a commentary by the author is given from the perspective of civil society.

1 Figures from the Netherlands Environmental Assessment Agency (MNP) (2007) http://www.mnp.nl/en/service/pressreleases/2007/20070622ChineseCO2emissionsinperspective.html

2 HM Treasury, Stern Review on the economics of climate change (2006) http://www.hm-treasury.gov.uk/independent_reviews/stern_review_economics_climate_change/stern_review_report.cfm

A) Overview of Government Positions and Programmes

Theme 1: Political Priorities and Determination

To understand China's climate policy requires a basic understanding of the Chinese context and of the vision of the country's government. On the 17th of November 2006, the Chinese President Hu Jintao addressed the APEC (Asia-Pacific Economic Co-Operation) CEO Summit in Hanoi, Vietnam, and outlined a new and long-term core political value of the Chinese government – the Scientific Outlook on Development.[3]

As a member of the international community and of the Asia-Pacific community, China's continued development and increasing engagement with the world in recent years has drawn keen interest in the international community, Hu said. China still faces major problems and challenges due to its big population, weak economic foundation and regionally uneven development. In efforts to solve these problems, China is pursuing a scientifically founded program of development, and will give high priority to the following four areas:

First, China aims at speeding up economic restructuring and the transformation of patterns of economic growth. "We will endeavour to develop a circular economy, lower energy and resource consumption and build a resource-conserving and environment-friendly society and ensure sound balance between economic development, population, resources and environment."

Second, China will accelerate the building of new socialist rural villages. China "will advance comprehensive rural reforms and strengthen development of modern agriculture, enhance the scales of economy in the agricultural sector, and raise overall agricultural productivity, improve farming efficiency and ensure steady growth in farmers' income."

Third, China wants to promote balanced regional development. "We will continue to develop China's western region, revitalise the old industrial bases in China's Northeast, and in other regions, and promote the rise of Central China and encourage China's eastern regions to take the lead in development."

Fourth, China will make continued efforts to build a harmonious society. China will develop social programs, promote social fairness and justice, construct a culture of harmony, and enforce social management.

Furthermore, "We will expand employment, improve the social security system and adjust income distribution."

A year after Hanoi APEC conference in Vietnam, Chinese President Hu Jintao addressed the 2007 Sydney APEC Summit, and highlighted the Chinese government's position on climate change.[4]

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[3] Speech of China's President Hu Jintao (Sep. 2007) , CEO summit of the Asia-Pacific Economic Cooperation (APEC) forum in Hanoi http://www.gov.cn/english/2006-11/17/content_445776.htm

[4] Hu Jintao, President of the People's Republic of China, The APEC CEO Summit, Sydney, Australia, 6 September 2007

To maintain a healthy natural environment is the key condition for building a sustainable future. Climate change has become an issue of global concern, and this fully shows that development and the environment are inextricably interconnected. Climate change is indeed an environmental issue. But ultimately, it is a development issue. We need, within the context of sustainable development, to uphold the United Nations Framework Convention on Climate Change and its Kyoto Protocol as the core mechanism and main avenue for co-operation, to follow the principle of "common but differentiated responsibilities" and tackle climate change proactively through extensive international co-operation. We need to upgrade technologies, ensure that production and consumption meet the requirements of sustainable development, promote "green" growth, and develop a circular economy to protect our homeland and the global environment.

The progress of science, technology and education are important driving forces in the building of a sustainable future. Ultimately, economic growth and a better life can only be achieved by acquiring knowledge and especially through scientific and technological innovation. We need to make scientific and technological co-operation a core priority of the international climate change agenda; we need to expand and deepen such co-operation and to make new progress in scientific and technological innovation. Human resources are the key to scientific and technological innovation, and education provides the basis for it. We need to increase investment in education, we need to bring education to all groups of society and to thus bridge the rural-urban divide, we need to enhance multilateral educational co-operation in all countries, especially in developing countries. This would aid developing countries in their development, and thereby inject new vitality into world economic growth.

Energy plays an enormous role in China's economic and social development, and thus in the building of a moderately prosperous society that benefits in all respects the 1.3 billion people living in China. It is a long and arduous task to use sustainable energy to support sustainable economic and social development. Since China adopted a policy of reform and opening up 29 years ago, its economy has maintained steady growth, with an average annual rate of over 9%. However, hidden by China's GDP growth are a number of pressing structural problems. Environmental degradation is one of these problems. The issue of climate change sets China the unprecedented challenge of maintaining economic growth and reducing energy consumption. Yet, it was said by the government that "an **increase in energy consumption is necessary for development**".

In the last 150 years developed countries have completed their industrialisation, consuming an enormous quantity of natural resources, especially energy resources, in the process. Today, some developing countries are undergoing their own era of industrialisation, and an increase of energy consumption is an inevitable corollary of their economic and social development. The Chinese Central Government sets and will set, for a long time to come, economic development and poverty elimination as the main tasks of the Chinese government and the Chinese people. The Chinese government is accelerating the development of a modern energy industry, and takes resource conservation and environmental protection as two basic state policies, it gives prominence to building a resource-conserving and environmental-friendly society in the course of its industrialisation and modernisation, and will strive to enhance its capability for sustainable development and to make China

an innovative country, so as to make greater contributions to the world's economy and prosperity. [5]

Theme 2: The Chinese Government's Climate Policy [6]

Determined political will is crucial for tackling dangerous climate change. The Chinese government has formulated and released a national programme addressing climate change and has taken a series of measures, including enhancing energy efficiency, diversifying China's energy balance, strengthening environmental protection, slowing population growth and improving the legal framework needed to tackle climate change. A clear picture of the stream of new policies adopted by the Chinese Government would facilitate a more effective scrutiny of the possible grey areas between practises and promises in China today.

The following policies and regulations compose the core of the Chinese government climate policy:

- **The Outline of the 11th Five-Year Plan for National Economic and Social Development of the People's Republic of China (2006-2010)** projects that the per-unit GDP energy consumption by 2010 will have decreased by 20 percent compared to 2005, and that the total amount of major pollutants discharged will have been reduced by 10 percent.

- **Report of the 17th National Congress of the Communist Party of China,** tabled in October 2007, sets the goals of accelerating the transformation of the pattern of development and quadrupling the per-capita GDP between 2000 and 2020, to be achieved through the optimisation of the economic structure and the improvement of economic returns, while reducing the consumption of energy resources and protecting the environment.

- **China's National Climate Change Programme** (hereafter referred to as the **CNCCP**), prepared under the auspices of the National Development and Reform Commission (NDRC) in June 2007, states the Chinese government's objectives, basic principles, key areas of actions, and detailed policies in addressing climate change for the period up to 2010. This is China's major initiative to combat climate change, with clear steps. At the same it was asserted that the full implementation of the programme will be in keeping with *Article 4, Paragraph 7 of the United Nations Climate Change Convention.* [7]

- **The Medium- and Long-Term Development Plan for Renewable Energy in China** was issued by the National Development and Reform Commission in September 2007, in order to speed up the development of renewable energy, promote energy conservation and reduce pollutants, mitigate climate change, and to better meet the

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5 China's Energy Conditions and Policies (Dec. 2007). Information Office of the State Council of the People's Republic of China

6 Refer to official relevant documents tabled by the Chinese central government.

7 Article 4, Paragraph 7 of the United Nations Climate Change Convention:
The extent to which developing country Parties will effectively implement their commitments under the Convention will depend on the effective implementation by developed country Parties of their commitments under the Convention related to financial resources and transfer of technology and will take fully into account that economic and social development and poverty eradication are the first and overriding priorities of the developing country Parties.
http://unfccc.int/essential_background/convention/background/items/2853.php

requirements of sustainable social and economic development. It puts forward the guiding principles, objectives and targets, priority sectors, and policies and measures for the development of renewable energy in China up to 2020. It sets the goal of increasing renewable energy consumption to 10 percent of the total energy consumption by 2010 and 15 percent by 2020.

- **The Outline for National Medium- and Long-term Plans for Science & Technology Development** (2006-2020) lists energy and environment as priority areas, under which the monitoring of global environmental change and response measures thereto are identified as priority themes.

- **China's Scientific & Technological Actions on Climate Change** (hereafter referred to as the **China's S&T Actions**), jointly issued by 14 ministries and institutions[8] in June 2007, has been created to implement the key tasks identified in the Outline for S&T Development, to provide S&T support to the CNCCP Programme, to coordinate climate change-related scientific research and technological development, and to enhance the comprehensive S&T capacity in response to climate change.

- **China's Energy Conditions and Policies**, issued by the Information Office of the State Council of the People's Republic of China in December 2007, was guided by *the Scientific Outlook on Development.* It indicates that the Chinese government is accelerating its development of a modern energy industry, taking resource conservation and environmental protection as two basic state policies, giving prominence to building a resource-conserving and environment-friendly society in the course of its industrialisation and modernisation, and striving to enhance its capability for sustainable development and making China an innovative country.

- **Renewable Energy Law of the People's Republic of China,** approved by the Standing Committee of the National People's Congress (NPC) of the People's Republic of China in the 14th Session on February 28, 2005. It came into effect on 1st January, 2006. The law intends to promote the development and utilisation of renewable energy, to improve the energy structure, to diversify energy supplies, and safeguard energy security; protect the environment, and realise the sustainable development of the economy and society.

Theme 3: Policy Content Index

1. ***The China's National Climate Change Programme (CNCCP)*****, June 2007** [9]

- Observations and climate change trends in China
- Current GHG emissions in China
- China's efforts and achievements in mitigating climate change
- China's basic national circumstances with regards to climate change

[8] Ministry of Science and Technology, National Development and Reform Commission, Ministry of Foreign Affairs, Ministry of Education, Ministry of Finance, Ministry of Water Resources, Ministry of Agriculture, State Environmental Protection Administration, State Forestry Administration, Chinese Academy of Science, China Meteorology Administration, National Natural Science Foundation, State Oceanic Administration, China Association for Science and Technology

[9] Downloadable at http://en.ndrc.gov.cn/newsrelease/P020070604561191006823.pdf

- Impact of climate change on China
- Challenges facing China in dealing with climate change
- Guidelines, principles and objectives of China's climate change policy
- Key areas for GHG mitigation
- Key areas for adaptation to climate change
- Climate change science and technology
- Public awareness of climate change
- Institutions and mechanisms
- China's position on key climate change issues
- Needs for international co-operation on climate change

2. ***The Medium- and Long-Term Development Plan for Renewable Energy in China,*** **September 2007**[10]

- Present situation of renewable energy in China
- The potential of China's renewable energy resources
- Guiding principles of renewable energy development
- Objectives and targets for China's renewable energy development over the next 15 Years
- Priority sectors for renewable energy development in China up to 2010 and 2020
- National policies and measures to support renewable energy development

3. ***China's Energy Conditions and Policies,*** **December 2007** [11]

- Current situation of energy development in China
- Strategy and goals of energy development in China
- All-round promotion of energy conservation
- Improving the energy supply capacity of China
- Accelerating the progress of energy technologies
- Co-ordinating energy and environment development
- Extending energy system reform
- Strengthening international co-operation in the field of energy

[10] Downloadable at http://www.ccchina.gov.cn/WebSite/CCChina/UpFile/2007/20079583745145.pdf (Chinese)
[11] Downloadable at http://www.ccchina.gov.cn/WebSite/CCChina/UpFile/File229.pdf

4. *China's Scientific & Technological Actions on Climate Change,* June 2007 [12]

- Current status of climate change and urgent demands for S&T
- China's S&T achievements in climate change
- Scientific research and technological development
- Establishing the infrastructure necessary for scientific research
- Human resources development and development of research infrastructure
- Guidelines, principles and targets of implementing S&T policies on climate change
- Key tasks of S&T policies
- Key strategies and policies on climate change
- Measures to enforce the implementation of the China's S&T actions

5. *Renewable Energy Law of the People's Republic of China,* February 2005 [13]

- Resource survey and development plan
- Industry guidance and technological support
- Promotion and application
- Price management and fee sharing
- Economic incentives and supervisory measures
- Legal responsibilities

Theme 4: China's Negotiation Position

The above policy package is the domestic effort undertaken by the Chinese government to reduce GHGs emission and energy consumption. It contributes to a more proactive stance of the Chinese delegation at international negotiations. This was especially noticeable at the recently closed United Nations Climate Change Conference in Bali, December 2007.

Advocates called for a reduction in emissions of between 25% to 40% compared with 1990 levels: although this target was not explicitly included in the Bali Roadmap, the necessity of "measurable, reportable and verifiable" measures has been agreed on by all the parties. Yet China's commitment, along with those of other developing countries, to adopt "measurable, reportable and verifiable" measures to reduce emissions also brings to bear huge pressure on its economy and society. To prepare and plan for COP14/MOP4 in Poland and COP15 in Copenhagen, it is necessary to understand China's basic negotiating position, and to thus maximise the chances of success for a Post-2012 Climate Accord.

[12] Downloadable at http://www.ccchina.gov.cn/WebSite/CCChina/UpFile/File199.pdf

Theme 4.1 "Five Propositions of the Chinese Government On Climate Change"[14]

1. **Climate change is a global issue.** Countries all around the world need to join hands to combat climate change. Developed countries should take the lead in emission reductions and should fulfil their commitments to transfer technologies and funds to developing countries.

2. **Climate change is fundamentally a development issue.** Economic growth, social development and environmental protection should be co-ordinated and the patterns of production and consumption required for sustainable development should be established. Endeavours aimed at coping with climate change should promote rather than hinder the economic development and poverty reduction of all countries in the world, especially developing countries.

3. **"Common but differentiated responsibilities"**. The United Nations Framework Convention on Climate Change (UNFCCC) identified "common but differentiated responsibilities" and the justice principle, as central tenets of the Bali Roadmap, around which the consensus of the international community condensed. The UNFCCC and the Kyoto Protocol should serve as the basic framework for international co-operation. Other initiatives and mechanisms calling for practical co-operation in this area are welcomed as beneficial supplements.

4. **Technical progress should play a decisive role in climate change mitigation and adaptation.** The international community should increase investments, expand exchange of information and strengthen co-operation in innovation, promotion and utilisation of technologies, so as to enhance the international community's capabilities to jointly cope with climate change.

5. **Adaptation is an issue of greatest concern to developing countries and an important component in addressing climate change.** Developed countries should help developing countries enhance their adaptability to climate change and improve their ability to cope with climate disasters.

Theme 4.2 Principles and Objectives[15]

4.2.1 Principles

- **To address climate change within the framework of sustainable development. In both the understanding of the international community, and the basic option of the Parties to the Convention, climate change should be addressed within the framework of sustainable development.** As early as in 1994, the Government of China formulated and published its sustainable development strategy - China's

[13] Text available at http://www.ccchina.gov.cn/en/NewsInfo.asp?NewsId=5371

[14] Address by Premier Wen Jiabao (Nov. 2007), to the Third East Asia Summit, expounding China's Position on Climate Change

[15] China's National Climate Change Programme (2007); the same points have been addressed by Gao GuangSheng, General Director at Office of National Coordination Committee on Climate Change at the conference "German-Chinese Perspectives on Energy and Climate Policy - Conference on Renewable Energy and Energy Efficiency" ("Deutsch-Chinesische Perspektiven zur Energie- und Klimapolitik, Konferenz zu Erneuerbaren Energien und Energieeffizienz"), Beijing, January 2008

Agenda 21 - A White Paper on Population, Environment and Development in the 21st Century. Later in 1996, the Government of China, for the first time, adopted sustainable development as the key guideline and strategic goal for its national social and economic development. In 2003, the Government of China further formulated the Programme of Action for Sustainable Development in China in the Early 21st Century. China will continue to actively tackle climate change issues in accordance with its national sustainable development strategy in the future.

- **To follow the UNFCCC's principle of "common but differentiated responsibilities".** According to this principle, developed countries should take the lead in reducing greenhouse gas emissions as well as providing financial and technical support to developing countries. The overriding priorities of developing countries are sustainable development and poverty eradication. The extent to which developing countries effectively implement their commitments under the Convention will depend on the effective implementation by developed countries of their basic commitments.

- **To place equal emphasis on both mitigation and adaptation.** Mitigation and adaptation are both integral components of the strategy to cope with climate change. For developing countries, mitigation is a long and arduous challenge, while adaptation to climate change looms as a more pressing and immediate task. China will strengthen its policy guidance for energy conservation and energy structure optimisation to make efforts to control its greenhouse gas emissions. Meanwhile, China will take practical measures to enhance its capacity to adapt to climate change via key projects for ecosystem protection, disaster prevention and reduction and other key infrastructure projects.

- **To integrate climate change policy with other interrelated policies.** Since adaptation to climate change and the mitigation of greenhouse gas emissions involve many facets of the social and economic sectors, policies to address climate change and other related policies will only be effective if they are integrated. China will continue to consider energy conservation, energy structure optimisation, ecological preservation and construction, and overall agricultural productivity advancement as important components of its national climate change policy. Therefore, China will give full consideration to climate change issues by integrating the policy of climate change mitigation and adaptation into its national, social and economic development programme and will push forward the policy in a co-ordinated way.

- **To rely on the advancement and innovation of science and technology.** Technological advancement and innovation are the effective way to mitigate greenhouse gas emissions and enhance our ability to adapt to climate change. Realising the leading and fundamental function of scientific and technological advancement in mitigation and adaptation to climate change, China will make great efforts to develop new and renewable energy technologies and new technologies for energy conservation, to promote carbon sink technologies and other adaptive technologies, to accelerate scientific and technological innovation and importation, and to provide strong scientific support of efforts to address climate change and promote sustainable development.

- **To participate in international co-operation actively and extensively.** Global climate change is a serious common challenge for the international community. Though countries differ in their understanding of climate change and in their ability to address this issue, they share a basic consensus on the need for co-operation and dialogue to jointly address the challenges of climate change. China will continue to actively par-

ticipate in the international negotiations of the UNFCCC and relevant activities of the IPCC. China is ready to strengthen international co-operation in addressing climate change, including co-operation on the clean development mechanism and technology transfer, and to join the efforts of the international community to tackle global climate change.

4.2.2 Objectives (by 2010)

To make significant achievements in controlling greenhouse gas emissions, to enhance the capability of continuous adaptation to climate change, to promote climate change related science, technology and R&D to a new level, to remarkably raise public awareness of climate change, and to further strengthen the institutions and mechanisms on climate change.

1. Control Greenhouse Gas Emissions

- **To achieve the target of about 20% reduction of energy consumption per unit GDP by 2010, and to thus reduce CO2 emissions** by accelerating the transformation of economic growth patterns, strengthening the policy guidance on energy conservation and efficient utilisation, reinforcing governmental supervision and administration of energy conservation, expediting R&D, demonstration and deployment of energy conservation technologies, bringing new market-based mechanisms for energy conservation into full play, raising public and social awareness of energy conservation, speeding up the development of a resource-conserving society.

- **To raise the proportion of renewable energy (including large-scale hydropower) in primary energy supply up to 10% by 2010, the extraction of coal-bed methane up to 10 billion cubic meters** by optimising energy consumption structure. Measures in this regard include: vigorously developing renewable energy, actively promoting nuclear power plant construction, and speeding up utilisation of coal-bed methane.

- **By 2010, the emissions of nitrous oxide from industrial processes will remain stable at 2005 levels through the reinforcement** of industrial policy governing metallurgy, building materials, and the chemical industry, the development of a circular economy, raising resource utilisation efficiency, and strengthening emissions control of nitrous oxide.

- To promote the adoption of low-emission and high-yield rice varieties, and 'semi-drought rice cultivation', and scientific irrigation technology. To strengthen the R&D on outstanding ruminant animal breeds and large-scale breeding and management techniques, to reinforce the management on animal wastes, wastewater and solid wastes, and promote biogas utilisation to control the growth of methane emissions.

- **To increase by 2010 the forest coverage rate to 20% and to thus realise the expansion of carbon sinks by 50 million tons compared to 2005 levels,** by continuously carrying out the policies and measures of reforestation, returning farmland to forest and grassland, natural forest protection, and basic construction for farmland and other key engineering projects.

2. To Enhance China's Capacity to Adapt to Climate Change

- **To increase the improved grassland by 24 million hectares, restore the grassland suffering from degradation, desertification, and salinity by 52 million hectares, and to strive to increase the efficient utilisation coefficient of agricultural irriga-**

tion water to 0.5 by 2010 through the strengthening of farmland infrastructure, the adjustment of cropping systems, the selection and breeding of stress-resistant varieties and the development of bio-technologies and other adaptive countermeasures.

- **By 2010, 90% of native forest ecosystems and wildlife will be effectively protected and the nature reserve area will account for 16% of China's total territory, and 22 million hectares of desertified lands will be under control** through the strengthening of natural forest conservation and nature reserve management and the continuous implementation of key ecological restoration programmes, and the establishment of key ecological protection areas and the enhancement of natural ecological restoration.

- By 2010, the vulnerability of water resources to climate change will have been reduced through a range of effective measures, including rational exploitation and optimised allocation of water resources, the development of new mechanisms for infrastructure construction and increased public awareness of the need for water-saving. At that time, the anti-flood engineering systems in large rivers and the high standard for drought relief of farmland will be completed.

- By 2010, the construction and expansion of mangroves will be finished, the capability to resist marine disasters will be raised remarkably, and the social damages and economic losses caused by sea level rise will be as far as possible reduced through scientific monitoring of sea level change and regulation of the ecosystem in marine and coastal zone areas and through the rational exploitation of coastlines and coastal wetlands and construction of a coastal shelter system.

3. To Enhance Research & Development

- China will work hard to keep up with advanced international research on climate change in some fields by 2010, so as to provide an effective and scientific basis for the development of national strategy and policy on climate change, and scientific guidance for China's participation in international co-operation on climate change. Measures in this regard include strengthening basic research on climate change, further developing and improving research and analytical methodology, intensifying the training and capacity building for professionals and decision-makers on climate change.

- In order to build up a strong scientific support to address climate change, China will work hard to build up its independent innovation capacity, to promote international co-operation and technology transfer, to achieve breakthrough in R&D on energy development, energy conservation and clean energy technology, and to significantly enhance the adaptation capacity of agriculture and forestry by 2010.

4. To Raise Public Awareness and Improve Management

- China will work hard to raise public awareness of climate change in all residential communities by 2010, to raise the whole society’s awareness of this issue, and to create a friendly social environment to address climate change by means of modern information dissemination technologies, to strengthen communication, education and training, and to raise public awareness and participation in efforts to combat climate change.

- China will establish a suitable and highly efficient institutional and management framework to address climate change in the future, and to further improve the inter-

ministerial decision-making and co-ordination mechanism on climate change, and to establish an action mechanism for response to climate change involving a wide range of enterprise and public participation.[16]

Theme 5: Institutions and Mechanisms in China's Climate Policy

- **The National Leading Group to Address Climate Change**

  Headed by: Premier Wen Jiabao, with Vice Premier Zeng Peiyan and State Councillor Tang Jiaxuan serving as the Deputy Directors of the Group. Office established within the National Development and Reform Commission.

  Responsible for: Deliberating and determining key national strategies, guidelines and measures on climate change, as well as co-ordinating and resolving key issues related to climate change.

  Local Legal Effect: Relevant ministries and departments of the State Council shall seriously fulfil their responsibilities, and strengthen co-ordination and co-operation, so as to achieve a united effort to address climate change. Local governments at different levels shall enhance the organisation and leadership on local responses to climate change, and formulate and implement local climate change programmes as a matter of priority.

- **A regional administration system for co-ordinating the work in response to climate change**

  Measures in this regard include: establishing regional administration agencies to fulfil and implement the national program, to organise and co-ordinate local activities and actions in response to climate change; building up local expert groups on climate change and initiating proper climate change policy and measures according to local conditions such as geographical environment, climatic conditions and economic development; meanwhile, strengthening the co-ordination between national and local governments to ensure the smooth implementation of relevant policy and measures in response to climate change.

- **Making effective use of the Clean Development Mechanism Fund (CDMF)**

  According to the pertinent articles on Measures for Operation and Management of Clean Development Mechanism Projects, the Government of China will levy a certain proportion of the certified emission reductions (CERs) transfer benefits from CDM projects, and this revenue will be used to establish the Clean Development Mechanism Fund to support the country's activities on climate change, such as climate change related science and technology research, and raising national adaptation and mitigation capacity. The establishment of the Clean Development Mechanism Fund will also play an active role in relieving the demands for funds in response to climate change, and guaranteeing the effective implementation of this national program.[17]

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[16] *China's National Climate Change Programme*, (June 2007), P23-29
[17] *China's National Climate Change Programme*, (June 2007), P56-57

Theme 6: Energy Security Issue

Energy security is a global issue. This problem has been exacerbated in China for two main reasons: its massive population and its surging economic growth, although this has undoubtedly contributed to the world poverty alleviation rates substantially over the last two decades. A dilemma here is China's rapidly growing energy consumption and its per-capita energy consumption level: about three-fourths of the world's average. The Chinese government promises in its **Energy Conditions and Policy Report** that China did not, does not and will not pose any threat to the world's energy security. However, there are challenges in the construction of a stable, economical, clean and safe energy supply system.[18]

- Prominent resource constraints and low energy efficiency. Poorly organised distribution of energy resources makes it difficult to secure a continued and steady supply; the extensive pattern of economic growth, irrational energy structure, unsatisfactory energy technology and poor management have resulted in higher energy consumption per unit GDP. This further intensifies the energy supply-demand contradiction. An increase solely in supply is insufficient to meet the rising demand for energy.

- Coal is the main source of energy consumed in China, and this energy structure with coal playing the main role will remain UNCHANGED[19] for a long time to come. Relatively backward methods of coal production and consumption have intensified the pressure on environmental protection. Coal consumption has been the main cause of smoke pollution in China and the main source of greenhouse gas emissions. As the number of motor vehicles climbs, the air pollution in some cities is becoming a mixture of coal smoke and exhaust gas.

- China's energy market system is yet to be completed, as the energy pricing mechanism fails to fully reflect the scarcity of resources, its supply and demand, and the environmental cost.

China's and India's growing participation in international trade heightens the importance of their contribution to collective efforts to enhance global energy security. How China and India respond to the rising threats to their energy security will also affect the rest of the world. Both countries are already taking action. The more effective their policies are to avert or overcome a supply emergency, the more other consuming countries stand to benefit, and vice-versa.[20]

China solves problems that emerge in the process of economic advancement through development and reform, in the application of its "principles", like the Scientific Outlook on Development, persevering in people first, changing its concept of development, making innovations in the mode of development, and improving the quality of development. China's energy development is based on the principle of relying on domestic resources, but more and more realities tell the insufficient ability of domestic resources to meet demand. An impressive case is the latest snow storm that hit South China during the Chinese New Year Holiday in February 2008. The peoples' enthusiasms in celebrating the most important holiday in China were frozen by the grim truth – the severe winter

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[18] *China's Energy Conditions and Policies*, (Dec 2007), P9-10

[19] Quoted from China's Energy Conditions and Policies report, page 9, issued in Dec 2007. Downloadable at http://www.ccchina.gov.cn/WebSite/CCChina/UpFile/File229.pdf

[20] *World Energy Outlook 2007*, Executive Summary, P50

weather that caused chaos in China cost the economy more than $15 billion and killed at least 107 people across the country, said by the Chinese government.[21] And a debilitating energy shortage provoked more discussion on the issues of climate change and energy security.

China has a strong will to resolve this challenge by striving to build a stable, economical, clean and safe energy supply system, so as to facilitate sustained economic and social development through sustained energy development. The Chinese government depends on structural adjustment as the fundamental approach, on scientific and technological advances as the key, on improved administration as a crucial measure, on the strengthening of law enforcement as an important guarantee, on the deepening of the reform as an internal motive force, and on public participation as the social foundation. And the government gives top priority to developing renewable energy sources in increasing energy supply, improving the energy mix and thus helping to achieve sustainable development goals. Various policies and regulations have been promulgated. Science and technology has been set as the primary productive force and the main motive force of energy development. The country is gradually striving to establish a market-oriented system for technological innovation, in which business will play a leading role and which combines the efforts of business, universities and research institutes.[22]

Every country has the right to rationally utilise energy resources for its development, and the overwhelming majority of countries could not enjoy energy security without international co-operation. To realise a steady and orderly development of the world economy, it is necessary to promote economic globalisation, and to develop in a direction featuring balance, universal benefit and mutual progress, and it is necessary for the international community to foster a new concept of energy security characterised by mutual benefit and co-operation, diversified development and co-ordinated guarantees. In recent years, sharp fluctuations of oil prices on the international market have affected the growth of the world economy. The causes are multiple and complex, which demands that the international community strengthens dialogue and co-operation to work out a solution together from various aspects. To safeguard world energy security, China holds that the international community should make efforts in the following three aspects:

— **Intensifying mutually beneficial co-operation in energy exploration and utilisation.** To ensure world energy security, it is imperative to strengthen dialogue and co-operation between energy exporting countries and energy consuming countries, as well as between energy consuming countries. The international community should strengthen consultation and co-ordination with regards to energy policies, improve the international energy market monitoring and emergency response mechanisms, promote oil and natural gas development to increase energy supply, realise globalisation and diversification of energy supply, ensure stable and sustainable energy supply internationally, maintain reasonable energy prices on the international market, and ensure that each country's energy demands are well met.

— Setting up a system to develop and share advanced technology. Energy conservation and diversification is a long-range plan for global energy security. The international community should strive to develop and share energy conservation technology, promote the comprehensive utilisation of energy, and encourage each country to improve energy efficiency. It is necessary to actively advocate co-operation in the highly efficient utilisa-

[21] "China snowstorms to cost 15bn", 13.2.2008, http://news.bbc.co.uk/2/hi/business/7243875.stm

tion of fossil fuels, such as clean coal technology, encourage co-operation in the international community in major energy technologies, such as renewable energy, hydrogen energy and nuclear energy, and to move toward the establishment of a future world energy supply system, using resources that are clean, economical, safe and reliable. Aiming at the sustainable development of humanity, the international community should handle well the problems concerning capital investment, intellectual property rights protection and popularisation of advanced technology, so as to benefit all countries and allow them to share humanity's achievements.

— Maintaining a safe and stable political environment. Safeguarding world peace and regional stability is the prerequisite for global energy security. The international community should work collaboratively to maintain stability in oil producing and exporting countries, especially those in the Middle East, to ensure the security of international energy transport routes and avoid geopolitical conflicts that affect the world's energy supply. The various countries should settle disputes and resolve contradictions through dialogue and consultation. Energy issues should not be politicised, and triggering antagonisms as well as the use of force should be avoided.[23]

Theme 7: Enlarging Opportunities Through External Engagement to Achieve Domestic Goals - Promising Chinese-EU Cooperation

It is unreasonable to expect those countries that are not yet fully industrialised to sacrifice economic development for climate policy reasons. No principle is more important in this endeavour than the principle of common but differentiated responsibilities that underpins the UN negotiations. But China needs to be part of the global transition to a low carbon society. If it is not then that transition will not succeed and China's own economy will be exposed to serious damage. This will require frameworks that enable China to move to low carbon in ways that are consistent with China's other goals, and which do not impose developmental burdens on the Chinese economy. In other words, the choices China makes for energy security need to be the same as those necessary to deliver a transition to low carbon. The cost of low carbon choice in China – what US commentator Tom Friedman calls that "China price" – needs to be not significantly higher than the cost of meeting China's energy needs as effectively as possible. To achieve this will be challenging. But it is entirely possible. In fact, in most areas, the demands of energy security and climate security reinforce each other.[24] The experience in Europe is showing that it is possible to reduce emissions rapidly without damaging the economy. And this is obviously true in the case of energy efficiency and renewables. By acting together, harnessing the market power of the world's largest single market to that of its fastest growing economy, there are opportunities in the energy and technology sector to secure the achievement of domestic goals for both the European Union and China.

According to the *Medium and Long-Term Development Plan for Renewable Energy in China*, renewable energy development will not only focus on scaling-up deployment and

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[22] *China's Energy Conditions and Policies, (December 2007),* P28
[23] *China's Energy Conditions and Policies, (December 2007),* P41-43
[24] Climate Change: A Strategic Priority for Economic Growth, (May 2007), Speech by John Ashton, UK Foreign Secretary's Special Representative for Climate Change at China Energy Law International Symposium.

increasing the proportion of renewable energy in total energy supply, but also on resolving rural energy problems, promoting a "recyclable" economy, and building a resource-saving, environmentally-friendly society in China. For those more newly developed renewable energy sectors with large resource potential and good commercial prospects, necessary measures will be taken to enlarge market demand, while at the same time increasing the input for technology development. With this two-pronged strategy, sustainable and stable market demand can create conditions beneficial to the development of the renewable energy industry. Priority will be attached to technologies mature in the current market, such as hydropower, biomass power, biogas, biomass pellet fuel, wind power, and solar thermal. At the same time, importance will also be attached to those less mature technologies that have good future prospects, such as solar photovoltaics and liquid biofuels. The Chinese government will adopt economic policy incentive measures to promote the utilisation of renewable energy technologies for addressing issues of energy shortage and lack of access to electricity in rural areas, also supporting development of a "recyclable economy". At the same time, the government will set up a market mechanism for promoting renewable energy development, using market measures to stimulate the participation of investors under the support of the nation's policies, to achieve large-scale development.

By 2010 China aims to raise the share of renewable energy in the total primary energy consumption to 10 percent. By 2020, it will aim to raise this again, to 15 percent. This will be achieved by fully utilising, to the extent possible, technologically mature and economically feasible renewable energy sources, such as hydropower, biogas, solar thermal, geothermal, and by promoting the development of the wind power, biomass power, and solar photovoltaic industries. China will also aim to provide electricity to people in remote, off-grid areas and to resolve fuel scarcity problems in rural areas through the use of renewable energy, doing so according to local conditions and at the same time effectively protecting the ecological environment. The utilisation of organic wastes for energy will be promoted according to the principles of a "recyclable economy," basically eliminating the environmental pollution problems caused by organic wastes. China will actively promote the development of renewable energy technologies and industries, building up a renewable energy technology innovation system. According to the *Medium and Long-Term Development Plan for Renewable Energy in China*, by 2010, China will have achieved the ability to produce domestically the main renewable energy equipment it uses. By 2020, local manufacturing capability based mainly on home-grown Intellectual Property Right (IPR) will be achieved. Based on the analysis of the resource potential, technological situation, and market demand for all types of renewable energy, targets in the priority sectors for renewable energy development in China up to 2010 and 2020 have been set as shown in Table 1.

Prioritised Renewable Energies	**2010**	**2020**
Hydropower	190 GW[25]	300 GW
Biomass Energy	5.5 GW	30 GW
- Biomass power *(agricultural and forestry wastes, energy crops plantations, bagasse included)*	4 GW	24 GW
- Large-scale biogas	1 GW	3 GW
- Biomass Pellets	1 million tons	50 million tons
- Biogas and Biomass Gasification	40 million house-holds	80 million house-holds
- Liquid Bio-fuels	[26]	
Wind Power	5 GW	30 GW
Solar Power	300 MW	1.8 GW
Solar Thermal Applications	150 million m^2	300 million m^2
Geothermal Energy	4 Mtce	12 Mtce
Tidal Power	N/A	100 MW

Table 1: Renewable energy development targets in China up to 2010 and 2020 [27]

According to the EU Commission, a stable, growing China is in Europe's interest. Europe has a critical interest in China's transition to a stable, prosperous and open economy. It recognises that the openness of the EU market to Chinese exports will be a key factor in China's further development. But Europe also stands to benefit from China's growing market for advanced technology, high-value goods and complex services. European consumers will continue to benefit from competitively priced imports from China. The macro-economic benefits of China's export strength for European competitiveness and growth are significant. These gains outweigh the losses suffered in particular areas. The only sustainable approach for Europe is to welcome China's growth and seek to benefit from it through open trade.[28]

On 23 January 2008 the European Commission has put forward the "Climate Action and Renewable Energy Package"– the European Commission's legislative proposal to achieve agreed EU objectives in the fight against climate change which is to reduce EU's overall emissions to at least 20% below 1990 levels by 2020 and to increase the share of renewables in energy use to 20% by 2020 – the "20 20 by 2020" target.

[25] Installed capacity, refer to *Medium and Long-Term Development Plan for Renewable Energy in China,* 2007

[26] By 2010, China aims to utilize (an additional) 2 million tons of bio-ethanol from nonfood-grain feedstock and increase biodiesel use to 200,000 tons. By 2020, China aims to utilize 10 million tons bio-ethanol and 2 million tons biodiesel, replacing 10 million tons of petroleum-based fuel annually.

[27] Data refer to: *Medium and Long-Term Development Plan for Renewable Energy in China*

[28] Accompanying COM(2006) 631 final: Closer Partners, Growing Responsibilities – A policy paper on EU-China trade and investment: Competition and Partnership, Commission of the European Communities, Brussels, 24.10.2006

The core of EU's energy policy is "a more sustainable, secure and competitive low-carbon economy". But the package also warns: "even if the EU succeeds in making significant changes to its energy mix and energy needs, it will still be highly dependent on oil, gas and coal for the foreseeable future."[29]

In parallel, recent price rises for oil and gas have brought home how competition for energy resources is becoming more intense every year; and how energy efficiency and renewable sources of energy can be profitable investments. This was the background to EU leaders' readiness to commit to a transformation of the European economy requiring a major political, social, and economic effort. At the same time, change offers a stepping stone to the modernisation of the European economy, orientating it towards a future where technology and society will be attuned to new needs and where innovation will create new opportunities to feed growth and jobs.

A global commitment remains indispensable in tackling climate change. But the case for Europe to act now is compelling. The longer Europe waits, the higher the cost of adaptation. The earlier Europe moves, the greater the opportunity to use its skills and technology to boost innovation and growth through exploiting first mover advantage. Indeed for many of the technologies concerned, the size and rate of growth in world markets are key determinants of price. China desires to support its energy policies through international trade and investment, as stated by the Vice Premier Zeng Peiyan, and for the European Union, based on the very similar interests as China has, co-operation will be the most effective way to realise a sustainable, secure and prosperous economy.

[29] Energy for a Changing World: An Energy Policy for Europe – The Need for Action, http://ec.europa.eu/energy/energy_policy/index_en.htm, Published by: European Commission, Directorate-General for Energy and Transport, BE – 1049

B) Commentary From the Perspective of Civil Society

Theme 8: Implementation of China's Climate Policy

Policy implementation and enforcement is a perennial problem in the Chinese political-economic system. Internal barriers and market fragmentation have plagued economic development in China. Embedded in the vertically structured regulatory regime, China's climate policies fall into three categories. The central government establishes the first two levels of policy, local governments, including provincial, municipal, and county governments establish the third level of policy with overall direction from the central government. First-level policies provide general direction and guidance, and include speeches of state leaders about climate change and renewable energy, as well as the Chinese government's standpoint on the global environment. Second-level policies include specific goals and objectives, development plans, laws and regulations which attempt to standardise the directions, focal points, and objectives of renewable energy development from different dimensions and viewpoints. Some ministries and departments propose concrete policies and regulations. Second-level policies have a crucial role in promoting and facilitating application and implementation of the central government's mandate. Third-level policies consist of practical and specific incentives and managerial guidelines.[30] In developing local policies and programmes, provincial or municipal governments need to be consistent with the national regulations. However, there is a growing tendency for the regulations and measures of sub-national governments to develop their own dynamics, speed and, partly, contents, thus deviating at least temporarily, and sometimes substantially, from national regulations.

The state apparatus in China is of over-arching importance in environmental protection and reform. The rise of environmental consciousness is mainly expressed by the impressive rise of environmental protection bureaus at various governmental levels. Yet the most common complaints from Chinese and foreign environmental analysts focus precisely on this system of (local) Environmental Protection Bureaus (EPBs) – on their poor environmental capacity; on the dependence of the local EPBs on both the higher level EPBs and on local governments, which often have no interests in stringent environmental reform but play a key role in financing the local EPBs; on the lack or distortion of environmental information; on the low priority given to environmental criteria in assessing local governments; and on the poor financial incentives for both governments and private actors to abide by environmental laws, standards and policies. Nevertheless, the environmental state in China is clearly undergoing a process of political modernisation, in which traditional hierarchical lines and conventional divisions of power are being transformed. Although processes of political modernisation in China's environmental policy have different characteristics from those witnessed in Europe, the direction of those reforms are similar: greater decentralisation and flexibility, and a shift away from a rigid, hierarchical, command-and-control system of environmental governance. Increasingly, local EPBs and local governments are being given – and are taking – larger degrees of freedom in developing environmental priorities, strategies, financial models and institutional arrange-

[30] *Renewable Energy Policy in China: Overview*, National Renewable Energy Laboratory

ments. This parallels broader tendencies of decentralisation in Chinese society, and is also environmentally motivated by state failure in environmental policy. [31]

It is true that China has had difficulty in enforcing its environmental laws and that pollution or ministries' inaction continues, despite the proliferation of new policies. Most of the policies have traditionally been carried out by isolated administrative authorities, with little co-ordination among these bodies. The State Environmental Protection Administration (SEPA) now recognises that co-operation across government departments and sectors is the key to the success of the new environmental framework.[32] To resolve the predicament of policy implementation definitely needs a systematic reform, nevertheless, the country's environmental agency is being strengthened in a limited but promising political space. SEPA has gained significant power in recent years and has shaken off its moniker as a "rubber stamp" agency. In 2005 and 2006, it launched several rounds of crackdowns against giant industrial polluters. And early this year, it issued a strong measure that suspends or restricts the environmental impact assessment permit process for certain construction projects until the companies comply with pollution regulations. The agency is also partnering with the Ministry of Supervision on environmental investigation, the People's Bank of China, and the China Banking Regulatory Commission on initiating a "green banking" mechanism, and plans to work with other ministries and departments on regulating polluters.[33]And in order to empower the EPBs system more effectively, at the 11th National People's Congress – China's top legislature, China's State Council promoted the State Environmental Protection Administration (SEPA) to cabinet ministerial level. The establishment of China's Environment Ministry is a milestone which indicates that the once marginalised environmental issue is moving to the centre stage in China.

In addition, as the newly adopted China's Energy Conservation Law comes into effect on 1 April, 2008, work carried out by local government officials in energy conservation will be officially integrated into the assessment of their political performance – "The way in which energy saving goals are accomplished will be made part of the performance rating of local governments and their leaders" the law says.

Besides, a spring of change is spouting. For example, the Urban Environmental Quality Examination System, ranking in this system of environmental indicators not only allows SEPA to compare municipalities, it also enables governments to design environmental responsibility contracts with local leaders for improvements in individual indicators, and to link these to assessments, financial incentives and promotion, thus encouraging town and village leaders to take environmental protection more seriously. This is a system of making local environmental governance accountable to the higher levels, in a situation in which decentralised, civil society based systems of accountability are underdeveloped. Via such mechanisms environmental standards are brought into the political system, so that local leaders are no longer judged only according to political and economic criteria, but also according to environmental results.[34] This newly implemented system for the evaluation and promotion of government officials demonstrates that the time is past, in

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[31] *China's limits to growth – greening state and society* (2006), Peter Ho and Eduard B. Vermeer, Blackwell Publishing, P37

[32] *China Needs New Environmental Policies, SEPA Says*,(September 2007), Ling Li , http://www.worldwatch.org/node/5370

[33] Hong Yaxiong, Deputy Director at SEPA's Policy Department, (12.2.2008) http://www.rsc.org/chemistryworld/News/2008/February/12020801.asp

[34] Rock, M.T. 2002b, Getting into the Environment Game: Integrating Environmental and Economic Policy – making in China and Taiwan, American Behavioral Scientist 45(9):1435-55

which economic and social development had absolute priority over environmental protection.

Further changes sprout. The city of Wuxi, in South China, recently responded to the toxic pollution coming out of local water taps by ordering the closure of 1,340 factories that were dumping their effluent into the Tai Lake. They did this because outraged citizens had begun strenuously protesting, presenting significant risk to the careers of local officials. Of course, those polluting factories had been supported by those same officials in order to meet the demands for jobs and growth. But a newly awakened Chinese populace is now realising that a growing economy isn't worth much if the air and water are poisoned as a result. [35]

And besides the Environmental Protection Bureau system, other powerful government departments are getting involved in environmental protection via legislation. According to China News Agency[36] the State Council, China's cabinet, recently issued a directive banning the production of ultra-thin plastic bags for environmental reasons. The ruling also prohibits shops, supermarkets and sales outlets nation-wide from handing out free plastic bags starting on 1 June, 2008. People in China use up to 3 billion plastic bags every day and dispose of more than 3 million tons of the bags annually.[37] The new ban will not only benefit the environment and energy conservation, but also, or even more importantly, it will trigger a profound change in the habits of 1.3 billion consumers. Another example is China's Ministry of Science and Technology (MOST)[38] launching of a new energy conservation guide[39] for citizens in an effort to promote the twin goals of saving energy and reducing emissions. This guide is a part of a nation-wide campaign on energy conservation included in China's Scientific & Technological Actions on Climate Change. If every Chinese citizen takes the full range of relevant actions to change their lifestyle, this would save the equivalent of some 77 million tons of coal each year and keep roughly 200 million tons of CO_2 out of the atmosphere, the handbook concludes. In 2004, consumption-related energy use accounted for 24 percent of China's total, the equivalent of 530 million tons of coal and an increase of 9.9 percent from the previous year, People's Daily reports.[40] In the first half of 2007, energy consumption per unit of GDP decreased by some 2.8 percent compared to the same period last year; however, electricity consumption per unit of GDP increased by some 3.6 percent, according to the National Bureau of Statistics.[41]

Theme 9: The Growing Voice of Civil Society

Together with economic liberalisation, decentralisation of decision-making and experiments with local democratisation, China is also experiencing mounting pressure from citizens, demanding that local environmental authorities reduce environmental pollution. In China, now, there is growing attention paid by the media to environmental pollution and environmental mismanagement, and the work of dynamic NGOs has articulated civil

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35 *China's Coming Environmental Renaissance*, (November 2007), Yingling Liu, http://www.worldwatch.org/node/5510
36 http://env.people.com.cn/GB/6750870.html (Chinese)
37 http://env.people.com.cn/GB/6656278.html
38 http://www.most.gov.cn/eng/index.htm
39 http://www.most.cn/ztzl/jqjnjp/qmjnjpsc/qmjnjpsc-ml.htm
40 http://www.gov.cn/jrzg/2007-09/07/content_740796.htm
41 http://news.xinhuanet.com/newscenter/2007-07/30/content_6452676.htm

society's environmental interests to economic and political decision-makers. These drive out within the context of the growing commitment of the Communist Party of China (CPC) and the central government to combat pollution, and the central government's encouragement of the media and individuals to speak up on environmental misuse. In that sense, the dominant environmental discourse and the advocacy coalitions supporting that discourse have changed dramatically during the last fifteen years.

One of the restrictions that prevents civil society – and other institutions beyond state and market – from playing a larger role in environmental reform is its limited access to environmental information. This is the result of several reasons: a lack of environmental monitoring since most environmental monitoring needs to be funded by the local governments, which have limited budgets and distortion of information processing; the secrecy with which environmental data is handled, putting them beyond the reach of other large segments of society; the absence of a right-to-know code, legislation or practice; and the limited internet use and access. Often, only general and aggregate date are available, and then only for political decision-makers and scientists; more specific local data either are not collected or are kept secret for those directly involved in environmental pollution. Consequently, local EPBs rely strongly on complaints as a way for monitoring, and priorities for control and enforcement are frequently set accordingly.[42] Consequently, it is not a surprise that there is a gap between what has been conveyed by the government on how China wants to mitigate climate change and what has been understood by its 1.3 billion citizens.

According to an in-depth interview conducted by Greenpeace in late 2007 in Beijing among the middle class, public understanding of "climate change" is still vague. (Figure 1)

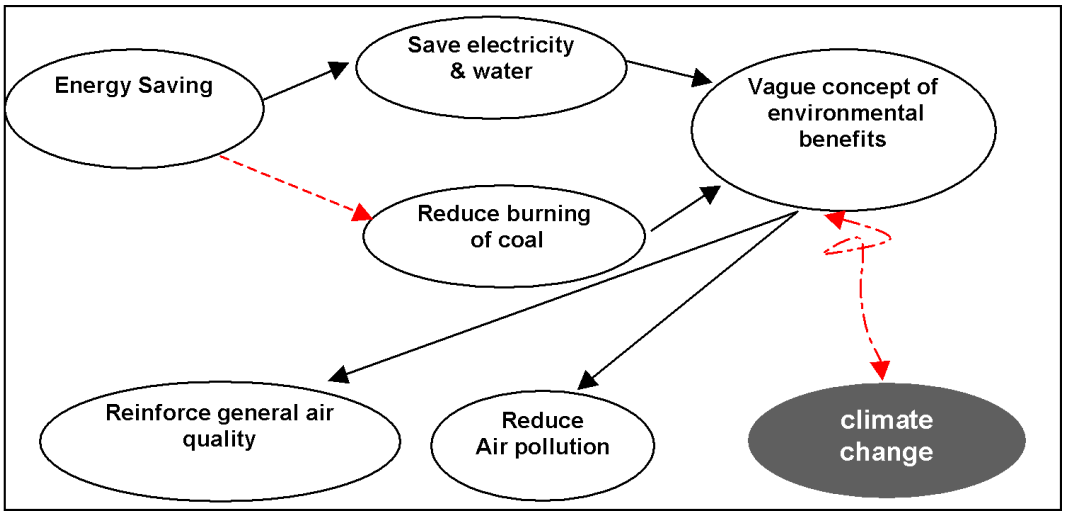

Figure 1: Public understanding of energy saving and climate change

Therefore it can be said that what China has achieved in terms of greenhouse gas emission reductions today is merely the tip of the iceberg of what could be done. Much more decarbonisation would be possible if the Chinese public were more informed, involved and hence motivated. To explore different avenues for tackling climate change, international NGOs, including Greenpeace, WWF, the Natural Resources Defence Council, En-

[42] Wu, C. and A. Robbins, 2000, *An overview of Accountability Issues in China's Environmental Governance*

vironmental Defence, Conservation International, and the Heinrich Böll Foundation, have established offices in Beijing and are pursuing projects related to energy and climate policy. Domestic NGOs, which generally lack experience in addressing climate change by themselves, are rising to the challenge, networking with international NGOs and enhancing capacity to effectively get involved in the issue.

And what is interesting in China are the GONGOs - environmentally-oriented government-organised NGOs. GONGOs are playing an increasingly important role in environmental governance in China today. They have more freedom of registration and manoeuvre due to their close links with state agencies. Via their expert knowledge and close networks with policy-makers, these GONGOs articulate environmental interests and bring them into sate and market institutions. In doing so, they help bridge the gap between NGOs and civil society on the one hand and the state on the other, thus "becoming an important non-state arena for China's environmental politics".[43] Now that these GONGOs are gaining organisational, financial and political independence and autonomy from the state, they are evaluated more positively by Western scholars. Although they remain embedded in a dominating state structure, the state is relaxing its control and allowing them relative autonomy in developing activities and raising funds.

It is notable that Chinese officials, especially in the central government, have openly acknowledged the problems of the ineffective policy enforcement nation-wide and permitted widespread reporting of them in the Chinese media. The government has also given more freedom to non-governmental environmental organisations and tolerated the growing number of environmental protests (e.g. Xiamen anti-paraxylene protest)[44]. As in other countries in the past, the environment has become a leading field for open discussion and government reform, with potentially far-reaching benefits for Chinese citizens.

At this point, it can be said the unprecedented crisis of climate change can bring another opportunity for the development of social equity and democracy in China. On 31 January, 2008, the German Environment Minister Sigmar Gabriel held a special meeting with Chinese Environmental NGOs during his climate and energy orientated trip to China.[45] This demonstrates the Chinese civil society, especially NGOs can and will play an important role to spread a broader understanding with international perspective between China and the outside world. And internally, civil society has already held talks and meetings with Chinese government officials, especially some members at the Chinese negotiation delegation to the Bali United Nation's Conference on Climate Change. This dynamic interaction and openness benefits the government and civil society with mutual understanding and momentum to enlarge chances that the government will adopt more political advocacy from civil society and the international community.

In July 2007, initiated by a range of local and international NGOs in China, a project seeking common positions and strategies in common actions to combat climate change was fulfilled. Over 200 NGOs joined a survey, several rounds of consultation and workshop, the *Positions of Chinese Civil Society* came out right before the UN Climate Conference in Bali, December 2008. Although comparing with many NGOs in other coun-

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[43] Wu,F (2002) New Partners of Old Brothers? GONGOs in Transitional Environmental Advocacy in China, China Environment Series 5 45-48

[44] http://www.chinadaily.com.cn/china/2008-01/03/content_6368825.htm

[45] Conference "German-Chinese Perspectives on Energy and Climate Policy - Conference on Renewable Energy and Energy Efficiency" ("Deutsch-Chinesische Perspektiven zur Energie- und Klimapolitik, Konferenz zu Erneuerbaren Energien und Energieeffizienz"), Beijing, 31 January 2008

tries, a joint statement raised by this NGO coalition is relatively moderate, it shows a strong signal that civil society in China is rousing and acting.

POSITIONS OF CHINESE CIVIL SOCIETY [46]

In order to avoid the worst impacts of climate change, countries around the world should take immediate actions. Chinese civil society hence calls for:

Position One: The governments of the world to set a common goal to tackle climate change under the auspices of the United Nations Framework Convention on Climate Change.

Position Two: To differentiate responsibilities between developed countries and developing countries in tackling climate change.

The developed countries to take the lead to drastically cut their GHG emissions and to provide assistance to the developing countries in areas such as technology transfer and funding through effective mechanisms.

Developed countries and developing countries should explore low carbon sustainable development together.

Position Three: The Chinese government should participate more proactively in international efforts to tackle climate change, taking responsibilities of global climate protection while securing the right to social and economic development.

The Chinese government should reform its economic development model and its energy structure to implement its energy efficiency target and to promote faster development of renewable energy, therefore controlling its GHG emissions.

Position Four: To apply the principle of social equity in drafting and implementing the adaptation and mitigation policies; to raise the capacities and conditions of the vulnerable groups and regions on adaptation; to prevent and reduce negative effects of policies, technologies and market mechanisms on the local environment when mitigating climate change.

Position Five: The Chinese government to encourage and ensure the participation of civil society in the climate change policy-making process and implementation and monitoring processes.

Theme 10: Internal Integration and Consistency

Standing at the crossroad of achieving industrialisation and adapting to a new industrial revolution, the issue of climate change may grant China a chance to realise the needs of more than one fifth of the world's population. In the long-run economic growth is limited by natural resources: the planet as a whole is a closed economy and its resources are finite. One of the most influential environmental books, Club of Rome's *"Limits to Growth"* argued that growth will be threatened due to resources such as oil running out (peak-oil hypothesis) but it must be concluded that climate change does not even permit the exhaustive use of these resources. Hence climate change can – at first glance – be seen as the limit to economic growth. The only way for the world economy to continue growing will be by *decoupling* the link between economic growth and carbon emissions.

[46] A Warming China: Thought and Action for the Chinese Civil Society

For this decoupling of growth and emissions to take place the world economy needs to revolutionised. One way of going down that route is to massively increase GDP share of the service sectors in China and elsewhere. This will require the formation of an entire new range of service jobs and this needs education. Hence without deepened and broadened education the shift to a low carbon economy will not work. To facilitate the transfer to a service-based world economy the WTO could be helpful but only if it incorporates effective measures to facilitate the trading of services that are produced in a sustainable and socially acceptable way.

The definition of economic development is a development that gives rise to economic growth while at the same time increasing the standard of living. Extending this to sustainable development a more long-term view is brought into this definition. Development needs to promote: economic growth, increasing standards of living, sustainability and equity. Hence mitigation of climate change is crucial to development because without this there might only be short-term and unsustainable economic growth. Is the Chinese government and other governments merely trying to keep climate change mitigation from undermining their economic growth? Or are they really working towards holistic development rather than only growth in numbers? Our government should and must be more committed and serious protecting its citizens from the threat of climate change, and they should also keep and fulfil the promises they have made.

Climate Change is a crisis for human beings. Our present course is leading us to a disaster: the chance to turn toward a new path is in our own hands. We will either grip this chance to change the model of social and economic development of our societies or we are going to be hit by this “boomerang”. The impact of climate change knows no boundaries. We are standing at the same frontline. We neither have one more chance to try other techniques of throwing the boomerang out because the time window is closing, nor do we have another chance to throw it to another direction because we must decide now. Stop funding and permitting any new fossil fuel projects and nuclear power stations, strengthen the promotion of renewable energies, decentralize energy generation and utilisation, and to continue to implement the promised renewable energy and GHG emission reduction targets. We have the chance to choose today, but we are not able to choose when the boomerang flies back to us – grasp it or be hit.

China adopted its first law on renewable energy in 2005 and has since issued many supplementary rules and regulations to enforce the implementation of this law. Take the wind power industry as an instance. The relevant regulations in assisting the implementation of Renewable Energy are:

- Mid- and Long-term Plans for Science & Technology Development
- Renewable Energy generated electrical pricing and fee sharing management rules
- Management regulations for electricity generation from renewable energy
- Energy-saving power dispatching methods (Trial Version)
- Supervision Measures on Electric Net Enterprises’ Acquisition of the Whole Electricity Produced by Renewable Energy
- Technical rule for connecting geothermal power plants to power network GB/T 19962-2005
- Technical rule for connecting wind farms to power network GB/T 19963-2005

- Technical rule connecting photovoltaic power stations to electric power systems GB/T 19964-2005 [47]

This quite common "1+X" model - one major law bundled with a basket of supplementary regulations released by relevant government departments irregularly – has slowed down the market and its counterparts in adapting themselves to new legislation, and has thereby put the effective implementation of this legislation process at stake.

To fill the gap in implementing Renewable Energy Law, a new regulation was recently released by China's State Electricity Regulatory Commission (SERC) that urges power companies to prioritise purchases of the maximum amount of "green" electricity available in their coverage areas. Different from the country's renewable energy law, this supplementary regulation details the authority, measures, and responsibilities necessary for SERC to facilitate the integration of renewable sources into power systems. It allows all renewable power facilities, with the exception of medium- and large-scale hydro-power plants, to receive government subsidies in power pricing rather than having to participate in competitive bidding.

A supplementary regulation on renewable power pricing and cost sharing, authored by the National Development and Reform Committee (NDRC), has helped break this cost bottleneck by requiring power suppliers on the grid to purchase renewable electricity at either a government-fixed or a government-directed price. The additional cost of renewable energy is to be borne by electricity users. An extra "renewable energy" charge of 0.001 yuan (0.013 U.S. cents) for every unit of electricity has been added to household utility bills since June 2006.

The success of renewable energy typically requires both government support and market incentives, according to some entrepreneurs in the power industry. They argue that in addition to the current price subsidy, the Chinese government needs to further develop a mix of strong policies to encourage renewable power generation, such as providing loans or tax credits to green power producers.[48]

Besides, to unify the national power grid, to undertake and distribute green power, to balance the uneven distribution of energy resources and to reduce the green power price, a more market-oriented approach is necessary.

From legislation to implementation, from policy to action, from good wishes to realities, China has a long way to go to refine its policy regime and to make laws and regulations consistent, to make one voice from the central to local governments to undertake the role of being accountable rule-setters and negotiators for the public interest. There is some hope, at least China is on its determined way for a low-carbon and sustainable future. However, it would be impossible for China to achieve this without mutually beneficial co-operation.

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[47] Wang Weisheng, Renewable Energy Department at China Electric Power Research Institute, http://www.serc.gov.cn/opencms/export/serc/zwgk/jggz/news/tongzhi000044.html (Chinese)

[48] China Urges Electricity Suppliers to Buy Green Power, Ling Li, August 2007, http://www.worldwatch.org/node/5330

Germanwatch

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