

THE CHINA COUNCIL
FOR INTERNATIONAL COOPERATION
ON ENVIRONMENT AND DEVELOPMENT

THE SECOND MEETING OF THE FIFTH PHASE

Diaoyutai State Guesthouse, Beijing

November 13 – 15 2013

Summary Record

January 2014

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ABBREVIATIONS

AGM	Annual general meeting
BAT	Best available techniques
CCICED	China Council for International Cooperation on Environment and Development
CIDA	Canadian International Development Agency
CER	Corporate environmental responsibility
CESR	Corporate environmental and social responsibility
CSR	Corporate social responsibility
EU	European Union
FDI	Foreign direct investment
FYP	Five-Year Plan
GDP	Gross domestic product
IMF	International Monetary Fund
MEP	Ministry of Environmental Protection
NEC	National emissions ceiling
NGO	Non-governmental organization
NPC	National People's Congress
OECD	Organisation for Economic Co-operation and Development
PM	Particulate matter
RMB	Renminbi
SERI	CCICED Secretariat
SISO	CCICED Secretariat International Support Office
SOE	State-owned enterprise
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
WHO	World Health Organization
WWF	Worldwide Fund for Nature

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I. Introduction

The China Council for International Cooperation on Environment and Development ("the Council" or CCICED, pronounced "sea-said") was established in 1992 by the State Council of the Chinese government in order to foster cooperation in the areas of environment and development between China and the international community.

The Council is a high-level advisory body that puts forth recommendations on environment and sustainable development for the Chinese government's consideration. It has so far convened 22 annual meetings organized in five-year phases.

The Council supports the development of a comprehensive approach to sustainable development and environment through close cooperation between China and other countries. At present the Council is composed of 25 Chinese members and 25 international members who were chosen for their experience, expertise, and influence.

The Council is chaired by Mr. Zhang Gaoli, Vice Premier of China's State Council and a member of the Political Bureau Standing Committee. It was at his invitation that the members of the Council attended the second meeting of Phase V.

The CCICED Bureau serves as the executive body of the Council.

The Council's host institution is the Ministry of Environmental Protection (MEP). Previously known as the State Environmental Protection Administration, MEP is responsible for the Council and for ensuring inter-ministerial coordination. It has established the CCICED Secretariat (SERI) to support international and domestic contacts. The Secretariat supports follow-up in China to CCICED recommendations, and deals with routine matters when the Council is not in session.

The Secretariat is assisted by the Secretariat International Support Office (SISO), directed by Mr. Christopher Dagg and located at Simon Fraser University in Burnaby, Canada. Until April 2013 SISO was funded by the Canadian International Development Agency (CIDA), afterwards by Canada's Department of the Environment (Environment Canada).

This Summary Record of the CCICED's second meeting of Phase V was prepared by Patrick Kavanagh for SISO, based on detailed notes recorded during the annual general meeting (AGM). Representing SISO's interpretation of the discussions, the Summary Record does not necessarily reflect the views of all participants. To encourage frank and direct dialogue, the Summary Record presents an overview of the points made during comments and discussion sessions without attribution to individual speakers.

II. Annual General Meeting

Item 1. Opening of the Meeting

China's Minister of Environmental Protection and CCICED Executive Vice Chairperson **Zhou Shengxian** called to order the second meeting of Phase V, focusing on the theme Environment and Society for Green Development. He introduced the following dignitaries:

- Vice Premier of China's State Council and CCICED Chairperson **Zhang Gaoli**;
- Canadian Member of Parliament, former Minister of the Environment for Canada, and CCICED International Executive Vice Chairperson **Peter Kent**;
- Executive Director of the United Nations Environment Programme (UNEP) and CCICED Vice Chairperson **Achim Steiner**;
- Deputy Secretary General of China's State Council **Ding Xiangyang**;
- China's Vice Minister of Foreign Affairs **Li Baodong**; and
- China's Vice Minister of Environmental Protection and CCICED Secretary General **Li Ganjie**.

He welcomed guests, Council members, and observers to the 2013 AGM, and declared the meeting open.

Item 2. Secretary General's Progress Report and Work Plan

Secretary General **Li Ganjie** presented to Council his report on the progress of work during 2013 and CCICED's work plan for 2014. Here are the highlights of his presentation:

First, CCICED has carried out its work smoothly and met its targets on policy research. It has looked at the green economy and society, environmental protection, and green development. It established two task forces and three special policy studies which have completed their work and have drawn up reports forming the basis of the policy recommendations that will be presented to the Chinese government.

Second, CCICED extended its influence at home and abroad by sharing research results and pushing for implementation. In 2013 the Council hosted a roundtable at the Eco Forum Global, held in Guiyang. In cooperation with the UNEP's Global South-South Development Expo 2013, held in Nairobi, the Council co-hosted a forum on ecological civilization and green transformation. Meanwhile, in Shanghai and Tianjin, demonstration projects addressed the green supply chain.

Third, this year we enhanced the management of CCICED itself. The Council added five new members from the World Conservation Union as well as from other influential environmental organizations. The Council has set up strategic partnerships to carry out cooperative activities in personal training and promotion. We have also improved the Secretariat's working skills and internal management.

Now, here is the report on the 2014 work plan:

2013 is a critical year for China as it strives to attain the goals established in the 12th Five-Year Plan (FYP). The Council will continue to look at urgent and controversial issues in China today in the context of achieving a green transformation. We will try to provide forward-looking and strategic backing for the new plans in the 13th FYP and work to enhance CCICED so it can contribute even more.

We propose that our work will focus on three areas.

- to meet policy needs posed by prominent current environmental and development issues in order to promote green transformation;
- to provide forward-looking strategies and recommendations based on sound scientific analysis for the 13th FYP, so that the influence of the Council will improve and broaden; and
- to develop a long-term strategy for a stable and dynamic CCICED, to expand our partnerships and collaborations, and to improve the Secretariat's standard of work.

We propose that the 2014 AGM will take place 10 to 12 November, in Beijing, on the theme of Management and Institutional Innovation in Green Development.

Item 3. Introduction of Draft Policy Recommendations

CCICED International Executive Vice Chairperson **Peter Kent** highlighted some of the key points in the draft policy recommendations being prepared for submission to the Chinese government:

The China Council believes that supervision by the people is a robust mechanism for building an ecological civilization with a new green development ethic at the core. This point is central to our main recommendations.

Our first recommendation is simple, but it carries a strong message. We suggest changing the name of the 13th FYP to become the National Economic, Social, and Environmental Development Plan, and to make a similar adjustment to the title of the report to the National People's Congress (NPC). These shifts, we believe, would help alter perception of the role of the environment.

In only six years from now, China is expected to become a moderately well off society. We therefore recommend speeding up institutional innovation and the implementation of ecological civilization in order to establish a stronger basis for green development and a more harmonious relationship of environment and society. This effort should focus on practical needs, for example, the performance of air, water, and soil plans. Green governance improvements also will require a broader reach across society covering environmental issues related to health, social justice, social risks, poverty reduction, and employment.

CCICED also recommends a shift in domestic consumption patterns toward sustainable consumption. We believe this would reduce China's ecological footprint and drive green development initiatives, including green market supply chains. The consumers we must reach are China's growing urban middle class. These people require access to green choices about products and services. Sustainable consumption is a new topic for China, therefore considerable work is needed to establish new regulations on environmental standards, legislation that will guarantee quality of goods for consumers, and more efforts to accelerate adoption of green procurement in government and public institutions, and with full participation by the private sector.

State-owned enterprises (SOEs) and private businesses must become much more active on issues related to the environment and green development. They will need to move beyond regulatory compliance to the point where their contributions to China's ecological civilization become a matter of achieving cost savings and realizing profitable green innovations. Thus, government should recognize the key role of SOEs and the private sector by promoting corporate environmental and social responsibility (CESR). A national strategy and action plan for corporate social responsibility (CSR) and corporate environmental responsibility (CER) would be a good start. We believe that government can provide guidance and enabling measures, but leave the main effort to the enterprises.

One of the most interesting and important elements of our work this year has been on communications, including social media. CCICED recommends promoting more active roles for media and for public participation in order to turn social power into a driving force for green development. We make a number of recommendations to improve public participation. These include further implementation and completion of a public information disclosure system for environment and for development. This expanded system needs to be complemented by awareness raising and the education of the public and officials, in order to address environmental and development risks, and to improve mechanisms for the resolution of disputes.

Finally, we have paid considerable attention to China's rapid urbanization and its essential role in green development. Our efforts have focused particularly on the need to establish urbanization systems that are in line with local resource and environmental capacity. We recommend establishment of urban environmental master plans that take into consideration functional zoning and ecological redlining. We believe that China's cities need to be designed with greater attention to neighbourhoods where people can have ready access to local walking and bicycling routes that minimize their need to use private and even public transport.

To achieve livable cities there must be adequate investment and operating revenues for all forms of urban green travel, so the Council recommends there be greater commitment of central government funds to high-capacity public transport in cities and to a specific commitment for meeting green travel budget needs. This could be done in part through the transformation of existing transfer payments. We believe more guidance from government is needed on public transport pricing mechanisms to eliminate transport deficits and to introduce stable funding patterns.

Item 4. Addresses, Special Remarks, Issues Paper

Statement by the Vice Chairperson

With International Executive Vice Chairperson **Peter Kent** presiding, CCICED Vice Chairperson **Achim Steiner** addressed the Council, emphasizing the following issues:

We are meeting here within a few hours of the Third Plenum of the Chinese Communist Party's Central Committee. This plenum signalled new directions for China's society and economy, but from CCICED's

vantage point it made a significant step forward in articulating the concept of ecological civilization. This concept encapsulates many of the ideas and aspirations that the China Council has been trying to express, sometimes through focused policy efforts. These ideas relate to fiscal policy, ecosystems services, mitigation efforts, and pollution, and sometimes to broader principles that could inform a development strategy for China and for many other countries.

If we study the first interpretations and statements made from yesterday's meeting, it shows that in many ways the challenge to the China Council has just grown immensely. This is because China has signalled a systemic effort, something that in the international community we have been trying to reach a consensus about for two decades. How do you begin to integrate sustainable development, the economy, and the social and environmental dimensions? How does development become one process, one policy, one economic strategy that recognizes that progress in one is conditional upon progress in the others? If that fails to happen, then imbalances in development will arise, such as ecological unsustainability, social inequity, and unemployment.

Juan Somavia, former Director-General of the International Labour Organization, has been drawing the world's attention to the fact that our economic development strategy is not one that actually creates new jobs. He refers to the recovery as a jobless recovery. What intrigues us all is that here in China you have, in a relatively short time, reached a point where the challenges of sustainability, balance, and equity within development have reached the centre stage of economic policy making. Under the umbrella of ecological civilization, key concepts form the mainstream policy discourse that will guide China's future: green development, a low-carbon development path, circular economy, resource efficiency, pollution prevention, and environmental protection.

We could not ask for a more auspicious set of circumstances, first to examine the work of the Council task forces over the past year, but also to reflect how the Council can meet the challenge of providing relevant advice that is sophisticated enough to keep pace with the challenges China will address in the years ahead.

Equally, the challenge of air pollution is immense. It has triggered a set of deliberations across the nation that will have a profound, transformative impact on the future of many of the development choices that China makes, whether in terms of the 10-point plan for pollution prevention that has been adopted by government or in terms of the public engagement that this problem has generated. I know of no other nation where the urban middle classes get up in the morning and monitor air quality on their mobile devices.

Thus, citizens are becoming part of the capacity of MEP to monitor decisions at a local and provincial level in a completely different way. You now have millions of allies working with local governments and industry to create a new set of parameters for decision making. With the best laws and norms and standards which China is so rapidly developing, you are also empowering this process. With all the enforcement capacity one could dream of, however, you could never quite match the capacity of citizens to ensure that the laws, regulations, norms, and standards actually can be translated into decisions at the local level.

In the United Nations (UN), many of the issues that China is exploring in its vision of a beautiful China are being discussed also in something known as the post-2015 development agenda. This is a set of sustainable development goals that all nations will share in terms of their ownership and their commitment to achieve. The discussions, policies, and decisions emerging from China will be highly relevant to this global discourse, not in the sense that one nation leads other nations, but that one nation's capacity to rethink development, to articulate a green economy agenda that translates into structural changes – fundamentally reimagining energy, public transport, urban infrastructure – will encourage other countries to take a more ambitious approach. Already China is building partnerships with Peru, South Africa, and Thailand on the concept of ecological civilization. This the kind of global conversation we need, and the China Council can play a significant role in bringing it forward.

Special Speech by the Minister of Environmental Protection

International Executive Vice Chairperson Peter Kent invited China's Minister of Environmental Protection and CCICED Executive Vice Chairperson **Zhou Shengxian** to brief the Council in a special speech. Minister Zhou made these points:

I wish to share my thoughts on how to implement the air pollution action plan so that people can have more "blue sky and white clouds."

The Third Plenum of the Chinese Communist Party's Central Committee concluded yesterday with the adoption of decisions on major issues. It determined to further deepen reform, to overcome institutional defects, and to speed up the market economy with socialist characteristics, democratic politics, advanced culture, harmonious society, and ecological civilization, all in order to give more and fairer benefits to the people. Our goal is to set up the well-off society to realize the Chinese dream on the basis of the achievements we have made since opening to the outside.

The Third Plenum has proposed some new initiatives covering the relationship between the government and the market, in particular the role that the market plays in the allocation of resources. In the past we said that the market played a basic role in resource allocation. Now at the Third Plenum there is a new phrasing: the market plays the fundamental role, the decisive role, in resource allocation. This is a theoretical breakthrough.

Other initiatives cover the basic economic system, the guarantee of people's benefits, social justice, institutional innovation, and some breakthroughs in priorities. All these initiatives have laid a solid foundation for the development of socialism with Chinese characteristics.

The Plenum has also made comprehensive arrangements for the development of ecological civilization. The focus will be on the mechanism of ecological civilization, the improvements of the mechanism of spatial development, resources saving, and environmental and ecological protection. These are the most important initiatives planned by the Third Plenum.

The Plenum also requires that the environmental and ecological management mechanism be improved. We must set up an integrated supervision mechanism for all pollutants. The reform of the ecological protection and management mechanism satisfies the needs of the development of ecological civilization. It is a breakthrough point for economic transformation, the development of the low-carbon economy, and the settling of the environmental problems that harm public health. The reform of ecological and environmental management means we must promote ecological civilization, to build a beautiful China and to continue carrying out new approaches to industrialization, urbanization, agricultural modernization, and the development of information.

We must realize that protection of the environment is protection of productivity, and improvement in the ecological environment is the development of production. So, we must prioritize the protection of the environment and find new ways to do it. It is important to start at the macro strategic level and integrate the whole process into the production process, so we can have integrated supervision over all kinds of pollutions.

So, reform of the ecological protection mechanism is extensive. It is a kind of complicated schismatic project. The priority is to set up an integrated supervision mechanism over all pollutants as well as an independent law enforcement mechanism integrating a regional joint mechanism to restore the ecological system and prevent pollution. It is important also to have a more efficient forest management system and

to improve the collective rights to forests. We must have in-time disclosure of environmental information as well as a reporting system to strengthen social supervision.

As to the pollutants, there must be a permit system so that we can control the total emissions. Those who harm the environment must be punished.

So, these are the important initiatives that have been proposed by the Third Plenum.

Since the beginning of the year the Chinese government has achieved a lot in the protection of the environment:

First, we have substantially reduced the emission of major pollutants. The statistical approach and monitoring message have been stipulated clearly in the document about the implementation of the 12th FYP. It has made the decrease in the emissions compulsory in six industries: chicken farms, wastewater treatment plants, paper-making plants, cement plants, coal-fired power plants, and steel factories. During the first half of this year the emissions decreases were as follows: chemical oxygen demand 2.73%, ammonia nitrate 2.15%, sulfur dioxide 2.48%, and nitrogen oxide 3.82%.

If we had not made such great efforts, if we had not reduced the emissions of sulfur dioxide, the concentration of PM_{2.5} (particulate matter) would be even higher than it is today. Therefore it is important that we take an objective attitude toward what is happening in China. Recently an article was published in the *New York Times*, written by a director of a research institute in America. In this report the author described the air quality in an objective way, supported by statistics. This is in sharp contrast to those who have been verbally attacking China about its pollution.

Second, we have taken an environmental approach to optimize economic development. We have issued about 88 national environmental standards related to emissions from industries like electronics, glassmaking, and other sectors. Although we have been delegating power to local governments, what is more important at present are the national standards. In industries such as coal power generation, steel manufacturing, petrochemicals, and coal boilers, we have also set a cap on emissions.

Third, we have tightened pollution control in the major river basins. We have been trying to implement more effectively the protection of drinking water sources. We have organized the assessment of water sources below prefecture levels. About RMB 10 billion has already been invested in new pollution control and prevention projects. Between January and February the surface water above grade 3 increased by

about 2.8% while the surface water below grade 5 decreased by 0.9%. We have also developed protection plans and engineering and technical guidelines so that we will have better demonstration pilot projects to promote the ecologies of lakes and river basins.

Fourth, we have further improved the cultivation of the ecology and protection of the rural environment. The action plan to conserve diversity has been upgraded and we have set up 21 new natural reserves.

Thus, with the approval of the Chinese government we have identified three priorities for the future:

- control of PM_{2.5};
- ensuring pollution control and safe drinking water in major river basins and ground water;
- addressing pollution and ecological degradation in rural areas.

These three important priorities require the formulation of a clean water action plan, an air pollution action plan, and a soil protection action plan.

Since the beginning of 2013 many cities in China have had longstanding, extensive, heavy smog which has had a bad impact on everyday life and public health. So the priority of priorities at present is the control of PM_{2.5}.

Experience shows that as long as we have the right policy, PM_{2.5} is manageable and controllable. For example, when Beijing hosted the Olympic Games, we took a lot of measures against air pollution. People were skeptical about the effectiveness of these measures, but the average PM_{2.5} concentration was less than 40 during the games. It was a good small scale pilot project, and we can disseminate these results.

Since the 11th FYP we have been taking large scale measures to save energy and reduce emissions. The aggregated sulfur dioxide decreased by about 20% and the nitrogen oxide has been decreasing all the time, contributing to some extent to the decreasing PM_{2.5} concentration in China.

A lot of discussions were based on proposals and policy recommendations and research by the CCICED task forces. On 12 September this year the Chinese government promulgated the *Atmospheric Pollution Prevention Action Plan* with 10 measures and 35 items. This is the guideline for air pollution control and prevention. This important initiative is regarded as the first gunshot against PM_{2.5}.

When this action plan was promulgated there was a good response from across the country. The plan's overall goal is to protect the environment, in particular, to address the serious smog pollution which has

aroused public concern. Without blue sky and white cloud we cannot talk about building a well-off society or a beautiful China with ecological civilization, and we cannot talk about the great rejuvenation of the Chinese nation.

Second, at the national macro strategy level we need to do a good job in air pollution prevention and control. We need to pay attention to reform and innovation, and attach equal importance to addressing the old pollution problems and controlling the new types of pollutants. We should reduce the consumption of coal and increase the use of natural gas. We need to pay equal attention to incentives and restraints, and set up a new pollution control mechanism, involving government and enterprises, that is market driven with public participation.

The government needs to strengthen its leadership and to show responsibility in managing the overall situation. Enterprises are the main players in pollution control, and they need to show responsibility too. Market mechanisms need to be brought into full play so as to develop the investment and financing channel for air pollution prevention and control. Financing and investment is very important. China is a big developing country, and it is impossible to rely on government investment alone to address environmental issues. This financing issue should be addressed in CCICED research studies.

Third, our actions should be practically focused and effective to realize a win-win-win in the areas of the economy, society, and environment. By practical I mean we need to adopt feasible actions and make steady progress. By focus I mean we need to have clear focus and precision control. By effective I mean we need to be heavy-fisted and effective in reducing pollution. We need to conduct scientific studies because different regions have different situations. Our overall requirement is that we reduce pollution and improve the environment.

We will have different policies for different regions, and we will have differentiated targets that will be implemented in a phased way. In terms of the implementation of results, we should try to achieve multiple goals with one single measure. We need to combine the readjustment of the industrial structure, the support of technology, improving the quality of economic growth, and improving people's livelihood and well-being.

If you think about the idea of ecological civilization, then environmental protection work is a kind of development model, a kind of economic structure or pattern of consumption. Therefore we need to focus on this top-level design so as to be well targeted in our action. If you talk about environmental protection without talking about economic development, you cannot achieve any goals. If you just talk about

economic development without focusing on environmental protection, then you can achieve nothing. It's as if you drain the river to get the fish.

Fourth, we need to improve all policies related to economic development and environmental management. We need to use various means: economic, technological, legal, and if necessary administrative. In particular we need to use market mechanisms to make breakthroughs and innovations in improving the pricing mechanism and fiscal policy. This involves the integrated control of multiple pollutants and readjustment of the industrial structure. In China if we consume 200 million tons of coal every year (which is greater than the current amount) then there is nothing MEP can do to control the pollution. And so we need to optimize the energy structure.

As well, we need to establish a regional coordination mechanism to tackle pollution. Currently, if Beijing just wished to address the air pollution in Beijing, the result will not be good. Beijing needs to cooperate and coordinate with surrounding regions in order to fix the problem. Nobody can rely on their own strengths in preventing and controlling air pollution.

Fifth, we will focus on pollution control and prevention in Beijing, Tianjin, and Hebei province, the Yangtze River delta, and the Pearl River delta. These three major regions suffer five times as much air pollution emissions as other regions. Here, the main pollutant is PM_{2.5}. In other regions the main target for control is PM₁₀. The overall goal is that after five years of effort there will be an improvement in the air quality throughout the nation, and a reduction in the number of days with serious pollution. In another five years we will gradually eliminate the seriously polluted weather, so as to improve the air quality throughout the country.

By 2017, cities above prefectural level will have a reduction of PM₁₀ concentration by 10% over the situation in 2012, and they will see an increase of days with fine weather. For the three focused regions, the concentration of PM_{2.5} will drop by between 15% and 25%. Beijing's PM_{2.5} will have its concentration controlled under 16 micrometres per cubic metre, according to the WHO requirement. Currently it is about 75 micrometres per cubic metre.

Generally speaking there are six measures:

The first is upgrading the industrial structure and phasing out overcapacity. We will strictly control the newly increased production capacity in high energy consuming and high polluting industries, and control the overall capacity of steel and other sectors. One year ahead of schedule we will phase out the

overcapacity in 21 important industries, and also we will stop those projects in progress that may result in serious pollution.

Second, we will accelerate the pace of adjusting the energy mix. We will increase the use of natural gas and develop nuclear power, wind power, and biomass energy. We will strengthen control of the overall consumption of coal and optimize the ways of using natural gas, and gradually phase out small coal-fired boilers.

Third, we will strictly control auto pollution and improve fuel quality. We will scientifically control the vehicle population and implement the national China V standard. We will accelerate the pace of phasing out yellow label [high polluting] vehicles, and accelerate the development of low sulfur fuel for vehicles. By the end of 2017 we will supply throughout the country the fuel which meets China V standards. Also we will give priority to the development of public transit in order to alleviate traffic congestion.

Fourth, we will have integrated control for multiple pollutants: desulfurization, denitrification, and dust removal measures in the coal-fired power plants, control of pollution from industrial boilers, volatile organic compounds, dust from construction sites, and emissions from restaurants. We will also control pollution during the heating season in northern China.

Fifth, we will establish a monitoring and early warning system to respond to highly polluting weather, and timely release of the information.

In the whole world not many countries can ensure that when citizens turn on their mobile phones they can access air quality information. This gives me great comfort and encouragement. We need to formulate and improve contingency plans and release the information to society based on the level of warning and alert. These plans will help us reduce the production of seriously polluting enterprises, stop the actions of the construction sites, and control vehicle transportation.

Six, we will strengthen the leadership to implement the safeguards. We will use pricing and taxation to increase the investment and encourage social capital to join in the effort of controlling air pollution. We will also amend The Environmental Protection Law and the Air Pollution Prevention and Control Law, and we will have stringent supervision and a crackdown on illegal behaviours. Starting next year, the central finance authorities will invest tens of millions of renminbi in environmental protection.

We will regularly release the ranking of cities in terms of their air quality, and the top ten and the bottom ten will be publicized to exert pressure on those who lag behind. We will establish a regional coordination mechanism and implement the responsibilities of local governments. If the cities fail to attend the target, then the leaders from the cities or the provinces will be urged to take corrective actions.

Winter is coming, and the northern area has entered into the heating period. We face severe challenges in meeting the requirements of the action plan. We will try our best to do the following work in air pollution prevention and control:

First, as I have already explained, we will strengthen the regional integrated prevention and control mechanisms.

Second, we will monitor, provide early warning, and activate contingency plans in the event of seriously polluting weather.

Third, we will strengthen environmental inspection, enforcement, and supervision. MEP will send out teams to conduct inspections on the implementation of the action plan. If we identify prominent issues we will urge the local government to address them, and important issues we will report to the State Council.

Fourth, we will further improve environmental policy in the regulations, on such issues as the costs of compliance with pollution control laws, emissions permits, and the prevention and control of auto pollution.

Fifth and finally, we will strengthen the technical support of our efforts.

Special Report on the Atmospheric Pollution Prevention Action Plan

Next, International Executive Vice Chairperson **Peter Kent** invited academician of the Chinese Academy of Engineering and CCICED member **Hao Jiming** to brief the Council on China's recent efforts to address the problem of air pollution. These are the main points of his presentation:

We have made great efforts to reduce pollutants, for example, between 2010 and 2012 we greatly reduced emissions. In 2012 we announced new standards for sulfur dioxide emissions, which most cities met.

However about 60% of cities still could not satisfy the standard for PM_{2.5} emissions. Since January 2013 many cities have been affected by long-lasting and highly concentrated smog, and it has become a public concern. Since last year about 74 cities have set up monitoring stations for PM_{2.5} and the results show that only a small number of cities in China can meet the requirements. In fact, in most cities the concentration of PM_{2.5} is about three times the acceptable standard.

During the 7th National Conference on Environmental Protection, the requirements for air pollution control were emphasized again. Furthermore, the 18th Party Congress promoted ecological progress to build a beautiful China. It also encouraged cities to set their own goals but to amend their standards to integrate with international standards. It seems however there is still a big gap between standards and reality. So, on the basis of recommendations and research results from CCICED task forces, policy research on air pollution control, and the responses to environmental emergencies, the State Council has promulgated the *Atmospheric Pollution Prevention Action Plan*. This plan is a quick response to public concern.

That is the background to the action plan. Now I would like to talk about some of its features.

First, the plan has a kind of top-level design featuring a national strategy. There are two important targets: to reduce the number of days with heavy smog, and to reduce PM_{2.5} in the priority regions.

Second, different regions have differentiated targets. Economic development in China is unbalanced regionally, so we have identified different priorities in different areas. In the priority areas, Beijing, Tianjin, Hebei, and so forth, the prime goal is control of PM_{2.5}. For other provinces such as Shandong, Inner Mongolia, and Shanxi, different targets have been set so that they can support the decrease in concentration of PM_{2.5} in Beijing, Tianjin, and Hebei.

Third, the action plan has speeded up industrial restructuring in order to reduce emissions that include carbon dioxide, nitrogen oxide, dust, and volatile organic compounds. Reductions in the emissions of these pollutants are important elements in the pre-approval of any project. In the process of industrial restructuring we must adopt higher standards on emissions control, energy saving, and productive quality in order to promote the elimination of outdated, high-polluting capacity.

In addition we have speeded up the supply and use of cleaner energy. The action plan emphasizes the improvement of the energy structure. Already we have lowered the ratio of coal to total national energy consumption. By 2017 significantly more coal will be washed and the use of coal by small boilers and

stoves will be restricted. As well, the use of natural gas will rise. Additional supplies of natural gas will be used to reduce part of the fuel for coal-fired industrial boilers, reducing pollutants significantly.

Furthermore, the co-generation of heat and power is an important measure for reducing emissions. If some coal-fired industrial boilers are replaced by thermoelectric coal-fired units, the possible reduction in pollutants such as sulfur dioxide would be 2.34 to 3.24 million tons.

Another important area is vehicle emission control, since China is now the biggest country for auto production and sales. In the megacities of Beijing, Shanghai, and Guangzhou we need to restrict the rapid growth of the vehicle population. Before the end of 2015 we must improve the fuel quality of gas and diesel. Fuel with lower sulfur content will be supplied for key areas, and by the end of 2017 this standard will be met throughout the country. We have put a lot of emphasis on fuel quality, and now this has been incorporated into the action plan.

By 2015 we will also speed up the elimination of five million yellow label vehicles in the key regions, and by 2017 all those vehicles will be gone nationwide. This measure will provide a lot of space for new vehicles. As well we will enhance annual vehicle inspections, and advance the upgrading of low-speed vehicles. We will promote “new energy” vehicles for use in public transit and government agencies. These bodies will take the lead in using the new energy vehicles while individuals will be encouraged to purchase them too.

The plan reflects four kinds of shifts. The focus of our attention has shifted from the control of emissions to placing equal importance on emission control and on air quality improvement. In the past we merely focused on the control of sulfur dioxide, but now we want integrated control of multiple pollutants. In the past we focused on the point sources and vehicles, but now we carry out integrated control for multiple pollution sources. And in the past the management approach was territorial management, but now we emphasize a new mechanism of joint action and control.

For instance, for Beijing, Tianjin, Hebei province, the Yangtze River and Pearl River deltas, we will have a regional collaboration mechanism. The governments of these regions will set up a working committee to coordinate local environmental issues. They will organize impact assessments, consultations, joint enforcement, and information sharing, and will report to one another on the progress of the responses.

There is a special requirement for Beijing, Tianjin, and Hebei to improve the regional air quality. Together with Shanxi, Inner Mongolia, and Shandong, there will be joint actions for those provinces imposing the

highest standards for pollution control. The focus will be on phasing out obsolete production capacities in steel and cement, while total coal consumption will be reduced by 83 million tons.

Beijing and Shanghai have already developed action plans for clean air. Beijing's plan involves eight important aspects for pollution control: the city's capacity, energy, transportation, economic structure, end-of-pipe control, fugitive source, ecological systems, and emergency response. It makes use of six important supporting measures: legislation, economic policy, science and technology, organization, clear responsibility, and assessment. And it foresees major undertakings by the general public, involving self-discipline by enterprises, public participation, and public supervision. Shanghai's action plan, meanwhile, specifies clear targets for the reduction of specific pollutants.

Now I would like to present our four recommendations for future efforts in this area.

First, we wish to emphasize the co-benefits from energy saving on air pollution prevention and control. We need to boost the energy efficiency of heavy industrial processes such as steel, cement, and chemicals. Energy consumption in China from those industries is much higher than in more advanced countries. We can use new materials and good management practices to enhance building energy and conservation. And we can reduce fuel consumption in the transportation sector.

Second, we need to find scientific plans to promote orderly urbanization, taking into consideration the requirement for industrial readjustment and the change in the energy mix. The plan should address the scale of cities, and we should be cautious in developing cities with populations of more than 10 million. We need to control the use of coal so as to reduce the pollution it brings. Next we need to improve the layout of cities and optimize public transportation systems so as to reduce emissions. And while we must pay attention to PM, we also need to pay more attention to ozone.

Third, we need to make further efforts to control automobile emissions. In one chart I emphasized that soon China will be the country with the highest demand growth for vehicles. In the past few years our efforts have had some success in controlling vehicle emissions, but because of the rapid increase in the vehicle population these reductions have been offset. At the same time we need to promote the prevention of pollution from non-road mobile sources.

Fourth, we need a long-term effort and strategy to improve air quality, involving goal setting, determining emission control targets, control strategies, implementation, and evaluation. These form a kind of cycle that may last five years.

The CCICED Issues Paper

International Executive Vice Chairperson **Peter Kent** introduced CCICED Chief Advisors **Shen Guofang** and **Arthur Hanson** who outlined the 2013 Issues Paper to Council. First, **Shen Guofang** made these brief points:

Following the China Council's customary practice, the Chief Advisors and their support team jointly developed the 2013 CCICED Issues Paper. Our International Chief Advisor, Dr. Hanson, drafted the paper as the leading author. The paper reflects the new situation in the field of environment and development that China currently faces. It sticks to this year's theme of Environment and Society for Green Development, and touches upon some sensitive social issues.

I believe that this Issues Paper will serve as a good reference that will help Council members and partners gain a deeper understanding of environment and development issues in China today.

Then **Arthur Hanson** introduced the Issues Paper at greater length:

Pollution is one of the most difficult environmental problems to crack. It's easy to say that we have seen these situations in London and elsewhere, but when, as in China, economic growth moves like a kind of locomotive, pollution control is a huge challenge. For example, Professor Hao has mentioned the possibility of a 20% reduction in pollution. But what would it look like with 20% less pollution. Well it's still really bad.

One of the new expressions is "top level." We have learned in China that green leadership starts at the top and that China's leaders are willing to take environmental problems seriously. When we examine the Third Plenum results, we will be surprised at how much of the work the China Council has been doing in recent years will link nicely with the economic reforms that are being placed before the Chinese people. I hope that our advice will directly influence what happens with this green leadership, and give them some of the ammunition they need to address these very difficult environmental, social, and economic reforms.

You have already heard our recommendation that we suggest changing the name of China's five-year national development plan to include the word environment. I hope that recommendation holds. I think it could be one of the best things that could happen.

This eloquent quote from President Xi Jinping gets to the heart and core of the issues we face and of what CCICED is all about: “We have to understand that to protect the environment is to preserve our productivity.” By productivity we mean employment and the production of goods for domestic or international consumption. We must have transformative change so that we can have jobs and a good economy, but also this change provides the means to protect the environment. We must keep this linkage central in our focus. We never talk about environmental protection on its own. It’s always about environment *and* development. I think that is more relevant now than ever before in the work of the Council.

The concept of ecological civilization has opened up a whole new horizon that ties together three levels. One is a broad conceptual framework that deals with aspirations, value systems, behaviour, which is what I take ecological civilization to be. In addition we have a wonderful opportunity to directly address development across a range of sectors within the whole of government, involving this concept of green development, or green economy, or green growth. At the third level we have hardworking Minister Zhou and his ministry sketching out this very vital aspect of environmental protection. The key to these three things is: how can we link them together in a way that will bring out China’s path to sustainable development? That’s the challenge we face.

As Achim has said, we are at a point where the challenge has never been greater. This is the most difficult time for us to be working. It will demand a higher quality and greater insight and greater linkages among our recommendations. We have to tie together things that relate to the social development side, the environmental side, and other social elements. That was our real starting point for this year’s work on the Environment and Society for Green Development.

I have chosen some photos to show you, of small things: birds, dragonflies, butterflies, and bees. All of these creatures depend on water and air quality and habitat protection, so they function as early warning systems, like canaries in the mines. China like other places is facing crises of bee populations. Nobody understands this, but there are already tales of people having to pollinate apple orchards by hand. The point is that ecological services are vital.

How do we innovate for green development? In the Taklamakan Desert they have been working to establish a “great green wall” of vegetation so you can maintain a highway across the desert. This isn’t just about greening — about saving this highway for oil development and such things — but it is also a good thing for the local economy. When you establish this vegetation you can produce medicinal plants,

for example. This is an inspiring example of the Chinese capacity to innovate and one that is being used in other countries. In places like the Sahara Desert this kind of approach would be great.

What exactly is “green mobility”? Here is a photo of a new high-speed railway linking Beijing and Xinjiang – a 13-hour trip versus much longer in the past. Is that green mobility? Maybe yes, maybe no. But here you have also a small car, a kid on roller blades, a woman on a bicycle. The point is this issue of what is or is not green mobility or sustainable consumption is all about consumer behaviour.

In the international press China is being called “the world’s worst polluter.” Despite the country’s efforts to clean up, this is what the world thinks of China right now. In my home village in western Canada, and in many other parts of the planet, people are aware of China’s PM_{2.5} problem. Tourism is down in Beijing and other cities, evidently because of air pollution issues. Pollution is giving China an image it does not want – of not being a clean place, or a nice place to visit, or a healthy place to live. And it’s as much perception challenge as a reality challenge.

So, for the first time ever in all the work I’ve done in China, I have decided it is time to talk about China’s environmental crisis. Nobody wants me to be using these words but, as a Chinese government official: “It is a crisis of governance created by the environmental problem, and the central part of the crisis is whether trust is being lost between the government and the people.” That is a vital thing to recognize, because once trust is lost it is difficult to regain. My own view is that China will make a huge effort. I’m very happy, for example, to see the air pollution action plan.

This environmental crisis is not only about air quality but about many other things. Despite rhetoric we have heard for years about the relationship between environment and development, fundamentally it comes down to the fact that development and economic growth still outpace environmental protection. MEP is making a fantastic effort, but on the other hand others are making a fantastic effort that makes their job more difficult.

In addition there are new threats. Despite some strengthening over the years, China’s environment and development institutions are weak. That’s the challenge we face as the China Council: to give wise guidance how these things can be improved. We have to talk in terms of *crisis*. We can change the word to *challenge* if we wish. But we have to recognize that in the short run, before all these good things happen, there may be some very bad times ahead as China tries to come to grips with these immense problems.

For years we have talked about transformative change. As well, the Third Plenum talked about transformative change – in the economy. So we have two kinds of transformative change taking parallel paths. The transformations through economic reform and social development are not well tied in yet with environmental transformation. We have to start thinking about new and flowery language, about an “ecologically respectful consumer and conserver society.” I think that is what the Third Plenum calls for: green growth, green economy, and green development. Those are different terms, well studied and increasingly well understood here in China. But how do we create transformative change from the use of those terms? I don’t think we know that well enough yet. As Minister Zhou has mentioned often, productive efforts are being made to establish a new path of environmental protection, but it’s still fragile.

Last summer we met in Guizhou at a forum on “Building Eco-Civilization: Green Transformation and Transition.” In Guizhou, a poor province, we discovered that the idea of transformative change in the environment and environmental protection for green development has seized the nation as an opportunity and as something well worth doing. We would like places like Guizhou to become pilot activities where we can see how green decision making is actually working. For example, Guizhou is moving to change its environmental protection bureaus to something labeled “ecological civilization.” In that province and capital city you cannot escape the notion that that place is committing itself to ecological civilization and green development. So we need to be looking carefully at China’s local areas, since they are quite different from one another.

I wish to mention briefly ten issues from the Issues Paper:

Managing gaps. A huge gap in China is caused by rising expectations, particularly of the middle class. There are wants, and there are needs, and many of these are unsustainable. Another gap is between environmental perception and realities – the “not in my backyard” syndrome where people perceive risks, where everything seems wrong, and so forth. At the same time you get other gaps in trust and credibility in terms of statements and numbers coming out of the government.

Balancing values. China is a society caught between values. It wants to embrace some traditional Chinese values, but if you walk through any Chinese city, contemporary values will be quite different. And there are strong international influences, for example in the advertising industry which is promoting automobiles and luxury products.

Improved governance. The issues of inclusive, effective, and efficient governance patterns are ones we must deal with not only now but also in the next couple of years. When I talk about governance I mean not just government, but the relationships among government, society, the public sector, the private sector, and so forth. The environmental crisis, after all, is a crisis of governance. And as we saw in remarks published yesterday in the Third Plenum, we must take whole-of-government approach to problems. Looking only at one aspect in one department and another aspect in another department is how China got into problems with water, energy, and the environment as a whole.

Transformative change. In western China you likely will see a constant stream of new vehicles being transported, on railways, trucks, and so forth, from factories in the east. This is sending a strong signal of what the future should be like. Is that a good thing? Those are the judgments that will have to go into considerations of transformative change. But the most critical point is that confusing signals are being sent. There are too many situations where one branch of government or the private sector is working at cross purposes with another. Protecting the environment in some instances may work against economic considerations, and vice versa. The confusion has to be sorted out.

Fiscal/tax reform. In Xinjiang, windmills are not working because the grid system still favors coal over wind power. So we have to reform fiscal and tax issues. The Council has called for green tax reform, but it has never been quite the right time for that. Also there are issues surrounding health and quality of life which relate to the non-pricing of ecological services.

Choices and participation. The work we started this year on sustainable consumption is all about choices and participation — public participation in development, the supervision of development decisions, the capacity, knowledge, and choices that are available to consumers who want to be green but who do not have the means to do so.

First low-carbon day. In 2009 we did our report on low carbon, and it was still a controversial subject. Now here we are having the first low-carbon day in 2013, and people are publicizing the need to think of low-carbon lifestyles here in China.

Corporate social responsibility and corporate environmental responsibility. These are happening in China, but far too slowly, and the effort is not being backed by strong government action. There is a basis for CSR here, and we could see much more happen in future.

Agriculture impacts. One sector that sometimes escapes attention is agriculture. Agriculture is a big problem in terms of water use. For example, a Chinese Academy of Sciences field station near Beijing monitors everything that goes into agriculture and everything that comes out. It found that the water demand is unsustainable. The groundwater in this area is declining by one metre per year. About 20% to 30% of the nitrogen that is applied as fertilizer goes directly into the atmosphere and contributes to PM_{2.5} and the other things. This is unsustainable.

New style urbanization. We have to focus attention on the environmental aspects of urbanization. For example, we have to consider compact urban design. Professor Hao says “beware of cities of 10 million” but maybe cities should be even smaller than that? Urbanization brings new quality of life demands, for example, people will demand very high quality environmental conditions. And then there are interesting ideas like ecological redlining and low-carbon cities. This is the pledge of the Council’s former Chair and now Premier Li Keqiang: “China will take an urbanization path that takes the path of green and efficient growth.” We should start thinking about what that means in terms of policy, and can we provide strong guidance from CCICED? We should be thinking of a rigorous scientific planning approach to help us decide what is a compact city and what is over-compact.

The term ecological redlining has come into prominence in China only in the past year. It starts with agriculture, for example, not allowing China’s agricultural land area to fall below a certain minimum number of hectares. Ecological redlining is all about the spatial planning of cities, and we propose to do further work on this. The new government has said that ecological redlining is needed as an environmental strategy, yet it has to be done at a micro level and in differentiated ways according to local ecological characteristics. This is something we in the China Council will dip our toes into. We think it is of great importance for achieving green development.

What China is doing now – and trying – is of vital interest to the rest of the world. We can take ideas from here and apply them elsewhere for the mutual benefit of China and other places. But China has to learn from other places too. The Chinese know that and have been doing that with the people around this table for the last 20 years. But how to achieve an alignment of interests? For example, China negotiates with other countries an agreement on mercury, but how do you make that work within China in terms of industrial development and environmental and human safety. How do you align post-2015 sustainable development goals with national and local policies?

General debate and comments

Although we have spent a lot of time talking about what will help reduce the impact of climate change, nobody has actually mentioned climate change itself. If ecological civilization is to have its full rich meaning, it should mean that humans live in harmony with nature, in harmony with each other – but also in harmony with future generations. There is no bigger issue than climate change. Much that China wants to do to address its immediate problems, it will also be good to address climate change.

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Professor Hao's presentation refers to the call in terms of primary energy mix to achieve a target of 65% coal by 2017. I hope that a very much more aggressive target will be set given the environmental challenges we are facing today. And when we pick the site for a pilot project, Guizhou is always romantic but Beijing would be a very much better choice.

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Minister Zhou mentioned the move from the idea of the market having a basic role to having a decisive role in guiding resource efficiency. This is a positive breakthrough that will have practical significance. Markets do a great job of managing private costs, but not social costs.

One big challenge for the government is to achieve a greater role for market forces in resource allocation and environmental outcomes. This implies a greater emphasis on the importance of MEP completing its work of assigning responsibilities to enterprises. For example, Professor Hao talked about volatile organic compounds. There are no regulations about these compounds now in China, so it's difficult to talk about PM_{2.5} or ozone without talking about volatile organic compounds, because these are a significant precursor.

Similarly it is important to complete the regulations articulating the ambient air quality standards for key regions in China, but also to specify market incentives such as accountability or consequences for noncompliance or for failing to meet targets. In this regard even the basic environment law needs reform in terms of its penalty provisions.

These are all examples of what needs to be done if the government or MEP is to effectively guide this greater role in the use of market forces, if we are to have an outcome that is harmonious in environmental terms and help lead toward ecological civilization rather than exacerbate it. There are too many examples

where the unfettered use of market forces has been negative for the environment as opposed to having a positive outcome. This is something both MEP and CCICED should take up as a challenge.

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What is the future for our oceans? We do face problems: hypoxia or the so-called dead zones, harmful algae blooms or green tides, jellyfish blooms, and so forth. But other issues are cropping up as well. A recent meeting in Xiamen talked about the “blue economy.” The blue economy is also green – it is the ocean-based green economy. In China today the problem is how to use the space along the coast and in the shallow water zone. Many people regard wetlands as wasteland. Actually we know that coastal ecosystems have service values. Wetlands are important as nursery ground for fisheries. They clean the water. And they serve as a defence against tropical cyclones and typhoons. So the time has come for CCICED to pay attention to how we should use the ocean.

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What is in a name? Here, the name of “ecological civilization” is everything. It is a made-in-China sustainable development concept. It has created a willingness to develop the mechanism and governance of sustainable development. For decades we have been trying to operationalize sustainable development, but we cannot find the right institutions. The reluctance to move into sustainable development in many countries often comes from the environmental movement or from environmental ministries or agencies, because they are afraid that the environmental brand will be removed from sustainable development. On the contrary, by not embracing sustainable development, the environmental movement keeps being marginalized from the more important environmental and social projects. But in China there is a big-hearted environmental community that is willing to move back so as to advance sustainable development. I think that is genius.

In Council discussions so far, “green commuting” has focused on the development of public transit. But at present in China’s big cities a large share of air pollution comes from small vehicle emissions. Unfortunately, we do not have any truly effective measures against the use of these small vehicles. Some years ago the government began to impose a fuel charge or tax, but the flat fee was so low it became ineffective once fuel prices themselves increased. At the same time, cities like Beijing have a low-price policy for public transit. These two policies offset each other. On the one hand we encourage people to use public transit. On the other hand we encourage people to use their private cars. In terms of Council

policy recommendations, the key is whether all the related policies can be properly coordinated and balanced.

As we know, the Beijing, Tianjin, and Hebei special region has suffered serious air pollution. We controlled this pollution well during the Olympic Games in 2008, but after the Games, Beijing renewed its effort to develop industry. We all know that the fiscal and tax system has resulted in fierce competition among these local governments in developing industries and investments. In the process Hebei province finds itself having no choice but to develop low-level, seriously polluting industry – and Beijing and Tianjin suffer as a result. Thus to address regional air quality issues we need the intervention of the central government to establish a coordination mechanism at regional level.

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If we are serious about ecological civilization, then we must be serious about ecosystems. We have to get much better at bringing the value of ecosystems into decision making. A lot of work has been done on the economics of ecosystems and of biodiversity, but it is not in our recommendations and there has not been enough discussion of it at the Council. Bringing the real economic value of ecosystems into decisions will be crucial if the markets are to work the way we need them to work. For example, wetlands in China provide services equal to RMB180,000 per hectare per year. Those numbers add up fast, and bringing them into the mix will be important.

What is the scope of the commitment to an ecological civilization? We know that China uses each year 2½ times the resources that can be produced by its own biocapacity. This means that China's ecological footprint is largely elsewhere. If China truly wants to build an ecological civilization, it must look at the impact it is having on resources outside China, as well as within the country. In terms of this year's recommendations, this issue relates to things like CSR. What is the scope of the social or environmental responsibility of companies? Clearly it should apply to their activities overseas, in Africa, Asia, and Latin America, as well as to their activities here.

The question also relates to the scope of what we mean by sustainable consumption. China is the largest buyer of many of the world's most important commodities. If you look at deforestation in Indonesia or in Brazil, China is among the largest buyers of palm oil and soy. China should be stepping up to a high level of performance regarding the sustainability of the commodities it buys overseas as well as the production that happens here in China.

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For the China Council to be effective, we need to tie our analysis to the work plan. One example is public participation, by which we mean getting the public involved, say as consumers or as businesses, and ensuring that all parties see themselves as being part of the diagnosis, the development, and the solution. This applies in particular to the area of financing. How do we achieve the financing that is needed for these massive changes? It's important for businesses to realize that this is not just a government solution. Everyone needs to find a place in the solution, and through dialogue and public participation this can be achieved. CCICED can help by sharing its information and analysis, both early in the development phase but also later in the monitoring phases.

Regarding the earlier comments about climate change, one area where the Council might wish to focus more attention is the work on short lived climate pollutants.

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It's important to distinguish between ecological civilization, green development, and environmental policy, because the success of an environmental policy will be the connection between this policy and green development. You have to link consumers, producers, and government, and you can consider these three elements in terms of the concept of that circular economy that connects production and consumption. The result can be less burden on materials, less waste. As well as the ten issues mentioned in the work plan, there could be an eleventh, innovation, which is the practice of research and development. You can stimulate cooperation among government ministries in two ways: you can love each other, which is difficult, or you can foster dependencies. These dependencies can encourage bonds between ministries, between governments, and between enterprises and the government.

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A decade or two ago, it was more difficult in China to tackle environmental questions, because the prevailing wisdom was "grow first, clean up later." In Europe, it took two centuries to go from that stage to "grow green so you don't have to clean up." It has taken China less than 20 years to make this leap. This is enormously important for China, but also for the rest of the world. After five years of economic crisis, Europe is beginning to see some weakening of its own commitment to green development. China moving so forcefully in this direction will help lift up all of us.

Two outcomes from yesterday's Third Plenum are connected to one another, and are crucially important: more attention to market guidance, and new paradigms in the interface between rural and urban development. As earlier speakers said, paying for ecological services should be part of this market guidance. This is so particularly when we talk about downstream water users, usually cities, paying for the protection of the upstream watersheds, usually rural communities. This would contribute to ecological civilization but also to lowering the inequalities between town and country, by creating an income stream to rural areas from urban users of water.

Part of the transformative change for all of us will be coping with more frequent and devastating disasters. Unfortunately the world has changed. Climate change is no more a problem of the future. A recent earthquake in Haiti killed 250,000 people, while another in Chile killed only 500. Well, one is one too many, but what was the difference? Chile had made 30 years of investment in disaster preparedness and risk reduction in which ecological investments such as soil protection and reforestation were a huge part. Haiti, on the other hand, no longer has any forest. The soil is so eroded that when the earthquake hits, everything collapses. Our societies need to be better able to withstand these shocks. Investment in resilience is part of our wholistic approach to a better future.

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In recent years we have seen many slogans in China. Starting with "China in 2020", then to the harmonious society, to the secular economy, and now to ecological civilization, it seems that China is looking for something that expresses the relationship between material consumption and development. Around the world, cities more and more want to have a say in the definition of the development pathway, where decisions are made for addressing issues like consumption and pollution control – where the global and the local are intertwined.

Perhaps CCICED can dedicate more time to China's urbanization challenge, which is incommensurate with anything anywhere else on the planet. We have no other example of the size and the speed of China's urban growth. Perhaps China can serve as a special case to really work out many urbanization issues and perhaps try to have specific recommendations but also with a global view.

Item 5. Open Forums

Open Forum 1: Green Development and Social Harmony

This open forum was co-chaired by CCICED Vice Chairperson **Achim Steiner** and CCICED Secretary General **Li Ganjie**. In their introduction they set out the framework for the discussion. Here are the main points of **Li Ganjie**'s remarks:

Two years ago when we began establishing a policy research program for the Council's phase V, the relationship between environment and society was proposed as a new field of study. With China's rapid economic progress, the environmental situation is increasingly severe. Various kinds of environmental incidents and risks are emerging, and these have aroused social concerns. Some experts even believe the problems and risks in environment and society may become important factors affecting China's social harmony and sustainable development.

While the relationship between environment and economy has attracted great attention, by contrast the relationship between environment and society has not received sufficient study. This year the Council carried out policy studies on this relationship. We believe that these problems and issues are the focus of attention in Chinese society. Also, these studies are consistent with policy requirements of the Chinese government to recognize the shift in China's social and economic development. This shows that our policy research is forward looking.

And here are the highlights of the introduction by **Achim Steiner**:

Our topic today is also one of the central threads in what the Chinese leadership, during the Third Plenum, has identified as a challenge for deepening the reform process: green development and social harmony. We are talking about issues like eradicating poverty. At the heart of China's development strategy still lies the challenge of lifting tens of millions of people out of poverty and into a new opportunity for development. But as the leaders also said, the rural-urban relationship has been put into the centre of some of the measures that will emerge in the coming years. I was struck by the notion that the cities have benefited for many decades from the rural areas in order to develop. Now it is time for the urban areas to focus on how they can help the rural economies. Herein lies one of the axes of this discussion about green development and social harmony.

We also see a shift toward a more decisive market element in future development. Markets are enabled to operate not just in terms of large enterprises but also small and medium scale enterprises. This is another element toward strengthening social harmony. Capital opportunity and development support are being spread more broadly to allow smaller players in the economy to play a significant role. Experience in Italy and Germany, for example, shows that small and medium scale enterprise can be the foundation of very large economies.

Wealth is another issue because inequity can disturb harmony in development. In many market economies, particularly when liberalization has occurred, inequities grew. China is conscious of this issue. A few years ago, the concept of the “five balances” was very much addressed to equity. With more decisive market forces coming to play, how will China best ensure that social harmony remains part of it?

Development is often singularly associated with infrastructure, with the built environment: steel, concrete, buildings, roads, railways. The Third Plenum clearly signaled that there is also an ecological infrastructure in China. This is China’s natural capital. The problem is understanding whose livelihood is based on which part of the economy’s capital, and how will the ecological, natural capital be recognized more clearly in future economic development. The notion of valuing and paying for nature’s services is a message that has emerged clearly in the past few days as being a key part of China’s reform agenda. So indeed, infrastructure is urban, modern, and physical, but part of the economy’s capital is also that ecological infrastructure that has been severely depleted and that has caused disharmony.

As we prepare for our discussion, my appeal to all of you will be – given these broader policy signals and given the focus of the recent Plenum – where would some of the front lines of policy implementation lie as we look ahead?

Li Ganjie then introduced the first of the forum speakers, **Zhao Yingmin**, Director General of the Department of Pollution Prevention and Control, MEP. He spoke about China’s pollution control strategy. Here are the main points of his presentation:

Since reform and opening, China entered a period of rapid development and industrialization. Urbanization and agricultural modernization have accelerated. In the process, environmental pollution has become increasingly prominent. To handle the relationship between social and economic development and environmental protection, and to achieve coordination and sustainable development, the Chinese government has done a lot of work, especially since the 11th FYP period.

The government has been pushing the “three shifts” of environmental protection from theory to practice. We have realized a leapfrog in development, and seen great achievements in the prevention and control of pollution during the 11th FYP period. Gross domestic product (GDP) has increased by RMB 13.7 trillion – much higher than the expected target – and the urban population has increased by 11 million. But still we realized the emission reduction target, and since the 12th FYP period China has accelerated the shift of its economic development model, and implemented the principle of protection in parallel with development.

So we incorporated environmental protection into the whole process of social and economic development. We improved the legal system and adopted legal, administrative, and economic means. We advocated the participation of enterprises, governments, and the general public to prevent and control pollution. This September the State Council issued the *Atmospheric Pollution Prevention Action Plan*. This new framework has been established with the government playing the dominant role and with an implementation role by enterprises and the public. The action plan includes 10 provisions and 35 measures.

We clearly realize we are in the middle and later period of industrialization and in an accelerated period of urbanization. We have seen complex, regional air pollution. The old environmental pollution was not addressed, but new problems have cropped up. Ozone and PM₁₀ et cetera have become increasingly prominent. Frequently we see large areas seriously polluted with smog. About 70% of China’s cities cannot meet new air quality standards. Also, 16.8% of groundwater is below standard, and surface water across the country is under slight pollution. The risks in the production, processing, and use of chemicals are clear. So, generally speaking the trend is toward a worsening environmental situation in China. We still have a long way to go in improve things. Environmental protection is still the weakest link of our social and economic development.

China faces a severe environmental situation for many reasons.

The first and most basic reason for China’s environmental problem is its economic growth model. We still focus on heavy industry and coal consumption. High energy consumption and high pollution are still very serious, as some local governments blindly develop industries. This has exerted pressure on environmental protection. In the near future we will still enjoy rapid economic growth, but we will face poorly coordinated and unbalanced development in different regions, and in urban and rural areas. Some

local governments are not fully aware of the importance of environmental protection and they only see GDP growth.

With urbanization and economic growth, people's consumption patterns have changed, and this change has worsened pollution. Exhaust emissions and many other sources of pollution have been on the rise. Sustainable consumption patterns have yet to take shape. Over-consumption and over-packaging increase the burden on the environment.

Also, China is weak in terms of research into the technologies that support environmental protection. We are in a preliminary stage of environmentally friendly technology.

Our imperfect policy management system also affects environmental management. Now we have established a policy support system, but at the local level we lack the mechanisms. Enterprises are not held to account for polluting the environment. The problem of lack of enforcement is critical. We need to further improve our policy management supporting system. The irrational resource pricing system and irrational dispersal of resources all increase the seriousness of the problem.

Our aim is to protect public health and improve environmental quality. We want to use laws and the market and administrative measures, and to shift from the single role played by the environmental agencies to a more comprehensive role that includes participation by all stakeholders. We want to shift from the control of major pollutants to comprehensive improvements in the environment. And we want to shift from extensive to intensive management.

The recent Third Plenum raised the theme of further deepening reform. We believe that in pollution prevention and control we will indeed deepen reform. Our focus is to accelerate work in four aspects:

First, we plan to strengthen the legal system as it relates to environmental protection. We will improve cooperation with the NPC to boost the law enforcement and legislative systems so as to demand more accountability for polluters. We will clarify the standards concerning emissions of pollutants in major industrial sectors, including air and water pollution. And we will clarify the measures for increasing the participation of the general public in this effort.

Second, we will gradually improve the economic policy systems for environmental protection. We will adjust resource pricing to better control coal-fired generation plants. We will improve the incentives system including taxes for used batteries. We will levy consumption taxes on more used products and

develop a green financing system and improve the green trading system. We will further strengthen our control on used electronic products. We will improve the funding and incentives system for enterprises so as to guide traditional industries to improve the environment.

Third, we will accelerate the construction of a more professional and efficient environmental management system. We will optimize industrial restructuring to wipe out overcapacity and implement the State Council's measures. We will carry out research on how to improve the control and management of the traditional sectors, for example the cement and aluminum industries. We will implement better pollution monitoring systems for major enterprises – especially publicly listed enterprises – so as to promote clean production and green development in the industrial sector. We will implement the pollution emission review and examination system, to give better guidance to the business sector and to have better control over overall emissions. And finally, we will strengthen our efforts in water and air quality control.

Fourth, we will solve three environmental problems that have a big impact on people's health. We aim to prevent and control PM_{2.5} and related pollutants, so as to have obvious improvement in air quality in the major cities. We aim to further improve water quality, particularly in the most seriously polluted areas. And, we will stress risk prevention to have better control over heavy metals and chemicals and hazardous waste, for example in used electronic products.

We will take comprehensive environmental control and prevention in the urban areas as the platform for further developing our overall systems and mechanisms for pollution control. In this way we will contribute to environmental protection in both urban and rural areas, as well as in lowering the gap between urban and rural areas and between eastern and western regions.

Next, **Li Ganjie** introduced **Corrado Clini**, CCICED member and Director General for Sustainable Development, Climate and Energy, Ministry for the Environment, Land and Sea, Italy. He spoke about the experience of the European Union (EU) in air pollution control. Here are the highlights of his talk:

We started to work on European rules for addressing air quality in the late 1970s. Starting from 1978 we developed an extensive body of legislation based on health standards and objectives. In the last 40 years, but mainly in the last 20 years, we were able to reduce the emissions of sulfur dioxide by 90%, carbon monoxide by 80%, non-methane volatile organic compounds by 68%, nitrogen oxides by 68%, and PM_{2.5} by 60%.

We were working on two parallel tracks. On one side we addressed air quality standards. The last directive in 2008 merges all the directives in the previous years. At the same time it set the limit value and the exposure reduction for all pollutants including PM_{2.5}. So we have the limit value from one side and the medium- to long-term objectives we have to meet in 10, 15, 20 years.

Another body of ambient air rules relates to the National Emissions Ceiling (NEC) directive. For total emissions in 2010, it sets a cap for each member state, for sulfur dioxide, nitrogen oxide, volatile organic compounds, and ammonia. These are the pollutants responsible for acidification, eutrophication, and ground-level ozone pollution.

This then is the track of air quality standards. On the other side, we have the directives for addressing emissions.

For this we have two main bodies. One is related to industrial emissions. We adopted in 2010 the directive for regulating permits in all member states for industrial activities. According to the directive, any industrial installation must use the best available techniques (BAT) according to the European best available techniques reference documents. Also we have at the European level a harmonized body for identifying the BAT that the industrial sector has to use in building and managing its activities. This is important, for it is an effective drive for promoting and driving investment in innovative technologies. At the same time, the BAT contain the emissions level associated with each technique that is to be used.

The other body relates to road traffic emissions. Since 1993 there has been a terrific reduction in emissions of hydrocarbons, nitrogen oxide, PM, and also carbon dioxide. When we address air pollution we are mainly dealing with pollution coming from the use of fossil fuels. So reducing carbon dioxide emissions from cars is a strong contribution to reducing pollution.

This is the situation in Europe today. We could say: fine, we met many of the objectives we established 10 or 20 or 30 years ago. But the history is not so simple. Last January the EU agency for the environment released its air quality report, which confirms that the emissions of many air pollutants have decreased substantially over recent decades. But the report also underlined that a significant portion of Europe's population lives in areas, especially cities, where exceedances of air quality standards are poor. Ozone, nitrogen dioxide, and PM pollution are health risks.

European agencies also noted that several countries exceeded one or more of their NEC emission limits established for 2010. And the World Health Organization (WHO) for Europe released a report that underlined that more than 80% of the population in WHO Europe lives in cities with levels of PM exceeding the WHO air quality guidelines. WHO notes that there is no evidence of a safe level of exposure, or a threshold below which no adverse health effects occur. This is a challenge, because WHO is saying that we have to improve the policies for the protection of air quality and we have to strengthen the effort we had in the past.

The EU Commissioner for the Environment, Janez Potočnik, has said that air pollution is reducing human life expectancy by more than eight months on average, and by more than two years in the most polluted cities and regions. And we are talking about the EU. He said that the current EU standards for ambient air quality are weaker than those recommended by the WHO. For example, the maximum concentration allowed of PM_{2.5} is 25 micrometres per cubic metre – currently 2.5 times weaker than what the WHO recommends. He said that we have to strengthen the commitment of the EU through the vision of existing directives in order to protect air quality and health.

In terms of public opinion, the Eurobarometer research report *Attitudes of Europeans Toward Air Quality* says that the majority of Europeans believe that air quality has deteriorated in the past ten years. Almost 79% believe the EU should propose additional measures to address air pollution. According to the poll, emissions from vehicles, industry, and international transportation are considered to have the biggest influence on air pollution.

So, we reduced emissions in Europe during the last 20 years a lot. We invested a lot for the protection of air quality in our countries. But this is not enough. According to the WHO, we have to minimize the concentration of pollution in the atmosphere, mainly the urban atmosphere. This is a big challenge for governments, for urban management, and for technologies, because to strengthen the policies for protecting air quality we cannot follow the old end-of-pipe solutions, but we have to change the chain of technologies.

In particular we face the challenge of PM. According to the EU and the WHO, we must consider how to lower the limit value of 20 micrometres per cubic metre that is to be met in 2020. The need to lower this value stems from a consideration of the components of PM. One of these components is difficult to manage: black carbon. Black carbon is both a pollutant affecting health but also affects the climate because it drives the warming in the atmosphere.

WHO suggests that the “reduction in exposure to PM containing black carbon should lead a reduction in the health effects associated with PM”. And climatologists have concluded that “the black carbon heats the air, increases convection and precipitation, and leads to larger surface cooling than if the aerosols were sulfates.” And they said that most aerosol climatologists underestimated the amount of black carbon by a factor of at least 2. This is relevant, because it corresponds to an increase in the climate forcing of about 1 watt per square metre.

Black carbon is related to industrialization. Remember that China and India increased their emissions of black carbon alongside their development. Black carbon can affect the climate also at a regional level. According to the observations of [American climate scientist] Jim Hansen, the northern China drought and the floods in south China could be related to pollution from black carbon.

So we are considering both the effects of black carbon on health and on climate. This makes the case for addressing both climate change and health protection at the same time. Remember that UNEP and the World Meteorological Organization said in 2011 that “black carbon and ozone in the lower atmosphere are harmful pollutants that have substantial regional and global climate impacts.”

So, some good news in this complicated game: in Beijing the Olympic Games were one instance of a good relationship between a reduction of pollution and a reduction of pollution’s health effects. Both black carbon and exhaled nitric oxide – a biomarker of acute respiratory inflammation in school children – were significantly reduced during the Olympics. All the available information on air quality and public health show that the figures were better during the Games than they were before or after.

It could be very interesting to consider that these positive effects were related to the intelligent measures adopted in the city: traffic control, reduction in pollution sources from industrial activities and from housing, improvement in fuel quality, and urban afforestation. If we consider what Beijing was able to do during the Olympic Games, we might find a way of addressing environmental pollution in this city and in other big cities around the world.

When we work to protect air quality we also work to protect climate. To reduce the risk of air pollution to health, cross-sectoral and long-term policies are needed to address the multiple sources of pollution: energy, transportation, housing, and the management of urban areas. The common background of most policies is mostly the reduction of fossil fuel consumption and the enlargement of carbon sinks, through renewable sources and energy efficiency, the development of low-carbon technologies in transportation and energy final uses, and the redesign and afforestation of the urban environment.

If we consider both the challenge of climate change and the challenge of air quality, we will find the right solution.

The Forum then heard from **Lim Haw Kuang**, CCICED member, Board Director of the BG Group, and former Executive Chairman of Shell Companies in China. He spoke about pollution control and CSR. Here is a summary of his talk:

To repeat a point made earlier, one factor contributing to deteriorating environmental performance is imperfect management systems. I want to share with you how the corporate world tends to manage policy systems. Policy and regulation are important, but equally important are execution and consequence management – in a manner transparent to all the organizations concerned. What gets measured gets managed.

But what is also important is CSR, or CER in particular. There are not a lot of tricks. We don't need to go to business school. We don't need to learn the law. But we know that where human nature is concerned, if there is pride, if there is a reward incentive, and if there is transparently applied punishment, you are more likely to move the organization in the direction you want it to go.

I want to share with you what I have learned in the corporate world, using safety as an example. You can substitute environmental performance for safety.

In my previous organization, everyone knew that safety was important. But it was not just about making slogans or taking voluntary actions (which are far too slow). What we did was simple: we maintained a balanced scorecard.

I, as a corporate leader, will be judged not only by how much business I have grown, not only by how much profit I have made. I will be judged also by my environmental and safety performance.

I remember one year when I grew the business extremely fast. But then, we had the first fatality in five years. I was humbled. The whole organization was humbled. The organization knew that I had to travel all the way to my head office to explain why the fatality had happened and what I would do to make sure it would not happen again. The whole organization realized we had to do better. The whole organization knew all about that. It was very transparent.

That is story number one. Here is story number two.

One business unit in my country did extremely well in one particular year. The marketing was excellent, sales were excellent, market share grew, and profit was spectacular. Despite this excellent performance, nobody in that unit received the usual bonus. Why? Because of bad safety incidents.

My recommendation is simple: put in place a transparent and robust management system. Assign accountability clearly, and make sure there is a balanced scorecard, so that promotion – or otherwise – will be clearly understood. The rewards should be governed not just by GDP or economic indicators, but also by environmental performance.

China is special in that it has many large and powerful SOEs where government can directly influence events. My recommendation again is simple: set out a transparent environmental scorecard for SOEs. Focus particularly on those in the six key high emission or energy intensive industries. Make it clear to the whole organization, from the chairman to the chief executive officer to the workforce, how their performance will be judged. Make it clear what consequence management looks like.

Li Ganjie next introduced **Andrew Steer**, newly elected CCICED member and President of the World Resources Institute. He who spoke about the harmony of environment, resources, and society, in particular about breaking the links between growth and climate change. Here are his main points:

We believe, as you do, that economic harmony and social harmony are two sides of the same coin, and I will talk about the two of them briefly today. But first, since I'm new, let me say something about the World Resources Institute.

We are a global research organization that doesn't just do research. We try and achieve change. We focus on the six global problems that must be addressed this decade: forests, food, water, climate change, energy, and cities and transport. Our approach is to obsess about measuring and analyzing. But nobody gets promoted because they measure things. They have to actually change things. So we pilot, convene, test. But nobody gets promoted simply by piloting something successfully. We are in the business of urgent times, and we need to operate at scale. For us, China is a central country. We have an office here, with 30 staff rising to 50. We also have offices in India, Brazil, the United States, and smaller offices in Indonesia and Europe.

As China grows, obviously its resource challenges grow. The opportunities are massive. What is exciting about the China Council is not only do we bring an international and a Chinese perspective to China's problems, but what China is doing is hugely important for the world. I want to remind ourselves about where we are on the intellectual journey. Will stronger environmental policies hurt or help the economy? And will they hurt or help social harmony? A lot of research is going on around the world that suggests that the positive aspects of environmental policies on economic growth and jobs are better than we thought. There are at least two reasons for this:

First, *the win-win opportunities are larger than we thought*. Every year we learn new things. Every time marginal abatement cost curves are calculated, we learn a great deal about how many good things can be done for the environment in a way that actually helps the economy. Here in China we do a lot of this kind of analysis. We looked at the issue in Anhui province of nitrogen nutrients. It turns out that you can come up to national standards by way of simple things that are good for people, good for the economy, including biodigesters, soil testing, aquatic vegetables. Or, you can do what most countries would do: things that are very expensive, like wastewater treatment plants and sludge disposal. China is not unusual. Often, government officials prefer to spend a lot more money than is necessary and also do things that are less good for society.

Second, *technology change can be induced more quickly than we thought*. Everyone knows the 1995 Porter hypothesis, which says strict environmental policies will promote innovation – which leads to increased competitiveness. Hundreds of studies have been done on this. A whole new generation of literature has come out suggesting that a modest carbon tax, a modest pollution tax, combined with government intervention in research can lead to huge gains. China is at the forefront of this exciting discovery, driving down technology costs which is extremely good for society because renewable energy employs more people and pollutes less. What China is doing is a massive gift to the world. China is leading the world in renewable installed capacity. In installed wind capacity, for example, China came from the bottom of the pack at the turn of the century and now leads the world. Even as air pollution is worse than ever in many Chinese cities, so too we have these huge signs of hope.

These hypotheses are the subject of a major new initiative called the Global Commission on the Economy and Climate. China is a central party. For China there are two areas where these hypotheses are important: urbanization, and a potential transition from coal.

China's urbanization is not just interesting, not just important – it is historically unprecedented. There is projected a 400 million increase in China's urban population between 2005 and 2025. No other country, no civilization anywhere in the history of the world has done anything closely resembling this. The rate of urban growth is much faster than in India, for example, and the scale is much larger than India.

China's window of opportunity is short, ten years or so. It is extremely important for China to invest well, but it is extremely important for the rest of the world too. This is because what China does this decade, Africa will be doing in the next decade. And what China has done on its cities will affect that African outcome. If China is able to demonstrate those two hypotheses – about win-win and technological change – that will be a huge blessing for the way urbanization takes place around the world.

We think it's useful to think about the entropy of cities, or the metabolism of cities. It's important that citizens understand this framework – that a city is a set of flows, of energy and materials and wastes that need to be recycled. If we can install this idea in the public imagination we can get progress very quickly.

One of our board members, Jaime Lerner, was the mayor of Curitiba, Brazil. Now in his 80s, he was one of the leaders of green cities around the world. I asked him what is the one thing I should know about cities. He said:

Cities to most people are so complicated. They tend to think that cities will take a generation to reform. But it's not true. You can do it much quicker than you think – if you have a vision for where the city must go, if you can persuade your citizens that it is the right vision, and if you have a governance system that enables you to implement change.

This is important for China. Chengdu and Qingdao are large cities with exciting opportunities. Qingdao shows the link between people and data and reform. The province, Shandong, has been saying you need to measure pollution every two hours. So there is a competition. Qingdao now measures pollution every 30 minutes, and gets the information out to citizens right away. This very rapid access to information can start driving reform.

We are working with Chengdu on a low-carbon blueprint study. It is an exciting process that is happening in several Chinese cities now. It starts with a baseline analysis, then scenario development, target setting, and then looking at the technology and its costs through an investment analysis, and in all

of this engaging citizens and coming all the way through to implementation and performance tracking. Whether it is in Chengdu or in the work we are doing in the Beijing, Tianjin, Hebei region, we are finding exciting experiments going on here that we are learning a great deal from.

Turning to the second potential transition, can China transition away from coal? One of our hobbies at the Institute is to count electricity generating coal plants, especially those in the pipeline. And in fact there is quite a lot of coal still in the planning stage. Our estimates from 2012 suggest there are 363 proposed plants in China, adding 558 thousand megawatts.

But there have been some new policies. In October 2013 the State Council announced a ban on new coal powered plants in Beijing, Shanghai, and Guangzhou. That will probably reduce the overall number by 15, which of course is only 5% of the total. But other new regulations are more exciting. Tighter emission standards were announced recently for ten other rapidly growing regions, which will reduce the big number of 363 proposed plants by another 48, we estimate — another 13%. So, even though the challenge is huge, you are starting to see some really interesting changes.

Now here is what we don't know: we don't know whether that transition could be more rapid, yet not hurt the economy. One of the things we study is the relationship among risks. We like to measure water risk with a tool called Aqueduct. It looks at the 15,000 major river basins in the world and models water flow. If you take the Chinese data you can project water risk, but if you overlay those maps with planned coal-fired electricity generating plants and also with coal areas, you see a scary problem. Generating electricity from coal takes a lot of water — water which of course cannot be used for other things. This situation gives China more encouragement to move away from coal, because coal is adding to its risk.

Even while China is trying to reduce emissions from coal, the idea of synthetic natural gas from coal is coming to the fore. But of course that uses huge amounts of water. If you look at where synthetic natural gas is going to be produced and you put water risk on top of that, you see other reasons why a transition away from coal would be a good idea.

The goal is smart environmental policies going to the resource-efficient side of the marginal abatement cost curve. This would demonstrate that you can induce technological change, resulting in a better society, with better public health. The nearly 10% of China's economy that is eaten away by environmental damage would not be eaten away. That's good for everybody.

So too the shape of China's development may shift. Currently China consumes large amounts of basic materials, for example, about 40% of the world's coal and steel. Shifting away from this level of intensity would not necessarily reduce GDP growth. It would just be a different kind of GDP growth.

The next speaker was **He Jiankun**, CCICED member and Dean of the Research Institute of Low Carbon Economy, Tsinghua University. He too spoke about the harmony of environment, resources, and society, focusing on overcoming resource and environmental constraints to realize sustainable development and a harmonious society. Here are his ten points:

1. Globally, sustainable development is increasingly constrained by resources and by the environment. Green and low-carbon development has become a trend in the world. With industrialization the over-consumption of fossil fuels has resulted in a shortage of resources, and in air, water, and soil pollution, plus other environmental problems. The accumulation of carbon dioxide and other greenhouse gas emissions has brought global climate change. Therefore, promoting coordinated environmental, economic, and social development has become the core issue for sustainable development in China.

The theme at last year's Rio +20 summit was building a green economy within the framework of sustainable development and poverty alleviation. At the same time, the UN climate conference also carried out the negotiation, through the Durban platform, to promote the mitigation of greenhouse gases, including carbon dioxide. So, coordinated social, economic, and environmental development are important and have become focus of attention throughout the world.

2. China's development also faces increasing resource and environmental constraints. It must meet the challenge of responding to climate change and reducing carbon dioxide emissions. We know that over-consumption of fossil fuels such as oil and coal is the main reason for the current pollution and smog. Environmental incidents have also been a cause of social instability.

The consumption of fossil fuels has given rise to serious environmental pollution. In the process of mining those fossil fuels, there has been soil and water pollution, and collapses in the coal mine regions. At present 1 million hectares of land has suffered from subsidence due to coal mining. China's carbon dioxide emissions from fossil fuels accounts for one-fourth of the world's emissions. So, responding to climate change is not only an important target for the protection of the ecological system. The main way of doing that is saving energy and reducing emissions and reducing consumption of fossil fuels.

3. China is in the process of industrialization and urbanization. How to coordinate the relation between economic development, social progress, and environmental protection, and how to respond to climate change are important for us. At present a top priority is to increase the economic benefit and to reduce the energy intensity per unit of GDP.

We have made a lot of effort and achieved great results. From 1990 to 2012, we saw the energy intensity drop by 57% and carbon dioxide intensity drop by 60%. But despite these great achievements we should see the other side of the story, which is due to the rapid economic development.

In spite of the great reduction of energy consumption per unit of GDP, the total consumption of energy is still on the rise. From 1990 to 2012 the total energy consumption grew by 3.6 times. So the total emission of carbon dioxide also increased by a wide margin. Especially every year in the past few years the new increases in carbon dioxide emissions mostly came from China. So, responding to climate change, controlling total energy consumption, and controlling total carbon dioxide emissions are still urgent tasks facing us.

4. In terms of spreading the vast energy saving technologies, China has achieved a lot. We have phased out many outdated capacities. For example, the coal-powered generating efficiency in China has exceeded that of the US and is one of the most advanced in the world. On the other hand, the per-unit energy consumption in China still lags behind that of advanced countries. The overall amount of energy consumption in China accounts for 20% of the world's total, but China's GDP only accounts for 10% of the world's total. That is to say, per-unit energy consumption for GDP in China is two times that of the world's average.

Energy consumption is 4.3 times that of Japan. In 2010 the total energy consumption of China is equivalent to that of the USA, but the per-unit energy consumption in China is lower compared to that of advanced countries. The output needs to be further improved. Our target is to optimize the growth model and to have industrial restructuring here in the country so as to further improve the per-unit output in energy consumption.

5. In developing new energy and renewable energy, China has been leading the world every year. China has invested a lot of money in the development of renewable energies. The rapid development of renewable energy is the fastest in the world. In the upcoming few years every year we will increase the photovoltaic power generation by 35 million kilowatts and wind power will exceed 200 million kilowatts by 2015. Despite our rapid growth of renewable energy, we start from a weak foundation, so the current

power generation from renewable energy cannot meet the total power demand for electricity in the country. This is a serious challenge facing us.

At present, coal accounts for around 70% of the primary energy in China. We expect to reduce this ratio to 65% and lower. In 2012 China's coal consumption exceeded 3.65 billion tons, accounting for 45% of the world's total. The annual increase of coal consumption in China accounts for about 60% of the incremental amount of the world. Given this energy consumption pattern, the carbon dioxide emission per energy consumption in China was about one-quarter higher than the world's average.

6. Therefore, changing China's energy pattern is an important way for the country to face up to climate change and to meet domestic energy demand. In the new period and with new circumstances, we should have more innovative ideas in terms of energy saving and emissions reduction. This is not only a strategic choice for China to overcome its resources and environmental constraints, but also an important demand for realizing sustainable development.

So we should better control the energy consumption pattern domestically and control the overall demand for energy by 2020. Our target is that the non-fossil field will account for 25% of total consumption by 2030. In this way we will guarantee more sustainable and faster growth of nuclear power. Nuclear power is an important part of China's efforts to restructure its energy and overall consumption patterns. At the same time we will also give priority to the development of natural gas as a substitute for coal.

7. We have set very clear goals for carbon dioxide reduction as our method to save energy, protect the environment, and deal with climate change. During this FYP period, we will implement the new targets on standards for energy intensity or carbon dioxide reduction per GDP, and by 2015 we will be able to control the overall energy consumption. So you see we go in parallel. On the one hand we control the carbon dioxide intensity per unit of GDP output. At the same time we aim to control overall energy consumption.

8. To determine the peaks for coal consumption and carbon dioxide emissions, we know that the results will be dependent on what we are doing now. We set our target peak for carbon dioxide emissions. This will also lay down a clear path for GDP growth. People expect that carbon dioxide emissions in China will reach their peak by 2030. In the past 20 years, carbon dioxide emissions increased by 200%. Since 2010 to 2030, that is, in the upcoming two decades, we are trying to reduce these emissions and to control their peak at around 11 billion tons total. As to per capita carbon dioxide emissions, we will control it below 8 tons. That will be lower than the advanced countries such as the United States.

To control the overall carbon dioxide emissions, we must first of all control emissions from industrial sectors, which contribute 70% of total carbon dioxide emissions in China. This ratio in developed countries is less than one-third. Therefore, with progress in the restructuring of China's industrial sectors we expect that these emissions from these sectors will reach a peak ahead of 2030.

9. China's eastern and better developed regions, especially the Yangtze River and Pearl River deltas, will also reach their carbon dioxide emissions peak ahead of 2030. Therefore we have to take measures now in those regions to control these emissions. In Beijing per capita carbon dioxide emissions reached a peak, but because of the rapid growth of population the overall amount of these emissions has not reached its peak there. We expect in one or two year's time, carbon dioxide emissions in Beijing will reach a peak.

So that is the real situation in China. It is quite urgent for us to set the standards and targets for carbon dioxide reduction and emission peaks. In this way we can better protect the local environment and overcome environmental constraints.

10. In my opinion, our goal should be to accelerate the transformation of the model of growth from an intensive, coal-focused one to one driven by innovation. We have to balance GDP growth and environmental protection. If GDP grows at a low rate, it will not create enough jobs and improve people's livelihoods. However, excessive GDP growth will bring environmental costs.

Therefore we have to adopt a more scientific and rational process of economic development and at the same time protect the environment. We should have more rational planning of future development and formulate policies and systems accordingly, so as to provide institutional guarantees for green and low-carbon development.

Leading comments

With **Achim Steiner** now chairing, the Council heard from several speakers who delivered brief "leading comments." The first was **Veerle Vanderweerd**, CCICED member and Director of the Environment and Energy Group, United Nations Development Programme (UNDP). She focused on four key issues for improving environmental management in China:

First, *organizing principles*. As others have noted already, China's new air quality action plan contains conflicting signals. For example, one signal promotes small cars and parking fees, while other signals

promote public transportation. Of course, if you give the public conflicting signals like this it is difficult to make any of them work. So, one first principle should be that whenever we create any environmental action or law, we should have policy coherence.

This is especially important when it comes to climate change. On this issue, UNDP is helping a number of countries make development plans that are wholistic, integrated, and low emission. Meanwhile, we see that other countries spend billions of dollars on hydro power, for example, but then forget to take care of the Montreal Protocol ozone-depleting gases. So the gains they make in one area are offset by losses other areas.

When we look at environmental laws – on water, oceans, and soil – we must look at policy coherence and ensure that we don't give mixed signals. This is the first issue we should consider for CCICED's next phase.

Another organizing principle is environmental impacts assessment. It took UNDP four years to have these assessments applied to all the programs we do. Now we are working to incorporate social and environmental safeguards into the whole UNDP system. This is not something you achieve overnight. The same applies for gender equality. For example, what is the impact of investments on poverty reduction and inequality? So there are some of the organizing principles the China Council could put forward in order to improve its impact.

Second, *visioning exercises and scenario development*. We need to know where we are going. What is the vision? What do we want to achieve? Nowadays everything I hear is "business as usual." We will continue to do what we are already doing, that is, more cars, more consumption. But is this what we want? Do we really know what sustainable consumption means? If we know where we want to go, it is easier to mobilize the public. It is extremely difficult to engage people, to make societies change, if we have no vision.

For example, what do we really mean by ecological civilization? In this group we focus on the ecological part. I would like us to focus also on the civilization part. In my mind civilization is not "even more consumption." Civilization is also about the arts, music, so many different things. At the Council we should give more emphasis to this. We need to look in a wholistic way when we do these visioning exercises.

We need a new economic paradigm, new technologies, a new education system, and particularly, new measurement. It has been said already: what we don't measure, we don't manage. And I think innovation has also come up. We need a "new innovation."

Third, *urgency in changing the development paradigm*. We don't have a lot of time. The next ten years will either catapult China on a new development path, or else there will be too many stranded assets and vested interests and it will be impossible to change anything.

I urge the Council in our recommendations to be less negative. Green economy is not negative. It has many positive aspects. We should cast our messages not so much as policing or controlling, but as potential for growth and for achieving a better life.

Fourth, *capacity building*. In everything we do, the most important goal is changing perceptions, attitudes, and values. That takes time. You need to talk to people, involve people, work with people. Building capacity, empowering people in rural villages, especially empowering women – that is the most important thing we can do.

Next, the Council heard from **Xu Dongqun**, CCICED member and Deputy Director of the Institute of Environmental Health and Related Product Safety. Here is a summary of her brief remarks:

All speakers have focused on taking measures to prevent and control air pollution. This is very important, but in the case of serious air pollution I believe that monitoring should be strengthened.

During 2008 to 2010, the World Health Organization measured the average annual concentration of PM₁₀ in 1082 world cities. Among 32 provincial capital cities in China, all except Haikou ranked 890th or below. Beijing ranked 1036th. Furthermore, only six Chinese cities among 74 that were monitored can meet the PM_{2.5} annual mean standard during the first three quarters of 2013.

All this evidence shows that PM pollution is very serious in China. Air and water pollution bring severe costs, in terms of health hazards, disease, and death, but also economic losses. In China, ambient PM pollution was among the leading risk factors for death in 2010. PM_{2.5} is closely associated with 20% of lung cancer deaths and 40% of cardiovascular deaths in China.

Although the Chinese government has produced its new action plan on pollution prevention and control, this is long-term and difficult work. For the next five years, Beijing's PM_{2.5} level will reach 60 micrometres per cubic metre, and Shanghai will reach 50 micrometres per cubic metre in 2015. As you know, the WHO's interim "target-1" of 35 micrometres per cubic metre is associated with about 15% higher long-term mortality rates relative to the Air Quality Guidelines level of 10 micrometres per cubic metre. So PM_{2.5} air pollution has become a serious public health problem in China.

In European countries and in the United States there have been studies on the health impact of air pollution, but in China we lack this long-term and systematic research. So the National Health and Family Planning Committee launched the air pollution health effects monitoring project this year. It will monitor 43 surveillance points in 16 provinces. The objective is to establish a nationwide air pollution health effects network in three to five years, and to explore the relationship between air pollution and health by long-term monitoring. In order to better finish the work, I suggest the establishment of a multi-sectoral coordination and cooperation mechanism that will share environmental, meteorological, and health data.

Finally, **Karl Hallding**, Director of the China Office of the Stockholm Environment Institute, offered these comments:

The Council's presentations have reflected two different arguments: one about the need and plans for controlling environmental pressures, the other about the high resource intensity of the Chinese development model. Personally I've gone from being an idealist to more of a realist. I think that transformative change is easier to motivate if it resonates with self-interest rather than with moral obligations, and I think that China definitely has strong self-interest in moving towards transformative change.

One piece of the puzzle has not yet been discussed here: the coal dilemma in China. If you look at the 11th FYP, China made ambitious environmental and energy security targets – which China met. It was impressive. At the same time if you look at the coal target – 2.6 billion tons for the 11th FYP, actual outcome 3.2 billion tons – this is an overshoot of one-third, or 30% more than was planned. Of course, coal consumption is the problem here, both for energy intensity and for air quality.

Coal consumption still continues to rise much more quickly than anyone could have anticipated. The problem for China is it hasn't enough coal domestically to actually continue with this resource-intensive

production. Most studies that look at coal limitation in China conclude that China's peak coal production domestically is about 4 billion tons. China's total consumption these days approaches 4 billion tons. China has gone from being a net exporter of coal only five years ago to today being absolutely the biggest importer of coal. China imports almost 300 million tons of coal. If China is to continue with the development model of the last ten years, China will need to import 2 billion tons of coal by the mid-2020s. Of course that is not sustainable.

Coal is at the heart of the whole question of transformative change. There is much more at stake than air pollution. Air pollution is not a trivial problem, of course, but the air pollution problem is about health but also about reputation – about China's ability to maintain and keep and attract the work force that is needed to move up the value chain. No one will want to move to China to work because of the air quality problems. So we need to bring this component into the discussion here when we think about opportunities for China.

Let me wind up with a story, about coal deposits in Xinjiang leading to discussions about locating energy intensive production – aluminum smelters – in that province. But Xinjiang has little of the needed water. Now turn the question around: what can be done in Xinjiang? What comparative advantages does the province have? Well, it is a very good place for agriculture – if you have enough water. Other than that, Xinjiang has good conditions for wine production. It has an opportunity to move ahead on high quality wine production, a kind of labour intensive, value-added production that would much better use the province's scarce water resources.

The heart of the problem with coal is the structure of the Chinese economy, with its oversized heavy manufacturing sector. It actually subsidizes and sells surplus production on world markets, so that in fact global citizens are buying products which are subsidized by the Chinese government and Chinese citizens. That is a lost opportunity. China should use that money that is subsidizing our consumption toward a transformation to a green economy.

General debate and comments

Recently, the *Economist* magazine called China the world's worst polluter. Better to say: China is the world's *biggest* polluter. Why is China the biggest polluter? Because it has the biggest population, one-fifth the world's total. So, all the problems facing China have to be solved in the context of such a huge population. Another CCICED member has mentioned that China's ecological footprint is two times

higher than the world's average, but he didn't say that China's *per capita* footprint is still at the world's average level. So you have to see two sides of the coin.

Why is pollution so serious in China? There are four reasons: our huge population; our rapid economic growth; China's position in the middle to late stage of industrialization and urbanization; and China's particular endowment of natural resources.

We are in a period of rapid development, industrialization, and urbanization. These processes need to be supported by energy. Where does this energy come from? We have to rely on coal. Of course, slower growth of consumption of coal is better. Now, however, the share of coal is high. We hope that we can reduce it to about 60 to 65%, but that requires hard work and much time.

At the current stage of China's development, pollution is high. This is natural and understandable. But the Chinese government and China's ruling party have sufficient understanding of the seriousness of this issue. In 1992, when China participated in the Rio Conference, we already attached importance to this issue. Our Premier put sustainable development to an important position in the policy agenda. Not long after that we treated environmental protection as a basic state policy. In the 21st century we talk about building an energy saving and environmentally friendly society. And we have put forward the concept of scientific development, part of which is the harmony between man and nature. At the 17th Party Congress we talked about ecological civilization, and at the 18th Congress ecological civilization was elevated to a higher level. So, in the past two decades the government's understanding and the people's understanding of the relation between humanity and the environment have been enhanced. China is playing a leading role in this regard throughout the world.

The Chinese government needs to control the impulse of local governments to always seek economic growth. The central government has to balance and coordinate the interests of different regions, departments, enterprises, and interest groups. A lot of work needs to be done by the government, and it takes time.

I appreciate an earlier remark: that we have more opportunities to achieve a good result than we expected because the speed of technological development is faster than we expected. Furthermore, the ability of the Chinese government to enforce regulations and controls is stronger than we expected.

Despite the fact that China is in a severe moment of serious pollution, many recommendations are being put forward, through consultations and listening to people's opinions. The Chinese government is willing

to listen to these recommendations. This means we have a scientific decision-making process and a science-based policy. We can imagine that the future for environmental protection in China is a bright one.

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You have just described two stories. On the one hand, China's storyline during the past 30 years has been a strong focus on GDP growth. On the other hand, China has repeatedly broken this well established development formula by shortening the timelines on its actions including, for example, the 10-point pollution prevention plan. The choices that China has made raise an important question: is there an evitable path to development? For example, does a country have to "pollute first" or does it have to rely on one energy source first in order to develop? Can political leadership redefine "the inevitable path" that countries have to take? At what point does the leadership change the formula of development, and therefore set a different timeline for, say, bringing down pollution or for balancing rural and urban development?

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Presently China must rely heavily on coal. For example, we need a lot of new infrastructure construction. Also we are in the process of urbanization, and many rural people are moving to urban areas where they will consume more, so energy consumption will continue to rise. This is something we cannot control. We aim to reach China's energy peak by 2030. I hope the world can understand our energy dilemma. We have no other choice.

To reach the peak by 2030 we need to reduce the share of coal to 65%. We must also develop hydro power, wind power, and solar energy, and we need to develop nuclear energy in spite of the safety concerns. Of course we can also develop biomass energy, but in the foreseeable future this form of energy will not play an important role.

So, in our policy choices we are following the developed countries but our unique situation forces us to adopt some of our own policies. GDP growth rate is already down to 7.5% this year. People around the world will note that this is much lower than before, but of course this is still a high rate. Some Chinese provinces and cities still hope to have double digit growth. Xinjiang, for example, has a lot of coal and needs to develop that in order to boost its GDP, but we do not want to exacerbate the water resources. So

different policies bring different problems. The central government has to balance all these things. Its policy choices are made out of concern for specific situations in China.

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Climate change and air pollution are a single challenge to China. Both MEP and the Chinese Academy of Engineering have said that the air pollution prevention and control plan needs to become a climate-friendly strategy. China's energy consumption has given rise to two environmental problems simultaneously: climate concern, and air pollution. Because these issues have the same cause, we can address them simultaneously.

The measures that China has adopted to prevent and control air pollution are all helpful for addressing the climate issue. These include changing the use of energy, changing the energy mix, adjusting the structure of industry, and reducing greenhouse gas emissions. If this air pollution action plan is implemented, it will be good news for the climate change issue throughout the world.

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There ought to be a practical link between the market economy and social harmony. We always have some social disharmony in that certain parts of the population disproportionately bear the social costs of development, whether it be the old, young, weak, rural, or urban. Of course the market can deliver some positive outcomes only if social or environmental costs are included in prices. But, including social costs in pricing has been hard to achieve politically.

China however has a particular opportunity. Here, health is managed at the city level, so there is a chance to make links between two kinds of costs. Air pollution translates into illness and disability, with resultant costs. People working on environmental protection should be speaking with their colleagues in the health department, to work out the best tradeoff among avoiding future health costs, caring for people with injury or illness, and the costs of production.

During the Olympic Games significant things were achieved in managing air pollution. Of course this is brought about by political focus, energy, attention, and resources. If you put enough political energy and effort into a problem, you can achieve great things. The trouble with urban development is you need this kind of energy and effort and resources *permanently*, and it is much harder to deliver that long-term attention and focus and resources to change the pattern of urban transit in the long term.

In cities, you get what you plan for. If you don't plan, you get chaotic megacities. But if you plan and develop carefully and have long-term attention, you can have great outcomes.

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I want to share ideas on two dimensions of green growth, green development, and social development. First, the domestic dimension. Business-as-usual still prevails because it is easier to maintain past development models. A lot of interests are organized around these models, and in many countries it is difficult to build change because of these interests. We should focus therefore on obstacles to change. One thing the China Council could quite comfortably address is why it is difficult to make change – for example, to improve fuel quality.

That is where the international dimension should come in, because no one knows exactly what green development is about or has implemented it effectively. It is not yet a fully developed global concept. There is a lot of uncertainty, especially among governments. This is why we should think about how international coordination can help reduce the cost of change. Already the link between health and energy consumption is clearly demonstrated in China, but we can also see the benefits of China's experience even in Europe. Five years ago in Europe the link between environment and health was not so strong. It is strong now. Why? Because a global concern about China has made everybody think about the same relationship happening in other countries. So we need these global perceptions of risk.

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During my work with a CCICED task force I became aware of differences among Chinese and westerners on some issues, but today at this meeting I realize that we can reach consensus. For example, some people think China is a "fast growing animal," but that is a one-sided view. In the past year Premier Li Keqiang raised two important concepts. One is to upgrade the Chinese economy, by which he means to increase economic growth efficiency, improve people's income, reduce energy consumption, and increase energy efficiency. In other words, this upgraded economy goes hand in hand with environmental protection and energy conservation. The second focus of Premier Li's work is urbanization. Some people worry that more serious pollution will come with urbanization. But we are now talking about a new type of urbanization, one that will let more people live as the people live in the cities. That is, all people in China will improve their livelihoods and standards.

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Those are profound comments that characterize the nature of our work here, which is not based on the judgmental approach of newspaper headlines, but on scientific and empirical analysis.

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I agree that China had to develop and use its resources, like coal, in order to provide economic development, to promote livelihoods. The question is whether is possible to supply China with coal to the extent that China can continue with the same model. If there is a limitation on coal, the element of choice will look different. China will be forced to look for a pathway where it will not be possible to extend coal consumption beyond 4.5 billion or so tons. That will enforce a strong limitation on what China can do. Under those conditions, choices look different. There are enormous opportunities in China to change the structure of its economy, to reap benefits, to extend social harmony. At the same time, there will be strong co-benefits that are environmental and climate related.

Summary by forum chairpersons

Chairperson **Achim Steiner** offered a brief synopsis of the discussion. Here are his main points:

We need to bring back from this dialogue a sense of the evolution of the policy discourse. There was a period in Chinese history when a single priority drove all decision making. In 2013, however, following the recent Plenum meeting, China has clearly redefined the cornerstones of what will drive the country's development from now on. In part that is rooted in the imperative to change, in the urgency, but also in the opportunity for change.

Also, over the past ten years, we have seen that the preoccupation of the world in judging China is changing. China itself is also changing because some of the drivers of what we talk about in the China Council – sustainability, elements of social harmony – are less driven by the perception of an international community that thinks it is ahead of China, but are increasingly driven by Chinese debates about development itself. There will be a carbon budget one day, and in the next ten years the world will begin to panic about climate change. That panic will have geo-political and geo-economic implications. It will change the way that any carbon emitting economy, including China, looks at its choices.

So the drivers of change are shifting significantly. In the context of our discussion let the world do its headlines. These headlines are driven by a preoccupation with China's economic rise, or by a reaction to images of pollution, or by the perception that some economies are not moving ahead as fast as China. At the end of the day these misperceptions will correct themselves. The interesting part is that China has brought the fundamental choices about its future of development back into the domestic drivers. I sense this is what underlies the evolution of more decisive market forces and building a different kind of economic platform, that is, ecological civilization.

We might also look at our discussion in terms of computer operating systems. China 1.0 was the revolution, communism, the socialist economy. China 2.0 was the socialist market economy, the opening up, and reform. China 3.0 has just begun – a further transition. It is the same China, the same country, but with a different set of drivers or operating systems. So we are on the verge of seeing a China 3.0 emerge.

Economists often portray economic choices in a way that is almost analogous to physical choices. But we know that economics is also a set of social choices. This is at the heart of our debate here. When for example you look at costs and benefits through the perspective of health, it changes the economics of choices about technology or energy. The macro policy framework is in the midst of rethinking the cost-benefit analysis of development pathways. China is now at the forefront of countries in practicing that rethink.

We also need to look at obstacles to change, as one speaker put it. Much of the debate in economic circles today centres round the notion of competition. Competition is used as a major rationale for why one cannot make different choices in the economic sphere – trade being a key instance. This is something we will have to confront, because some of these issues cannot be solved through a purely competitive model of international cooperation. Where is cooperation to emerge from? If you look to climate negotiations right now, cooperation is nowhere to be seen. If you look at trade negotiations, it is nowhere to be seen.

Herein lies the area where the China Council also needs to study: not only how we begin to change the economic parameters for choices with co-benefits that have already been demonstrated, but also how we can better understand the political economy – the obstacles to change – which are not only national but international too.

Finally, Chairperson **Li Ganjie** offered a five-point summary of the Forum:

1. Green development is the necessary path of development for China. While this path is consistent with global trends, we do this to meet the internal requirements for China's growth. We are keenly aware that if China does not follow the road of green development and green economy, there will not be a way out. There is no bright future for us – we are very clear about that. We are not suggesting doing this because of pressure from the outside world. We are following this road because of internal needs.

2. In terms of green development two issues require a lot of work. One is the energy mix. As others have noted already, our share of fossil fuels, especially coal, is too high. Our coal consumption is almost 50% of the world's total. If we do not solve this problem we cannot improve air quality. On the one hand we need to reduce energy consumption, on the other hand we need to develop clean and renewable forms of energy. In recent years we have made rapid progress, for example with wind power, solar energy, and nuclear energy, but we need to make further efforts. The second issue is urbanization. It is a necessary trend in China, but in the process we need to pay more attention to green urbanization and ecologically friendly urbanization. In past years we have made some progress and in the future we will make more efforts.

3. The 10-point action plan on air pollution prevention and treatment was based on our previous efforts in this regard and it is a great improvement. In view, the most important change brought about by this plan is to focus less on the symptoms and more on the root causes of environmental problems. We will change the industrial structure, production methods, even our way of living in order to achieve this goal. This is a tremendous change, from treating only the symptoms to taking a combined approach.

4. In China, public awareness of environment and development needs to be improved. We should make information more transparent. We should encourage more participation and involvement by the public and protect their right to know. We can have better monitoring and supervision by the public of service delivery by government agencies. We must improve training and educational programs that target the public. We should also have better control by giving more penalties. We should expect that our actions and projects will bring complaints and opposing viewpoints, so we should increase our communication and training on public awareness.

5. While facing tremendous tasks for environmental protection in China, we are very confident. Why? Because we have the political will from China's central government and from local governments. China's governing party has a clear understanding of the importance of environmental protection, and at the grassroots level the public has a better awareness of the importance of green development. By combining

these forces we are in a better position to promote our work. Although we face tremendous pressures, we will do a lot more in the future.

Open Forum 2: Public Participation in Green Development

This forum was co-chaired by CCICED member and Vice-President of the Asian Development Bank, **Bindu N. Lohani**, and by CCICED member and Professor and Director at the Resources, Energy, and Environmental Law Institute at Peking University, **Wang Jin**. **Wang Jin**'s brief introduction set out the framework for the discussion. Here are the main points he made:

Since the 2008 financial crisis the world economy has been in a cyclical adjustment period. The issues concerning an irrational economic structure and unbalanced development have been exposed. People have been increasingly aware that the traditional development pattern had severe disadvantages and constraints. Therefore we need to explore a new development path, namely a path that is green, low carbon, that protects the environment. In China we call it the green transformation of the economic development pattern.

This year, the Chinese government has lowered the speed of economic development. We have focused our efforts on optimizing the quality of economic development and on overcoming and addressing issues about sustainability in economic development. China is a big country in terms of population, and to realize the transformation to green development we must rely on the participation and support of the whole of society. In the process of green transformation and in our efforts to implement the key strategies and actions to protect the environment and promote ecological civilization, how can we mobilize the positive energy of the public, the media, and society, and give their potential full play?

Wang Jin then introduced the first of the forum presenters, **Jia Feng**, who is Director General of the Center for Environmental Education and Communications, MEP. His topic was the media and public involvement in environmental protection. Here is a summary of Jia Feng's remarks:

We can describe the evolution or development of the media and society during the past 100 years, particularly in the United States, in terms of four aspects:

The evolution of environmentalism. During the past century, the United States gradually evolved in its recognition and understanding of environmental issues. In particular, it came to understand these issues in a scientific way.

The evolution of environmental law. American legislation and policies developed from the protection of resources in the early period to the protection of wildlife, and then to the control of environmental pollution, for example with the introduction in 1969 of the landmark National Environmental Policy Act.

The evolution of environmental NGOs. The public's growing concern about environmental issues was reflected in the establishment of NGOs for environmental protection. The Sierra Club, for example, concerned itself with the management and protection of nature and forestry, particularly in the western part of the country. Other organizations followed – in 1967 the Environmental Defense Fund and in the 1970s the Natural Resources Defense Council. Through these organizations, members of the public could express their opinions and get involved in the policy-making process.

Evolution of environmental responsibility in the media. The focus and scope of coverage of American newspapers has also seen dramatic changes on the topic of the environment. In the 1890s, the coverage by these newspapers about environment was only 3.1 column inches per year; however by the 1970s it saw a dramatic increase to 944.7 column inches.

We can conclude from this that human understanding of the environment is a gradually changing process. The increase of knowledge about the environment raises public concerns about environmental issues, and provides incentives to developing relevant legislation for protection. At the same time, the media plays an important role by disseminating knowledge and exposing illegal behaviour.

Now let's look at China's situation, which is quite similar to that of the United States. The biggest difference is that this kind of change happened over more than 100 years in the US, but in China it happened only during the past 20 or 30 years, since reform and opening. During the 1990s, the Chinese NGO Friends of Nature carried out a series of investigations on the awareness of the Chinese print media about the environment, measured by the volume of coverage on those issues. It found that from 1994 to 1999, China's newspapers increased their coverage of environmental matters by five times. Together, 70 different newspapers in China printed 17,555 pieces of environmental news in 1996, but by 1999 this figure had increased to 47,273 pieces.

We have also seen the media get involved in environmental protection activities. For instance, in 1993 a number of influential media outlets participated in an activity called the China Trans-Century Environmental Inspection Campaign. This campaign exposed a great deal of illegal behaviour, promoted information disclosure, spurred new environmental policies and legislation, and increased public awareness.

In the 21st century we often see reports about the environment on mainstream media such as CCTV. In addition, the famous weekly newspaper *Southern Weekend* gives special attention to environmental stories. On new media or “soft media” outlets such as microblogs or Wechat well-known public figures sometimes release information about the environment, or help expose illegal behaviour by enterprises.

In China, in addition to arousing the awareness of the public and carrying out supervisory functions, the media has another important role. For example, in 2004 we carried out an awareness survey about climate change. Our data found that, in China, TV and newspapers are still dominant in terms of the influence (at that time social media had not yet emerged). Compared with the general education system, TV and newspapers played a very important role in disseminating knowledge and improving the awareness of the people.

In terms of the media’s functions in the interest of environmental protection, we can list five:

- The media has helped disseminate science and knowledge about the environment.
- It can supervise and expose illegal behaviour.
- It has helped improve the general awareness of society about environmental protection.
- It has helped push the national government to develop new environmental policies and legislation.
- It can help shape public opinion in the whole of society and enable the public to become involved in environmental protection.

Regarding public involvement, in China we already have developed relevant environmental legislation. We have a good legal basis for public involvement in environmental protection: for example, the Constitution, environmental protection laws, and regulations enforced by different government departments.

China has two major categories of relevant laws and regulations. We have those general laws and regulations concerned with the rights and interests of the public in environmental questions, plus laws

about information disclosure. As well, we have those laws focusing especially on environmental protection.

Yesterday we heard speakers talk about the spirit of the Third Plenum. If we look at the laws and regulations that encourage public participation, we can see that maybe in future more relevant laws and regulations will be revised and improved, for example, the regulation on the development of NGOs. The purpose of the revision is to enable the public and NGOs to get involved in environmental protection. I think we may need more experts and scholars to study how to further improve the legislation concerning public involvement and information disclosure in the future.

In China there are different aspects of public participation, for example: the right to know; the right to express one's own ideas; the right to oversee and supervise work; and the right of association to establish new organizations or NGOs. We also advocate another idea, that is, that the public can get involved in environmental protection by way of individual acts – for example, green choices such as green transportation – and so reduce the consumption of energy as individuals.

Within our research team, we had some disagreements among the experts on issues of public participation, the right to know, and information disclosure. I believe that different countries have different situations and development stages.

We are also promoting information disclosure by enterprises. For example, we have just released an investigation report. Starting in 1999, Chinese enterprises began to release CSR reports. By 2012 the total number of these reports has reached 1438. Disclosure requirements include the compulsory information disclosure, but in addition we have encouraged some enterprises and organizations to satisfy the public's right to information by releasing additional information. Also we introduced the roundtable dialogue model, from the World Bank, to let the public, enterprises, government, and other stakeholders have better communication about environmental issues.

Finally, I wish to mention a number of challenges to the Chinese media with regard to public participation. The biggest challenge comes from the “not in my back yard” or NIMBY movement. In other countries this movement is largely focused on garbage incineration or waste treatment. In China, some people are mobilizing the NIMBY movement against projects like construction, railway, and ports.

Another challenge is the erratic interaction between government and enterprises, particularly between government and the public. Some members of the public may believe the interaction with the

government does not follow the legal process. The result can sometimes be that the public disagrees over certain projects, or the government and the public do not communicate with one another, or, if the government tries to force the construction of a project, then the public might take collective measures to express dissatisfaction – and “social events” may happen. Sometimes, in the end, the project is cancelled. This kind of erratic interaction happened often during 2012.

What kind of role shall the media play here? China’s media faces competition in two major areas: within the industry where there is much oversupply and fierce competition among peers, and between new and traditional media. In the case of some news stories, for example, the “social events” in Qidong, the evening news carried a report. That is a rational win-win, because the expression of public opinion finally promoted environmental protection. What’s more, the government responded to the public in a rational way and did not take forceful measures.

Why does a project which can bring benefits to the public fail to satisfy the people? In Shifang, the project had been officially approved by the government. It was a project that could have brought good environmental, economic, and social benefits. But, due to poor communication with the public, and due to poor information disclosure, the project had bad results and could not be launched. This kind of issue is something CCICED needs to consider in the future.

In today’s society there is a popular saying: where there are photos, there is truth. But I doubt whether that is really so. A journalist in Jinan, Shandong, shot a news video from a bus, and he did not carry out a filmed interview. Later he put this video on the website Qilu, and then he moved it to his microblog. At the same time, five local mainstream media outlets carried the video report, and later Xinhua.com and others also did. But in fact, the story was false. It was not real. This shows us that, because of competition among different media outlets, sometimes the media are not able to carry out an objective investigation of an incident.

In a famous photo, taken in Shifang, you can see a student kneeling before the police. This student looks helpless. This photo was popularly transferred among different microblogs. But what is the truth about it? Actually the person is a tobacco peddler. A company paid him RMB 500 to kneel for five minutes, and the company took the photo. The other people who transferred this picture to other media outlets did not do any investigation. They did not know the real story behind the picture.

So, we need to further dwell on many experiences and lessons with regard to environmental and “social events.” In future, when we try to launch new construction projects, we should know that while in the

first phase everything may be legal, this construction project may not necessarily enjoy the support of the whole society. People may have different opinions about it. Also we should know that the bigger the project, the easier it is for people to target it with their dissatisfaction.

In the digital age, when there are pictures or videos, we need to let people know that these images may not necessarily represent the truth. We need to guide people to express their opinions about environmental issues in a more rational way. Sometimes when people express dissenting opinions about a project, they get very professional people to help and support them.

Furthermore, the government should understand correctly the influence and force of public opinion. In the past, the government ignored the existence of the general public, but today the government should acknowledge objectively the influence of the public. Also, the government should be aware that public opinion can sometimes lead to the cancellation of a project or cause chain reactions. The government in dealing with these situations should respond to the requirements of the people and have a rational dialogue with the public in order to solve the issue.

In the report of the 18th Party Congress, three points deserve our special attention because they have a close relationship with environmental protection and public participation in China:

- China shall gradually expand the orderly political involvement of the general public at different levels.
- Where decisions may affect the rights and interests of the public, the government shall listen to people's opinions. Officials shall correct their behaviour if they damage the rights and interests of the people. I believe these two points are basic principles the government must observe when dealing with events concerning the environment in the future. Also, the government must guarantee the transparency of information and have better communications with the public.
- The government shall guide the healthy and orderly development of social organizations.

We have a number of suggestions for how best to promote public participation in China:

- The whole society should understand that public involvement can play an important role in fostering China's green development.
- We should develop and improve relevant laws and regulations so we can provide a more visible road for public participation.
- We must establish a "sunshine government" that puts people first. Just as the Third Plenum said, everything should operate under the sunshine of further disclosure of information.

- We should guide, support, and help the development of NGOs for environmental protection.
- We should encourage the supervisory role of the media. The media can play an important role, but at the same time we hope that the media can be self-disciplined. Actually we don't want to undermine the force of the media, but to make the force of the media even bigger and stronger.
- We should improve the knowledge and awareness of the general public. In recent years there have been issues concerning the meaning of photographs, and rumors in the soft media and even in some mainstream media. To a large extent this results from a lack of understanding of environmental knowledge by the public.

The Forum next heard from **Kandeh K. Yumkella**, CCICED member and Chief Executive of the Sustainable Energy for All Initiative. Here are the highlights of his remarks:

Two years ago I came to China and met Premier Wen Jiabao. He said that China hopes that CCICED will not just sing songs of praise to the Chinese government, but that the Council will tell the government how to do things better. I hope that today my own presentation will follow this spirit.

I think that China has gone pretty well, but I believe that China can do better in environmental protection. In the past 30 or 40 years, China's success was promoted by industrialization. China has proved that industrialization can effectively change society, improve the economy, and give people a better life. This year the World Bank reported that during the past three decades China has enabled 600 million people to escape poverty. In the history of the world, no other country has done something like this.

Meanwhile, China's power sector has allowed 500 million people to access electricity in just 10 years. This is big progress. The rapid development of industry boosted demand for energy, and the resulting massive generation of power enabled more people to have access to electricity.

If China wants to have an ecological society, a harmonious society, to realize the harmony between man and the environment, then China should think about the best way to realize that. In some countries, they develop their economy on the one hand, but they make better use of the environment and natural resources on the other hand. And also, they change people's mindset.

In China, urbanization is happening fast. Urbanization is still faced with many challenges in energy. Energy security and reliability will play an important role in further boosting urbanization in China. Also

I see significant challenges in China's energy sector, and energy security and reliability will continue to be critical issues. There are similar issues in Europe and other countries. Green energy is developing fast, but consumers are not yet ready, because they will have to pay more money. But in the green development process, green technology and energy is a "must go" road.

Air quality is another important issue. Thermal power plants will bring many challenges for environmental protection, so a critical issue is the "unhook" or disconnect between the industrialization process and energy use. We have seen successful cases in Denmark, so we think it is possible. In Denmark they unhooked economic growth from energy. During the past 40 or 50 years, Denmark's economy increased by 100%, but its energy use remained constant, or even decreased.

China's issue is the same, but the question is whether China can realize this goal. How can China reduce energy consumption while boosting economic development? We have been involved in a lot of projects to improve energy efficiency in enterprises and in different sectors. Some big enterprises reduced their carbon dioxide emissions and their consumption of energy. At the same time, I believe that China will also improve its energy efficiency. If so, that can also help China address the issue of energy security.

We have seen many good cases in Denmark and other countries, so I believe that China has opportunities to create innovation. We need new technologies; we need to innovate the management model, develop new materials, and adjust the whole supply chain.

Some big global companies have done something in that direction. For example, Microsoft reduced energy consumption and improved energy efficiency in their data centre. They also increased energy efficiency in their office buildings. Walmart reduced energy consumption intensity in its worldwide supply chain. I believe that China can also do something like that.

Also, people are very important. If the Chinese people do not change their consumption patterns, a lot of issues cannot be solved. We know that there are many opportunities and potential for this kind of change, for example in the area of lighting. Many European countries and UN agencies promote energy-saving lighting. So China can do that too. Energy-saving lighting can help a family reduce their electricity bills by 15%. For a poor country like Romania, this kind of energy saving is large.

There is not just a climate change issue. There is also an energy security issue. If we can enable consumers to save energy, if we can promote energy innovation, then we can better guarantee energy security. Several American cities are promoting energy saving lighting and smart meters among consumers. Some

energy companies in Italy are also promoting smart meters in domestic households. Smart meters can remind consumers if they forget to turn off the lights or computers. In fact, if they forget to use the smart meter, the meter will remind them.

Smart meters have been promoted by power generating companies. We know that power plants sometimes need to generate 15% to 20% more power in an emergency, but if consumers are using smart meters, then it is not necessary to generate that electricity because they have more accurate figures on consumption. In all these areas China can do better, because power consumption in China is higher and the Chinese people's organizational ability is greater. So, as Chinese society gets richer and the middle class gets bigger, we have many things like this to do in future.

Raw materials and energy efficiency are important for China. China's economy will continue to grow fast and to be a major driving force for international industrialization. China will keep consuming resources to support its own economic development. Raw materials from African countries are crucial for China. Meanwhile China can seek more innovation in its raw materials and inputs. For instance, China can use solar power. We know that China's solar power is advanced and can help other countries reduce their consumption of energy. Also we can use renewable energy to support sustainable industrialization. So, if we want to have a safe world, a sustainably developing world, we have to reform our energy structure and energy consumption patterns.

In this world a lot of people are still using biomass, such as wood, to cook. I think the use of biomass is the fourth most serious global health issue, following HIV/AIDS, malaria, and tuberculosis, because biomass can have large impact on the environment and human health. We can use solar power to replace biomass. We can introduce technical innovations to enable billions of African people to access clean solar power. For the whole world and for regions such as Africa, solar power is a driving force for development. Without energy innovation, you cannot solve these issues.

The third forum presenter was **Steven G. Dong**, Vice Chairman of the China International Public Relations Association and Chair and Dean, Academy of Media and Public Affairs, Communications University of China. He spoke about managing crisis communications for environmental protection agencies. Here are his key points:

In our new "omni-media" age, how do we deal with emergent environment protection events so as to guide the general public? Environmental protection agencies and other government departments should

pay attention to this issue. In the omni-media era, Chinese people don't just listen to radio or watch TV. More people spend more time on microblogs. Microblogs have become an important information source for matters concerning environmental protection. While environmental agencies may have done a lot of work in protecting the environment, they have not spent much time doing real communication with the public.

In China we are now in an omni-media age, with many kinds of media outlets. These include radio, TV, magazines, and newspapers, which of course remain important. Nowadays the anchors of CCTV news programs are widely known in China because they enjoy large audiences every day. But sina.com is the biggest portal website in China and the number of microblog users is the largest in China. Among these microblogs users, 42 had about 200 million fans each. So these 42 people are very influential in China, even though none of them is a government official or a serious scholar or expert, and none works at CCTV or China Radio International. Still, these microbloggers are the real opinion leaders. I have a son who is in senior middle school. He does not believe me, his father — but he does not believe his teacher either. He only believes the microbloggers.

So in the omni-media age we have to do crisis management because government departments, including environmental protection agencies, are faced with different kinds of crisis. Although these environmental agencies may claim to be the leading organizations in promoting and building a new ecological civilization, the general public is often critical of their work. For example, if near their homes a nuclear plant or gas station is being built, people will not be happy about that.

These agencies in almost every Chinese province are faced with different kinds of crisis concerning their reputations, so we need to take action. We can't just close the door. We need to open the door and do our work.

These environmental agencies can shape their own image, but the task needs a team approach. We cannot depend on the publicity department to do the communications work. We need everybody to understand the importance of communications and to get involved. Also all the major leaders at the municipal or provincial level should get involved in efforts to shape or build our image.

To achieve this, transparency is important. We need to inform the public and the media, and to remember that the media is not our enemy. The media is in a transition period so we need to do our work in a transparent way. While the media poses new challenges for us, at the same time the new media platform enables us to build our mutual trust.

In China we have different kinds of media. We have about 9000 different magazines, 940 radio stations, and more than 2000 TV channels. We have a lot of websites, microblogs, netizens, and mobile phone users. China is the biggest country in terms of population, and the number of mobile phone users is the largest of any country in the world. Whenever there is a disturbing piece of environmental news, everyone shares his or her own opinion about it – before environmental protection agencies can act, even before the Xinhua News Agency can speak. These people have their own version of that news.

In China the biggest news agency is no longer Xinhua, but it is the “news agency” among the general public. This public agency is as powerful as Reuters. They have a large audience – 90% of Chinese people have received information from these sources. In omni-media space or time, the information supplied by environmental protection agencies is not sufficient.

I am a member of the State Council’s emergency management centre. I have been to places where events related to environmental protection have occurred, and I can report that local agencies wish to communicate with the public, but they fail. Why? Because their mayors do not allow them to speak. The officials of local environmental protection agencies are usually appointed by the mayor, so they have to listen to the mayor. If the mayor says you cannot speak, then you must keep silent. This is the biggest problem we face in China. It is a serious and sensitive issue.

Now let’s look at other major problems for environmental protection in China.

One problem is fragmentation. The Chinese government actually pays a lot of attention to information disclosure. If someone wishes to disclose information to the general public, they must apply for permission and be approved by a higher authority. The application then may go through a long process – three days, let us say.

But let’s look at a microblog. For example, if I say something, I will put it on a microblog. If I hear something, I will put it on a microblog. Even if I dream something, maybe I will put it on a microblog. I can do that in just three minutes. So there is time competition.

I think some “social events” can be avoided, for example, the anti-nuclear event in Heshan. Projects like this are good ones, as they can bring a lot of revenue to the local area. But a few years ago there was a nuclear crisis in Japan, so the local people had bad feelings about the construction of this nuclear plant near where they lived. At that time the local environmental protection agency said that it wished to

disclose the relevant information to the public, but the local authority refused to do that because it may cause “social events.”

Can we actually avoid the occurrence of these events? Yes, we can. Maybe we can let the public know about this nuclear plant three or six months beforehand, and convince them that we can guarantee its safety. It is not right to just be like a policeman to maintain order. We shall use information and greater transparency to control public opinion.

So this was a “social event” in the omni-media age. It involved a three-day demonstration, the final result being that the mayor had to say: OK, we will cancel this project. This is the result of very bad communications between the government and public. What they should have done is have a public investigation in the first place. They need to obtain the trust of the public and make information very transparent. It is bad to do something without explaining to the public. It is also wrong to do things first and let the people know about it afterwards. What should do and explain at the same time. We need to be fair and transparent.

Currently we have a lot of media outlets. The power of netizens and microblogs is strong. It is stupid to just fight back. The best way is to provide the media with information proactively. Then they will not spread rumors as a result of a lack of information. If they have information, they will become good friends with government agencies and can help us solve crises.

The period immediately following the occurrence of an event is important. During this period we should release important information to the media as soon as possible, for example on the official website. We should keep the dialogue going before the shaping of public opinion happens. This dialogue should be ended only when we have reached a harmonious stage.

Sometimes, attitude is more important than facts. I once had a conversation with 20 directors of local environmental protection agencies. They said they can only speak when they confirm something. I told them: you cannot do that. You have to provide some information during a crisis, every hour if possible. Perhaps you can only get a conclusion about the actual facts next year, but meanwhile you have to keep talking. If you do, people will believe what you say and believe that you are doing something. We should be fast to tell the truth to the public. We should show a good attitude, and be sincere and prudent in coming to conclusions. We have to keep communicating with the public until we get their trust, until they believe they are getting the truth.

Finally, I would like to share some of my suggestions.

Sometimes we do the right thing in providing correct scientific information, but our communication method is not good enough. We have to remember to have moral or ethical support, shared feelings with the public, and logic. With these three important points we can do successful communication.

We should not just provide information. We should also try to understand public opinion and guide it to move toward a favorable direction. We should remember that we are the image ambassadors for environmental protection. We should provide the truth to the public. If there is truth and transparency, there will not be rumours. If we can do this, we can not only be fair to the public, but we can also have a good environment. We can improve the air quality of Beijing and improve people's lives.

Next, the chairperson introduced **Simon Upton**, CCICED Member and Director General of the Environment Directorate of the Organisation for Economic Co-operation and Development (OECD). He spoke about public participation in policy on green development in OECD countries. Here is a summary of his presentation:

Public participation is not something we just talk about. We should have better communication with the public. We should guarantee that the people participating can generate some impact and that their remarks shall be respected. All the OECD countries have full-fledged legislation on the environment in order to guarantee that the public can access information in different ways. These laws guarantee that the public has the right to access information and that their right to express their own opinions will be respected.

We should also guarantee that the government cannot do whatever it wants. Sometimes the government must do something that the public does not like, but the government must communicate with the public.

So what role can the media play? The media hope they can guarantee that all public opinions are expressed openly (sometimes of course media outlets can encounter problems of their own, as we have seen recently in the United Kingdom). People in the media should encourage each other and put pressure on each other. This can help guarantee that what they tell the people is the truth.

The OECD does not have a media committee because its member governments do not want to control the media. They only want to coexist with the media. The media's information productivity is high now, so the problem is not that the information supply is insufficient but whether the public is concerned about

this information or whether they believe the information provided by governments. OECD country governments are trying hard to develop a network in order to collect public remarks and opinions, especially about green development.

Different countries are getting involved in different ways. In France there is an advisory body to the Minister of Environment, Sustainable Development, and Energy. With this kind of setup the environmental protection agencies can have updated information at any time. They bring researchers, academics, NGOs, and civil society to hear opinions and information. This mechanism was realized during French President Sarkozy's term, and it works well. Its objective is to invite people such as non-governmental officials to become involved and to discuss the issues. A lot of other OECD countries are doing something similar, that is, inviting members of the public get involved in ministerial-level committees.

France also has established networks which enable people of different regions within the country to have greater coordination, including among cities and enterprises, and to share their experiences in environmental protection. It is a good way to realize public participation. For example, if we are going to put up a new building, we can share experiences regarding that process through these networks.

Another European example enabling public participation is the Copenhagen Clean-tech Cluster. This group incorporates universities, enterprises, banks, financial institutions, and Copenhagen's municipal government. They have allocated a special fund to launch a foundation, established a board of directors, and even set up a secretariat to coordinate the work.

In Amsterdam they adopted another way. To further public-private partnerships, the municipal government and innovative enterprises and local institutions established a green investment fund together. This fund was started because resources are scarce, and it has been necessary to find a way to utilize scarce resources in an efficient way. In another example, the Netherlands Bank established a "green finance lab."

We have still other ways to promote public participation. For example, South Korea spends about 2% of its national budget to communicate with the general public. They also enable the public to take part in environmental standards development, plus there are green credit card projects which also enable the public to get involved.

We also need to depend on young people. If you want to build an eco-civilized country, then young people are the major driving force. We need to educate them in early age, for example, starting at age five. Data has shown that environmental education should start at a young age, so primary school is an important platform. In OECD member countries – particularly Austria – already primary and middle-school students talk a lot about environmental protection issues in their classrooms.

In OECD countries we have a mechanism for international cooperation that we call the green knowledge dissemination platform. This is one of the important platforms among OECD countries to help achieve international cooperation for promoting public participation. We hope this platform can disseminate relevant knowledge to people beyond the OECD.

Our forward looking report, *The OECD Environmental Outlook to 2050: the Consequences of Inaction*, asks the question: if we continue the business-as-usual scenario – that is, if we do nothing currently – then what kind of society and economy will we have in 2050? The report shows graphically the dramatic per capita GDP increase and social and economic development in the OECD region, the BRICs countries, and the rest of the world.

At the same time we should consider the relationship between air pollution and health. We have had much discussion in OECD countries about this. In another study, we looked at the impact of particles and of ozone pollution on people's health up to 2050. I have to say that air pollution is a very important killer.

Current policies are not strong enough. We know that China is advancing fast in technology and innovation. China's wealth is also increasing fast. But the air pollution in China's cities is also serious. According to the WHO air quality guidelines, most cities in the world are in the "safe" zone, but some countries are seriously higher than this line. If we continue to develop according to the current model, then countries like China, India, and South Asian countries will have serious problems.

So, what kind of information should we spread to the general public, and how can we get the public involved in efforts to address this problem? It is not just a crisis management issue. If we released this kind of information, will the public have a panic? We determined that we still need to communicate with the public and let them know about the statistics, even though they sound scary. We should let the public participate in discussion as to how to address this issue, for example, if we consider introducing a green taxation system, or carbon tax, or environment tax system, or consumption tax. We can use different ways to address environmental issues, but before introducing all these new policies we need to

communicate with the public. It's very important, and the specific communication methods are also important.

In OECD countries, before introducing important policies, governments keep close communication with the public. At the same time they also let the public know the communications results, in a regular and speedy manner. If there are failures, if the communication has not been good, then they also will let the public know that. You have to let people know if something bad is happening, because they will find out sooner or later. It's better for you to tell them earlier.

The fifth presenter was Forum co-chair **Wang Jin**. He spoke about the value of public participation and green development. Here are his highlights:

I would like to analyze the value objective and pursuit of green development and public participation from the perspectives of legislation and human environmental utilization.

The goal of green development is to protect our basic human rights and to maintain social progress. The relation between green development and environmental protection can be divided into three categories: government, enterprises, and natural persons or citizens. The group of people composed of natural persons we call the general public.

In China, governments are the managers of the natural resources and the environment. According to the Constitution, they are the entity with the responsibility for protecting the country's environment. The major function of government is to protect the national assets or property, and to maintain the balance of social interests.

The Third Plenum proposed to establish a property rights system for natural resources, including the confirmation of ecological systems service value. So, we can consider this kind of asset as a national property. Then, under the management of the government, this property should maintain and increase its value. At one and the same time the Chinese government has two separate functions: supervising the development and utilization of national resources, and controlling pollution. Are these two functions in harmony, or do they conflict? Since the GDP annual increase target is related to levels of pollutant discharge, if we lower the overall economic income, environmental quality should improve. So we have to find a balance.

In China, according to law, enterprises are the major entity to develop and utilize the environment. They are also the major polluters of the environment. While enterprises create positive economic value, they can also bring two kinds of negative value. First, they reduce environmental elements and resources, that is, the basic elements of our ecosystem. Second, the discharge of the pollutants damages the capacity of the environment, a circumstance which can threaten human survival.

The general public usually is represented by environmental NGOs. Sometimes we ignore NGOs, but I remind government officials at various levels that citizens are also the utilizers of environmental elements and capacity. We can call this “the utilization out of nature,” that is, people utilize environmental resources in order to survive. This kind of utilization should take priority over utilization by enterprises. The law of nature advocates that people have intrinsic natural rights. These are not granted by law or belief, but because we need to breathe, eat, drink, and appreciate beautiful scenery. So, among the rights of government, enterprises, and the general public, we need to establish a balancing mechanism. I think the ultimate purpose of protecting the environment is human survival.

In order to address the conflicts of interest among people, enterprises, and government, we need to set up a standard or rational target which considers the interests of the general public but also economic development at the same time. So what is the relationship between the general public, government, and enterprises in utilizing the environment?

Between government and the public we need to have the concept of representative elections. The decision for major developments shall be implemented in our constitutional system and in other legislative systems. We shall take public welfare and environmental quality as the most important pursuits for the government. At the same time we need to establish procedures to guarantee that the wishes and desires of the public can be realized.

As to the relationship between the public and enterprises, they share the resources and environment together. At the same time they compete in terms of environmental interests. If enterprises develop the environment to a larger degree, then the space for the general public to survive will decrease. In China, a country with ownership by the whole people, then the government — which rules the country on behalf of the nation — shall try to balance the interests of these two sides with laws and regulations.

And as to the relationship between government and enterprises, in China natural resources and the environment are under public ownership, so their development and utilization cannot be decided solely by the government. When the government gives enterprises approval to develop and utilize the

environment, or when they approve the discharge of pollutants, they must consider the public interest. This is an important theoretical basis for information disclosure and soliciting public opinion. We should set up rules for the public and enterprises to utilize the environment, and standards for supervision. Plus we need a market to exchange interests between the two. Finally we need the public involved and we need a legal process to realize green development.

But first of all, we need to decide that the public has the basic right to participate in environmental decision making. This is especially important in China. When it comes to this participation, the public has four basic rights:

- The right to know. Government and enterprises must disclose their information on environmental utilization.
- The right to say. People should be able to talk and voice their opinions. In particular we need legislation to guarantee that the public can voice opinions during investigations or hearings by the government or by enterprises.
- The remarks or opinions of the public shall be respected. We need legislation to guarantee that. If people report misconduct or violations, we cannot ignore their opinions. We must take legal procedures to answer and explain. If the public's opinions are not heard, people must know why.
- The public must also have the right to review or litigation, if they refuse to accept our final decisions.

Another important point is the legislative procedures that confirm public participation. In our laws and regulations we should make it clear how the public can get involved in decision making.

Also we should enlarge the scope of the entities that have the qualifications or standing to launch public interest litigation. Currently the third draft of China's Environmental Protection Law has confirmed the scope of these entities, but this scope is narrow. Only a few societies in the civil affairs departments at central government level have the standing. But China is so big, just one or two societies is too few. I think at least one entity in each province, or even one in each city, should have this standing.

Leading comments

With Binhu Lohani now chairing, the forum heard from three speakers who presented brief "leading comments." The first was **Kristalina Georgieva**, CCICED member and European Commissioner for International Cooperation, Humanitarian Aid, and Crisis Response. Here is a summary of her remarks:

Since the 1970s I've been working for environmental protection. At that time one of my family members had a serious but totally preventable disease that had been caused by polluted underground water. Had he known that that water was polluted, he may have chosen not to drink it, and he might not have suffered that disease. So a long time ago I decided that information disclosure is important. It affected my personal attitude and positioning. I think that we need to let people understand pollution and environmental deterioration, and their impact on our health, productivity, and social harmony. In Europe we have worked hard to guarantee information disclosure and public participation. We think this is important to promote green development.

I want to share four kinds of experience that can serve as good reference for China:

1. I think we can use environmental impact assessment to encourage public participation in the public policy decision making process. We know that China started to develop relevant laws in 2002. Still, I think we can further improve this law. The evaluation of environmental impacts can be meaningful and can affect the design of a project. In China probably you cannot do this right now, but I believe that the general public should be informed of evaluation processes.
2. In Europe, environmental protection organizations have played an important role in promoting and encouraging public participation and providing relevant information. China should move toward taking a more systematic approach to letting the public have the opportunity to establish this kind of organization to do publicity work on issues of concern. In this case, China can better guarantee information disclosure. In Europe we have a multiparty system, including a Green Party which is very influential in Germany. Although it is not the ruling party it has a strong influence on policies and it encourages Germany to use more renewable energy.
3. Another of Europe's experiences is that we have green volunteers. Last year in the EU we had the Year of the Volunteer. In China in some areas and regions a lot of people would love to do green volunteering, including making publicity among the public. CSR is also important. Enterprises need to take environmental responsibility. I can give you an example. In our tourism sector in Europe, food was wasted a lot in the past, especially during buffets. In order to prevent this waste, we launched a CSR campaign against food waste. This initiative however was not implemented well. Then a young girl proposed a new suggestion: she said we need to start with children. We should let children tell their parents about this campaign. In the Year of the Volunteer we noticed that many of the volunteers were young people, so we need to involve more young people in environmental protection.

4. We have a convention on information disclosure which is applied in the whole of Europe. It concerns public participation, information disclosure, and fairness and justice. It has already been written into our national laws. I think that you should consider putting information disclosure into China's laws.

The forum chairperson then invited comments from **Hau Sing Tse**, CCICED member and Executive Director of the African Development Bank (ADB):

We have to distinguish between negotiation and participation. Negotiation is a bilateral relationship. The government solicits opinions from the public as to certain proposals it has put forward, and it asks civil society to give feedback on those. Participation however is a wider process, a kind of cooperative partnership for policy making with the active involvement of citizens. That is, citizens can put forward their own suggestions for solutions to an issue.

Now let's look at what we have learned from developing the integrated guarantee system in the ADB. On the guarantee measures, we had negotiations on biodiversity, ecological systems, pollution prevention and control, working conditions, and so forth. We developed some guiding principles, the first of which is transparency. We also published relevant documents including all the negotiation processes and results. Feedback from the public was also made available on our website.

We wanted more people involved in the process of developing the integrated guarantee system. We invited many African countries, academics, the public, NGOs, and so on, to join the effort. Also we have a review committee with some UN experts and representatives from local development banks. In the end we have representatives from almost every part of Africa. We had three days of negotiations, with two plenary meetings and three breakout sessions. All the regional negotiations are recorded, and our discussions and answers to questions raised are all made public on the website.

I think that people and process are important. Public participation is not just a policy. The key is: who participates? Who *should* participate? We need to consider various kinds of stakeholders from different walks of life, and with different interests.

In China, in addition to environmental protection agencies, we also need the involvement of other ministries and departments. We also need to build up a local accountability system in order to foster mutual trust and to encourage more parties to get involved. Some of the previous speakers mentioned rights. It is important to talk about the rights of the citizen to access information. But the problem is how to confirm that their rights can be protected?

We need to have clear targets and expectations. We should identify the responsibilities of the government, of the public, and of management. We should identify the contribution the public or relevant parties should make, what kind of input they should provide, and what role their opinions can play in the decision-making process.

Another important aspect is the degree to which the relevant parties show that they understand the information. We should guarantee that the information they get is correct, and the kinds of changes they can make after their initial participation. In this, social media can play an important role.

We need some effective formal way to facilitate public participation. For example, the federal government of Canada recently raised three policy-related issues and encouraged the public to talk about these matters. And although there may be negotiations, consultations, and communications, these are not the end of the work. You also need to do follow-up, that is, you have to have a feedback mechanism. And the feedback you get also should be made public on the official website.

Previous speakers also mentioned the rights of the general public. The problem is what mechanism can enable the public's rights to be respected? One important way to do that is via NGOs, that is, to promote the development of NGOs in order to guarantee environmental protection. NGOs are an important intermediary. In China's future development, environmental protection and green development will be key driving forces. But public participation is also a key driving force for green development. NGOs can play a significant role. In this area we have a lot to learn from other countries.

I asked Premier Li what is the major driving force for our growth in the future. He answered: the urbanization policies that put people first. But the key is, how to realize that? I think that public participation can play an important role. We need an open, transparent governance structure which is the precondition for public participation. This is the direction we should move toward.

The final presenter was **Roger Beale**, CCICED member and Principal, PricewaterhouseCoopers Australia and former Secretary of the Department of Environment and Heritage, Australia. Here is a summary of his brief remarks:

My experience in Australia has shown me what kinds of public participation are successful and which are not. I want to summarize their features.

Previously we spoke about the role of the media. Effective public participation needs an efficient platform, with high quality information dissemination. We need a good media place to exchange ideas and to allow the general public to express opinions.

We also need an effective intermediary, or channel, between stakeholders and the public. Governments and supervising agencies play important roles in this process. At the same time we should encourage NGOs also to play this intermediary role. In some African countries, NGOs in the area of environmental protection are developing fast, and they have relevant policies to support them. Fundamentally, however the basis is the trust of the general public in the relevant government departments.

I would like to give you two examples: the protection of our forest environment and our water resource sharing project. A project usually takes a long time and needs great patience. It may involve external experts, and we need to share their knowledge among government departments and among different stakeholders and water users and timber users, and so on. Among all these different concerned parties we need to shape a negotiation mechanism, a coordination mechanism, and also a communications mechanism. In this case, the stakeholders of the watershed and of the forest can sit down together to communicate with each other.

In Australia we attempted to take a one-size-fits-all solution. Across the nation we set out a carbon emissions price mechanism and we also declared our target to reduce carbon emissions. We have discussions, and then later we come up to the mechanism. But this kind of mechanism or decision was a unilateral decision, created without patience and without public participation. We just declared how much emissions we were going to reduce, and how much carbon is priced at. But in the past, such efforts did not work well.

In this debate we can clearly see that new media will play an interesting role. We already had a lot of discussion. When people choose social media, they tend to choose Weibo or a microblog which tends to share similar opinions with their own. People are actually reading their own opinions. This omni-media age is a monologue age. We always log and read the kind of ideas that further strengthen our own ideas. So here in this process I hope we can have more comprehensive dialogue on the issues rather than just have a monologue or just talk to ourselves.

General debate and comments

The success of an environmental policy is largely dependent on whether the interested parties can truly get involved in the policy decision-making process. Enterprises should realize that, if they do not pay attention to the environment, they will lose their image and good name. So we should think about how to enable each business to fully consider the relationship between their profits and their environmental performance. We should let them know that if they do not do well on environmental protection, they will suffer losses.

Another issue is legislation. In addition to laws and regulations themselves, we must attend to law enforcement. From a legal perspective we should think of how to establish an efficient procedure to enforce the law and to enable laws to be implemented in a real sense. So, enforcement procedures are important. The government and the legislative agencies should consider this issue. On this, the Chinese government and Chinese public participation have great potential to make further improvements.

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Everybody thinks that China has some social challenges and problems. Public participation is one solution to these issues. The government can also benefit from public participation. Public participation with good design can help the government to develop good policies, which can result from well-designed and structured public participation mechanisms.

And, we should not take it as a kind of preventative measure, to prevent “public events.” Rather the government should take it as a proactive and spontaneous measure, and design an efficient mechanism to enable the public to participate in an active way. In this case the government can benefit from that. The government should not be passive and should not prevent the public from exercising its right to know nor from taking actions once they know something.

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We have been talking about public participation, but here among us we do not have representatives of civil society or of NGOs. Just now we stressed that NGOs are important, so indeed we should have invited them to have attended our meeting. China is such a huge country, to facilitate public participation the government does not have the capability to reach every citizen. So media and civil society are important.

In China probably you do not call it NGOs or civil society. Probably you call it not-for-profit organizations. No matter what you call it, the rules are the same. There are a lot of NGOs in China without formal registration, and they try to respond from a variety of bases: different channels, enterprises, overseas foundations – or perhaps they are sponsored by rich people. In China there are more than 300 billionaires and these people donate a lot to NGOs.

So the Chinese government should think about how to make use of NGOs or social organizations. This is important because it can help us establish public trust. China's NGOs, media, and civil society can help build mutually trusting relationships. Then we can solve a lot of issues.

If there are information gaps, sometimes we need NGOs to serve as a bridge and to help with the dissemination of knowledge and information. For example, after the nuclear accident in Japan everybody, including my grandson and granddaughter, began to question nuclear power. Although Japan is such an advanced country in nuclear technology, nonetheless it has these kind of issues. If you build a nuclear plant near my home, how can you guarantee that it will be safe?

For the public to know these things, we need NGOs and the media to do the explanation, education, and communication work. Sometimes we need to do the communication before we take the action. Before we do anything, we should let the public know. We cannot make decisions while closing the door. If you do that, then naturally the project will be accepted by the people. Extreme behaviours, “social events,” “emergent accidents” – all these result from the information gap. Civil societies and NGOs need to play their true role. They can cooperate with the government and have a dialogue or mechanism that can build social trust. In this way a lot of issues can be solved.

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In Brazil and the USA, officials do not like environmentalists because they think we increase costs and slow development. But in China it is not so. In China we get a lot of support. You have the advantage of being a late starter. You can learn from the experience of the developed countries.

We should think about how to enable the public to get involved in environmental issues. In particular we should invite those people who have suffered the impact of the environment – people who have experienced the harm that environmental change has brought.

In the Amazon and in North America a lot of investment fails because we only listen to the opinions of males. When I began listening to females I began to make money. In our enterprises, currently we have women do the plan, because they have children. They have to consider hospitals and so on, so they hope for sustainable development. But the males do not do much thinking about that kind of development, because they only consider what they can do on weekends.

We also should listen to youth. In every business we needed to have a person below 22 years of age on the board of directors, because they truly understand the demands of the world.

As for the ideas we heard earlier about the separation among government, business, and the general public, I don't think this is suitable for China, where 80% of companies are state owned. In China some private companies actually want transparency and sustainable development, and so on, but they do not have an environment of fair competition. But it is exciting to hear that some SOEs have begun to sell their equity to individuals. I think this is the right way to go.

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Without trust, nobody would cooperate with others. Information disclosure will fill this gap. The goal of information disclosure is to remove barriers to distrust. We need to release relevant information in advance. If something bad happens but only then do you provide the relevant information, then it will be too late. If you put all relevant information ahead of time on the website, then nobody can claim there has been some scheme or plot.

You should try to provide as much information as possible in advance. Don't wait until it is too late. Information disclosure is important. Only when the information is transparent can we have public participation. People will trust. They will say there is no scheme, no plot. People will love to cooperate. This is something they will remember.

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Since 1992 the China Council has been committed to studying the relations between the environment and economy in China. In particular, in 2007 we judged that the relations between the two were at an important transformation period. Again, today, we feel that the relations between environment and society are at a transition period. We render this judgment against the broad background of social

transformation in China generally, that is, changes in our social structure, the structure of the population, and the relations among public interests. All have seen major readjustments.

Meanwhile, environmental protection issues also overlay the social and economic transformations. These environmental factors have had a large impact on the transformation of Chinese society. Pollution has had a big impact on people's quality of life and on their sense of fairness and justice. People have health concerns, and there are issues of ecological compensation among different regions of the country.

At the same time, the public's concern about environmental issues, the way they express these concerns, and the impact of their protests are also changing. The public pays a great deal of attention to environmental issues. People not only express their opinions, but they also take action to reflect their concerns. This may be positive for our society, but sometimes it can also be negative for our society.

It is important for our government to develop the institutional and legislative basis for public participation. To do that, the Chinese government should understand three major issues:

1. We should regard public participation as an important factor for changing China's environmental protection system. In the past, our environmental governance had more of a top-down approach, but with public participation we can change the governance structure to bottom-up or some combination of the two. If we have this kind of understanding we can better promote public participation.
2. Our government officials should be very open to public participation. We should welcome the public to get involved, and we should listen to their opinions.
3. We should try to improve the capability of government officials to deal with these issues. The government requires us to be very close with the public, to listen to their opinions and to communicate with them a lot. However, without the capability to deal with the emergent environmental events, we cannot do the public participation work well. A lot of government officials do not have the capability to improve their communication with the public.

The general public, meanwhile, should pay attention to two issues in order to improve their participation:

1. The government should try not just to increase public awareness about the environment, but should also disseminate relevant scientific knowledge. Sometimes people have strong feelings about these issues, but they do not understand the scientific background. Then it can be very problematic, for example in the

case of paraxylene. A lot of scientists tell us that the toxicity of paraxylene is the same as the toxicity of coffee, but the public does not understand that. If they do not know the truth, they may overreact.

2. On the other hand, we shall not enable members of the public only to express their opinions, but we should also let them know their own obligations toward environmental protection and their accountability for pollution. Members of the public are among the users of natural resources, but they are also polluters and victims too.

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Obviously the new media are powerful. Just now somebody said that we can use the new media to speed up the dissemination of information, that we can take measures to make the new media more proactive. But it is very difficult to control new media. In fact this platform is sometimes very messy. There are varied interest groups, they voice their own opinions, and so on. These features actually confound our ability to encourage public participation by making use of new media.

In Canada, the federal government will remind the public to go to the government's website to review new policies that are announced there and to express opinions about them. China can do something similar. We should not just take new media as a kind of tool, but we should also try to make it provide reliable and comprehensive information to the public. In China we can do a lot of innovation.

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The Chinese government pays much attention to environmental protection. However we tend to focus on policy, technology, and capital – but we ignore public participation. This topic is pertinent and pragmatic. We are drafting a document about how to promote public participation in environmental protection work in China. Today I would like to briefly talk about our ideas, in particular, about what the public can do and what the government can do for them.

This draft document can be summarized in these points:

- With the government's active guidance, we aim to involve the public in environmental protection in an orderly way.
- Members of the public should express their opinions and their positions in a rational manner.
- The government should effectively supervise violations of the law as well as its own environmental performance.

The government should be clear about which aspects of environmental protection the public can get involved in, since it is such a broad topic. The public can become involved in policy making and legislation, in government efforts to implement policies once they are developed, in environmental impact assessments for major projects, in pollution prevention and control, and in education and publicity.

As for the government, it should:

- Disclose information so the public can understand the issues.
- Strengthen training and capacity building for officials and for the public too.
- Strengthen regular communications, not just when something happens, but routinely even when no major events are happening.
- Support the public and provide help where possible.
- Implement policies in an active manner.

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How does the government better motivate the public for participation and improve the public's sense of satisfaction?

Last year, on a Beijing expressway, I photographed a vehicle emitting thick black smoke. I sent the picture to the Beijing environmental protection agency. They told me to forward the car's plate number to Beijing's traffic management bureau. But now it is one year later, and there still has been no feedback from these agencies. I don't know whether that car is still running on Beijing's expressway. I mention this story because I want to demonstrate that government should put people first, and that government should guide people to participate in environmental protection in China.

I could mention other stories. In Xiaotangshan district in north Beijing, the government invested RMB 800 million in a development project which affected air quality and disrupted the whole area. As a result, house values there depreciated dramatically. Why did the government allow this project to proceed while others – such as one in the Liulicheng neighbourhood – were cancelled following environmental protests? It is because the government did not put people first. They just prioritized GDP. I hope that in future the government will not make GDP the ultimate priority.

We should offer training to local government officials to help them use Weibo or microblogs. The local governments of China's cities and towns should have their own Weibo or Wechat or other social media, to get feedback from people and to reply to people's concerns.

Finally, we should establish a public evaluation system and involve officials, professionals, and civil organizations.

Summary by forum chairperson

Forum co-chairperson **Bindu Lohani** wrapped up the discussion with these remarks:

Today we talked about a variety of issues. In fact, 30 years ago we talked about these same issues, but 30 years later we can see that the quality of public participation and the policies that govern it have seen dramatic changes. We hope that 30 years in the future, the things we discussed today can further improve the quality of public participation.

In 1982, after we talked about public participation, our good ideas later turned into specific actions and policies. Today's government of China should make new policies. For example, they should legalize public participation. We should also put public participation into routine work and into the decision-making process. What we are talking about today we should make the mainstream of our work. For example, in every project we will do in future, or in policy making in the future, we should explain to the public in advance. We should let them get involved in the process. We can talk with them, negotiate with them. We need a full set of procedures to explain why you can do this or can't do that. Of course, this consultation process involves a cost, but I believe that the benefits make up for the cost.

Possibly, reporters can be controlled by politicians who sometimes pay the reporters to write for them. This is a problem we need to solve. I know many journalists who will release news or information for money. We have to prevent this phenomenon.

If NGOs or multilateral organizations such as the World Bank or the Asian Development Bank do something that people disagree with, anybody can sue us, because we have an independent board of directors. Officials like me can be affected, and I may be investigated by some relevant department. I think this is important because it guarantees that all people can have a fair opportunity to express their opinions. If you are not happy with a multilateral organization, you can sue. But not a government agency. It is really very hard to sue the government. This is where NGOs have a role to play.

In China, in the past, we had a lot of top-down approach. We should encourage the bottom-up approach, and I know that China is in the process of introducing this. Some people have said that to implement central policies at local level can be very difficult. In the Philippines there is a saying: when you cook, you not only need the fire under the food but also above the food. So, we need both the bottom-up and top-down approach together to do things effectively.

Open Forum 3: Practice and Innovation for Ecological Civilization Construction

This forum was co-chaired by CCICED member and Deputy Minister of Environment Canada, **Bob Hamilton**, and by CCICED Deputy Secretary General, **Xu Qinghua**. In a brief introduction, **Xu Qinghua** made the following points:

The 18th Party Congress has integrated ecological civilization into the master plan of the development of socialism with Chinese characteristics. An ecological, beautiful China and sustainable development of the nation are the most important goals set by the Chinese Communist Party. President Xi Jinping pointed out that an ecological, beautiful China is an important component of the rejuvenation of the Chinese dream. He emphasized that we must respect nature, go along with nature, and conserve nature. Conservation of resources and protection of the environment are fundamental policies of the Chinese government. Premier Li Keqiang also mentioned that the upgraded economic plan includes the important concept of ecological civilization. Promoting practice and innovation for ecological civilization requires more exploration, more work, and more wisdom.

Bob Hamilton then offered brief remarks to set the framework for the discussion:

Today we will talk beyond the broad issue of ecological civilization and delve into innovation and practice in the construction of ecological civilization. Those are two important words.

Innovation in the area of technologies that we use and adopt for solutions — that will be a critical part of moving forward, not only in China but across the globe. As well we must consider innovation in thinking, how we assess problems in innovation, and how we approach solutions. We must challenge ourselves to think of different ways to do things, because the traditional processes might not serve us here.

And in the area of practice, today we will talk about some of the practical considerations necessary for bringing about ecological civilization. Speaking as someone who works in a policy regime, I can say that this is important. Steps need to be taken between the broad framework and the specific proposals that actually implement and make solutions effective.

With Xu Qinghua chairing the first part of the session, the forum heard from **Art Hanson**, CCICED International Chief Advisor and former President of the International Institute for Sustainable Development. He spoke about international perspectives on ecological civilization. Here are the main points of his talk:

Ecological civilization is obviously a transformative idea, in the sense of being “big thinking” about industrialization and about human relations with nature and so forth. It takes the idea of industrial civilization — which has been a standard development pathway — and moves it toward a new pathway that will define China as a post-industrial or post-modern society. In this society, values other than extreme materialism and domination over nature take on greater significance. So we are talking big and we are talking long term. It’s such a large concept that if you are politician you have to make sure those ideas are set in place during your term in office, such as the five- to ten-year terms that China’s leaders usually enjoy.

China’s ambition is to make ecological civilization a centrepiece, a working out of top-level views about how to deal with these three levels: a broad conceptual and aspirational level (which is what ecological civilization is about); green development; and environmental protection. This means there are three entry points in dealing with environment and development in China.

China has put this challenge on the table, but it is a challenge not only for China itself but also for the world. These ideas are appearing in initiatives by the UNEP, for example. Other countries have acknowledged and are starting to embrace the ideas of ecological civilization. China has become a great experiment in how to deal with environment and development. What we learn from that experiment are of definite and widespread significance throughout the world.

If we get down to the more profound meaning of ecological civilization, we can say it is “the absolute dependence of humans on nature and ecological services for our own long-term survival and well being.” The choice of words is important. Why is it not an environmental civilization? It is an ecological

civilization because it is about ecosystems. It is about our dependence on nature and our need to respect nature. This is a fundamental point, and as an ecologist I can only applaud.

We should ask three key questions about how we want to address ecological civilization:

- Is this concept operable, that is, can it have measurable outcomes?
- Or is it a broad goal that becomes a driver for policy shifts?
- Or is it a focused concept for China's future?

The answer is ecological civilization is all three of those major kinds of thinking: outcomes, driver for policy shifts, and aspirational concept for China's future — which brings us back to pride of country and the desire for a beautiful China.

How does ecological civilization relate to the various environmental approaches China takes? Green development is all about sectoral approaches, whether for example in the oil industry, urbanization, or rural development. Green development also relates back to the fundamentals of environmental protection. The important point is that ecological civilization depends on success in green development and on success in how one deals with environmental protection issues like clean air, clean water, and clean soil.

Ecological civilization also depends on the full participation of people. China's population has to be committed in order for ecological civilization to be successful. This links us back to issues like sustainable consumption and other things. Public participation, information flow, the building of trust that goes into having a harmonious society — all are aspects that relate back to ecological civilization.

What is the idea of civilization? Can you build a civilization? How do you know when you have one? Here is one definition, from [American political scientist] Samuel Huntington:

A civilization is the highest cultural grouping of people and involves values, norms, institutions, and modes of thinking to which successive generations in a given society have attached primary importance.

But who assesses whether you have a civilization or not, or even whether you are civilized? The answer is, from an historian's point of view, that you can't do it yourself. You can't say: I have constructed a civilization. You have to depend on those who follow you to actually assess whether you really are a civilization. It's an important point. While you have to work to build and to construct, others in the wider

world must assess what you are doing. This approach is parallel to sustainable development, which is why I say that ecological civilization is closely aligned to a made-in-China approach to sustainable development – and we'll let successive generations decide how successful it is.

In my mind, the use of the term ecological footprint now is closely related to the concept of ecological civilization. The two terms have a big handshake. They work together. This is important globally, because we are already consuming more than the earth can support. China is getting close to that boundary line in its own levels of consumption. This is another linkage to the international concepts that are profound and solid.

Why use terms, sometimes uniquely Chinese, such as ecological construction, or ecological compensation, and others which have the word ecological in front? I have learned to respect the use of Chinese terminology, but few people elsewhere in the world would use this kind of terminology. The fact it is uniquely Chinese is a strength rather than a weakness.

When China's leaders brought together the five ideas that now guide policy, they spoke almost exclusively in terms of progress: economic progress, social development progress, and so on. Ecological progress was the term used for ecological civilization. My colleague Shen Guofang points out that ecological progress was not the correct translation. But I can understand where the leaders are coming from. What they said is that we have been damaging things ecological and environmental, and now we have to show progress in reconstructing, in making things better, and in safeguarding them for the future. That is where the measurable outcomes should be – in seeing how well we are doing in this process. Again, this leads us back to green development.

We will need a huge effort in standards and indicators if we want to make ecological civilization a measurable outcome. Whatever measures we use, we will need to explain it carefully so we are not confusing people when we talk about these other ideas. There is a great amount of work that needs to be done on this.

As a consequence of the Plenum, we need an in-depth look at the economic reform package, the political reform package, and the social reform package, and we need to understand what is the value added of ecological civilization to that debate and discussion. That is not going to be an easy job. One of our key messages is that ecological civilization can add value to China's sustainable development. I say that with a hope and a prayer, because I don't think we know and understand enough about this comprehensive thing called ecological civilization to be able to say exactly what that value added will be.

It is vital during the next five years to pinpoint success stories about ecological civilization, how we draw upon experience and efforts so far in looking at things like the low-carbon economy, and some of the other ideas that have steered China's environment and development in the past. Highlighting these stories again will be important inside China, but also in communicating what this new animal, ecological civilization, will be used for in the rest of the world.

Recently I attended a China Council-sponsored meeting in Nairobi in the context of South-South cooperation. People were very interested in the idea of ecological civilization, and wanted to see if there is a reality that can be of use to others. It is important for China to build on this approach in its relationship with other countries. In fact, the fundamental ideas here should be followed with interest and learning by OECD and rich countries that have been smugly talking about sustainable consumption and other important ideas, but not acting on them very well.

Xu Qinghua introduced **Li Zaiyong**, Mayor of Guiyang city, Guizhou province. The speaker delivered a talk about the institutional mechanisms of ecological civilization, with a particular focus on Guiyang. Here are the highlights:

Guiyang is often called "China's best summer resort" but prior to 2007 we were well known as a very polluted city. Starting in that year we explored ways to carry out scientific development – to be fast, to be good, and to take into account society, ecology, and economy. As a result we were selected as a pilot demonstration city for green development. We have also been recognized as a civilized city, a well-organized city, and an ecological city. I would like to report to you on how we achieved this.

How can we build an ecological city? How can we respect and preserve our ecology and still improve our economy? We have taken the path of scientific development and we have achieved a consensus among city officials and the population. Through various people's congresses at different levels we have achieved a consensus on three criteria: we will achieve a high performing economy, a good ecology, and a clean society. So it will be economy, ecology, and society – and a high degree of happiness among our people.

In 2007 the municipal government held one of its congresses and we put this issue on the agenda. As a result we laid out new plans for urbanization, for ecological functional areas, and for a model eco-city. As Art Hanson just mentioned, when you talk about the ecology in China, what criteria do you use? We

have a special plan for this which has already been submitted to over 20 different national offices for their final authorization. We have urban functional areas and ecological functional areas. We are trying to set up a green economy system, an ecological civilization system, and an environmentally friendly system – in all, six different ecological systems. Underneath these six systems we have 33 projects with specific goals. These have worked to bring our officials together.

We have set up a regulatory mechanism with new laws, and in 2008 we promulgated the first set of regulations and laws to promote ecological civilization. This year we revised these laws and regulations to incorporate ecological construction. We have also set up an environmental court, and this year we established environmental protection police and guards.

We have organized the environment, forestry, and water management bureaus and other organizations into a Guiyang ecological civilization committee. In this way we can have a complete city, with comprehensive and coordinated management.

We want to build Guiyang into a livable city, so we are doing a lot of reforestation. Our forested areas are increasing by 2% a year. That was the first step. The second step is to develop and protect our water. Before we started all this, our water was very bad, graded at 5 or worse. Now it is graded at 2 or 3.

Another element is the management of our enterprises, particularly control of coal-fired enterprises. In Guiyang today all our public vehicles use clean energy. Every year we close hundreds of enterprises with high energy consumption. We also try to preserve and rehabilitate our soil. Every year we rehabilitate about 20,000 hectares of soil. We have separated the residential and development areas clearly, so we are able to protect our water, mountains, and fields, and achieve an ecological city.

We have laid a lot of stress on innovation. We are most concerned about this. If we want to develop our ecology, preserve our environment, then we have to use innovation. How do we do this? We have done the following to try to build up a system and set of mechanisms.

The first issue is the direction of development. How do you develop? That is what will determine a green economy. If you use bad methods, you will end up with bad results. So we have emphasized the quality of economic development, and we have tried to improve our concepts and ideas. We have to be good, fast, and ecologically sound. We use the idea of ecological civilization and its rules to direct our economic development. We have also decided to turn our ecology into a kind of enterprise, and at the same time we want all our enterprises to be ecologically sound. We try to combine these two.

We optimize economic, ecological, and social values. For instance, this year we set up a science base where we try to develop ecological services, rural services, so that we can decrease our reliance on minerals and mining. We have a lot of mines in Guiyang, but they are low level in technology, so we are trying to have them wait until the technology becomes good enough that we can develop the mining better. So we emphasize advanced technology and advanced industry.

We realize that ecological civilization is going to take a long time. At this point there are a lot of barriers. Not everybody has bought into the idea, so we are trying to establish channels for building consensus. We have held a number of meetings. The Eco Forum in Guiyang has become an international event. This year Vice Premier Zhang Gaoli attended, President Xi Jinping sent congratulatory messages, and representatives from the UN and specialized agencies attended – about 3000 people in all. This is forming a very wide consensus. We hope that Guiyang can be a platform, a vehicle for achieving this consensus. We are now a national eco-city. We also want to be a model for environmental protection, and we hope that through these various platforms to build an even broader consensus among our people.

Education, training, and promotion are also important aspects. All schools in Guiyang now have an ecology class. We want ecology to go into organizations, government offices, and enterprises, and so our newspapers and magazines are promoting the idea widely. We are in the process of exploring ways to set up this concept. We still have a lot of weaknesses, so we come here to learn from everybody. And we hope that you will come and visit us.

The next speaker was **Jim Leape**, CCICED member and Director General of WWF International. He spoke about ecological footprint and China for a global shift. Here are the highlights of his presentation:

I want to put the concept of ecological civilization into a broader context, and to talk about the ecology of the world and China's role in that.

WWF's biannual Living Planet Report tries to measure how we are doing as a planet through two indices: a living planet index which gauges the health of biodiversity, and an ecological footprint. From those measures we know that over the last half century global biodiversity has declined by almost 30%, but most importantly, biodiversity in the poorest countries declined by more than 60%. This means we are fundamentally undermining the natural capital on which development and an ecological civilization depend.

There is no secret why our ecological footprints — the pressure we put on the earth's resources — has increased so rapidly. We can mention the increasing use of land for agriculture and the mounting pressure on fisheries resources, but the most important factor is our growing reliance on fossil fuels and the impact this has on the economy.

Our ecological footprint today exceeds the earth's carrying capacity by 50%. It's as if we had a second planet to draw upon. If we all lived like Europeans we would need three planets. If we all lived like Americans, don't even think about it.

In recent years China has become increasingly important in that global picture. It is important to recognize that China's per capita imprint remains below the global average, but it is #1 in total global footprint — and growing very fast. This, by the way, is a measure of China's domestic consumption. The fact that many goods are imported and then turned into manufactured products for consumption elsewhere is netted out of the calculation. China's footprint now far exceeds its own biological capacity. In other words, China is using 2.5 times more resources each year than its own ecosystems can provide. That tells us that China's ecological footprint is hitting hard at home, but is quite heavy in other parts of the world.

If you take all this together, there are a couple of clear imperatives. If you chart the progress of human development against ecological footprint, there is a very clear pattern. As countries develop, they quickly go beyond a sustainable footprint. The challenge we face is, for developed countries, to bring sharply down their ecological footprint, and for poorer countries, to find a path to development that stays within sustainable limits. That is one version of a definition of ecological civilization — charting that path toward a high level of development that nonetheless the earth can sustain.

China has a role to play in every dimension of this challenge: in helping to bring down ecological footprints in both developed and developing countries, and more broadly in helping chart a path to progress that stays within planetary limits.

In China itself, part of the challenge is phenomenal economic growth. Another part of the problem is urbanization, because we see a steady increase in footprint as the population urbanizes. But here, as in the rest of the world, most of the challenge is carbon. 54% of China's ecological footprint today is from the burning of fossil fuels. That means the key to meeting this challenge is coal.

I was heartened to see in our draft policy recommendations talk of controlling coal. There is no question China has to find a way to control and ultimately reduce its reliance on coal if it is to going to meet the challenge of an ecological civilization. It's encouraging to see some cities talk about capping coal already. That is an idea whose time should come. One part of it is capping coal. Another part is moving strongly to renewables. China of course in recent years has become a leader not only in the manufacture but in the deployment of renewable technologies (also in the deployment of urban transportation, rapid transit in particular). So the first field of action for building an ecological civilization is here at home, and the first priority there is carbon emissions.

But let me focus on China's role overseas. China has become in recent years an increasingly important actor in shaping development in other countries. Since 1999, for example, Africa's economic growth has very closely tracked China's. This is partly a question of direct investment. China now invests something like US\$600 billion a year overseas in Foreign Direct Investment (FDI). Investments play an increasingly important role in shaping the course of development, not only in Africa but in Latin America and parts of Asia as well. The China-Africa Forum on Cooperation is one important vehicle for shaping how that investment is used. One priority for building an ecological civilization is to bring that concept into that cooperation.

It is encouraging that the Chinese banking regulatory commission a year ago adopted guidelines for sustainable investments, or green investment guidelines. Just last week, 29 Chinese banks committed to implementing those guidelines. This is an important step toward ensuring that FDI flowing out of China promotes sustainable practices.

Even bigger than FDI is the impact of China's trade with the rest of the world. Latin America is just one example. China's trade with Latin America grew by 2500% — that is, 26-fold — in just the past 12 years. China is now the largest buyer of many of the world's most important commodities. Cotton, pulp and paper, timber, soy, fishmeal, farmed fish, farmed shrimp — China is #1 in all those categories. China is the first, second, third, or fourth largest purchaser of the 15 commodities which are the biggest drivers of biodiversity loss around the world. In other words, the choices that China makes in the commodities it buys are driving agricultural and fishing practices in many corners of the globe.

Now, China has begun to take some action to address this issue, in adopting guidelines for sustainable forestry in timber imports and for trade into China. Those are some initial steps. But one of the most important things China can do is step up to global norms for sustainability and production. These norms are increasingly well recognized, from the Forest Stewardship Council, the Marine Stewardship Council,

and the Roundtable on Sustainable Palm Oil. They all are growing very fast in terms of global market share. There are similarly new criteria and standards established for soy, beef, aquaculture, and other commodities. China's stepping up to those global norms would be a huge step toward helping the world move toward an ecological civilization.

Let me emphasize that this is partly about safeguards, about standards, about making sure that China's investment and trade is not undermining global efforts to build an ecological civilization. But it is also about a proactive role that China can play in helping other countries chart that path. Over the last couple of years China has become the world's leading manufacturer of many renewable energy technologies. If China were to use that leadership advantage to deploy these technologies worldwide, it would be the single most important thing any country could do to help the planet move toward an ecological civilization. China should ensure that energy access in Africa and in South Asia is access to modern energy, to the energy technologies of this century – meaning solar and wind and other renewable technologies – and is not access to the energy technologies of the last century – meaning coal and oil.

Of course, China's role does not have to be confined to that. In fact, China's solar cells and wind turbines can supply the entire world with the technology it needs – and at a cost it can afford – to move toward a sustainable future. That is one of the most exciting aspects of thinking about the role China can play in moving toward the ecological civilization that it envisions.

Chairperson Xu next invited **Sun Jian**, Deputy Director General of the Shanghai Environmental Protection Bureau, to make a presentation about green supply chain (GSC) practice and innovation in Shanghai. Here are the highlights of that talk:

In Shanghai we have recently set up a pilot free trade zone. This provides a special opportunity for advanced enterprises with a high CSR consciousness to gather in Shanghai. At the same time the citizens of Shanghai have a growing desire for green consumption and green growth. New rules, laws, and economic regulations are also beginning to have good effects, guiding society toward green transformation and participation. The new zone will promote and facilitate this pilot project. More people will participate in the optimization of GSC. This will increase enterprises' competitiveness and their ability to prevent environmental risk, and create a new management system.

We believe that Shanghai's participation in this project with CCICED will have significance for the green growth of Shanghai, and will facilitate economic development of the free trade zone.

Under the guidance of CCICED and with its support, in 2011 the Shanghai Environmental Protection Bureau introduced the concept of GSC. In 2013 it officially launched the CCICED Shanghai Green Supply Chain Pilot Project. The project includes training, enterprise investigation, a feasibility study, and a summary of experiences at the end.

The pilot project involved three enterprises: IKEA, Shanghai GM, and the Bailian Group. These enterprises are representative of their sectors, plus each also has special features regarding their nature and their supply chain.

IKEA has adopted the Scandinavian model and has already included some of these concepts in its procurement and supplier organization. It also insists its suppliers improve their environmental impact. Four suppliers cooperated in this project and we achieved some remarkable results in water efficiency.

Shanghai GM, as a major auto manufacturer, places a great deal of attention on the green nature of suppliers. It encourages them to voluntarily join in green improvement. It entrusts third-party consulting firms to provide technical support, and carries out a competition among green suppliers. In 2013 some 33 suppliers took part in Shanghai GM's green continuous improvement program. 19 suppliers joined in a green design of to-be-built plants. They achieved remarkable environmental results and enhanced their green competitiveness.

The Bailian group, which is a large supermarket company, has a number of subsidiaries including Lianhua. It improved its green management by focusing on green consumption, green market, and green access. It also carried out a number of activities in training and promotion. Through these transformations, Lianhua supermarket was able to achieve significant results which encouraged it to carry out these changes on a wider scale.

These companies have achieved a number of results. They compiled GSC-related specifications for pilot enterprises which can be used as reference for similar projects. The enterprises themselves have also set up their own better management systems for GSC.

Activities have been organized for experts to come and give different kinds of training and to share successful examples from home and abroad so as to continually advance the understanding of the staff and personnel about the concept of GSC. Many of these people participated in seminars and exchanges. In June 2013, on the occasion of World Environment Day, we organized a pilot demonstration for

organizations to present their findings that promote the issue of GSC. This project also opened a new GSC website. We use this website to disseminate more information to enterprises and citizens and to exchange technical services.

We have also carried out a policy study, a compilation and summary of existing regulations and policies. We have also looked into the motivators and movers of GSC. We have investigated GSC policies needed by enterprises and suppliers in Shanghai, and identified the barriers and difficulties as well as the policy requirements.

We realize that new financial incentives are needed. We have also carried out a questionnaire survey on the public's green consumption awareness. This survey showed, for 25% of consumers, green awareness is their first consideration in their consumption. And 80% of consumers are willing to pay from 10% to 15% higher for green products.

It is clear that the results of the pilot project are quite positive. The next step is to continue to improve and promote GSC. We will offer better advice on a platform for promoting GSC, and provide service and technical input so as to invite more enterprises to join GSC. We will organize more pilot projects in different sectors, and from other parts of the Yangtze River delta, so that more and different organizations and enterprises can join. We aim to carry out a study of GSC criteria and management systems that looks into the various indicators, assessment methods, and methodologies, so that we can provide sufficient technical backing for the project.

Finally, the forum heard about GSC in the city of Tianjin from Li Li, Deputy Director General of the Tianjin Municipal Development and Reform Commission. Here are the main points of Li Li's presentation:

Tianjin city is the demonstration project for low-carbon development and for the regional carbon reduction and carbon trading project. The China Council has officially approved Tianjin to be the pilot city for ecological civilization, particularly on GSC management. And the Tianjin municipal government has issued an ordinance, following President Xi Jinping's speech in Tianjin, declaring that the development of a beautiful Tianjin is the most important component of the government's work in the coming years. Here are the main steps we have taken:

1. We conducted research and development in the initial program of the GSC management pilot project. We developed the rules governing the program and decided on the four companies to take part in the project.

2. We held a launch meeting to start the project, in March 2013. Experts shared their observations, and the four companies involved in the project also expressed their determination to help the GSC in Tianjin.

3. We issued the implementation program of the GSC management project. The requirements, goals, main tasks, guarantees, and arrangements of the work in the coming years were all specified and clarified. The city's main tasks are as follows:

- Promote the government's green procurement and improve the supervisory mechanism.
- Improve the carbon footprint of the steel industry.
- Boost GSC management in the construction sector.
- Built the green goods and services platform by creating the Yujiabao green goods and service demonstration area.
- Stress cooperation with international organizations, develop green standards, and establish a market service system.
- Promote green consumption among public and private enterprises so we they have a green consumption culture.
- Establish a financial support system for the development of GSC.

4. We launched the Tianjin low-carbon development and GSC management service centre. We have also set up a data centre so we can connect Tianjin with the rest of China's cities for future development.

5. We have studied and prepared the documents for the program on the establishment of the APEC [Asia-Pacific Economic Cooperation] international trading centre for green goods. This centre will provide more efficient consultation and trading mechanisms for the trading of green goods.

6. Government procurement agencies have communicated with some of the companies about the provision of green steel, one of the key components of our policy.

7. We have been promoting the Yujiabao demonstration area. Research has been done on the establishment of a low-carbon city, and a program has been approved by the municipal government.

8. We have encouraged the development of the green construction industry. Tianjin's municipal government has promulgated ordinances which cover building designs, construction, and the assessments and evaluation of buildings. Meanwhile the Tianjin Housing Group has been researching the application of green construction in building as well as the efficiency of green buildings. Construction companies have been developing systems of distribution and assembly of prefabricated houses.

9. We have urged improvements in the steel industry according to the GSC model.

10. We have conducted the first phase of training on GSC management, at a July 2013 training workshop attended by 40 people.

Leading comments

With Bob Hamilton now acting as chairperson, the forum heard from four speakers who delivered brief "leading comments." The first was **Hu Angang**, CCICED member and Professor and PhD Supervisor at the Center for China Studies, Tsinghua University. Here is a summary of Hu Angang's remarks:

How can China mobilize to carry out a green revolution? To think about the future we need to look at the past. Since reform and opening in 1978, a great deal has happened in China. Look at the kind of indicators of development goals that have been highlighted in official plans. Back in the early 1980s most of these indicators related to the economy. By the 12th FYP, however, the majority were social indicators. This shows that the functions of the Chinese government and its development objectives have been changing.

But pay particular attention to the indicators of green development. In 1981 there were only three – and those related to energy. By the 12th FYP, however, the number of green indicators was 24. This is why we say that the Chinese 12th FYP is a green development plan.

But how has the 12th FYP carried these out? On the basis of 2011-2012 figures, we can see that, out of those 24 indicators, the ones that were not going well were precisely those that involved resources. For example, the indicators of non-fossil fuel usage in primary energy consumption and the decrease in energy consumption per unit of GDP are both lagging behind where they should be. The situation is extremely challenging.

In a report we submitted to the State Council and to the National Development and Reform Commission, we recommended that:

- We need to focus on the quality – not the quantity – of economic growth.
- We should promote a green revolution so that we can integrate with the worldwide movement toward greenness, particularly in those areas where we lag behind.
- We must deal with the issue of who is in charge. In other words, what is most important? In the past, it was always GDP. Growth was the most important thing. Now, when we look at the provinces, or units under the provinces, we should not consider GDP. We should look at green development.
- We need to strengthen the use of the 24 indicators, particularly the obligatory ones for environmental protection.

Next, **Siebe Riedstra**, CCICED member and Secretary-General of the Ministry of Infrastructure and the Environment, Netherlands, presented brief remarks:

In the Netherlands I lead a ministry responsible on the one hand for broad long-term environmental and spatial planning, and on the other hand for immediate practical concerns such as roads, harbours, and airports. In the Chinese context too we need to connect urgent challenges with the long-term vision of an ecological civilization.

After listening to the CCICED presentations and after reading through the materials, I believe that one fruitful connecting theme for CCICED collaboration in future will be innovative planning. To achieve a society in China that could qualify as an ecological civilization – say in the year 2040 or 2050 – a useful step would be to reason back from that vision. The trick is to identify the policy decisions needed to be taken and implemented early on in order to have a chance of achieving this vision. I think this approach can be fairly useful.

For example, an exercise in such “backcasting” might consider what must be the decision-making process to transform a Chinese city from an industrial economy to a service-oriented economy? What new types of consumption must be in place? What new forms of spatial planning?

Another example is the process of urbanization. It is a challenge and an opportunity, because cities are longer lasting than many people realize. Every day in the Netherlands I see the results of decisions taken

just after World War II. What we do in Holland, but also in China, will determine our future possibilities. A good long-term vision will be necessary.

Concepts of urbanization change all the time. A small city in the 20th century is not a small city in 2050. It is important to keep room for adaptability. A smart city is an innovative city. It applies the latest technology and at the same time leaves room for changes in that technology, in demography, and in economic investment.

And it is important that experiments go further with participatory planning. We must give to citizens, social organizations, and businesses, active defined roles in developing homes, neighbourhoods, and employment. A combination of participation, integration, and adaptability is essential.

The chairperson then introduced **Li Xiaoxi**, CCICED member and Professor and Deputy Director of the Academic Board of Beijing Normal University. He made these brief remarks:

A narrow understanding of ecological civilization would define it as “the optimizing of ecological systems, closely linked to ecological footprint.” But if you look at it from a broader perspective it’s not only ecology. You must also add the human component. After all, you are talking about the relationship between mankind and nature. It is how man and nature can live in harmony.

This is something we should talk about: how do we understand and define ecological development and ecological civilization? If we are taking an international way of looking at it, it is probably better to adopt the wider perspective, since that probably makes it easier to achieve cooperation.

During the Third Plenum, the term ecological civilization was mentioned seven times. Three times it was ecological civilization, and four times it was ecological civilization *system*. A system implies reform of mechanisms, a regulatory framework. But when you are talking about reforms to the structure, how do you understand that? How can we be more innovative in our frameworks, our structures, to protect the environment and biodiversity? We will need rules and regulations to do this.

The Third Plenum also talked about objectives, not only for the construction of a beautiful China. Everybody has been putting up indicators, but how can that be combined with the building of a beautiful China? Our understanding of ecological civilization is probably going to evolve and so we should look at all these terms that are used in the Third Plenum report.

Finally, Bob Hamilton introduced **Scott Vaughan**, President of the International Institute for Sustainable Development. He made four points:

1. A key challenge in making tangible progress towards ecological civilization is “greening” the financial sector to make investments more open to green opportunities. One important innovation is the 2012 green credit policy of the China Banking Regulatory Commission. It is extraordinary to have a banking regulatory commission set out very ambitious targets to move private sector banking towards greening. We can see some of the tangible proof of that happening in that 8% of total liquidity in Chinese banking is now directed towards the green sector. This is incredibly important not only in China, but it is an example of Chinese leadership that banking regulators around the world will notice.

2. Another opportunity is public procurement. Moving toward greening of procurement is a way to reduce an ecological footprint. In China approximately 20% of all goods and services are tied to public purchasing. So shifting toward the greening of that has tremendous potential in lowering pollution across a range of sectors and markets. We have heard also of opportunities coming from the private sector, from IKEA for example. Another important detail comes from Shanghai, where polling has shown the willingness to pay – and what’s more a price premium – for goods and services that consumers feel have a positive impact on reducing their ecological footprint.

3. That is the positive side of it. Meanwhile, we have the big problem of policy coherence. Moving toward a whole-government approach to any challenge, not just environmental protection, is difficult. One area in the energy sector that needs progress is the matter of subsidies. The International Monetary Fund has estimated that \$1.9 trillion are spent annually on global subsidies to the fossil fuel sector. In fact, the ratio of subsidies in the coal sector to subsidies in renewable energies is about 10 to 1. All our governments are making ambitious targets to reduce carbon footprints, to introduce carbon mitigation measures, and so on, but at the same time those subsidy payments to fossil fuels are actually creating obvious and considerable barriers.

4. Indicators and measurement are important, because they essentially frame the narrative of how we see progress toward ecological civilization or greening economic growth. We do need to complement our standard understanding of GDP indicators with alternative, green indicators. But one of the challenges and opportunities is to have indicators that the public can understand – that can show them progress in the right direction. But also we need to harness the public’s obvious engagement with data collection and

data observation — for example, PM_{2.5} indicators — to create indicators that not only inform people but actually turn them into participants working towards ecological civilization.

General debate and comments

A lot of effort has gone into education and training, but green education is probably on the weak side. What we are promoting is ecological civilization, or an ecological *system*. We all know that the resources that we depend on come from this ecological system. So I think the concept of ecological system should be incorporated into education.

I am particularly concerned about oceans. We know that China's development is mainly in the coastal areas. People go to visit the wetlands and they say: Well, it's just a few birds, isn't it! What is so great about that? But what do those birds reflect? They reflect that this wetland is productive. Stocks of small fish are living well here, but if you destroy that wetland then those fish will disappear.

We also know that wetlands can clean and purify the water. Once the wetlands are destroyed, this cleaning effect is gone. We also know that wetlands are important when it comes to defending the coastline from typhoons. You destroy the wetlands, you get no defence.

If you look at it from a long-term perspective, there are even more facets. For instance, if you have no more wetlands and the fish disappear, then you get a bloom of jellyfish, because normally those jellyfish are eaten by those fish. So there is a complex relationship among the various factors. Once the wetlands are destroyed, it is hard to re-establish them. In one particular place where wetlands were removed to build a harbour, that facility produced a lot of income, so in that case it will be difficult to do away with the harbour and restore the wetland.

Many regions want to reclaim land, but does every place need to do that? There should be marine special planning. We need indicators not just for the forests but for coastal wetlands too. For coastal cities after all the forests are not that important, the wetlands are more important.

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We have heard from various cities about what they are doing in building ecological civilization, but still I feel that we are only starting out. I think this set of policy recommendations is specific and the most concrete, practical recommendations that we have proposed over the past few years. However I still

would like to strengthen some parts. For example, air pollution in China is clearly increasing. Since the beginning of the 11th FYP we have laid out some targets for the limitation of major pollutants and we have actually achieved or even surpassed these targets. But if you look at the increase in the smog, it's actually getting worse over the last few years. So this targeted control that we lay out is just not enough to control the smog at the rate it is increasing every year.

The State Council's 10-point action plan has laid out new indicators, but there are still different understandings about how smog forms. People don't see it in the same way. We know that the sum total of pollutants that are put into the air is way above the possibility of support. If the effect of sunlight is added, it just increases the pollution. If we want PM_{2.5} to drop by 30% in Beijing, then emissions will have to drop by over 30%. But our goal is still only 10%. So, if we want to achieve 30% drop in pollution, it is difficult indeed. What we are doing is not enough.

At this point, China's growth overall is still high-carbon and expanding. Different places are all using high investment to achieve high growth. Mayors and officials and leaders in different places have all said yes, well, that's the way it is. Environmentalists have worked hard to promote a low-carbon and green economy, but they haven't been able to reverse the overall trend of an expanding economy. So, while there might be good stories and cases, the overall results do not seem to have changed very much.

So the challenge now is: what are we going to do? How do we deal with this? Control and reduction of overall pollutants is essential. No matter how you want to talk about GDP, you have to talk about emission reduction. And it has to be a very high reduction. If you cannot achieve that, then you are not going to deal with the smog issue.

Personally I think our society, including our leaders, actually don't have a thorough understanding of the situation. Although a lot of measures have been taken to limit the smog, it is getting worse. It is worse this year than last year. National Day in October used to be the best day of the year, but now without wind we are covered in smog. So, I think our present measures are not enough to reverse this increase of pollution and smog.

We are building more and more buildings. It's expanding in all cities. Under these circumstances, how are you going to cut down on emissions? Because power has to increase, coal production has to increase. As soon as we start slowing down a little, somebody gets anxious and worried: "Oh, we should go faster. If growth is faster, that means our economy is doing well. If we burn more coal, if we create more

electricity, we are doing well." So, speed of growth is the criterion. If we don't change this overall concept, all our measures are not going to solve the problem.

Therefore, I suggest in our policy recommendations that we add that a regional environment impact assessment should be a precondition for any kind of project. If regional emissions increase too fast, we are not going to reach our goal.

I agree with the idea of a green GDP. Although our central leaders have heard many different opinions, still we hope that China's GDP will increase over 7.5%. If we can't guarantee 7.5% then all sorts of incentive measures come into effect, usually greater investment in building and construction. Sometimes we build something, then pull it down, and build it again. If we still use GDP as the focus indicator, as the goal of our economic growth, and if we keep saying that GDP cannot drop below 7.5%, then changing the environmental situation is going to be extremely difficult. Using GDP to assess our economic growth is at the root of why the environment is so bad.

So we still have not resolved how can we achieve green growth. At this point most of our growth is not green. The faster you go, the less green it is. We don't even theoretically have a way of explaining or dealing with this. What are the measures we want to take? Obviously it needs further study. But I do think that using GDP and the expansive mode will result in more consumption, more investment, more pollution.

I also approve of pricing resources. If our pricing system is not correct, then it will be difficult to rely on the market. When it comes to price management China is encountering a difficult situation. If you have any price increase, you will get a lot of opposition. Leaders don't want to offend the public, after all. The price of energy in China is being subsidized, and the subsidies come in different forms: a lowering of price or continuing to support production even in the case of loss. Importation of natural gas is one way of dealing with it, but this is being done at a loss. It is being subsidized by the government. So, if we continue to move into a market economy and if the market is going to have a greater impact, then pricing and taxation must change.

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The Chinese government is making a major contribution with its commitment to ecological civilization. It is a major breakthrough in thinking and in making political commitments that have meaning. But precisely because they have meaning they may have even more value if they are somewhat ambiguous.

Such concepts tend to evaporate if you try to give too precise a meaning to it. This is one reason the idea of sustainable development caught on. It was something that every sector and every group could buy into, come to the table, and get to know one another's views.

Ecological civilization is another of those concepts where different groups and sectors can make their contributions accordingly. This means we need to revise and refine the language – or different languages – for different kinds of communications. For example, if you are talking to an economist, one could easily define it as being that kind of development or pathway which leaves all kinds of assets or capital intact or even bigger, for the benefit of the next generation. It could be human capital in terms of skills, knowledge, and abilities. It could be natural capital in terms of forests, soils, and waters. It could be financial capital, of course. Or it could be cultural capital: value systems or community-based social cohesion.

When you have these different kinds of capital you have to recognize that they are not interchangeable. You can't convert all your forests into money, and then say you have left behind a better world. You need to look at each type of asset as something that needs to be enhanced as civilization progresses. You could talk to a Buddhist who would deny the language of capital altogether – because it reduces all these values to economic or monetary terms – but rather talk instead about issues of human development or a variety of alternative indicators such as Bhutan's Gross National Happiness.

My concern as an environmentalist is that while we have made strong commitments to stable climates, to the conservation of biodiversity and prevention of species loss, and to the management of energy resources – we have not given enough thought to material resources. This problem will confront humankind not as dramatically as species loss or environmental change, but possibly sooner. We now see indications that anthropogenic movement of materials in the earth's crust is actually comparable to or exceeding natural flows. So humans are messing with the fragile ecosystems of the planet in a dangerous way.

We need to bring into our calculations a whole range of natural resources, not only metals and rare earths, but biogeochemical cycles. According to most scientific findings, the time horizon for serious depletion of the phosphate cycle is 30 to 40 years. You can't grow food without phosphates. These serious issues are not really on the agenda, so I make a plea that CCICED also look at material resources.

One reason this issue is extremely urgent for China is that it affects the construction sector. China's new roads, buildings, ports, and other facilities are actually the largest consumer of material resources: sand,

aggregate, stone, cement, limestone, and everything else. Huge volumes of these resources go into the construction sector. This is destructive of nature. This is what causes the ecological breakdown which leads to a lowering of agricultural productivity, loss of food stocks, and price increases.

From an engineering viewpoint it's all very well to have centralized, large-scale, highly sophisticated mechanical and chemical industrial systems for making steel and cars and such things. But normal amenities — water systems and treatment plants and so on — we tend to lose sight of the fact that Mother Nature does these things much better than we do, and for much less money. In nature there is no such thing as waste. In nature you don't have to pay for the enormous services that ecosystems provide, which is at least as much as the human economy does. In hard dollar terms nature provides us with tens of trillions of dollars worth of services.

Biomimicry is a subset of engineering that uses nature to do a lot of our work, in ways it has been doing for 4.5 billion years. We should dedicate a little more time and attention to understanding “blue technologies” that are based on nature as a whole. There are thousands of these technologies that use nature or are inspired by nature to do our work for us.

It all boils down to the fact that there are planetary boundaries or limits to what humankind can do. It means that our development patterns, our commitments to a better future, have to be redesigned. The “safe operating space” concept, where you can deliver things that people need in a way that doesn't transgress planetary boundaries, is important to understand.

Big cities are not going to be the viable organisms of the future. There is a limit to how dense and compact you can make a city, how high you can go, how wide you can go in spreading your populations into the countryside. The nexus between rural and urban is far more important if the city is going to be a livable place. The more resources you pour into a city, the more people will come. It is like a magnet, and when you invest in more amenities you are making the magnet stronger. You are depleting the countryside which is actually a place that is livable provided you can deliver services, like jobs and health care and education, that people come to the city to obtain. So we need to rethink the urban-rural balance. I am afraid that in the Third World that is a lost cause at the moment, because modernization is basically seen as building big tall cities.

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There is a gap, both in our discussion today and in broader discussions around the world, which is that nobody talks about social policy. To the extent we can see a relationship between environmental protection and social policy, it is always a one-way street. People tend to say: how can we change the behaviour of citizens and consumers so they will do a better job of protecting the environment? We seldom get to the point of saying: while social policy is affected by the environment, just as importantly it affects the environment as well.

For example, we don't look at health policies, education policies, and so on, in the sense that these are driving people to the cities. We don't yet have a good understanding of the issue of social development and its relationship to environmental protection and economic development. That has been true for 20 years. We started first trying to find out what are the problems with respect to environmental protection. We then came to understand that we really needed to make the link to economic development. So far we have not made real progress on the issue of social development and on trying to understand what those links are.

One way to pick apart those links, to try and understand it, is to look at urbanization. That is where economic development, social development, and environmental protection come together in a direct way. In China's case, it is important because of the scale and pace of change. So it is particularly important to view urbanization almost as a living laboratory. If during the next five years the China Council can map out a much better understanding of that relationship, so that social policy, environmental protection policy, and economic development policy are coherent and moving at the same pace, we are much more likely to see an ecological civilization in the long term.

And I would make the point that we will not achieve ecological civilization unless we pay real attention to the human beings in the system. The technology will come easily and quickly. It is the changing of attitudes and behaviours of individuals and institutions that is going to be the real stumbling block.

Summary by forum chairpersons

The co-chairpersons wrapped up the discussion with brief remarks. First, **Bob Hamilton**:

I found the discussion on the pilot projects fascinating. These projects demonstrate the importance of planning and of timeframes. And again we saw the importance of an integrated approach. The discussion shows what a complex set of issues we are dealing with and the breadth of those issues across a range of

topics that we are still debating. The pilot projects make a good case not only for planning effectively but for having an organized and coherent framework and an integrated approach to the issues.

Finally, **Xu Qinghua** offered these comments:

Regarding this concept of ecological civilization, note that whenever such new concepts are proposed, there is a period of time needed for us to understand and interpret them. It not as though the moment they come out we have a clear idea of what they mean. How do we understand it? What are its implications? It is going to be some time before we can reach consensus on this.

Ecological civilization, in our discussion, is still mostly focused on trying to link economic development and environmental protection. I don't have a very clear idea about this myself, but I want to raise it so we can all think of it. One of our international colleagues said to me: "If we don't protect our environment, then the human race is probably going to destroy itself. On the other hand, if we don't develop our economies, then we are going to perish right away." In other words, how do we resolve the tension between these two both now and in the future? It's a huge topic in this period of transformation of our economy.

Item 6. Briefings on the Open Forums

CCICED Secretary General **Li Ganjie** introduced CCICED Vice Chairperson **Achim Steiner**, who briefed the wider conference on the discussion in Open Forum 1: Green Development and Social Harmony. In addition to summarizing the exchanges that took place during the forum, he made these observations:

The presentation by He Jiankun was a fascinating set of statistics and analysis of what characterized much of our discussion, which another forum member has called the "coal dilemma." China needs energy. People want access to electricity. You need to provide it. Coal is a central pillar of that, and it will remain so. What's more, 70% of that energy is actually for industry. Many industrialized countries have a proportion of energy allocated for industry of around 30% or 40%.

We also had fascinating presentations about the costs of energy, in particular one by Xu Dongqun. In her presentation the group saw the other half of the challenge of social harmony, which is pollution and its cost to people in terms of health. Whether you calculate it in terms of premature death, years of life lost,

or economic cost to the health sector – clearly the challenge of air pollution is a central one in the search for green development and social harmony.

The imperative to act on pollution is recognized from an energy perspective, a pollution perspective, a health perspective. The urgency has been recognized in China, and through the presentation on the pollution control strategy we saw the urgency with which China is addressing this issue. But, structurally this issue will not disappear for a while. The discussion looked at the choices that China needs to make, and I was struck again by how our forum presentations echoed themes repeated elsewhere during the conference, which is: you have to start looking at the co-benefits, because then you begin to make different choices. It is through the articulation of the co-benefits that the economics changes or priorities can be adjusted.

We also touched on the question: what are the obstacles to change? We need to look at the reasons why these changes are not happening. When we listened to the green urban strategy I think we had many of these echoes I just mentioned. Why do we continue – decade after decade, hundreds of years after urbanization had already learned its lessons about congestion and mobility – to build cities the same way and then have to rip them up and spend a great deal of money re-engineering mobility in the urban centres?

Out of its own necessity China has to act on this, and the social harmony theme was a central one. The energy mix is a good example of the difficult choices that are there. We see the further reliance on coal – even the expansion of coal – but on the other hand we must remember China’s remarkable record in already achieving, sometimes well above any other country, energy efficiency gains in certain sectors. As Chief Advisor Shen has noted, there is a big difference between being called the world’s worst polluter and the world’s largest polluter. It is a reminder to us that China is jumping in different eras. I offered the notion of China 1.0, China 2.0, and now China 3.0 in terms of decoupling economic development from some of the costs of development that are disrupting social harmony. Green development becomes a way to bring co-benefits together.

I mention also the presentation by Corrado Clini as a reminder that even in those countries that have made significant achievements in managing pollution, success is not complete. He pointed out that today significant parts of Europe’s population live in PM_{2.5} conditions that are above WHO standards.

Li Ganjie then introduced CCICED member and Vice-President of the Asian Development Bank, **Bindu N. Lohani**, who provided a brief point-by-point summary of the presentations delivered during Open Forum 2: Public Participation in Green Development.

Finally, Li Ganjie introduced **Bob Hamilton**, CCICED member and Deputy Minister of Environment Canada, who presented a summary of Open Forum 3: Practice and Innovation for Ecological Civilization Construction. In addition to providing a summary of the various presentations, he made these general points:

The presentations started with strategic, policy context issues, then proceeded to the practical and innovative things that we can do in a pilot project, on the ground, to make a real difference. In other words it went from broad conceptual arguments and strategies toward very tangible examples that we have learned from cities – especially from cities linking together in an overall government policy.

We considered the innovative measures taken in China to give life to ecological civilization. We talked about the challenges and opportunities, both domestically and globally, that China will encounter on the road ahead. There was a good balance in recognizing the positive things that are happening, but at the same time recognition of the significant challenges ahead.

We heard a lot of admiration for, and discussion of, the concept of ecological civilization. There was a sense in the room it could be defined narrowly or broadly. Maybe at the end of the day we don't want to define it too precisely. It will have to be a concept that will be a guiding force but will be flexible and adapt to diverse needs.

Another issue that ran through many of the presentations was the notion of integrated policy coordination. When we hear examples from the cities of what's working and not working, one thing that is working is where they have integrated decision-making processes among different departments so that they are not acting at cross purposes.

Other key themes were the importance of measuring our goals and providing good indicators, and also the importance of planning and recognizing the time frames in which we operate. Not only are we now dealing with decisions made a long time ago, but the implications of the decisions we take today will last a long time. It is important to have a comprehensive and broad framework.

Item 7. Task Force and Policy Research Reports

CCICED Secretary General **Li Ganjie** chaired the presentation of the task force reports.

Task Force on Environmental Protection and Social Development

Li Ganjie introduced the task force co-chairpersons. **Elizabeth Dowdeswell** is President and Chief Executive Officer of the Council of Canadian Academies, and a former Executive Director of UNEP. **Fan Bi** is Deputy Director General in the Department of Integrated Research at the Research Office of China's State Council. First, **Elizabeth Dowdeswell** made these points about the task force report:

It is important to note that this task force was asked to develop a general framework, and in this way is very different from many of the other task forces that have been undertaken. We seek a framework for achieving harmonious interactions between China's environmental protection and its social development. We want to answer the question: how to use social capital in promoting green development transition for China's environmental protection and society?

Early in our discussions we realized how difficult this task was.

The first issue was that our task was about developing a better understanding of the relationship between environment and sustainable development. This was not intended to be yet another report on improving environmental protection – as important as that is. It was also clear that, while economic growth has been the priority in China's strategic planning and policy making, the specific relationship between environmental protection and economic development also was not our task. So we took as our starting point, of course, the concept of sustainable development, recognizing the importance of the environment, the economy, and society, but trying to focus specifically on the linkage between the environment and society.

The second difficult and related issue was that we had to approach this task systemically and holistically. We were asked to provide a framework that would apply to all parts of society, not just one department or one level of government, not just one industrial sector or region, but would apply also to citizens and institutions. We did not concern ourselves with specific sectoral recommendations. We did comment that, although in the environmental protection movement we always talk about ecosystems and we always assume that we require integration – integration of the human being and of the environment

– we seldom actually achieve that integration. A useful framework, we decided, requires a clear long-term vision, in this case the vision of an ecological civilization. But it also requires some well-understood guiding principles for all of the actors. Most importantly, it requires the development of a coherent set of policies and actions that cross government departments and regions.

The third reason this was difficult to undertake was that we realized it was an ambitious undertaking that would take time. This was not something that could be accomplished with a few short-term recommendations. While there are indeed some recommendations that can be actionable in the short term – to address matters that demand urgent attention such as social instability and unrest – there are also specific matters that require further research to move them forward in the medium and the long term. So our framework covers a period of time. It also makes clear that simply hoping for incremental change will not be good enough. There will be moments when a real step change is required.

Finally it is important to acknowledge that the work of this task force is preliminary. It was seen to be a first step which would be followed by further work in the continuing program of CCICED over the next several years, to really advance and optimize the relationship and to mitigate any possible unintended consequences of working in just one sector.

I'm delighted that the concurrent work of the other task forces is aligned with our general thinking: the role of enterprises and CSR, the importance and timeliness of considering seriously how to bring about a pattern of consumption that is sustainable, and of course proposing ways in which a civil society can really participate in bringing about ecological civilization. All these task forces illustrate the necessity of understanding the relationship between social development and environmental protection.

Our methodology included first of all learning about the current reality in China. The task force recognized that remarkable progress has been made in economic growth. We also supported the continued strengthening of environmental protection actions that had been the subject of earlier CCICED work, and about which we have heard so much, and so many positive things, during the past two days.

But it was our Chinese researchers who drew attention to many of the issues that are still causing them concern:

- increasing mass incidents caused by environmental problems.
- public health hazards caused by environmental degradation.
- vicious cycle between environmental degradation and poverty.
- new social injustice brought about by environmental issues.

- mounting pressure on resources and the environment in the context of rapid urbanization.

We were acutely aware of the urgency of action needed on some of these matters. We noted in certain cases the issue was not one of designing good legislation and regulations, but in putting an emphasis on effective implementation and enforcement.

We decided that one of these issues, urbanization, really was an ideal case study through which we could try to identify both the challenges and opportunities of optimizing this relationship between social development and environmental protection. It was like a living laboratory. Consequently urbanization became the focus of our study tour, in the Netherlands and in Geneva.

Finally we were asked to look at perspectives from the international community. I should say that we did so with a great deal of humility, because most countries around the world are still having difficulty both defining the relationship and acting on it. We undertook a brief historical review of environmental protection and social development, and noted policy issues related to environment and poverty, population, migration, urbanization, health, employment, social justice, and sustainable consumption – a list of problems similar to the reality of the Chinese situation. We asked ourselves: what can we learn from other attempts to understand this relationship between environment and society?

First, we noted a variety of models have been developed over the past 20 years, from the simple three-pillar or intersecting circles model that we are all familiar with, to a more complex model that takes planetary boundaries and carrying capacity of the environment into account. We concluded that each model could provide some guidance to China, but ultimately we also concluded that any approach that China would take needed to be context specific – built on the legacy of the past, on the geographic circumstances, and on the culture of this society.

Second, we became very aware that language matters. The tools and concepts of the social sciences are much more subject to misunderstanding than those the traditional and perhaps narrow domain of environmental protection. It is not at all clear that we reached a common understanding of words like values, norms, social risk, rights, and equity. Consequently we felt that much more needs to be done to undertake the rigorous social policy analysis beyond simply looking at how you involve society in acting in the interests of the environment. It is important at this stage to do the analysis of development processes in education and in health, and how these might affect the environment, and be affected by environmental policy.

That being said, there are promising practices that may be useful in China: the development of indicators, the development of social and environmental planning and risk assessment processes, ways of financing local government activity and the provision of public services, and approaches to governance. By that we mean the way societies actually make decisions, including co-management – governance that actually features inclusion of all actors and is adaptive and resilient. And of course we all have a lot to learn about how one builds trust and confidence in the other actors in the system.

Next, **Fan Bi** offered these comments:

On the basis of identified problems and theoretical structures, our international and Chinese members have put forward a series of targeted policy recommendations. First of all we have five basic principles:

1. *Multi-party participation.* We believe that promoting environmental protection and social development involves the common interests of the government, enterprises, social groups, and individuals. All those social actors are not bystanders or spectators. Rather, they need to be involved and to play an active role.
2. *Long-term and short-term goal combination.* When we formulate policies, we need to consider both the immediate and the long-term interests.
3. *Goal congruence.* When we formulate policies – whether in the economic, social, or environmental sectors – we need to consider the impact of these policies on the other two areas so they can be well coordinated and coherent with one another.
4. *Legal guarantee.* We need to pass legislation to ensure the coordination of environmental protection and social development.
5. *Equity and justice.* We believe that environmental rights are the basic rights of citizens. Enjoying a good environment is part of a citizen's basic welfare, and protecting the environment is a basic duty and obligation of every citizen. So each social actor, while enjoying the rights to a good environment, should also shoulder the rights and responsibilities of protecting the environment.

We studied the domestic and international results of the relationship between environment and society, and we put forward a framework. It includes three parameters: environmental awareness, environmental

behaviour, and environmental governance. The framework of our policy recommendations centres on these three dimensions. Here are the recommendations:

1. *Elaborating a 2050 vision and developing a phased plan of policy and actions that will be essential in achieving that vision.* From the three dimensions – awareness, behaviour, and governance – we discuss the phased goals from 2020 to 2050. In summary, in terms of awareness it is necessary to mainstream the concept and values of ecological civilization. In terms of behaviour we need to put forward policy recommendations from the perspective of three main actors: public, enterprises, and social organizations. In terms of governance we need to put forward recommendations in four areas: strengthening legal guarantee, establishing independent environmental policy, improving social risk control, and improving environmental public services.

2. *Promoting social norms and values relating to ecological civilization.* The task force holds that ecological civilization is a progressive and advanced concept, and should become a mainstream norm and value of society. The government needs to play a role in mainstreaming ecological civilization. We need policies in three areas:

- formulate education and training plans so that the basic knowledge of environmental protection and the theory of sustainable development can be incorporated into programs of certificate education, vocational education, continuing education, and the training of public servants.
- support theory and policy studies. CCICED can play a further role in this regard.
- promote ecological civilization through the wide use of the news media, Internet, and other media.

3. *Encouraging all in society to exercise their appropriate roles.* We advocate, for example:

- healthy and sustainable lifestyles. Social organizations, entrepreneurs, and public figures need to set examples.
- public participation. Through certain kinds of institutional arrangements we can ensure that the public can take part in the decision-making process and ensure their rights to information, and through legislation we can ensure the transparency of environmental information.
- acceptance by enterprises of their environmental and social responsibilities.
- supporting the further development of environmental and social organizations. China must change the policies governing registration of social organizations so as to relax the restrictions on them carrying out activities in the field of environment and society. Conditions need to be created to solve the difficulties in getting registered, in receiving funding, and in participating in

social activities. And, environmental protection organizations need to be incorporated in the list of organizations from which the government can procure public services.

4. *Strengthening public governance.*

- We hope that, with the 13th FYP, we can change its name to the National Economic, Social, and Environmental Protection [sic] Plan, so that environmental policies will be on an equal footing with economic and social policy.
- We also need to establish an environmental social impact mechanism for important policies.
- Also we must change the performance evaluation process for government officials to increase the weight of ecological, environmental protection, social development and other indicators.

5. *Establishing a sound mechanism to assess, communicate and mitigate the social risks of environmental protection.* All the major decisions, policies, and projects that affect citizens' right to a clean environment need to be incorporated into the environmental and social risk evaluation. The government needs to set up a whole set of methods for making this assessment. We suggest the following policy measures:

- Important policies and projects need to have pre-approval, including the evaluation of due process, the reasonableness of the policy, and the feasibility of the proposal.
- A procedure needs to be established to solicit public opinion, for example, public hearings or social announcements.
- We must ensure accountability for environmental and social impacts. Decision makers who violate the evaluation process need to be investigated and held responsible.
- We should establish emergency response mechanisms for environmental incidents.
- And we should increase the openness and transparency of environment-related information. When responding to environmental incidents, there should be timely release of real information so as to avoid rumors and speculation.

6. *Improving the level of public environmental services.* We need to define the scope of public services related to the environment to ensure people's right to clean water, clean air, and quiet. In addition, the government can:

- buy basic environmental services. For example, we can ask social organizations to conduct monitoring and evaluation of environmental services.
- gradually increase the share of investment in the public services related to environmental protection in its fiscal expenditures.
- establish an ecological compensation system.

We suggest further study in these areas:

- how to change people's lifestyle and behaviour.
- how to build a legal foundation to put forward coordinated social development and environmental protection.
- how to address the funding resources needed to promote coordinated social development and environmental protection.

Task Force on Sustainable Consumption and Green Development

The Co-Chairs of this task force are **Xu Qinghua**, Deputy Secretary General of CCICED, and **Michael Kuhndt**, Director of the Collaborating Centre on Sustainable Consumption and Production. **Xu Qinghua** opened the presentation of the task force report with these points:

Sustainable and green development is closely related to the development of China in recent years. During this time the Chinese economy has grown at a surprising rate. At the same time we have many challenges, for example, unsustainable consumption resulting in waste and pollution. The Chinese economy will continue to grow, but we are beginning to see the shift with consumption taking a bigger share of development. This will help improve economic efficiencies which will bring us both opportunities and challenges.

Our task force had four objectives or tasks:

- identify the principles of sustainable consumption and production.
- research sustainable consumption and production policy trends in China.
- research international experiences as well.
- formulate policy recommendations for the Chinese government.

According to the UN's *Guidelines for Consumption Protection*, sustainable consumption means "meeting the needs of present and future generations for goods and services in ways that are economically, socially, and environmentally sustainable." So, governments should support sustainable consumption with a good policy framework.

Sustainable consumption is the central component of any green development strategy. It should satisfy the needs of the people while at the same time lowering the consumption of resources in order to avoid waste and pollution.

The shift in the attitude towards consumption is important, and it should be in line with the goal of the development of a well-off society and sustainable development. Since 1978, sustainable consumption in China has been decreasing to some extent, so the contribution of consumption to the growth rate actually decreased. If we compare China with other countries, we can see that China presently is consuming more energy than necessary. There is a low proportion of cultural events, education, and other service consumption, and the service industry takes up less than 50% of the GDP, which provides low benefits in terms of promoting sustainable consumption in economic development.

We compared consumption in households and found that housing, mobility, and food are the major domains that generate a high ecological footprint. Therefore those should be priorities in our efforts to promote sustainable development. We also have opportunities where sustainable consumption in the building of new housing can reduce China's growing need for primary metals, steel, timber, and concrete. It can also help reduce unsustainable construction materials and can also help reduce the ecological footprint of food consumption.

Presently China's consumption rate is lower than the world average. Our research found that the consumption rate has decreased by about 12% for urban and rural residents since the year 2000. But the awareness of the general public of consumption has been improving all the time.

The Chinese government has developed new policies, for example, the financial subsidy policy, the new energy policy, the investment in sustainable consumption services, as well as the subsidy for electric vehicles. In spite of these policies there are many deficiencies in the existing policies that promote sustainable consumption. For instance, sustainable consumption has not been integrated into the national development plans or in major laws, and there are no indicator systems.

So, sustainable consumption policies can create a lot of opportunities for us, for instance, the low-carbon economy, the new business models, and the new consumption patterns in households can improve the national competitiveness on the world stage. At the same time, sustainable consumption policies can also improve social justice.

Task force Co-Chair **Michael Kuhndt** then introduced the policy recommendations:

Our recommendations look from consumption into production. If you want to change sustainable consumption you need to look into the whole system. You have to understand what kind of resources you are taking and where they are coming from, say in order to feed everyone in 2030. How do you build the resource efficient buildings? How do you go into mobility patterns, and how do you enable sustainable transport?

We looked at all this and we came up with three major recommendation:

1. *Integrate sustainable consumption into national political social-economic and development frameworks.* We need to embed sustainable consumption in the national policy framework, from laws to existing economic institutions.

We felt it worthwhile to start at one of the more specific recommendations: Develop a national sustainable consumption roadmap and a sustainable consumption action plan to support implementation. This means we need to look into the future, to the year 2050 or so, and ask: What will consumption look like then? What will the poor, the middle classes, and the well-to-do be consuming then? What consumption level do we envisage?

From this we go to an action plan. In other words, what can be done? We also want to look into how to feature sustainable consumption in the 13th FYP, but meanwhile to integrate sustainable consumption into existing laws. It happens that right now China's environmental protection law is being revised, and so is its consumer protection law. It would be worthwhile to bring consumption into it, and production too – to look at both chicken and egg issues.

We also can adjust economic instruments. There are already some taxes out there that look into high impact products, but there is room for more. Housing, food, and mobility are areas where more can be done. The same is true of sustainable procurement. Consumption relates very much to public procurement. How a government builds infrastructure can lock you into certain consumption patterns.

There is vast international experience on this. For example, we looked at the action plans of the EU and of Brazil on sustainable production and consumption, and at Japan's green procurement law which has been successful in changing production patterns. We also investigated the idea of embedding sustainable consumption in consumer protection law, or maybe of creating a sustainable consumption law in itself,

which could say: you have a basic right to consume more sustainably, and a right to have access to sustainable products and services, and so on.

2. Enable institutional innovations for sustainable consumption in the administrative system and society.

Sustainable consumption is a challenge because it is quite horizontal. It relates to education, transport, housing, food, agriculture, and so on. So with this recommendation basically we suggest setting up a working group to look at those issues, and report to the State Council.

Throughout the study we became aware that the general public does not trust the existing certification schemes. Several times within the task force we discussed what we can do about it. We felt there should be some local pilot projects on sustainable consumption. We need to show that it is do-able. It is nothing tricky. It can be done.

As always, only what is measured gets done. We need an indicator system to demonstrate progress in areas like food, housing, mobility – to measure whether policy instruments are successful. Again, the international experience is there to serve as a model: the EU's EcoLabel, the German Blue Angel, One Planet Living Communities in the UK, indicators from the European Environment Agency, among others.

In terms of the time plan, we suggest starting right away with local community projects. We could start in January to test those recommendations we have developed, and explore the different ideas. In the long term we would want also to measure progress on sustainable consumption at the city level and the national level.

3. Initiate multi-stakeholder partnerships for sustainable consumption. Dealing with sustainable consumption cannot be done just by the government. It needs a multi-stakeholder collaboration, engaging business and civil society to make the system more efficient.

The role of retailer is crucial. Usually you will have many producers and many consumers, but few retailers between them. We suggest working with retailers to define an agenda for sustainable consumption.

Similarly, it is important to work with financial institutions and investment organizations. If you want to build a sustainable urban infrastructure that enables sustainable consumption, you will need to get things right in terms of criteria for investments.

Already we have highlighted the role of civil society. Sustainable consumption is about values and mindsets, and you need civil society to support this. You also need to build consumer information centres to foster education about sustainable consumption.

Much learning and understanding can be done from the international community. It is important to collaborate, for example, to look at and link to the decade-long framework of programs that UNEP is holding. In addition, international experience from retailers and from consumer advisory systems can be harvested. We again make clear the strong link with urbanization, and point out several initiatives ongoing on low-carbon cities (which look into production systems mainly), on emissions trading system pilots, and the use of public transport.

We suggest a “house of sustainable consumption” model. It has a “roof” which is the legislative and policy framework on sustainable consumption. But under that protective roof different stakeholders can engage in different activities related to sustainable consumption, from pilot projects where basically everyone is involved, to sustainable business models that enable sustainable production as well. This house is quite diverse, and we would like to engage you in cooperating with us to help create a brilliant future for China.

Special Policy Study on Media and Public Participation Policies on Promoting China's Green Development

This study group was co-chaired by **Isabel Hilton**, Chief Executive Officer of Chinadialogue, and **Jia Feng**, Director General of the Center for Environmental Education and Communications, MEP. First, **Isabel Hilton** introduced the principles that informed the study:

Our policy study began by looking at the problems China is facing: growing protests in opposition to major developments, a loss of public trust in official stories, competing narratives on social media where sometimes bad information can drive out good information. We reflected on why public participation is such an important part of this conundrum.

Of course, we embrace the proposition that sustainable development cannot be achieved without public participation. The issues I mentioned are closely related. If the public does not have a real say in planning – particularly in decisions that affect them directly – they will take their frustrations to the streets.

Projects can be cancelled very late. To overcome this, the government needs trust. It also needs trust to compete in the networked information marketplace that is the digital age.

China already has significant rules and laws, both on information and on participation. We commend the progress that has been made. But our initial observations told us that these rules and laws are not working as well as they could work. The government is getting all the headaches and few of the benefits. So, we looked at the two decades of international experience on these issues to see how that experience could be helpful as China considers revisions to these rules and practices. How can China ensure greater harmony, better public policy, and a more trusted exchange of views and information between citizen and government so that the public, the environment, and the government all benefit?

During our research, the people we met stressed the importance of the foundational international principles that are the legal blueprint for information and participation. China was present in the Rio Declaration on Environment and Development in 1992, and it is well understood today in China that public participation is essential for sustainable development. So the question that faces us is: how to make it work better? It is a three-part process: public participation requires open information and access to judicial remedy.

The principles of Rio were of course incorporated in the Declaration of Santo Domingo for the Sustainable Development of the Americas; the Bali Guidelines for Development of National Legislation on Access to Information, Public Participation and Access to Justice in Environmental Matters; and in Europe into the Aarhus Convention. It is also in use in such countries as Georgia, Armenia, and China's neighbors Tajikistan, Turkmenistan, Kazakhstan, and Kyrgyzstan. In total 60 countries have adopted these principles.

Under Aarhus, information is treated as a right with an obligation on governments proactively to offer it and also to respond to specific requests – which can be made by citizens or non-citizens. Anyone in this room could ask for information. And those who ask have no obligation to explain why they need the information or make any other justification. Information is not considered to be just messaging. It includes raw data, data sets, any material on pollution data – all relevant information indeed.

So what else is required to make public participation meaningful? Education and information are critical, but the other thing is that participation must have real influence on decisions. For that, it must begin early, certainly early in the planning stage, preferably in the policy-design stage. In this way, problems can be eliminated and government can harvest the benefit. I stress there are tremendous benefits to

government in harvesting public contributions, both in citizen science and in policy design. This can be slow and difficult, of course, but there are real benefits in the form of better decisions and eventually in greater public acceptance.

Of course it can go wrong. One example is Stuttgart 21, the large railway and urban development project in Germany. This was a major infrastructure project and people did have the chance to participate, but it went wrong because there was a lack of outreach on the official side in the beginning. It wasn't until building actually began that the public reacted, negatively. Then the excessive response of the police pushed public opinion to the side of the protesters. It required a major outreach effort on the part of the authorities to turn this around. This was an example of how proactive communication and engagement can actually transform a situation.

We were impressed with Eye on Earth, which is a global public environmental information network. Clearly participation works better when the public is informed and educated. China is a huge country and the collection and dissemination of reliable information is a problem. We think that the example of Eye on Earth – which is the beginning of a truly global system – offers helpful examples. It is networked, interactive, inter-operable, and it aims to be a global system. It includes not only government information but also information from citizens. So people around the world can report on violations, beach quality, noise, and so on. This information is proving helpful and useful to governments around the world.

What lessons did we draw from this? Proactive consultation is important. Good communication is vital to promote meaningful collaboration. It can be frustrating, but it is important to remember that constructive and vigorous participation brings real benefits. It doesn't immediately lessen confrontation necessarily, but in the longer term it leads to greater stability and harmony. The more open the information system, the more trust there is, and the less room there is for bad or partial or malicious information to flourish. That obviously helps the citizen, but just as importantly, it helps the government.

Which brings me to media and this confusing and bewildering age of digital media. In the digital age, withholding information is often ineffective and leads to a loss of trust, which results to a subsequent loss of trust in all government communications. So the aim should be to build digital communications as a huge resource, both of public knowledge and of citizen science. Used properly, this can help governments – with implementation and reporting violations – and with the benefit of having the data from citizen science.

Communications in the digital age are bottom-up, they go sideways, they are networked, and obviously they go top-down. But to handle this properly, governments need to speed up. They need to offer reliable, prompt communication. They need swift action. And the public needs responsive policy-makers and easy reporting mechanisms for violations. And what is true for regular communication is particularly true for communication in emergencies, which is: it must be timely, frequent, truthful, and two-way.

Now, **Jia Feng** presented a summary of the task force's findings and recommendations:

We have had a wonderful experience of learning from each other, also many debates and discussions and arguments. On one particular topic we argued for so long and so heatedly that we had to take a one-hour break and nobody talked to anybody. So I invited them to my home. Miss Hilton brought English whisky, and over food and wine we became good friends again.

Our research is based on specific practical issues. To have a good beginning, we started from research and field trips. We visited places where there have been popular incidents over environmental issues. We also looked at how the new media had affected these public actions. And we interviewed a number of experts.

Here briefly are our findings:

1. Public incidents have a bad effect on society and negatively affect China's whole green transformation. In many places there are lots of copycat movements.
2. Public participation is an important part of building trust between government and the people. Sometimes there is a lot of emphasis on the right to have public participation, but the responsibility aspect is less emphasized.
- 3 Our present rules and regulations are in place, but they are not well implemented. The channels for participation are not clear or open. People often use methods like protest walk to try and make their case.
4. The government is not providing enough support for public participation. The allocation of resources is unbalanced, unequal, dispersed. There needs to be better coordination among government organizations.

5. Government response in a number of areas has been inadequate. From incidents such as environmental emergencies that have occurred, we have not learned much. The government has focused on the hardware of environmental protection, but policies on communication, education, open information, and channels for protest have not been well defined.

6. Government lacks an active and strategic plan for environmental communications.

7. Government has an inadequate understanding of new media.

We have come up with six policy recommendations:

1. Strengthen legal and orderly public participation in environmental fields as an important basis for promoting ecological civilization.

2. Promote and develop open environmental information systems; consolidate and improve the information management capabilities of central and local governments and enterprises; and effectively implement open information legislation.

3. Create a comprehensive environmental communications strategy to include the accelerated introduction of national environmental education legislation, in order to raise environmental awareness and promote environmental participation across all sectors of society. One reason rumors flourish is because there is not sufficient understanding of issues. And so we need basic education legislation to raise environmental awareness and promote environmental participation. So, with better education and awareness there will be better participation.

4. Improve the implementation of existing laws, regulations, and policies on public participation in planning.

5. Understand and use new media. New media has actually provided a platform where the public can participate widely, and can be more effective.

6. Improve environmental incident response mechanism.

Many of these recommendations have already been included in the submission to the Chinese government. I want to review our whole research process.

My colleague and other foreign experts come from industrialized countries, but in China we are just starting to build this kind of environment. This point in our green development is occurring at the same time as this explosion in digital media. This has resulted in huge contradictions and conflicts which is far more than these other countries experienced. This presents huge challenges for us, but also opportunities.

Our policy recommendations have been proposed to the China Council. But this is just a start. For instance, we went to Germany and met the person who was part of that Stuttgart 21 incident and helped the government improve the transparency of information. Now we have invited his organization to set up a strategic partnership and in this way will be able to provide advice for us.

Special Policy Study on Corporate Social Responsibility in Green Development

Hao Fanghua, Vice President, Beijing Normal University, and **William Valentino**, Professor and Deputy Director of the China Institute of Social Responsibility at Beijing Normal University, co-chaired this policy study group. **Hao Fanghua** led the discussion:

During the past three decades China has enjoyed unprecedented economic growth, but this has brought many challenges to the environment. As the main players in economic growth, how should enterprises balance environmental protection, social development, and economic development? This is the urgent task facing China.

We have put forward some recommendations on how should we promote CESR in green development in China. Our study has four parts:

Great opportunities have been brought about by green development. At present China faces the most severe environmental situation in the world. All of us know of the severe conditions. Take air quality from 2001 to 2006. Most places fail to meet the air quality standard, and PM_{2.5} is several times higher than the WHO guidelines. Seven years later, the situation is worse than before. According to research from MEP, currently almost all China's major emissions pollutants are #1 in the world. Environmental pollution not only damages the health of the people but has also become a negative factor affecting social harmony, and it has become a political issue. But behind these risks we also have great opportunities.

In the past several hundred years there have been five waves of innovation. Now China is facing the sixth wave of technological innovation, driven by green development and sustainability. For the first time China is at the same starting point as the rest of the world. This gives China the chance to be the leader in this regard, and to achieve a great potential in dividends. According to recent research, since 2008 China's share of green, environmental protection measures in its national stimulus package accounts for 4.6%, while the figure for the USA is less than 1%. In this, China led the world.

In terms of innovation factors, China is ahead of all other medium-income countries. Enterprises are the main force driving green development and innovation. Huawei, for example, has applied for 40,000 domestic patents and 14,000 international patents. In 2013, according to the Global Innovation Index report, China is in transition from being a "follower" to being a "leader."

Enterprise is a core player in green development. Enterprises are the main players in driving economic development but also the main sources of environmental pollution. Also they are the innovators in green development. When we have a perfect institutional environment, enterprises should seek a balance of social responsibility, environmental protection, and economic development. But when there is an imperfect institutional environment, corporations ignore social responsibility and instead seek to maximize profits.

We may consider that, when it comes to corporations taking action to further CESR, there are three levels: compliance, voluntary actions, and "green pioneer." Compliance is the bottom line. In fact, most enterprises do not comply with the regulations. They are below the line. On the one hand government needs to improve the legal framework to establish a good institutional environment for enterprises to comply with the regulations. Also government needs to give incentives so that more enterprises will become "pioneers" in green development. In the process of fulfilling their CSR the government needs to guide and the public needs to supervise.

Government regulation is the key to promoting CSR. The government needs to promote CSR so that violators can be punished. We need to give compliant companies incentives and rewards. "Pioneers" need training so they can improve their CSR capacity and so their experience can be replicated in the whole society. As for the role of government in promoting CSR, China is different from western countries because the compliance of companies is low. Government needs to establish the legal system and empower stakeholders so as to promote public participation and social cooperation, and establish an effective governance system.

In putting forward our policy recommendations we have focused on five areas:

1. *We need to formulate a national strategy and action plan on CESR.* The government and society and enterprises need to be integrated. The legal system needs to be further improved, especially the role of environmental litigation, and especially at the local level. We need to formulate a roadmap for promoting CESR. Also at the central government level we need to identify the priorities for CESR.

2. *We must promote good coordination and cooperation with social organizations.* We suggest there should be a special committee of CESR to coordinate the implementation of policies and the development of strategies. It should set up a platform for the participation of multiple stakeholders so they can increase their understanding. And it can help enhance international communication and cooperation with other parties so that China can set an example for developing countries.

3. *We need to build capacity and provide service support.* We should improve the evaluation system for CESR. There ought to be a dedicated government department that will set criteria, support social participation and reward research results, and enhance innovation capability in management. It can involve research and teaching organizations, and help set up research institutes at universities to provide intellectual support to CESR and to train talented people and conduct basic research.

4. *The compliance mechanism should enhance the coordination of rewards, and enhance punishment for violators.* Also we need to establish a good financial environment and promote accountability. To those companies with good CESR we can give subsidies and rewards. Tax credits need to be differentiated for companies with differing performances. And we need to establish CESR labelling, and promote green procurement. We encourage government agencies and the general public to procure products from those companies with good CESR performances.

5. *We should increase information disclosure and transparency.* We need to further amend measures for the disclosure of environmental information and enhance the methods of law enforcement. Also we need to set up a national information centre for CESR, with a focus on small- to medium-sized enterprises in particular. Based on the features of different industries we need to set up specifications and criteria for CESR reports for different sectors to ensure that the general public can access real information on CESR.

One final point: I hope that next year CCICED will carry out demonstration or pilot projects on CESR.

The study group's co-chair, **William Valentino**, offered some additional remarks:

Professor Hao has said it all in terms of our findings and recommendations. My job is to take those data and express them in findings that you can take home – that will show you the practicality of it all.

In the beginning we considered the issue of “fertile ground” – where things can grow. This is not just for our own report, but it is for every study we have heard about today. In other words, we have to train, we have to educate, and we have to create capacity. That's the number one message we want you to take home.

Let us start with education. We hear a lot about CSR programs, but we don't hear so much about CER. Academic institutions, especially in China, have not embraced this idea. They have not said: let's create a discipline, a profession, scholars who can implement this. That is one of the things that need to be addressed.

Back in 1996, MEP's predecessor agency had the “green school” concept. It looked at university students or executives being trained in CSR. But it considered more than that. It considered a whole society being trained – a civilization. This really is “ecological civilization.” We are training for the future. We know that not everything will be solved today. We know the solution is in the future, so we begin with that. With that idea already in place in China, it needs to be further developed, at the university level. At Beijing Normal University we have the first program in CSR. We have the private sector and the government sector all together in the same classrooms discussing this together.

We need to see more investment in CSR. We need a more professional CSR program in China from old to young. As the Chinese adage has it, “You are always learning, from youth to old age.” But then there is the idea of a national strategy. This is where we bring in the idea of an enabling environment. It builds capacity, enforces legislation, creates incentives, fosters commitment, and ensures transparency.

We have been working with this puzzle of sustainability, CSR, enterprises in China for many years. But now we have a new piece of the puzzle, which is green development. Where does that fit? If we start with the government, this idea of CSR takes three building blocks: people, planet, and profit. That is, the social, the environmental, and the economy.

If we look over the past 30 years the track record has not been good in the social or the environmental. But the economic area has done tremendous things for the development of China. How do we balance the economic growth with social and environmental concerns?

So, CSR begins to narrow it down, especially for our China Council conference today. We can see the impact of the environment both on the social and the economic spheres. We begin to focus on this because it is becoming more important, especially here in China. And the idea of a new area under sustainability is CER – corporate environmental responsibility.

Where is that leading us? To the idea of green development and eco-efficiency. How do we begin to take these and put it all together, and what is the result? Here in China it is looking at sustainability on a China scale at first, but there is a much bigger picture at stake. It is looking at sustainability also on a global scale.

It may seem simple to say we bring together CSR, CER, and government, and then we have sustainability. But it doesn't work so simply as that. At our meeting yesterday Premier Li brought up an element that is incredibly important: it is local government and their role in putting this puzzle together. It is local governments who will take CSR, CER, and green development, and put it together locally throughout China – with the central government as the guiding force. This is where that sustainable China will emerge, from that collaboration, that cooperation.

But do they do it? There are carrots and there are sticks. In CSR, CER, and green development, carrots and sticks are all equally important.

We begin with the sticks. In China, compliance starts at the basic level with the government. The government's goal is a much greener China, and it proceeds in terms of legislation. The legislation is already there, in place, but enforcing it is the question. How, when, where will the laws be enforced?

Internationally we have standards such as the Global Reporting Initiative and the International Organization for Standardization, and others. We need more standards for China. And we want more guidance from governments, as we have for example now in the EU. Another stick is measurement and monitoring. Again, you can't manage what you can't measure. You have to constantly monitor and to do this you have to have in place the infrastructure of organization and monitoring frameworks. Finally, you need the regulations that accompany the legislation.

Now there are carrots – incentives – and these follow the same pattern of central government with many other stakeholders such as local governments, companies, individual citizens, nonprofit organizations. They are all a part of this collaborative attempt to create a more sustainable, green China.

These incentives include tax breaks and green financing – not just for SOEs but also for entrepreneurs, people with ideas. Incentives include awards. This is all about perceptions, branding, and reputation, when a government pats companies on the back. The recognition that goes with awards fosters commitment and not just compliance. Capacity building is another incentive. And finally we have subsidies.

In our international task force we try to put global thinking into local action. China does this on a regular basis. China is always combining. Anything that enters China, whether be it Buddhism, communism, socialism, or the market economy, it always leaves bearing Chinese characteristics. It is the same with CSR.

That's what we are developing. We are taking best practices – especially from CCICED – and putting them together with this puzzle that combines CSR, sustainable development, and Chinese enterprises, and creating something new: CRS with Chinese characteristics. In fact China has been talking about this for years in concepts such as the scientific outlook on development, or harmonious society. Our new concept is looking at sustainability on a China scale, but also on a global scale. It is looking at the next step: the Chinese dream. We are talking about the same things, about a sustainable future.

Our group looked at what comes from outside that can be viewed as a possible model or idea. The EU is a perfect example of how guidance is done on a larger scale. We also studied Japan, Korea, and Germany, and how governments direct policy – how they use the invisible hand to create a more sustainable society.

Einstein said you can't solve a problem using the same thinking you had when you created the problem. Where does our new thinking come from? We have to get out of the fishbowl, all of us doing the same thing, swimming around at the same pace. We have to jump out. China can make that jump. China has a role, in guiding, leading, being a part of CSR, CER and green development. Probably no other country has the capability at the moment to lead like this, in terms of sustainable consumption, social development, and environmental protection. The problems are here, but the solutions are also here.

Special Policy Study on Promoting Urban Green Travel

This study group was co-chaired by **Mark Major**, senior official of the Directorate-General of Mobility and Transport of the European Commission, and by **Zhou Wei**, CCICED member and President of China's Research Institute of Highways. **Mark Major** provided the background to the report and made these main points:

It is important to remember that China still has very high levels of public transport, cycling, and walking compared with international standards. The problem is these levels of walking and cycling are falling fast, while the number of cars is increasing dramatically. The levels of motorization are still low, but you already see in Beijing and other cities the problems of congestion and pollution. We want to underline that this is not an issue just for the megacities. This is a problem which, without policy action, will come to hundreds of smaller cities throughout China.

While our study focused on addressing the air pollution and congestion problems, we want to point out the co-benefits of taking action on this — for energy use, quality of life, and the attractiveness and efficiency of urban areas, which of course is crucial for the economy in general. There is an important social equity aspect of urban transport as well, since most citizens don't have direct access to a private car, and won't for some years. Instead they are using public transport, walking, and cycling. Poor people suffer disproportionately from traffic accidents and air pollution, maybe since they live closer to the streets and use cycling and walking more often.

So, China's current low level of car ownership and high level of public transport, walking, and cycling is an opportunity for China to take action now before the motorization trends significantly develop. Unless China develops an efficient, attractive, green urban passenger transport system for the majority of people, then you have no chance to resist the motorization trend. China will miss this opportunity to change course.

The kind of trend we generally see in urban transport policy goes like this: in the early stages, you have a car focused policy, so the number of cars increases, and you have an urban mobility policy focused on cars. Eventually countries run into chronic local problems with air pollution, congestion, accidents and injury. Then you see a change in policy focus, with moves away from being car focused to a broader focus on increasing urban accessibility and efficiency.

The question is can this process be short circuited? Can you avoid this trajectory of car-focused policy and investments, and come more quickly to a broader accessibility and efficiency focus in urban mobility policy?

Here is another way to think about this cycle. Car-focused urban investments, often infrastructure, lead to changes in the accessibility patterns of cities. That is, this infrastructure changes where you can get to and how. Consequently, people and organizations make their location decisions based on this increased accessibility, often with longer distances involved. This leads to capacity problems and congestion, which leads to further investment in car-focused infrastructure, which leads to further capacity problems, which leads to changes in location decisions. So you have a negative cycle which generally continues until you run out of resources. Interestingly, this doesn't usually tend to be running out of money, but running out of space.

In the study we looked at examples from Spain, the United Kingdom, and South Korea, where some very expensive physical urban infrastructure built in the 1970s and 1980s has actually been taken away.

A key message behind our strategy is you get what you plan for. In urban transport, you can only use the facilities and services that are provided. So the investments, in services as well as infrastructure, are crucial in determining what choices people will make in the future. If you plan for efficient people-focused cities, that is what you will get.

In Europe, the concept of sustainable urban mobility planning, which is a process to build long-term consensus on urban mobility policy, involving stakeholders in a transparent and inclusive way, has gained a lot of ground and is now seen as a fundamental precursor for success in improving urban mobility patterns.

Urban mobility is also socially inclusive. We see a vision where all types of people – rich, poor, young, old, students, workers – all use public transport, walking, and cycling facilities efficiently together. We saw that when the mayor of London, Boris Johnson, came to China recently, and he made an impact by using the metro and bicycling around town to his meetings.

Also it's important to remember that streets have important functions as places – places to meet, exchange, play, spend time, relax. So if this "places" function is neglected and streets become only transport thoroughfares, this will be detrimental to the vibrancy and quality of life in urban areas.

We must emphasize the economic efficiency of investments. Clearly, building expensive infrastructure and then having to remove it 20 or 30 years later because you are not getting sufficient transport service out of the money you have spent is completely inefficient. That is why we talk in our report about the importance of having critical evaluation of the transport benefits of different types of investment options. What transport service will you get for each investment you are making? This needs to be critically evaluated in the process as well as the environmental and social impact assessments that we recommend.

We want to be clear that currently urban mobility in China is on the wrong course. It is an inefficient and socially divisive car-dependent path. You know that China is already a large oil importer. A dramatic increase in oil demand for China is not an economically or environmentally viable option.

While improving urban mobility is essentially and appropriately a task for city governments, this won't happen unless the national government provides the policy direction, guidance, and incentives, and gives cities the powers to do this work themselves. This is why our policy recommendations – which according to our brief are addressed to the national level – are about providing that right enabling framework from the national level so that cities can do this work themselves. When listening to these recommendations I encourage you to think about the barriers or forces that might prevent the change to this policy in China, which, as I have tried to make clear, is socially, economically, and globally unsustainable.

Next, the study group's co-chairperson, **Zhou Wei**, offered more detail about the recommendations:

Our vision is to make public transport attractive so that all social groups are willing to use it. We should provide a safe and convenient environment for all citizens, and that includes walking and cycling. To realize this vision, we propose that transit-oriented development should take priority, transport demand management should be more efficient, and that we should prioritize green travel. We also propose avoiding pollution, shifting our focus, and improving the present system.

The purpose is to develop a low-carbon, efficient city with a rational, spatial design. It is also important to take the strategy of transport demand management, that is to say, we need to shift our focus toward “the internalization of the externalities.” We should divert more people from private cars to public transport. In this way we can balance the supply and demand of road infrastructure, especially at rush hours. So we should prioritize green travel like walking and cycling.

The only way to achieve this is to improve the present infrastructure to make public transport more attractive to commuters. It is also prudent for us to encourage people to walk or cycle, so as to contribute to the protection of the environment and at the same time improve their own health.

In our research we used different kinds of methods: brainstorming, analysis of domestic and international experiences, assessments, and so on. We also conducted an online survey of people's attitude toward green travel. On the basis of this research we propose six policy recommendations:

1. The State Council should issue an outline of China urban green travel implementation as part of the national strategy for building ecological civilization and reforming urbanization.

In this way we can address the deep causes of urban congestion and pollution. Central government guidelines will help promote urban transport, the environment, land-use planning, and management. The EU has been doing well in this area. It has put more emphasis on the relationship between transport and people, on the management of resources, and on improving the attractiveness of urban transport.

The purpose of such an outline is to establish a modern urban green travel system by way of the following:

- making public transport more attractive to all social groups.
- encouraging cycling and walking, but also providing convenient, seamless links to public transport.
- implementing management measures for private vehicle ownership and use.
- making sure that the city's own development process can be best used to reduce the cost of transport.

2. The central government should enable city governments to raise sufficient and sustainable local resources of revenue to fund public transport companies and provide targeted financial support for specific projects.

At present, ticket fares in many cities are very low and at the same time the government cannot provide enough subsidies for public transport companies. So there is an imbalance. As a matter of fact, there are many success stories around the world. In 1982 the US federal government set up a specific transport account, the US Highway Trust Fund. In Paris a public transport tax must be paid by companies with more than eight employees. Traffic congestion fees and differential parking fees are collected in London

and Stockholm. In Singapore, Berlin, and New York city, fare levels increase with economic growth. These are all good references for us.

On the basis of this we suggest that cities should be able to raise adequate funds locally from taxes, and the central government should specify the use of supporting funds to cities. These funds should mainly be used for supporting high capacity public transport, non-motorized transport, comprehensive passenger transport hubs, low-energy consuming transport equipment, and smart public transport. Guidance should be given on public transport pricing mechanisms, and evaluation mechanisms should be put in place.

3. The State Council should establish policy guidelines for the rational use of vehicles and road space, in order to reduce congestion and air pollution, and improve equal access to a range of transport modes.

At present the motorization rate in China is still low compared with developed countries, although the rate is growing all the time. The share of bicycling as a transport mode has been decreasing – which also involves a threat to the rights to use roads, threats to public health, and a lot of traffic accidents. Therefore we suggest that public transport, walking, and cycling should have a clear priority in the allocation of city road space.

In addition, the definition of “officials” should be broadened, that is, official vehicles should also include the vehicles of state-owned institutes or companies. Free private parking spaces at government institutes or companies should be reduced, or charged, or taxed. We should have the best mix of policy instruments including differentiated parking, congestion fees, low-emission zones, and better management.

4. The state and city administrations should be required to ensure cross-ministry or cross-departmental coordination, enhance performance appraisal and management accountability, and public participation should be encouraged.

At present there is inadequate supervision from the central government and inadequate coordination and guidance. Therefore we suggest the State Council should set up a mechanism within the central government to coordinate green travel. The Ministry of Transport should establish a “Bureau of Urban Passenger Transport Management” and the central government should stimulate the development of a comprehensive urban transport management system.

In addition, there is not enough public participation. In many cases, public participation is a kind of vanity project or a formality. We encourage substantial public participation, for example in supervision over officials and in decision-making. In this way we can provide an efficient platform for public transport.

5. The central government should amend the legislation on Urban Public Transport Regulation and the Law of Air Pollution Management to require local governments to fulfill their duties to promote green travel.

At present we have already had some important but ineffective regulations. Therefore we suggest that the Urban Public Transport Regulation should be integrated into other laws and regulations, and it should be strengthened in the *Atmospheric Pollution Prevention Action Plan*.

6. The central government should select different types of cities in order to organize and implement a series of demonstration projects to promote urban green travel.

The central government should:

- include street-space reallocation to prioritize public transport, walking, and cycling to improve the street environment.
- implement the “smooth public transport project” to attract more people.
- select megacities like Beijing and Shanghai to set up congestion control zones and low-emission zones.
- establish and pilot transport, pollution, monitoring, evaluation, and publishing systems in Beijing, Tianjin, Hebei, and the Yangtze River Delta.

At present we have options: whether we choose a car-dominant mode, or whether we choose a mode in which we can improve our social equity, economy, and resources efficiency. I think the answer is clear. The co-benefits of the actions we propose are reduced accidents, reduced oil imports, and reduced greenhouse gas emissions. Local governments play an important role, but support from the central government is the guarantee.

Transport is a permanent problematic issue, everywhere in the world. It’s just like love – love is a permanent theme in all literature. I hope that our recommendations can provide some support to decision making, and that with joint efforts we can find a viable solution.

General debate and comments

Following the task force and policy research reports, **Li Ganjie** invited brief comments on the presentations. Here are the highlights of the remarks by CCICED members:

Public participation is one thing, but there is a key role for civil society, in particular for NGOs. They act as a bridge, a facilitator, a third party, an adjunct for government capabilities, they provide analysis, education, media outreach, public engagement, they carry out pilot projects, compliance reporting, and so on. There are many great examples of things that have been undertaken by NGOs. For example, we just heard about the GSC work in Shanghai and Tianjin which is a partnership among government, business, and NGOs. But my point is: NGOs in China have key needs. One is a more routine procedure for the legal registration of NGOs. Another is funding mechanisms – incentives for the funding of civil society, and the legal structure to facilitate the growth of private philanthropy. China now has great pools of private and personal wealth that can be tapped to support the creation of ecological civilization.

We need to talk about the training of public officials. Many of us know how difficult it is to stand up and be responsible to the general public, sometimes to sit for hours and receive a constant stream of people, all of whose questions you must answer. It takes training, a change in mindset, and some practice to do this. It's not a skill that is immediately granted by the privilege of obtaining high office but needs to be fostered through training.

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Our concern about public participation should bring us to the international image of China, as an investor or buyer of commodities abroad. We know that China will be depending more and more on foreign resources, and in about 20 years it will be importing almost half its needs from abroad. So you can't just look at the problems at home. You also have to look at the need for China to take care of its international image, as a buyer or investor, or as a friendly player. Often however the press does not show the good news about Chinese investments, only the bad news. So we need to insist on the importance of China's image internationally.

When discussing CSR, please include the business sector. Don't just keep the discussion at the academic and government level. It is important to bring in the banks, insurance companies, and corporations into the discussion.

During the green urban mobility presentation it was surprising to hear the recommendation to broaden the definition of official vehicles to include the officials of SOEs. In my experience, if officials are forced to use public transport, then the public transport improves. If they are kept in helicopters and private lanes and fast tracks and official cars, they don't realize how tough it is to use public transportation. As was done in New York and Sao Paolo and other places, we should force public officials to use public transport. It will improve considerably.

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Our meeting with Premier Li yesterday opened my eyes to how excited this country is about opening to international markets. I realized that now is the time to open up to society more – to their own people. If we talk about government, business, and society, well, government and business are organized institutions, but society is so diverse. We need to give more recognition to civil society and NGOs. I agree with what has been said already about problems with the registration and funding of NGOs.

In China there are actually millions of civil society organizations. More than 500,000 of them are registered, the rest are not. Some have to register as profit-making organizations, even though they are called non-profits. Among these millions of NGOs are tens of thousands of consumer groups. I was surprised to learn there are so many, mostly small, in all sub-district levels, doing a lot of good consumer education programs.

And women's groups, too. Again, there are hundreds of thousands of women's groups. Even though this is Beijing – of the Beijing Plan of Action, a reference for women's groups worldwide – women's strength and potential are still not recognized. I think all the studies that have been done need to be polished with more gender recognition. Only then can things be balanced. We value civil society as a countervailing power for industry and government. In the same way, women should balance men.

Regarding CSR, among those millions of civil society organizations some 270,000 foundations are registered. Many more are not registered. Many still struggle with the misappropriation of their funds, or struggle to achieve good governance. How can they have the resources to implement CSR? But more and more of these organizations are generating resources from overseas foundations, from the Chinese diaspora in other countries, and from wealthy Chinese individuals. Here in China there are more billionaires than in the rest of Asia. So there is potential to complement what the government is already doing. You can get more mileage out of your resources.

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This year's theme of environment and society brings into much sharper focus the inequalities, those between genders, between ethnicities, in rural versus urban, and geographic inequalities too – last year for example we talked about western development. Those are the issues we need to continue to talk about in order to understand their implications for the environment.

Environmental governance is a good area where we can begin to engage public participation as a major building block for cultivating ecological civilization. After all, it's all about people.

In the coming years China's growth will be driven by domestic consumption as well as by urbanization. When Premier Li was asked about urbanization in the coming years, he talked about "people-centered" urbanization. That is a rich area where public participation could be deployed to help ensure that urbanization in China is indeed centered on people.

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I agree with strengthening the NGO movement. It is the "third sector" that enables the first two sectors to work at their peak. But there is a special kind of civil society organization that the world is seeing more of (although in China I have seen few). They are called social enterprises. They are businesses, but with social and environmental objectives. They are people who work as entrepreneurs but do things that normally NGOs or governments would do – for the poor, the marginalized, the environment, and so on. Social enterprises are beginning to show tremendous potential for delivering results on social and environmental issues. These are essentially not-for-profit businesses. They are run as businesses, with business models and business methods, but they use their profits to pursue their objectives.

Doing well by doing good is maybe more powerful than doing good by doing well, which is what CSR is about. That is not to say that CSR is bad. CSR is crucial. But we often misunderstand what CSR is about. It is beyond compliance with the law. Everybody must comply with the law. CSR is going beyond. Often we just think that CSR is making people be more environmentally sensitive or socially good. But it must go well beyond that when a corporation contributes to a better society and a better environment.

Concerning natural resources, China like other large countries will have a huge impact on the natural resource base of the planet. We worry about climate change and biodiversity loss – and these are major threats to life on earth – but the way we are using our material resources, for construction, industry,

power generation and so forth, is mindless. We need to give much more thought to the rational management of our resources. I suggest that CCICED in future years look at this subject with some seriousness.

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There has been a lot of debate over public participation, with much emphasis on identifying your own problems. But why can't we let the public participate in finding solutions too? I have had experience in what has been called here a "Stuttgart," an infrastructure project that draws public concern. We built and reorganized an airport where we involved not only NGOs, but also the people living near the airport, in a cooperative effort to find solutions. People did much more than just give their opinion on problems.

Regarding green urban transport, we have had a lot of comment about public transport. But why not more ideas about organized green *private* transport? For example, there is much experience here in China with Intelligent Transport Systems. Could we use more? China has a lot of bicycles. Make it happy, pleasant, sportive to use cycles. In Holland, we are a cycling country, with 60 million people, 32 million bicycles, and 1 million electric bicycles. Everyone, even the civil servant, comes to his office by bicycle, not by car. Even my 88-year-old father uses an electric bicycle – and remember that you have an aging population in China.

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This Council might try to act out some of the things we recommend. What might have improved our open forums would have been the participation of some of the people we were talking about. For example, in the forum on CSR, perhaps more people from industry could have been sitting around the table and talking about that subject. In the forum on public participation, it would have been good to have people from the new media.

What a wonderful contribution it would be from this Council if MEP were to pick up the creative suggestion from one of our colleagues that the first step in the development of MEP's draft public communications strategy would be to release the draft to the public for consultation – to be talked about, debated, and discussed before it is finally adopted. In that way, as a Council, we could begin to act out some of these ecological civilization ideas.

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This year all the Council's reports have been related to the theme of state and society. This is impressive, because in the past the conference theme often revolved around the relationship between state and market. To enlarge that to state and society is progress, and I congratulate the Council for taking this route.

When you look at sustainable consumption, the media, social development, even green transport, it's all part of the same issue – how will society respond? Green development and ecological civilization are about structural change in the development pathway. That cannot be achieved by the government or the market only. There has to be a buy-in by society.

The Council and Minister Zhou both need allies. You need allies in society to help implement these changes, because there are a lot of vested interests who would prefer inertia and taking routes and pathways from the past. Change however can be supported and promoted by society. We can't have change if we don't have public involvement.

In France we had a wide public debate on our energy policy. It was first time we involved all stakeholders: NGOs, businesses, local authorities, parliamentarians, people's organizations. There were conflicts, but that was the first time we could envisage a long-term vision for France on energy. Normally only some groups talked about that subject, but this was the whole public. We had 2000 meetings all over the country to discuss nuclear energy, sustainable transport, sustainable cities. I think that consultation produced a totally different atmosphere around what in France is normally a difficult topic.

So, it's risky, it's difficult. And, as many said, it can be a training ground for officials and for elected politicians to meet with the public. But the risk pays off, particularly for environment ministries who are arguing for the change. They need support from society. If not, the change will not happen.

Regarding the question whether companies should be part of the CSR discussion, in the case of China, SOEs have a big role. It's a good thing that they are exposed to this discussion, because they are prominent actors at global level too. France too has big state-owned companies, such as electricity companies. It was essential to take the energy debate outside of the closed doors of the electricity company, which is a very powerful and efficient one, but has had a custom of not discussing its policies with others. So yes, SOEs are targets for the kind of openness the China Council is advising on environmental policy.

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In the open forum on public participation, one of our Chinese colleagues noted that there is a large and growing gap between the productivity of the media and the amount of official content there is to inform the public. He reasonably said that the government should try to fill that gap with good quality, transparent information. That makes good sense. But then Premier Li said that we have to leave to the market what the market does best. In the context of public participation and information, the implication of his remark is that in future businesses will be a much bigger source of information than they have ever been. You give the market its head, and it will use the opportunity to communicate – but as “producers” of things for “consumers.”

This raises an interesting point about the role of the government, because it is no longer a question just of a gap between state officials and the people. It is also a question of the gap between producers and consumers. Over the last 30 or 40 years in developed societies, producers have had the upper hand. They have had amazing marketing ability to persuade people to buy things. But what has happened with the information revolution is that social communications techniques potentially will give consumers a more evenhanded part in this debate. They will be able to make decisions as they have never done before.

Think of the energy system. Most of us live in countries where there is not much choice on energy. It just comes down the line and you have to buy it. But smart grids, for instance, give consumers potential buying power they have never had before.

In terms of public participation, it's not just a question of government providing more information to people. Instead, in that new sort of world, governments will be looked to be the arbiters of good quality information in the marketplace, so that there is an even playing field between consumers and producers. In thinking about participation and information, we should not think only about government and the public. We should think also about the flow of information and the distribution of power between producers and consumers, and the way that new information technologies can either make for a level playing field, or not.

Item 8. Draft Policy Recommendations to the Government of China

With **Achim Steiner** presiding, CCICED Chief Advisor **Shen Guofang** briefly introduced Council members to the revised policy recommendations that will be submitted to China's State Council. He made the following points:

With the support of the task forces, the policy studies groups, and individual Council members we have concluded our drafting of the policy recommendations to be submitted to the Chinese government. In the process we considered the domestic and international environmental situation, current hot topics, and the theme of our AGM. We submitted this draft to Council members and received much good feedback. Members believe the recommendations are systematic, thorough, comprehensive, and operable.

Our draft document has five parts. The first part is our analysis of the basic situation, where we say we need to accelerate the pace of building ecological civilization, promote green development, and build a more harmonious relationship between environmental protection and social development.

Parts two to five present the specific recommendations put forward by the task forces and the policy study groups. The recommendations sent to the State Council from the AGM are not likely to include all the recommendations received from the task forces and policy study groups, but we have incorporated the most important ones.

Shen Guofang then introduced **Ren Yong**, Coordinator of the Chief Advisors' Support Team, who provided more detail about the revision of the policy recommendations:

The revisions have been carried out on the basis of:

- Premier Li Keqiang's talk during the courtesy call, and Vice Premier Zhang Gaoli's informal remarks before the opening session.
- Comments at the CCICED Bureau meeting.
- The speeches by Minister Zhou and Mr. Kent, and personal remarks they made.
- Comments and suggestions made by CCICED members during the plenary session, the open forums, and in written form.

We have received 83 pieces of feedback from members, including general comments, specific suggestions referring to concrete policy issues, and editorial advice. The revisions have been carried out bearing in mind three considerations:

1. For many years, CCICED has devoted its energy to the study of the relationship between environment and economy. Given environmental impacts on society, and corresponding responses from society, this year we adapted our efforts to addressing the relationship between environment and society. This is a new and challenging area for us. Our policy recommendations should be closely related to this year's theme, which is Environment and Society for Green Development. The recommendations should also reflect the deliberations of our task forces and policy study groups. On some issues, such as climate change and the responsibilities of Chinese overseas investments, we have added some sentences in relevant parts of the paper rather than highlight them as independent recommendations. Some other issues we may place on our study agenda in coming years.

2. Our policy recommendations paper will be going directly to the State Council, and therefore will be macro- and mid-level oriented. Detailed recommendations from each task force will be made available to relevant stakeholders, such as ministries, agencies, and local governments.

3. This year our draft recommendations are lengthy, 28 pages in the Chinese version. That is the largest paper in CCICED history. Deciding on the size of the policy paper is really a dilemma. Shorter or longer, which is better? In our opinion the draft for discussion and adoption should be longer and richer, so as to cover all the important points. After adoption, however, we will make a more concise paper for submission to the State Council. The current longer version is valuable for relevant ministries in order to understand the details and the purposes of implementation.

Here are the major changes we have made to the paper:

1. Considering that the Third Plenum has already put forward clear reform requirements for the building of ecological civilization, we have introduced new text calling for a focus on speeding up the implementation of institutional reform put forward by the Third Plenum to promote institutional building for ecological civilization. Additional revised text recommends specific recommendations on reform of the management system and institutional arrangements.

2. Based on suggestions from the Bureau meeting we have added new text calling for study of the important environmental and development issues during the 13th FYP period. We put specific focus on

energy saving and environmental protection, responding to opinions raised by Premier Li. We also emphasized the climate change issue to respond to concerns expressed by Council members.

3. In recommendations related to the resolution of critical issues such as air pollution and public demands for environmental quality, we have added content related to financing, market mechanisms, and climate change.

As for the new suggestions and comments to be put forward by Council members, we will take them into consideration and continue to make further changes to our policy recommendations.

General debate and comments

Chairperson Achim Steiner invited CCICED members to comment. Here are their remarks:

The UN hopes to cooperate with CCICED and with the government of China to promote sustainable energy for all. The three targets the UN has set for sustainable energy are: to achieve universal access to energy for all by 2030; to double the annual rate of energy efficiency improvement by 2030; and to double the share of renewables. We believe these targets are relevant to China, but more importantly they will be useful for China to join with us to spread the concept to other parts of the world. In particular we hope China will join the UN in promoting renewable energy technologies to achieve energy access, particularly in the most energy poor continent, Africa.

In our discussions here there has been much mention of the private sector, of business – whether it is sustainable production or energy efficiency in industry. At the next Council meeting we should have more captains of industry, real chief executives of private business, but particularly of manufacturing. As we have heard, 70% of China’s energy demand goes into industry. It is industrialization that has made China wealthy, that has allowed China to lift so many people out of poverty. In the next round of our discussions we should have the captains of industry here to hear the message that CCICED is trying to spread, particularly the experiences of the rest of the world on industrial energy efficiency and on resource efficiency in manufacturing.

* * *

As a new Council member it was a remarkable experience to hear those five presentations struggling with extraordinarily difficult and crucially important issues. For me the highlight was when Jia Feng said

“we argued a lot, we disagreed, we had to actually separate, and it was only whisky that brought us together.” It is precisely in bringing together different perspectives like this that you get the sparks of inspiration. I deeply hope that the way we do business in this Council is transmitted elsewhere. Few advanced, rich countries in the world do this kind of thing. Wouldn't it be great if they did? Or if emerging economies did? Or if low income countries did? And I hope that the whole concept of ecological civilization gets through. Out of necessity – because growth and scale are so much bigger here than anywhere – China is struggling with issues that other countries will need to confront.

I have one quibble about the draft recommendations. The text says “there exists an in-depth understanding on the relationship between environment and economy.” I feel sadly that we don't have a deep enough understanding, and one of the things that our group addressed is precisely new understandings, about smart environmental technologies that can actually drive growth. It is a mistake to think that that is done and dusted, that we know the answers, because we don't. We are still learning a great deal. That's why there is a new global commission on growth and climate change, set up precisely to struggle with those issues. I hope that in future years the Council really grapples with that.

* * *

I endorse the proposal of the working group on Environmental Protection and Social Development to continue the work to craft a vision for 2050, and then to take a separate approach on how to develop the norms and values that will give form to the concept of ecological civilization. I see that in the recommendations already a lot of that is included. Of course it is up to the members of the working group to judge whether their recommendations are properly reflected in the new text.

The work we do is relevant for so many other countries in the South. We should reflect how we can rework this information so that we can use it to inform other countries. It is a pity that all the work that is done is used only in one particular area of the world. The Council should reflect on how it can translate some of this work as it relates to other countries so we are not doing the same work twice.

Regarding the draft recommendations, we spoke about the need for food security, but I don't see a lot of reference to this issue in the draft. This is something we need to strengthen in the final version.

* * *

I welcome the notion that the Council might look at demography in the future.

The recommendations make reference to interventions in the enforcement of environmental laws. The passage could be strengthened by changing “reduce inappropriate interventions” to “act strongly to prevent inappropriate interventions.” I know this is hard to achieve rapidly, but the aim should be to stop all inappropriate interventions to environmental law enforcement.

China’s economic reform and opening to the market has tremendous opportunities for transformative environmental improvements, but it also carries some risks unless environmental supervision is enhanced to make sure the new competition is fair. This would be a good message to include in the recommendations. It would strengthen the arm of MEP.

* * *

The current version of the recommendations says “whoever pollutes should deal with the pollution.” This should be changed to “the polluter pays” because now we are bringing in market mechanisms. Some people who might pollute actually may not have the ability to deal with the pollution. But they can pay. So let them pay the bill.

* * *

We are at a timely moment, just after the Third Plenum, which give us more opportunities to make recommendations. One of the main topics at the Plenum was overall deepening of reform. Under this topic the communiqué says this task is to improve the ability of the government to manage better and to accelerate five aspects of work, which are socialist market development, democratic government, advanced civilization, harmonious society, and ecological civilization. So, ecological civilization is one of the main components of this overall deepening of reform. I think we should highlight this in our own paper.

Although the Third Plenum highlights reforms in these five areas, the ecological civilization aspect has been particularly concrete and specific. It includes the idea of redlining and mentions the strengthening of the whole system to protect the environment and the ecology. These are important and significant demands. In our new draft we should echo these demands. This is an important opportunity for us. Ecological civilization is not just an isolated thing any more. It has become an integral part of the whole big picture of the deepening of reform. This is why in our draft we should have wording to this effect.

* * *

Please include in the recommendations something about the value of ecosystem services. Surely if we are putting in place the indicators and data that would allow us to define an ecological civilization, the foundation for that is understanding the ecosystems that underlie that civilization.

To echo comments made earlier, it seems straightforward and hugely important to be clear that CER is an obligation that applies to corporate activities not only within China, but increasingly to activities outside China. Chinese corporations are important to what is happening overseas, especially in the exploitation of commodities. Please add that point to the recommendations.

I applaud the change which calls for a cap on total consumption of coal. This is one of the most important things China could do. Of course, everything depends where that cap is set, and I assume that debate comes next. But putting that issue on the table is a welcome step.

* * *

Please make a number of brief additions and changes to wording, to emphasize the promotion of green travel, green transport, and green signaling systems. In addition please add the word 'national' and make it the National Coordination Mechanism to Promote Urban Green Travel.

* * *

In the recommendations about developing a national strategy and action plan that promotes CER, we should strengthen the demands on Chinese SOEs. In fact, these enterprises should take the lead in promoting CER and, what's more, lead by example. And this obligation should hold not only within China, but with their international operations too.

Also, in the introductory material we should echo more closely the actual conclusions of the Third Plenum and seize upon the relationship between macroeconomic reforms and ecological civilization.

* * *

Regarding green travel, we should say more about the development of non-motorized vehicles. Bicycling is popular in China, so cycling should be emphasized in the recommendations. There should be a special

lane for bicycles, and if a journey is five kilometres or less, it is better to encourage bicycling or non-motorized vehicles. The amount of cycling and walking that people do should be increased, and on some streets motorized vehicles should be forbidden.

* * *

At present we are faced with deterioration of the environment and climate instability. People do not have environmental security. The recommendations about air and soil pollution mention that the fundamental approach is to further strengthen the transformation and adjustment of economic modes. In other words, we must have a green transformation. We should not only change the production mode and the consumption mode, but we should also promote social development. On the one hand this can address social problems, on the other hand it can address the problems of climate change and environmental protection. Therefore I think this point is so important it should be moved to the top level of the recommendations, that is, to the main core statement.

* * *

We should link our Council's most important proposals to the Third Plenum, which decided to establish two important commissions, on security and on reform. In terms of structure and governance, this is important. How can we have our task forces linked to that? By expressing things in terms of eco-security. We saw recently the typhoon that hit the Philippines, the hurricane that hit New York, tsunamis in Japan and the Indian Ocean, and so on. China also has frequent disasters. This is something we can study: eco-security.

During its 21 years, CCICED has been operating mainly inward, bringing international experience into China. Now China has put forward the concept, the vision, of ecological civilization. The China Council has a unique strength internationally. It is time for Council members to put this forward this idea to the UN, since next year the UN will have a climate change summit. Also 2015 will bring new Millennium Development Goals. No matter whether these two tracks merge, this is a focal point for the world's leaders.

We focus so much on policy and strategy, which is excellent. We also should focus on solutions. During the next 20 years China's 500 million peasants should be urbanized. For China's urbanization process now, the number one principle is human-oriented urbanization. Which is good. But it should also be ecologically based urbanization. The International Union for the Conservation of Nature – one of the

originators of the concept of sustainable development – has promoted a nature-based solution. This kind of practice can be involved in CCICED’s proposals.

Response by the Chief Advisors

Achim Steiner introduced CCICED Chief Advisors **Art Hanson** and **Shen Guofang**, who thanked members for their suggestions for revision of the draft recommendations. **Art Hanson** made these additional comments:

Several people have suggested we should be aggregating things so there is a clear response to the Third Plenum. For example, we should organize the recommendations around ecological civilization or else around economic reform. We may try to do that so the links stand out more clearly.

There are always difficulties of language. There are real differences between English and Chinese, not so much in thinking as in expression, so we have to be careful about that. We try to make sure there is a good level of compatibility between the two versions. This takes time.

Even though this year’s recommendations are lengthy, there is a lot of content in them. The document provides an important roadmap for the government on certain topics. But it also gives the China Council itself a roadmap for the way forward. It contains a lot of observations that we have not been able to follow up on immediately, as well as material from the past that we have brought forward in the context of the new reform package. All this is helpful for the work that lies ahead in 2014 and 2015.

At this point, on the invitation of Chairperson **Achim Steiner**, the assembly adopted the draft policy recommendations by acclamation. The final version of these recommendations, incorporating changes made following this discussion, subsequently was submitted to China’s State Council. The full text of that final version is included in this report as Section III.

Item 9. Closing Session

Achim Steiner then invited CCICED International Executive Vice Chairperson **Peter Kent** to make closing remarks. Here are the highlights:

We have reached the end of a very successful AGM. We have examined the issues and proposals before us well. We have chewed on them quite diligently over the past couple of days, and the passage of the recommendations this afternoon brings this AGM to a successful conclusion.

I would like to again thank Minister Zhou personally for his assistance and cooperation during the AGM, and of course for his many years of support for the China Council. And I would also like to underscore again the important role that Secretary General Li plays in preparation for and in the execution of the AGM, and to thank the Secretariat and of course the Chief Advisors again for their contributions under the Secretary General's guidance and leadership.

I think it was evident again here this week that the commitment and dedication of the Chinese and the international co-chairs and members of the policy research teams bring to the Council's work a very important combination of counsel and advice, not only of course during the actual AGM but in the preparation and the work that is carried out through the year.

We can all agree that we have had a rich, continuing discussion of the various opportunities in the interest of this year's theme, Environment and Society for Green Development. I think the open forums were particularly stimulating, and the reports today particularly illuminating, giving us a better understanding of some of the complex relationships between environment and the factors such as consumption, social engagement, urbanization, health, and transport.

This morning we heard a number of, fair to say, "profound truths" in advice offered to China which I believe could equally resonate in many of the China Council's international member countries, including my own. We also heard about the range of challenges and opportunities that China will face in building an ecological civilization. Continued focus of course will be needed to strike a balance between economic growth, environmental protection, and social development objectives. And I think the recommendations that we have just approved this afternoon are ambitious, but they reflect best international practices, and are, I believe — with a concerted effort at all levels of government and with international support — quite achievable.

And as last year, I am again impressed by the breadth and the high quality of the advice presented, because all of us here benefit from the work of CCICED. Our efforts again this week demonstrate that international cooperation, international discourse, and a shared search for solutions in this great country serve not only China but the international community as well. Minister Zhou — eloquently I think — a

number of times outlined for us the progress made so far under the 12th FYP, as well as detailing the challenges that lie ahead. And I assure you again, Minister Zhou, you have our full support, because of course challenges also provide opportunities, and those opportunities are there for the taking.

I was honored and pleased to convey yesterday our collective thinking and recommendations to the Premier, assisted of course by esteemed colleagues Steiner, Georgieva, and Leape. Fair to say we had a very constructive exchange. And I'm sure we all share an appreciation for the time that the Premier afforded us for that report and for his shared views. The Premier made quite clear to us China's commitment to environmental protection, and his remarks that such protection will play a stronger future role in development that is so important for this country – that as China does achieve middle-income status, the population will demand higher levels of environmental quality and protection. And the government is taking concerted actions to recognize those demands.

The Premier was clear to us and to his colleagues in the Ministry the government's commitment to the delegation not only of central government authority but also the delegation of new authorities to local governments, business, industry, and the markets to work towards the goal of ecological civilization.

So thank you again, Minister Zhou, and thanks again to all our members, both Chinese and international partners, for cooperation and assistance throughout the year, but particularly over the past few days.

Next, Achim Steiner invited CCICED Executive Vice Chairperson **Zhou Shengxian** to offer a summary of the conference and to make his closing remarks:

Our second AGM of Phase V of the China Council is drawing to a close. CCICED continues to receive the highest attention from the Chinese government. Premier Li Keqiang met with everybody in the Great Hall of the People. We had a group photo, and he made some important remarks. He pointed out that China is now at an extremely important point where transformation has to occur if sustainable development is to continue. The protection of the environment has become a national issue for the people. He also said that the Chinese government will coordinate and balance the relationship between development and the environment, effectively deal with air pollution by regulatory methods, promote energy conservation and environmental protection, and continue to protect the environment in all its aspects.

The Vice Premier, Mr. Zhang Gaoli, who is also Chairperson of the China Council, also met with our foreign representatives. He emphasized that protection of the environment is China's fundamental national strategy and that China will continue to do this while advancing its economy. He also said that he hoped CCICED would continue to provide an effective platform for exchange between China and the world. This of course is a huge encouragement to us. And he encourages all of our experts and academicians to continue to work on their research.

The theme this year is Environment and Society for Green Development. The Executive Vice Chairs, the Vice Chairs, and Chief Advisors all have made reports on these issues. We also heard from three parallel forums and from five policy research teams. The policy recommendations drafting team listened carefully to everybody's suggestions and worked closely on amending the recommendations, which now have been adopted in principle. So the next step is for the Secretary of CCICED to submit these recommendations to the Chinese government.

Every time we hold an AGM, all of us in the China Council learn a great deal – and China's environment benefits. Every time we have such a meeting in fact it is a spur to environmental protection in China. It's like a filling station for us. This year, I listened carefully to the policy reports. I was very much enlightened and learned a great deal from them. I have points I want to make about each of these reports.

1. The first report examined a number of public incidents that occurred over environmental issues, talked about the NIMBY syndrome, and so on. The analysis has strengthened my conviction that we need to use the concept of ecological civilization to look at environmental protection, and furthermore that ecological civilization is a combination of consumption and production. So when we look at environmental protection we need to raise ourselves to a strategic level. We need to continue to look at consumption in our direction and guidance towards environmental protection.

2. When I heard the second report I thought about what is happening in China today as we promote new urbanization and the problems we are facing with that. In a few days the Central Committee will hold a meeting on urbanization, so thanks to this report I have a new and better understanding of this issue. According to this new urbanization movement in China, this concept should focus on the human being. It should be a person-centered urbanization. It should be a low-carbon development. If urbanization is carried out well, it will have a huge positive effect on China's environmental protection and on the development of society and the economy in China. But if we don't do a good job with this, we will have huge problems later on.

3. How do we use the new media to communicate with the public? This is a new problem for us. How can we get more of the public to become involved in environmental protection? In the past the links between the public, media, and the environment became almost hostile, the government became hostile, and things became exaggerated and overstated. So, thanks to this report I believe that information transparency and openness of environmental information should be a normal situation. Closing it off should be the exception. Only when this information is accurately provided to the public can we stand on the same side as the media in promoting environmental protection.

4. Regarding CSR, I believe that whether you are a private enterprise or a state-run enterprise or a joint partnership, you have a responsibility to society. Protection of the environment is part of this responsibility, and is built on the basis of trust. Regarding green development, this is a wave of new technology which I think will be unstoppable. Every time there is some new technological revolution it propels social change and productive forces expand. If it is well employed, it is absolutely invincible. But if it is not used properly it will be extremely destructive — and might even result in the loss of political power.

Toward the end of the Qing Dynasty, China became decadent. There was not a good flow of information, no new technology was coming in, and there was a sense of isolation. A senior court official asked the emperor: How much longer do you think you can stave off this wave? The emperor is supposed to have said: When the wick of our lamp goes down, we will be finished. And that's pretty much what happened.

On the other hand, look at the changes that came about as a result of the steam engine and electricity. We should see green development as an historic opportunity to look at things with vision and foresight. Any country, any people must grab this opportunity and push the technology forward. The Third Plenum, the Vice Premier, and the Central Committee have recognized this, and are determined to seize this opportunity. This has increased my determination to implement the decisions and proposals of the Third Plenum.

5. Green mobility is definitely an environmental issue. In the past, Beijing was called the empire of the bicycle. At every crossing on Chang'an Avenue, the moment the lights changed an army of bicycles would surge forward in a phalanx. This was quite grand to see. Unfortunately now what do we see? Beijing has one of the most serious traffic congestion problems in the world.

Regarding CCICED, every time we have a meeting, there are a number of new issues. This time we have new opportunities, new situations, and new tasks. We can summarize these as follows.

First, we must deepen reforms. China's reforms have already reached a key and challenging period. We can say we are in the deep end of the pool. Shortly after the Third Plenum closed we were immediately faced with change and reform. So I think CCICED also has to propose that we need a unified system to deal with all the different pollutants, emissions, and so on. This is going to be a reform, a change, an opportunity for environmental protection. This is making one organization, one department the representative of these various resources, and how they can be used. One department is going to be in charge of monitoring and restoring. That is going to be the future institutional system. This should be part of what CCICED should be examining.

Second, we need to build a beautiful China.

Third, we must focus on important environmental issues that affect public health. These are the three main points of concern of the Chinese government: air, water, and soil. Everything is bent out of kilter.

Fourth, we need to promote the concept of environmental social responsibility. Everybody in society has a responsibility to protect the environment. All enterprises have this responsibility, and when that is actually in place then there will be hope for China's environment.

On behalf of the CCICED Bureau, MEP, and in my own name, I would like to thank Mr. Kent, Mr. Steiner, our experts and academicians, and our government officials for all for the hard work they put into organizing this AGM.

Finally, **Achim Steiner** made some closing observations:

We have met at an historical moment. This Council – in terms of both its timing and its agenda, and its encounter with the Premier – will stand out, not least in terms of its substantive recommendations, as one of the special ones. Many of you are in the midst of a transformative moment, by necessity as we have heard time and again – China's necessity – but also because of the opportunity.

Ecological civilization is a term that will be part of our work for years to come. It is with this year's Council that we have embraced this challenge, and also the expectation that CCICED will rise to a new level of sophistication and understanding, but also provision of relevant advice.

In just a couple of years ecological civilization has moved from a vision to being a central part of China's reform strategy. This is one reason Council members are so committed to this unique international effort. The contrast between a world that is at a loss about how to cooperate and come together on some of these fundamental challenges receives almost an antidote when you come together in the China Council. You begin to see how vision, leadership, science, empirical evidence, and best practice can inform policy agendas, and also the pathways by which you proceed to implementation.

We often bemoan the lack of political will. This week, nobody can accuse China's leadership of lacking political will or vision. That vision is not expressed in terms of slogans – of which we have many in the world – but in fundamental commitments that have been laid out. There will be skeptics and doubters, and let them be, because it will always be a good challenge to convince them of the opposite.

Those who have served for a while in CCICED, or been associated with China, will know that when the leadership – especially in a meeting such as the Third Plenum – makes some clear directional shifts, these shifts have not happened on the spur of the moment. Nor will they just remain on paper. Therefore, for the Council this is a moment that we have seen emerge over the last three or four years – of the Council beginning to be as much a vehicle about bringing international expertise together with Chinese expertise, as it is about bringing China's own way of looking at developing into the context of where the world is at the moment. The world is struggling to identify a 21st century development response in a planet of 7 billion people, of climate change, of pollution, of ecosystem destruction, of food insecurity, of a lack of energy security – and I could go on and on. We live in a challenging age, and these challenges are multiplying faster than ever.

I am privileged to be part of this unique body – to have been invited by China to be part of its own journey in addressing these issues. I am privileged also to be part of a community of professionals who, based on trust, evidence, and firsthand experience, are helping the world understand that in this country there is a deeply serious effort to try and address these issues.

As we meet here, at the Warsaw Climate Change Conference, meanwhile, the world is again unable to communicate with one another. The world of negotiation is always far from the world of action and implementation, in China as it is in many other countries. We have to study this more deeply because a world that cannot come together in a multilateral context to face these challenges collectively – and yet out of desperation is acting with great frustration and energy locally – surely must find an answer to this impasse, this paralysis. Otherwise it simply is not serving the people across the globe.

III. Final Policy Recommendations to the Government of China

China Council for International Cooperation on Environment and Development 2013 CCICED Annual General Meeting Policy Recommendations to the Government of China

The 2nd Annual General Meeting of the China Council for International Cooperation on Environment and Development (CCICED) Phase V was held from 13 to 15 November 2013 in Beijing with the theme of “Environment and Society for Green Development”.

CCICED members appreciate the shift in green strategic thinking and major initiatives of the new leadership of China’s government. We specifically note: the green development emphasis in the 12th Five-Year Plan (FYP); the significant foothold Ecological Civilization has gained recently in China’s society; and, within the “China Dream”, the vision of a “Beautiful China” which can inspire Chinese green prosperity actions. Members believe that the commitment towards economic reform within China provides substantial opportunities for transformative environmental improvements. The new *Air Pollution Control Action Plan (APCAP)* highlights to us the new level of determination and commitment by China’s government to environmental protection that is urgently needed.

The Council members are particularly pleased to learn of the comprehensive reforms agreed upon at the 3rd Plenum of the 18th Communist Party of China’s Central Committee. These reforms will be of great value for the construction of China’s Ecological Civilization since they effectively link environment with other key domains, including economic, political, cultural and social development. Internationally, CCICED Members also appreciate the incorporation of Ecological Civilization into decision document (Decision 27/8) by the 27th Governing Council of UNEP (First Universal Session). CCICED expects that Ecological Civilization can become a ‘Made in China’ enhanced version of sustainable development and a new path for China’s environmental protection that enlightens and contributes to global sustainable development.

Environmental problems involve social values. Therefore solutions must be to form environment-friendly social values, ethics and culture, thus establishing a new institutional framework and patterns of behavior that encourage harmony between people and nature, and that guide transformation of the entire society towards green development and social harmony. An Ecological Civilization is the only type of civilization that is sustainable in the long term.

Yet CCICED members also recognize the huge environment and development challenges China is now facing. Some are of a global nature such as climate change; others are of a national or local nature. The world has taken note of the large scale, frequent and long-lasting haze/smog pollution occurrences in various regions of China. Despite the significant efforts of China’s government on environmental protection and on mainstreaming transformation of the development mode, the environmental situation is becoming more serious. Problems are becoming more complex, with an array of legacy issues arising from past development and new environmental issues that are often associated with rising levels of industrial development and modern levels of energy use and domestic consumption; difficulties and lags in changing the

development mode. Inadequate implementation of some environmental policies and enforcement limitations of laws and regulations are serious challenges.

When considering people's reaction to smog pollution and public concerns about environmental and health impacts of construction projects, it is apparent that the relationship between environment and society has significantly changed with the progress on social development of China.

On the one hand, environmental issues now have greater impacts on quality of life, for example through the impact of environmental pollution on public health, and there is a need for greater recognition of the rights of environmental pollution victims and more equality of access to environmental public services. On the other hand, there are significant changes in terms of extent, methods and effects of public reaction on environmental issues. It is beneficial for the public to demand environmental information disclosure, to report and monitor environmental pollution and damaging activities and to supervise government performance. China, like other countries will have to set out fair and reasonable protocols for addressing NIMBY ("Not In My Backyard") situations, and for other public responses to proposed projects. These protocols will require greater attention to mechanisms for dispute resolution.

China's decision-makers need to identify key areas and prominent issues that currently and in the future will affect environment and society linkages in China, and clarify new policy directions that can be followed by gradual establishment and improvement of specific policies. Specifically, the following seven areas of social concern require attention: environment and health, environment and social risk, environment and social justice, environment and poverty, environment and employment, environment and sustainable consumption, and NIMBY issues.

At this stage of China's development, and in a time of expanding use of social media and the need for further public information dissemination, what constitutes appropriate environmental rights and public or private sector obligations obviously requires good judgment. There is an apparent need to shift towards a new approach for accurate information dissemination, whether on project planning and environmental assessment, or for more fundamental environmental monitoring and other knowledge. This new approach would make the default decision be to release environmental information on a timely and regular basis so that people could be well informed on important matters that pertain to their daily lives.

CCICED Members believe that great opportunities exist for transformative change in China's relationship between environment and society. A prominent example is the need for setting in place sustainable consumption as part of stimulating domestic consumption. Furthermore, a reasonable foundation already exists for establishing an overall green and coordinated relationship of environment, society and development. Environmental awareness of the Chinese people is increasing in both breadth and depth. Thus, demands of the people for reasonable environmental rights and rational environmental behavior will become a strong social pressure and driving force to promote environmental protection. Already, there is positive change of understanding on environment and society relationship on the part of China's government, illustrated by a deep understanding statement from Chinese leaders—that "a sound ecological environment is the fairest public good, and most beneficial welfare".

In 2013 CCICED focused its studies on several key fields of environment and society linkages in China. These studies included the following task forces (TF) and special policy studies (SPS):

- China Environmental Protection and Social Development TF.
- Sustainable Consumption and Green Development TF.
- Media and Public Participation Policies on Promoting China's Green Development SPS.
- Corporate Social Responsibility in Green Development in China SPS.
- Promoting Urban Green Travel SPS.

Based on outcomes of these 2013 studies, discussions during the AGM, and other inputs, CCICED is providing five major policy recommendations to the Government of China.

RECOMMENDATION 1. Speed up institutional innovation and implementation of Ecological Civilization, in order to strengthen green development and to establish a more harmonious relationship of environment and society in China

While China now has clearer strategic thinking and an overall arrangement for Ecological Civilization, the institutional system for implementation lags behind in terms of adequacy and innovation. Implementation at local levels has yet to be embraced across key sectors and deepened in terms of content. Therefore, the Government of China should pay high attention to speeding up top-level design for an institutional system that can construct and implement a coherent and coordinated approach to Ecological Civilization. This institutional system must be capable of shifting values, people's behavior, lifestyle choices, and both production and consumption towards patterns of long-term sustainability and goals of improved environmental use and protection, strengthened ecological services, and due respect for nature.

Institutional innovation is required to redirect decisions from a "sectoral" approach towards a "whole of government" approach that will reduce actions that work at cross-purposes, turn public environmental behavior into positive energy for environmental protection, and enable environmental protection to fulfill its obligations towards safeguarding environmental services and related public goods. Climate change is already causing problems and is a major future risk. Avoiding decisions that lock China into a high emission economy, while charting a future path to a low carbon economy and preparing adaptation responses to climate risks are all part of Ecological Civilization.

CCICED recommends the following actions:

(1) Speed up improvement of top-level design and comprehensively promote practical implementation of Ecological Civilization.

- 1) In line with the Third Plenum reform directions, establish the appropriate institutions and systems for Ecological Civilization implementation. Promptly develop guidelines for strengthening Ecological Civilization construction in the immediate future, and formulate Ecological Civilization mid-term (2015-2030) and long-term (to 2050) vision, objectives and plans, with a greater degree of public participation and expert inputs. This vision will provide

a basis for the preparation and establishment of indicators, statistics and accounting systems. Establish a high-level leading and coordination mechanism for construction of Ecological Civilization. The mechanism should receive inputs from various stakeholders; identify implementation actions; identify responsibilities of central and local governments, and among government agencies; and recommend channels for the necessary sustainable financing including new local sources of revenue.

- 2) Create the most stringent and effective as possible resource and environmental protection system. Speed up relevant legislation processes to complete a comprehensive revision of the Environmental Protection Law and specific supporting laws and regulations. Conduct pro-environment modifications to economic and social laws and regulations so they become consistent with Ecological Civilization requirements. Define a comprehensive and credible ecological redlining approach. Establish an accountability and compensation regime for resource and environmental damages, as well as improved mechanisms of payment for resource uses and environmental services; extend the scope and degree of ecological compensation to balance and coordinate equitable distribution of resource and environmental benefits.

Speed up institutional reform for eco-environmental protection management; establish an environmental governance system for unified supervision of all pollutants, all emission sources, all environmental components, and all ecosystems. Establish a regional joint action mechanism that coordinates terrestrial and marine regimes for ecosystem conservation and restoration, and for pollution prevention and control.

China's central government should use economic incentives to encourage local pilot efforts for Ecological Civilization construction, and gradually form an overall pattern of building Ecological Civilization initiatives in line with specific local conditions.

- 3) Carry out a study on green accounting needs for the national economy, and gradually establish a national economy evaluation system incorporating resource consumption, environmental damage, and environmental protection benefits. Incorporate Ecological Civilization progress as an important indicator into the local government official performance evaluation system.
- 4) As China is moving towards the final years of the 12th Five-Year Plan, it is important for the Chinese Government to examine and identify characteristics of economic, social, and environmental development for the 13th Five-Year Plan, and to set up mid- and long-term goals and measures for green development, environmental protection, energy conservation and emissions reduction, and climate change for the future 5 to 15 years.

(2) Focus greater effort on resolution of prominent environmental issues such as air, water and soil pollution, in order to meet basic public demands for a healthy environment.

Enjoying a healthy environment is a basic right for people. Severe pollution issues that significantly affect public health and life are key factors leading to current tensions and non-harmonious environment and society relationships in China. Therefore, effectively solving these

issues is a fundamental approach to reduce societal tensions. The *Air Pollution Control Action Plan (APCAP)* is a good start. However, the Government of China should develop special action plans for other environmental issues that seriously affect public health and life such as water pollution, soil pollution and rural environmental problems.

The key element for an environmental action plan is to have a credible and implementable approach that will result in demonstrable improvement in environmental quality for prescribed time periods. Concerning implementation of *APCAP*, the central government should focus its supervision and coordination efforts on three aspects: (i) strengthening overall action implementation by local governments and step up review and accountability; (ii) fulfillment of responsibilities of central government agencies, especially the development of supporting policies for investment, fiscal arrangements, taxation, finance, price, trade and science & technology; and (iii) joint actions among local governments within each region. The supervision of enterprise actions should fall mainly under the responsibility of local government and environmental authority, with full utilization of public and social organizations.

The fundamental approach to resolve current prominent environmental issues such as air pollution is to change the economic growth mode and adjust the energy structure. Measures such as a cap on the total consumption of coal and improved fuel quality are necessary parts of such a shift. In order to fully realize co-benefits arising from economy, environment and energy measures, it is important to coordinate efforts for reduction of conventional pollutants, energy conservation, and for low carbon development. Market-based long-term mechanisms including pricing, taxation and emissions trading are important instruments for this coordinated effort. It is further recommended that efforts be stepped up in exploring and creating new funding mechanisms and resources for environmental protection and environmental investments. These approaches are not only critical measures for the success of *APCAP*, but also effective mechanisms to ensure long-term effects continue after completion of the action plan.

(3) Improve governance policies for green development and speed up transformation of environmental governance.

- 1) Government agencies at all levels should explicitly take environmental protection concerns into account in all aspects of their governance and decision-making, such as economic/social and cultural construction, development of programs and policies, policy implementation and evaluation, and performance evaluation. Government and staff should be evaluated and promoted on the basis of delivery of sustainable/green development.
- 2) Clearly recognize environmental rights as a basic component of citizens' rights. This should be done through legislation, and be considered as a basic principle for policy development in economic, social and environmental fields. Ensure public environmental rights are protected through concrete institutional systems based on the rule of law, including litigation, incentives and compensation.
- 3) Strengthen ecological compensation and pollution damage compensation mechanisms to reasonably solve unbalanced and unjust distribution of environmental benefits and costs between regions, urban and rural areas, and among different social groups.

(4) Reform Environmental Impact Assessments (EIAs) and Social Impact Assessments in a systematic manner.

An environmental and social assessment mechanism for major policies should be implemented and made to work effectively. To be convincing, the approach should be based on principles of openness and transparency and on meaningful public access. Specific actions should include:

- 1) Establishment of a “pre-approval” screening system for major projects with environmental and social implications. Introduce third-party assessment mechanisms for social and environmental impacts. Policies and reforms are needed to ensure public environmental interests are better served.
- 2) In the event of failure by cadres to strictly follow the assessment process, such failures should seriously be taken into account in the regular evaluation of such cadres.
- 3) The building of a more robust and anticipatory environmental emergency response mechanism should be given priority. Review the adequacy of plans for existing facilities, beginning with large projects in proximity to populations or to water resources. Set up hierarchy of priority industries and locations.
- 4) The provision of timely, and accurate information during environmental incidents is important. Full advantage should also be taken of new media platforms to ensure more widespread and accurate knowledge of such incidents.

(5) Improve environmental governance structure by establishing robust green government-public-enterprise partnerships.

In the current environmental governance structure in China, the roles and responsibilities of various actors and stakeholders are not always well defined, and there is sometimes a lack of effective communication and consultation mechanisms. Therefore, a primary task of improving environmental governance is to clarify the roles and responsibilities of government, enterprises, and the public as key stakeholders in Ecological Civilization construction, green development, and environmental protection. CCICED suggests the following roles, rights and responsibilities for each sector:

- 1) Government – As necessary, develop regulations, policies and an institutional system to regulate behavior of all important actors (including the government itself); enable cooperation among various actors; build trust in the relationship between government and society on environment and green development issues; strengthen environmental awareness and capacity of enterprises and the public; and encourage the role of social organizations in environment and development. Develop a “balanced scorecard” for all SOEs, local and provincial governments and key ministries whereby Corporate Environmental and Social Responsibility can be taken into account.
- 2) Enterprises (SOEs and private sector) – Strictly follow environmental regulations and mandatory standards and implement basic environmental obligations; behave environmentally responsible according to industrial and corporate standards and guidelines; and cooperate with other stakeholders such as media and environmental non-governmental organizations (NGOs)

to enhance corporate environmental and social responsibilities. Ensure establishment of an internal environmental management structure within SOEs and large private enterprises. Publically reveal the identity of the corporate officer responsible for these matters.

- 3) Public and social organizations – Explore innovative social governance mechanisms for environmental protection; integrate various social resources and forces to establish more effective communication mechanisms between the public and government through which public opinions can be communicated in a rational and effective way; establish consistent, effective and widespread public participation mechanisms in environmental decision making; clarify supervision and evaluation roles for citizens in environmental management processes and for performance of government and public sectors; conduct participatory environmental education and awareness raising activities.

(6) Ensure equal standing of environmental, economic and social issues in national and provincial planning and reporting.

- 1) From the 13th FYP, the five-year plan of the Chinese government should be listed as the National Economic, Social and Environmental Development Plan. The National Economic and Social Development Report submitted by the Chinese government to the National People's Congress and the Chinese Political Consultative Conference (NPC & CPPCC) would then also have been changed to the National Economic, Social and Environmental Development Report accordingly. A similar adjustment should be made at the provincial level.
- 2) To support this change, the Government should submit to the National People's Congress an annual report with the achievements made by the Government and with equal emphasis on the economy, society and environment. In this way the Government will demonstrate responsibility for environmental protection in China, and clarify the relationship between the three key elements for sustainable development progress.

RECOMMENDATION 2. Change consumption patterns towards sustainable consumption in order to drive green development

In China, economic reform and social development requires stimulation of domestic consumption. This may result in dramatic shifts on the expenditure patterns of China's citizens, especially the rising middle class in both cities and the countryside. It would be disastrous for an excessively high level of per capita consumption based on western levels of energy and materialism to replace the frugal habits of most Chinese. Yet, China's rising ecological footprint and other evidence suggests that substantial numbers of Chinese are already following a path of high consumption.

Sustainable consumption is a topic that has not received sufficient attention in China. It requires urgent consideration in order to identify sustainable consumption patterns appropriate for China, and to encourage people to adopt lifestyles and purchasing decisions accordingly. The Government of China can take various enabling measures, including incentives, laws and regulations and information dissemination relevant to sustainable consumption. Therefore, CCICED recommends:

(1) Incorporate sustainable consumption as an important element of Ecological Civilization construction.

Develop and implement a national sustainable consumption strategy and action plan consistent with Ecological Civilization and Green Development, and formulate a sustainable consumption road map.

The national sustainable consumption action plan should: (i) Select priorities among consumption themes where there are major resource and environmental impacts such as housing, household appliances, travel options, and food. Specific attention should be placed on green building codes and incentives. (ii) For the short-term, incorporate the sustainable consumption concept into the 13th FYP and establish an institutional foundation. For the mid-term (to 2030), establish and improve the legal framework to promote sustainable consumption pattern among the emerging urban middle class in China. For the longer-term (to 2050), further enhance the sustainable consumption capacity and level in the whole society including the transition to an extremely low carbon society successfully adapted to climate change considerations. And, (iii) Develop differentiated sustainable consumption strategies for different regions, cities and consumer groups.

- 1) Improve laws and regulations that promote sustainable consumption. In the short-term, incorporate the concept of sustainable consumption into the currently being-revised *Environmental Protection Law*, *Consumer Rights Protection Law* and *Government Procurement Law*. For the longer-term, consider development of a special *Sustainable Consumption Promotion Law* to reconcile the relationship among consumer rights protection, food safety, environmental protection and sustainable consumption.
- 2) Reform and improve pricing, taxation and financial incentive policies that promote sustainable consumption. Strengthen public transport financial support, including increased funding for local public transport development. Redesign government subsidy programs drawing on the “appliance to countryside policy” and “old appliance trade-in policy”, and focus subsidies on the top 10% best performance products. Impose environmental taxes on resource-intensive or emission-intensive consumption products. Link family income tax breaks with sustainable consumption, encourage recycling of product and waste resources, and provide low interest credit for purchasing green buildings.
- 3) Strengthen sustainable public procurement and give preferential purchase treatment to products from green supply chains. Update the current energy-saving products catalog and environmental label inventory, and assign mandatory quotas for government procurement of green products and services. Include green standards of hotels for business travel and meetings into government procurement standards. Revise government procurement systems to include new energy and low emission vehicles, and make green supply chains an important indicator for procurement standards.

(2) Promote innovation through sustainable consumption policy and institutional systems.

- 1) Strengthen the credibility and independence of the Chinese green product certification system and enhance China's environmental labeling system. Promote consistency of China's green product certification system with international standards. Establish independent consumer associations and consumer advisory committees, and develop a national database of green products managed by a third-party body charged with collecting and publishing product information.
- 2) Develop a sustainable consumption indicator system at the national, regional and local level and carry out sustainable consumption pilot demonstration. Incorporate sustainable consumption into other programs and plans such as a pilot demonstration of Ecological Civilization construction and low carbon economy. Implement small-scale community pilots and local demonstration initiatives, and a pilot of urban green travel and urban road resources optimization.

(3) Foster sustainable consumption partnerships, with participation by stakeholders.

- 1) Encourage the role of private sector and incorporate sustainable consumption into market-based codes of conduct. Give full play to sectors such as retailers and financial institutions in sustainable consumption. Encourage the establishment of green supply chain management and encourage incorporation of sustainable consumption objectives into the core business of financial institutions.
- 2) Encourage social organizations and consumer groups to participate in development of national and local sustainable consumption policy frameworks. Establish consumer information center in cities to provide dialogue platform for citizen, entrepreneurs and local governments, and to provide advisory service on recycling, products sharing, water saving and food safety. Include sustainable consumption in the school curricula at a national and local level.
- 3) Promote international cooperation in sustainable consumption. Actively participate in multi-lateral policy framework negotiation on sustainable consumption, participate in UNEP's *10 Year Framework Programmes on Sustainable Consumption and Production* and focus on the topic of sustainable consumption in the WTO government procurement agreement negotiation.

RECOMMENDATION 3. Recognize environmental and social roles of enterprises and promote corporate environmental and social responsibility (CER and CSR)

Enterprises can be the driving force of economic growth but also a primary source of environmental pollution. It is a significant challenge for Chinese enterprises (both SOEs and private sector) to harmonize development and environmental protection, and to explore a green and sustainable development path.

Implementation of corporate social and environmental responsibility has three levels: (i) a basic level of compliance with regulations, (ii) moving beyond compliance by proactive participation, and (iii) taking a leadership level of corporate environmental responsibility. For enterprises at

different levels, government should develop corresponding strategies and policies with objectives of punishing enterprises that violate regulations, encouraging voluntary implementation of corporate environmental responsibility, and advancing enterprises where possible to a higher level of green development. Therefore, CCICED recommends:

(1) Developing a national strategy and action plan for corporate environmental and social responsibility.

Address different needs of state-owned enterprises (SOEs) and small and medium-size enterprises (SMEs), and develop differentiated national strategies and action plans to promote CER/CSR; define cooperative relationships involving government, enterprises and society; and clarify responsibilities of various government departments. In boosting CSR and CER practices, implement the polluter pays principle.

(2) Develop a working mechanism for social organizations and industrial associations to press for corporate social and environmental responsibility.

Encourage industrial associations to play an important role in standards development, guidance and self-discipline to support implementation of CER/CSR by enterprises.

Advocate corporate environmental responsibility initiatives, and encourage supervision and active participation of the public. Encourage social organizations, media and internet sources to play a full role in performance evaluation, information disclosure, supervision of behavior and public feedback. Strengthen international cooperation and learn from success stories.

(3) Enhance CSR and CER incentives and other mechanisms for stimulating actions beyond compliance.

Strengthen supporting laws and regulations for implementation of CER/CSR. Enhance coordination of *Corporation Law*, *Environmental Protection Law*, *Consumers Rights Protection Law* and *Labor Law*, increase punishment of enterprises not in compliance with the laws and regulations; promote establishment of local environmental protection courts and improve relevant juridical practices; support environmental public litigation and enable the supervision function of social organizations.

Actively construct the financial investment environment to promote CER/CSR. Promote green investment and credit, for example, through establishment of investment funds that can provide interest discounts or subsidies to enterprises with good CER/CSR performance. Provide priority government procurement support to enterprises with good CER/CSR performance.

Government should give priority to public policies that provide incentives for SMEs to fulfill CER/CSR. In addition, government should pay attention to policy and capacity building for Chinese overseas enterprises to meet CER/CSR requirements. Specific attention needs to be paid to cultural differences in terms of local expectations abroad about corporate responsibility and performance.

(4) Improve information disclosure systems of CSR and CER performance to increase transparency.

- 1) Increase the extent of enterprise's environmental information disclosure. Build a tracking system for enterprise social and environmental information; pay attention to environmental information storage, processing and analysis; regulate enterprise environmental information disclosure; and improve rewards and penalty measures for enterprise information disclosure.
- 2) Develop sectoral reporting requirements based on industrial characteristics.
- 3) Promote industrial associations to build an information platform on Chinese firms' CER/CSR implementation record.

RECOMMENDATION 4. Promote active roles of media and public participation in order to turn social concern for environment into a driving force for green development

The public is the major and essential stakeholder in Ecological Civilization construction, and is the direct beneficiary of green transformation of economy and environmental quality improvement. China's Ecological Civilization will lay a solid foundation and make sustainable progress only when it is widely and effectively supported by the public. While facing the growing public concerns and inspirations on environmental issues, the government is not yet well prepared to transform the public concerns and inspirations into an orderly and rational public participation. There is an urgent need to enhance government functional shifts and capacity building on environmental education, knowledge dissemination, information disclosure and emergency response so that the roles of media (especially new media) can be fully realized. Therefore, CCICED recommends:

(1) Improvements to the institutional system in order to promote legitimate, orderly and rational public participation.

- 1) Develop measures and mechanisms for early engagement, transparent and effective public participation in planning and project decisions. Effective public participation in early stages will contribute to green development, reduce social conflicts and improve decision-making and its social acceptance.
- 2) Develop a more complete emergency response system for environmental accidents and mass incidents. First, ensure rapid information disclosure and transparency. This includes timely and accurate information provided to media (traditional and new media), online information disclosure tools that the public can access, response guidelines, process transparency, and relevant risk information. Second, provide rational access and channels for public opinion expression. Related laws and regulations need to be issued to encourage and protect whistleblowers, and to ensure that environmental issues, accident and emergency are reported without delay.
- 3) Support development of environmental NGOs. Simplify registration procedures for NGOs and non-corporate social groups, encourage their development and growth; actively guide

and standardize the development of different public environmental organizations, give full play of industrial associations in environmental protection, actively encourage and lead environmental organizations and urban/rural communities engaging in environmental protection.

(2) Promote implementation and completion of environmental information disclosure systems.

- 1) Further improve and implement environmental information disclosure systems. Providing real-time and reliable information will help produce better decision and improve public support to government decisions. Integrate currently scattered environmental information and data in different institutions and departments, and develop an accessible national environmental information and data system. Based on the experience gained in implementing *Government Information Disclosure Regulation* issued in 2008, effort needs to be made to develop an information disclosure law. With such a law, the government needs to ensure the right of the public to timely access of information, to embrace the principles of the 1992 *Rio Declaration on Environment and Development*, and to ensure the public can obtain information in line with common international standards.
- 2) Develop a pollutant inventory for industrial point sources and other emission sources, and improve monitoring capacity and transparency of pollution data. Development of pollutant inventory can draw on experience of the *Pollutant Release and Transfer Register (PRTR)* now in use in many countries. Such a system could initially be piloted in the chemical industry within China, which has had many mass incidents due to high levels of public concern.

(3) Enhance the role of media to form a communication and education system promoting green development.

- 1) Enhance the utilization of new media platforms and public information dissemination activities for green development. New media technology can be more widely used to provide open, detailed, accurate and real-time environmental information and to establish an important platform for collecting public opinions on environmental and development decision-making. Media's social responsibility needs to be enhanced to ensure information authenticity and accuracy.
- 2) Strengthen the environment and green development information dissemination and education systems. Establish specific working organizations and mechanisms for environmental strategy dissemination and public participation to study and predict environmental hot topics for a certain period of time or more generally in the future, and to promote public participation and public acceptance of environmental decisions.

RECOMMENDATION 5. Pay high attention to resource and environment challenges in the process of urbanization, and explore paths to green urbanization including urban green transportation

Urbanization is an opportunity because people's needs can be met more efficiently in urban areas than in rural areas. Cities are the drivers of economic growth but great care is required to ensure that cities remain or become attractive places to live and work. It is predicted that permanent urban residents in China will reach 1 billion and China's urbanization rate will reach around 70% in the coming two decades. About 300 million people will emigrate from rural area into cities. Undoubtedly, this will make many problems become more prominent, such as mismatches in the spatial distribution of urbanization and resource capacity, and other resource and environmental constraints. Thus, the Government of China needs to pay high attention to the environment risks in the coming new round of urbanization. Therefore, CCICED recommends:

(1) Develop urbanization systems and layout in line with resource and environmental capacity.

Strictly control the scale of cities in defined urban areas of the *National Main Functional Zoning Plan*; optimize layout of urban development; and promote coordinated development of cities and small-towns. Place special emphasis on urbanization quality in the rapid development pattern now occurring in Western China. Maintain and reserve adequate ecological spaces, properly handle the relationships among urbanization, new countryside construction, and ecological service and nature reserves, and encourage the adoption of "*compact and multi-centred*" city plans.

(2) Accelerate adoption of an integrated and sustainable urban master plan.

Such a master plan is an important measure to integrate environment elements into urban space, with rational allocation and use of local resources and environments. Expand the scope of pilot demonstrations for creation of urban environment master plans, and establish/improve standards, specifications and an institutional system for these plans.

(3) Improve urban resource and energy efficiency.

Urbanization should facilitate sustainable production and consumption to minimize environmental impacts. Actively promote green building standards, green architecture design and green community construction. Vigorously promote green transportation, enforce urban energy and water conservation management, and increase usage of renewable energy as much as possible.

(4) Build urban environmental infrastructure along with urbanization process.

Construct environmental infrastructure such as waste water treatment, solid waste separation, collection and disposal facilities and hazardous waste management facilities according to population and urban function layout. Enhance operation management of urban environment infrastructure.

(5) Encourage and promote urban green travel.

China's urban transport systems are presently on the wrong course—leading towards low density and socially divisive car dependency. The government should urgently address the promotion of urban green travel as part of the necessary transformation of China's urban development strategies; and facilitate establishment of a modern, low emission, and high efficiency green public transport system. This requires attention to cross-sector coordination and cooperation for better designed policies of car usage and public transport development; strengthening of the ability of the central government to encourage and pressure local governments to develop urban green travel through financial leverage and other means; providing clear guidance for Chinese cities to promote green travel; and enhancing local governments' capacity to finance, supervise and assess the urban transport system.

- 1) Develop the 'Outline of China Urban Green Travel Implementation'. Speed up developing or amending Urban Public Transport and Chinese Cleaner Air Act; carry out pilot projects to promote urban green travel and build a modern urban green transport system with Chinese characteristics.
- 2) Formulate 'Policy Guidelines for the Rational Use of Vehicles and Road Space' to reduce congestion and air pollution. Road user charges should be encouraged in congested areas in mega cities, and greater limitations on car ownership should be implemented.
- 3) Support investment in urban green transport to raise sufficient and sustainable local sources of revenue to fund local public transport companies. The Central Government should establish a management system for the central fiscal fund that promotes green travel as well as monitor and appraise the usage of the fund, for example shifting the fuel tax collection from a fixed amount of tax to an *ad valorem* basis, so that fuel tax income increases as fuel prices rise.
- 4) The state and city administrations should be required to ensure cross ministry/department policy coordination, as well as enhanced performance appraisal and management accountability. Public participation should be encouraged. Set up a coordinating mechanism to promote urban green travel.

IV. Meeting with Premier Li Keqiang

On 14 November 2013, the second day of the AGM, China's Premier **Li Keqiang** welcomed a group of international members of CCICED at the Great Hall of the People. The CCICED representatives who spoke during the meeting were International Executive Vice Chairperson **Peter Kent**, Vice Chairperson **Achim Steiner**, and members **Kristalina Georgieva** and **Jim Leape**. Here is a summary of their exchange:

Premier Li Keqiang: It is a great pleasure to meet you, Mr. Kent, and other friends of CCICED. In the past I attended and addressed the annual conferences of the China Council on many occasions. It is a great pleasure to see my old friends today.

You have all made active contributions to promoting China's development, in particular China's progress in protecting the environment. So on behalf of the Chinese government, I wish to express our high appreciation for all your active contributions, and express a warm welcome to all of you who have come from afar.

Peter Kent: Thank you, Mr. Premier. It's good to see you again. Thank you for your hospitality this afternoon. Let me first congratulate you on behalf of the China Council on your appointment. We look forward to continuing the CCICED tradition of meeting each year to discuss our recommendations.

It is very timely that the China Council's meeting is being held so soon after the Third Plenum. We applaud the outcomes regarding economic, social, and environmental reforms, and we commend the progress that the government of China has made in addressing the many environmental challenges it faces.

Likewise, Mr. Premier, we are very impressed by the comprehensive *Atmospheric Pollution Prevention Action Plan*. The same type of action plans, we believe, are needed to address water pollution and contamination.

This year the Council's work has focused on Environment and Society for Green Development. We believe China is genuinely at a crossroads where both citizens and government agree that environment and development relationships must be reformed.

Successful transformative change, we believe, depends on full engagement of the people. Hence your government's call for China's citizens to take a larger role in supervision of development is laudable.

Public participation can turn a social power into a driving force, we believe, for green development. Also, the great opportunity at hand is to rebuild trust that has been diminished in matters such as food safety and air and water pollution. This requires a strong commitment, we believe, to awareness and to education related to green development.

This situation would be helped, we suggest, by having government release in-depth, accurate information about environmental matters as the routine or the default case. There could also be more effective use, perhaps, of social media, and other means on the part of the government to ensure that people do have good outlets to express their views.

Premier Li, we have identified two key areas where new national strategies, we believe, should be established.

First, there is an urgent need to promote sustainable consumption on the part of China's citizens. Particularly important is to reach the hundreds of millions comprising China's growing middle class. Their consumer choices will determine whether China can indeed build an ecological civilization.

Second, both state-owned enterprises and private firms, we believe, should play a much greater role in green development and environmental protection. A national strategy toward corporate social and corporate environmental responsibility is needed. Voluntary action is too slow at the moment, and the situation, we believe, is unlikely to change without some greater level of guidance.

Mr. Premier, the China Council believes the time is short to address the challenges of environment and development. We therefore recommend speeding up institutional innovation and implementation of ecological civilization. These actions, we believe, will establish a stronger basis for green development, and a more harmonious relationship of environment and society.

Finally, a specific recommendation stands out for its simplicity – but also for its potentially strong message. We suggest changing the name of the 13th Five-Year Plan to become the National Economic, Social, and Environmental Protection [sic] Development Plan, and to make a similar adjustment for the report to the NPC.

Mr. Premier, with your permission I would like to invite three of my colleagues on the China Council to offer their perspectives. First, Mr. Achim Steiner, who is the UNEP Executive Director and CCICED Vice Chairperson.

Achim Steiner: Mr. Premier, our meeting has coincided with the conclusion of your plenary meeting of the CPC. One of the core messages to emerge from that has been ecological civilization, the green economy, environmental protection, and it is one that we all in the Council believe to be a central concept that will drive development choices in China – but also one that offers to the discussion about development globally a very exciting prospect.

The focus that you have provided to this discussion about future development, and through ecological civilization, is one that also the international community at the moment, at the level of the UN, is very much seized by as it searches for a new development agenda, post 2015, as we negotiate sustainable development goals, as we also negotiate international climate agreements. And I believe that through the notion of ecological civilization you will offer also to these debates a new impulse that I think the international community will hopefully be able to pick up, because it will help us integrate what internationally is often discussed under the theme of sustainable development and its three dimensions. Today is not the time to go deeper, but we certainly as Council members believe that this discussion and articulation and implementation of this concept in China is very exciting.

Peter Kent: Next, I introduce Ms Kristalina Georgieva, the EU Commissioner for International Cooperation, Humanitarian Aid, and Crisis Response.

Kristalina Georgieva: Mr. Premier, like my colleagues here I am greatly honored to be a member of the Council at this moment of time, of significant change you are undertaking through a comprehensive reform program, for the benefit of the Chinese people and for a beautiful China.

Like you, we in Europe embrace green development and the decisive role of markets to lead us toward it. In our discussions in the Council we particularly emphasized the importance of innovative market instruments to underpin green urbanization, and to bring a quick shift towards green urban travel – so important for the future of China and for the well-being of the Chinese people.

In Europe we have beautiful green cities – and we have some cities that are not great to live in, not so beautiful. And what makes the difference between the beautiful and the ugly are two things. First is a commitment and determination at leadership level for a long time to lead toward sustainable green cities. Second, the delegation to the city mayors the authority to apply market-based instruments to direct green development.

And of course we would be very happy to share the good and the bad with you, and would be very interested to learn from your experience in the future.

Peter Kent: Mr. James Leape, Director General of the World Wildlife Fund.

Jim Leape: Thank you, Mr. Premier, for meeting with us. WWF has worked in China for 30 years, and we have been a part of the China Council since it was formed more than 20 years ago.

As I think you have noted, the China Council is a unique forum for bringing international experience to China – but also for bringing the experience of China to the rest of the world. As China defines what it means to become an ecological civilization, I think the role of the Council is more important than ever, giving meaning to that term here in China, and also looking at what it means for China's investment and trade with the rest of the world.

I want to highlight two aspects of the work the Council has done in recent years that are important, I think, for what we can do going forward.

The first is the focus on low-carbon cities – building on what Commissioner Georgieva has already said – especially when we are going into international negotiations on climate change. Highlighting the bold action that some cities are taking in China to move toward a low-carbon future and looking at how that can be rolled out to other parts of the country is crucially important. You see cities that are moving strongly on efficiency, renewable energy, and even on capping coal, and all of those innovations have real potential for broader application.

The second point is that even as most of us live in cities, we still depend on healthy forests, healthy wetlands, healthy rivers to sustain us. So surely the foundation of an ecological civilization depends on valuing those ecosystem services. I think there is a lot of work to be done to figure out how those services can be brought meaningfully into economic decision making. And that is an area where the Council can make a difference.

Premier Li: I want to first thank Mr. Kent, Mr. Steiner, Madame Georgieva, and Mr. Leape for your inputs. And I appreciate the fact that you used just a few minutes to contribute your very valuable ideas and suggestions for the Chinese government. However due to time constraints it is impossible for me to listen to other friends speak today, but I am sure that you all have very insightful views on how China can promote green development, and I hope you will share them with us by other means.

Here I want to emphasize that China has come to a crucial stage where sustained and healthy economic growth can only be achieved with economic transformation and upgrading. It is essential for us to conserve energy, protect the environment, break the bottleneck of resource and energy supply, and address air, water, and soil pollution in order to ensure the health and safety of our people.

China is the largest developing country in the world. Therefore China still needs to continue to develop itself. But environmental protection is acquiring a greater role and significance in pursuing development, and it has significant impact on pursuit of sustainable growth. As China becomes a middle-income country, there is a rising call and higher expectation on the part of the Chinese public for higher quality of the environment.

As a member of the international community, and a big developing country, China must fulfill its share of international responsibility and work with the rest of the international community to tackle such challenges as climate change.

The Chinese government is fully committed to conserving the environment, and in particular tackling the challenge of pollution. You may know that in the first half of this year, the Chinese economy came under tremendous downward pressure, and there was talk in the international community of a possible “hard landing” of the Chinese economy. Well, we took focused steps to keep the economic operation on an even keel, and in spite of the tremendous downward pressure on economic growth, we still resolutely introduced a host of measures to protect the environment, including specific steps for pollution control. For example, we have worked to keep our public better informed of the PM_{2.5} situation, and we have taken integrated steps to tackle air pollution in Beijing and surrounding areas. As far as I know, China is probably the first developing country to make PM_{2.5} control one of its priority tasks in environmental protection.

I believe these measures demonstrate the resolve on the part of the Chinese government, and in this process the government has also – as Mr. Kent suggested – galvanized the private sector players to participate in this campaign.

At the same time, the new Chinese government has also taken steps to streamline administration and delegate powers to lower authorities, in the hope of giving more play to the role of the market in this process. This has been a crucial part of our reform agenda. It can also be called the very first move that the new government took.

It is the requirement of the central government that what should be left to the market should be truly given to the market. This is to galvanize further dynamism of the market, and in this way the central government can better concentrate its energy on creating a level playing field and strengthening its law-based supervision over the market.

The local governments have been required not to run their own companies in the future any more. Rather, their main function is to create a fair-competition market environment, and in particular step up their supervision and regulation over those companies which have not complied with the pollution control regulations, which are actually competing in an unfair way.

As the government reduces its intervention into the micro-economic activities as much as possible, it will be putting the government in a good position to do as much as it can to step up the supervision for a level playing field in the market and ensuring the full implementation of all environment-related laws and regulations.

The government needs to ensure that the laws and regulations will be enforced in a fair way, and ensure that those companies which discharge pollution will bear their due share of cost – even unbearable cost. By streamlining administration, delegating powers to lower authorities, and stimulating the dynamism of the market, the government will also play a better role in helping those companies use more market instruments and tools to grow in strength in the course of fair competition.

We have come to recognize that there is a huge market in China for pursuing green development, particularly growing those energy-conserving and environmentally friendly industries. They themselves represent a strong driving force of economic development. Therefore, at a time when the Chinese economy was under downward pressure, the central government introduced policies and measures to strengthen the development of energy-saving and environmentally friendly industries, in the hope that these industries will get stronger in the years ahead and become a pillar in driving economic growth.

We have taken the decision that we will introduce private capital into the running of some public utilities, such as the treatment of sewage or wastewater, and we will also open up the running and operation of some franchises to the private capital and private sector players. We are also exploring the possibility of opening up the infrastructure development concerning those environmentally friendly and energy-conserving products and industries to foreign countries.

The entire mankind has but one earth, our common home. I believe it is essential for the international community to enhance exchange and cooperation of ideas, technologies, and industries to jointly pursue green development. I believe that is highly significant for China, a big developing country in the course of modernization.

I want to thank you all for your active part in the China Council, and I express my appreciation to all of you for your insightful views and ideas about how China can achieve environmental protection and build ecological conservation in the pursuit of its development agenda. I hope there can be even closer cooperation between the two sides in the future. And let me send my congratulations on a very productive AGM for the Council this year.

Peter Kent: Thank you, Mr. Premier. I can assure you that the international members of the China Council stand ready to work with you over the years ahead to assist in fulfilling the expectations of the ecological civilization.
