

CCICED FINDINGS ON ENVIRONMENT AND DEVELOPMENT POLICIES

(2007—2009)

China Council for International Cooperation on
Environment and Development



CCICED FINDINGS ON ENVIRONMENT AND DEVELOPMENT POLICIES

(2007—2009)

China Council for International Cooperation on
Environment and Development



图书在版编目 (CIP) 数据

绿色转型·科学发展的战略思考:中国环境与发展国际合作委员会 2007~2009 政策研究成果:英文版/中国环境与发展国际合作委员会秘书处编. —北京: 中国环境科学出版社, 2010.3

ISBN 978-7-5111-0166-2

I. 绿… II. 中… III. 环境保护政策—研究—中国—英文 IV. X-012

中国版本图书馆 CIP 数据核字 (2010) 第 010427 号

责任编辑 李 力 胡勘平
责任校对 扣志红
封面设计 龙文视觉

出版发行 中国环境科学出版社
(100062 北京崇文区广渠门内大街 16 号)
网 址: <http://www.cesp.com.cn>
联系电话: 010-67112765 (总编室)
发行热线: 010-67125803

印 刷 北京东海印刷有限公司
经 销 各地新华书店
版 次 2010 年 3 月第 1 版
印 次 2010 年 3 月第 1 次印刷
开 本 787×1092 1/16
印 张 17
字 数 300 千字
定 价 48.00 元

【版权所有。未经许可请勿翻印、转载, 侵权必究】
如有缺页、破损、倒装等印装质量问题, 请寄回本社更换

Preface

The China Council for International Cooperation on Environment and Development (CCICED) was established in 1992 with the approval of the Chinese Government, as a high-profile advisory body consisting of senior international and Chinese experts on environment and development. Its mandate is to conduct research into environment and development issues in China, and to provide policy recommendations to the Government of China that will support scientific decision making processes towards the development of a resource saving and environment-friendly society.

During 2007-2009, the CCICED operated against the background of the international financial crisis, the challenges of climate change, and efforts by China to realize energy savings and emission reductions and to achieve a green transformation. The Council focused its efforts on such relevant key issues as innovation and environment-friendly society, institutional innovation and harmonious development, and energy, environment and development. During the first three years of the Fourth Phase of CCICED (2007-2011), the Council organized a total of 12 task forces and 5 special policy research programs and put forward policy recommendations to the Chinese Government covering such fields as low carbon economy, rural energy, economic instruments, urban energy, innovation, and the sustainable use of coal. The Council's findings and policy recommendations are highly relevant to the environment and development of China and have attracted the attention of the national departments concerned. CCICED Phase IV also sought to combine policy research with local practice and carried out local a demonstration project on energy and environment policies. This further expands the role of CCICED in facilitating local governments' efforts to adjust their policies on environment and development.

To enable readers to review CCICED's policy research findings during the first three years of CCICED Phase IV, we hereby publish CCICED Findings on

Environment and Development Policy (2007-2009).

This book comprises three parts. Part I collects CCICED's policy recommendations to the Chinese Government from 2007 to 2009. The Council's policy recommendations, which flow from each year's Annual General Meeting, represent the culmination of CCICED's policy research efforts related to sustainable development in China. They reflect both Chinese and international perspectives and are of high reference value. Part II is composed of the Issues Papers presented to the CCICED's Annual General Meetings in 2007, 2008 and 2009. The Issues Papers review key environment and development issues confronting China, options for action, relevant international background, and future development trends. They capture current thinking on sustainable development and serve as the basis for discussions among Chinese and international experts and scholars during Annual General Meetings. Part III presents the Report on the Progress on Environment and Development Policies in China of 2007-2008 and 2008-2009. The reports summarize major developments in the field of environment and development, key policies and other measures adopted, and major areas of progress in the field of environment and development in China over the past year. This information is presented in the context of the policy recommendations advanced by CCICED. The two reports provided comprehensive and practical background for in-depth discussion of environment and development issues in China by CCICED Chinese and International Members and relevant stakeholders.

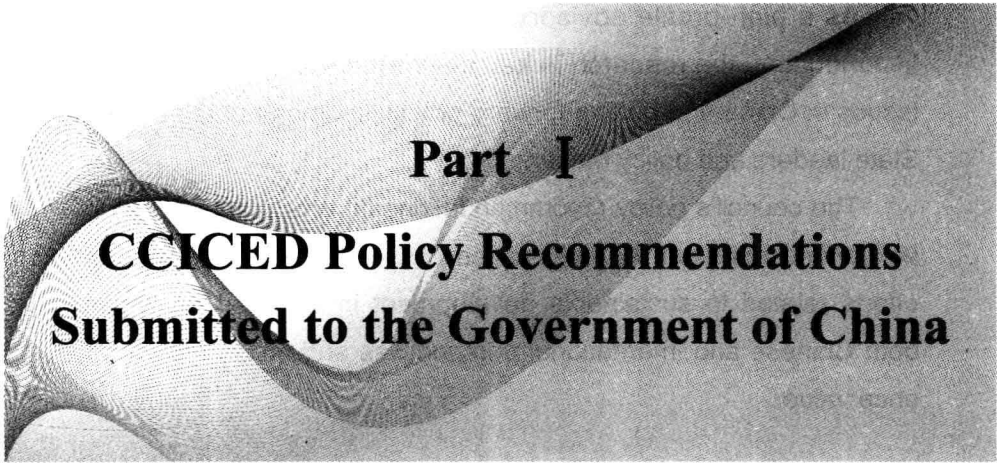
It is hoped that this book will enable readers to gain insight into CCICED's efforts in the field of environment and development during 2007-2009 and will provide useful material that will contribute meaningfully to the promotion of conservation culture and the exploration of a new path to environmental protection with Chinese characteristics.

CCICED Secretariat

March, 2010

Contents

Part I	CCICED Policy Recommendations Submitted to the Government of China	
	CCICED Policy Recommendations Submitted to the Government of China (2007)	3
	CCICED Policy Recommendations Submitted to the Government of China (2008)	21
	CCICED Policy Recommendations Submitted to the Government of China (2009)	39
Part II	CCICED Issues Paper	
	Innovation for an Environment-Friendly Society (2007)	65
	Environment and Development for a Harmonious Society (2008)	94
	China's Green Prosperity Future	
	–Environment, Energy and Economy (2009)	135
Part III	Reports on the Progress on Environment and Development Policies in China	
	Report on Progress on Environment and Development Policies in China (2007-2008)	207
	Report on Progress on Environment and Development Policies in China (2008-2009)	242



Part I

**CCICED Policy Recommendations
Submitted to the Government of China**

As a high-profile advisory body, the main task of CCICED is conducting the research in key environment and development issues in China and putting forward policy recommendations to the State leaders and policy makers.

The council's policy recommendations on environment and development represent the culmination of CCICED's policy research efforts related to sustainable development in China. They reflect both Chinese and international perspectives and are of high reference value.

CCICED Policy Recommendations Submitted to the Government of China

(2007)

Overview

In light of the innovative strategic ideas and policies on environment and development put forward at the recent 17th National Congress of the Communist Party of China (CPC); the “Three Transformations” set out in 2006; and efforts during the first two years of the 11th Five-Year Plan, CCICED believes China is now entering a period of strategic transformation for environment and development.

This transformation towards a resource conserving and environment-friendly society will be a long-term undertaking with a clear need to meet important milestones such as the environmental targets in the 11th Five-Year Plan. The Council believes it will be extremely difficult to achieve these targets with the current framework for environmental management, levels of investment, and pollution-intensive mode of economic growth. The higher-than-expected rate of economic growth, fuelled by a range of incentives at the local level, intensifies these pressures. Reconciling China’s environment and development policies is likely to be even more difficult during the 12th and 13th Five-Year Plans, since the problems will become even more complex and will include a growing ecological deficit.

Also, while China is focusing its main efforts on primary environmental problems caused by industrial and municipal pollution, a range of secondary, often non-point source pollution problems, mostly from the use of various chemicals, is threatening its environmental security and public health. The Chinese government has begun to pay great attention to the problem. The members of CCICED also

have expressed deep concerns about how to address these problems. They involve a wide range of pollutants, including those produced by the burgeoning chemical industry sector.

It is against the backdrop of globalization that China's industrial and urban revolution is taking place; this includes the building of a knowledge-based society and a socialist market economy. China's environment and development process has become integrated with that of the world. While China is faced with new environmental challenges brought about by globalization, it is also creating an impact on global and regional environments. China's ecological footprint, a measure of human demand on the planet's biologically productive land and water, is still low by comparison to many other nations, if measured on a *per capita* basis. However, it is growing and should become a matter of concern in policy decisions that affect international trade, climate change and other international cooperation. The future of China's environmental quality hinges on tackling these issues and others through changes that involve fundamental reforms and mechanisms for involvement of the whole society in their outcome. This is the key message arising from successful transformative approaches to environment and development in other countries such as Germany and South Korea. Incremental change is not enough.

China's commitment to becoming an innovative society is an essential step in the right direction. Innovation is the opportunity side for environment and sustainable development. The key to its success lies in taking a comprehensive innovation approach to institutional change, policies and technologies.

Supported by various task forces and other research efforts,¹ the 2007 CCICED AGM has focused on policy innovations, particularly on the following two aspects: (1) innovation of strategic thinking, including the transformation of environment and development strategies, as well as the challenges brought by globalization; and (2) innovation of specific policies and mechanisms, par-

¹ The studies reported at the 2007 AGM included: *CCICED Task Force on Policy Mechanisms Towards Successful Achievement of the 11th Five-Year Plan Environmental Targets*, *CCICED Special Policy Study on Strategic Transformation of Environment and Development in China*, *CCICED Special Policy Study on Environmentally Sound and Strategic Management of Chemicals in China*, and *interim reports from the CCICED Task Force on Innovation for China's Environmental-friendly Society*, and from a *CCICED-WWF preliminary analysis of China's Ecological Footprint*.

ticularly on emissions reduction for the 11th Five-Year Plan and beyond, and for chemicals management.

This examination of “Innovation for an Environment-Friendly Society” is intended to set the stage for future work of CCICED, including task forces on Innovation for Sustainable Development, Environment and Health, and Energy and Environment. It marks a shift in CCICED’s attention towards collaborative work to identify early warning of key problems, and towards creative solutions that will rely much more on technology and policy innovation worked out in China. The business sector, long recognized as both the origin and centre of innovation, will play a key role in developing and implementing solutions for an environment-friendly society. Business engagement is key since business makes the operational decisions that most affect environmental outcomes. However, enterprises cannot do so if they are unclear about their obligations, and these need to be clearly defined and legally enforceable.

Recommendations

The following major recommendations to the Government of China are based on the deliberations and agreement at the CCICED AGM 2007. In addition, more detailed recommendations from the individual CCICED task forces and special study reports will be forwarded for consideration.

1. Strengthen and add new policies and mechanisms to achieve emission reduction targets

Achieving the 11th Five-Year Plan emissions reduction targets is a major challenge for the Chinese government. Despite the significant efforts to date, the challenge is made more difficult by the pace and composition of economic growth. The emission reduction objective was calculated on the basis of the emission volume at the end of the 10th Five-Year Plan period. But the Chinese economy is growing much faster than the original estimate of 7.5%. This fast growth rate, and the even faster growth of high energy-consuming, high pollu-

tion-emitting industries, will result in a need for a much higher level of emissions reduction than predicted. Structural changes in the economy are essential, as well as policies that provide incentives for process change rather than end of pipe solutions, but this may not occur quickly enough for 2010 targets to be reached. Very demanding targets for pollution reduction will be needed for the foreseeable future, at least to 2020.

The program for achieving the target of reducing SO₂ emissions by 10% compared to the 2005 baseline is heavily dependent on installing FDG (Flue Gas Desulphurisation) equipment in coal-burning electricity stations. This strategy is impeded by the poor performance of FDG equipment and operation, and higher than expected levels of sulphur in coal. Cost effective approaches such as coal washing have not been given sufficient attention. These concerns need to be addressed urgently. Achieving the target of reducing energy intensity (energy consumption per unit of GDP) is a necessary but not sufficient condition for achieving the SO₂ target. Further efforts will be needed to reduce SO₂ emissions from the non-power sector.

COD (chemical oxygen demand in water) is an even more difficult problem. It is doubtful that the very ambitious program for constructing urban sewage treatment pipes can be completed as planned. More attention should be paid to sludge treatment and to discharges from the industrial sector and non-point sources. The pricing and financing policies applied in this sector need to be re-examined.

There are serious problems in terms of quality control and performance. Monitoring is inadequate, and is impeded by three sets of data EPBs (Environmental Protection Bureaus) work with that are not compatible. Local EPBs often lack the authority and means to fulfill their responsibilities, and some local governments undermine their efforts. In short, management and institutional weaknesses are holding back progress. Inadequate financial investment is also a major constraint in reducing pollutant emissions. Using international definitions such as those of OECD and Eurostat, environmental expenditures amount to about 0.6% of GDP, about half of the official estimates, and low for countries at this stage of development.

End-of-pipe pollution control approach is necessary but not sufficient to deal with the growing volume of pollution in China. What is needed is an effective total emissions control (TEC) approach that controls both the volume and concentration of pollution. More emphasis should be put on cost-effective approaches such as washing coal, structural adjustment in the energy and industrial sectors, and removing incentives such as favourable financial conditions that foster excessive investment in polluting industries like coke and steel. Greater use of market instruments is needed to provide continuous incentives to find cost-effective approaches to pollution prevention and control, including innovation. This can include cap and trade market-based systems. Energy conservation and new processes that eliminate pollution production can help. Other economic instruments and strict enforcement of regulations are needed so that it is no longer cheaper to pollute than to clean up.

It is vital that environmental management systems within government be made much more functional, with clearly understood responsibilities and accountability at each level. The performance assessment of local political leaders should place greater emphasis on their environmental performance. Failure to do so results in economic considerations overriding environmental policy objectives.

Therefore, we recommend:

1) Adopting a new “Five Shifts” approach and examining how it could be implemented not only in the 11th, but also the 12th and 13th Five-Year Plans: (1) Move to a focus on reducing total emissions and specific improvements in environmental quality; (2) Move from an over-reliance on reducing pollution from selected industries to reducing pollution from all industries; (3) Move from total control of single pollutants to the coordinated control of many pollutants; (4) Move from increasing the number of pollution reduction projects to increasing their quality; (5) Move from reliance on administrative mechanisms to greater use of market-based instruments.

2) Under the leadership of the State Council, establishing a technological analysis platform for economy-energy-pollutant emission reduction and a joint policy making system between the relevant government departments to carry out

dynamic tracking, early warning and response in regard to pollutant emission reduction; and with a strategic focus on understanding the benefits and costs of changing the economic development mode.

3) Constructing a total emission reduction system composed of reduction of resource-energy inputs, much greater efficiency improvement in production processes, and end-treatment of pollutant emissions.

4) Reforming the performance assessment system for local government officials to take account of their responsibility for achieving environmental targets and related policy objectives; creating a simple evaluation system for government officials based on a locally appropriate energy and emission reduction index, as well as the degree of compliance by enterprises with current environmental laws and regulations in their jurisdiction.

5) Improving the technical support capacity of both the central and local governments, including the development of a more integrated environmental information system, a scientific indicator system of pollutant emission reduction, an accurate emission reduction surveillance system, and a rigid emission reduction examination and evaluation system.

6) Improving the operability of COD reduction programs focusing on the key polluting industries and non-point source pollution, especially from agricultural sources; increase funding and implement faster construction of urban sewage pipes networks and sewage treatment infrastructure. Optimize SO₂ reduction programs through integrated programs that broaden the focus from scrubbers and other stack controls including quality of coal, and the proportion being washed, more effective supervision of the quality of FDG equipment, and developing a program to reduce pollution from coal-fired boilers in the non-power sector.

7) Beginning now to study trends in pollutant emissions, and how they could be reduced most cost-effectively in the 12th Five-Year Plan period, paying attention to all the points mentioned above, but emphasizing greater use of public-private sector approaches to necessary investments; establishing long-term emission reduction mechanisms using market-based instruments including environmental taxes; resource pricing; emissions trading; the establishment of appropriate envi-

ronmental finance mechanisms; and continuing efforts to build a high-performing administration and management system, particularly at the local level, with necessary upgrading of laws and regulations.

2. Integrate chemical management strategy into China's overall national environmental and health management systems

Currently, China is producing and marketing approximately 47,000 kinds of chemical products, with about 100 new chemicals in line for registration annually. In the course of production, storage, selling, transportation, utilization and waste disposal, chemicals can have vital impacts on human health and environmental security owing to misuses, abuses, emergencies, and maltreatment of wastes. Many hazardous chemicals that are widely controlled internationally are still produced and used without restriction in China. In addition, accidents involving hazardous chemicals happen frequently. The international community is vigorously promoting SAICM – Strategic Approach to International Chemicals Management, with a proposed target of 2020 for production and use of chemicals in ways that minimize environmental and human health harm.

The rapid development of China's chemical industry sector makes formulation of a robust chemical management system an urgent matter. China's existing chemical administration is mainly limited to the professional safety administration of the flammable, explosive, and acute toxicity chemicals. The methods of chemical environmental administration are limited to end treatment of toxic chemical pollutants and the registration of toxic chemicals upon importation and exportation. The currently used classification system for hazardous chemicals in China does not fully reflect various potential environmental and health hazards and risks of chemicals. China is yet to exert systematic and institutional environmental administration on the chemicals that have potential and long-term harms on human health and environment.

Therefore, we recommend:

1) Establishing China's Environmentally Sound and Strategic Management of Chemicals System, with environment protection departments as the major respon-

sible institution, coordinated with other relevant departments; and strengthening capacity building to carry out effective testing, evaluation, monitoring and management of chemicals from an environmental perspective.

2) Formulating China's chemical environmental administration strategy, with "prevention as the key measure, combining prevention and rectification of problems, strengthening surveillance, and regulation" as the guidelines. A long-term action plan for risk assessment should be developed. Chemicals with high risks to health and environment should be given earliest attention for possible replacement, and their manufacture and management should follow clean production and green chemistry concepts. The strategy should be WTO compliant.

3) Formulating a special law or administrative regulations on chemical environment administration. This should establish a basic institutional system on chemical environmental administration, including classification and labeling, notification of new chemical substances (currently established only by a ministerial rule), risk assessment and management of new and existing substances, national criteria for prioritization of chemicals of very high concern, appropriate environmental monitoring systems, a right-to-know system for release of toxic chemicals, and environmental accident prevention and emergency response systems coordinated with existing mechanisms.

4) Establishing a system of release recording on toxic pollutants and a publication system for toxic chemical pollutants so that the Chinese public is informed and can participate in the government decision making on chemicals management.

5) Promoting and supporting voluntary measures on the part of chemical enterprises, including Responsible Care and product stewardship initiatives that have been successful in other countries or internationally, and clarify the legal status of voluntary agreements between government and industry and actions taken under China's "Cleaner Production Promotion Law".

3. Seize the opportunity provided by China's strategic transformation of its environment and development mode

CCICED notes there has been substantial progress since 2003 towards creating a coherent approach to environment and development policies. It is encouraging for the future, despite the magnitude of challenges today. China is setting in place necessary conditions to optimize the potential of future innovations for sustainable development. The current transformation of environment and development strategy in China is a necessary step for China's social advancement. According to international experience, China should strive for strategic transformation of its environment and development path for the coming 15-20 years, leading to significant improvement of its ecological environment as well as its economic development. The 17th National Congress of the CPC marked a turning point for China's new strategic system to guide sustainable social-economic development—using Scientific Development Theory as an overarching framework for building a harmonious socialist society.

Signals for a strategic transformation of Chinese government policy relevant to environment include: a new industrialization pathway with five criteria, as well as a peaceful development path internationally; and elevating environment protection to the level of a "Conservation Culture", where the objective is building a resource conserving and environment-friendly society. The guiding idea has shifted from "rapid and sound development" to "sound and rapid development". China is demonstrating its immediate commitment through the difficult pollutant emission reduction objectives in the 11th Five-Year Plan.

Other countries such as Germany and Japan have found four key factors in their period of transformative change for environmental improvement. One is public participation and involvement of the whole society in decisions on environment and development. Second is that in most cases it is problems of environment and health that have galvanized action, whether it be Minamata Disease caused by mercury pollution in Japan, or by the effects of smog in Los Angeles. Third is the need for a progression of changes, some immediate and others longer