

**China Council for International Cooperation on
Environment and Development**

**Progress in Environment and Development Policies in China
and Impact of CCICED's Policy Recommendations
2014-2015**

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Foreword

A high-level policy advisory body approved by the Chinese government, the China Council for International Cooperation on Environment and Development (CCICED, the Council) is responsible for proposing policy recommendations on important issues in these fields. At the Council's annual general meetings, Chinese and foreign members engage in policy discussions based on policy research. These discussions lead to policy recommendations that are submitted to the State Council and to central government departments. The CCICED's organizational objectives are to further enhance its unique role, improve its operations, strengthen understanding of the overall progress of policies in China, and assist members to better offer advice and suggestions.

Annually since 2008 the support group for the Council's Chinese and international chief advisors has reported on *Progress of Important Policies Pertaining to China's Environment and Development, and Impact of CCICED Policy Recommendations*. The report aims to provide Council members and others with an overview of China's major progress in environment and development policies during the previous year. It also helps determine whether policy shifts are consistent with recommendations submitted by the CCICED to the government of China.

It is always difficult to attribute policy shifts to any single source of advice, especially over time frames as short as one year. It is decision-makers who must determine the real impacts of the CCICED on China's environmental and development policies. But the Council does wish to know whether or not the general policy thrusts are heading in directions we believe to be desirable.

This paper is the eighth report provided by the Chinese members of CCICED's support group to its chief advisors. It describes and briefly analyzes legislation and policy development during November 2014 to October 2015 that are relevant to the Council's policy proposals made in 2013 and, in some cases, earlier years. It should be noted that certain policy shifts are not covered in this report — some aspects of water use, biodiversity conservation, marine resource management, among other topics — because a report of such scope is not feasible at present.

Introduction

2015 is the final year of China's 12th Five-Year Plan (FYP) and ushers in the first year of the policy of "comprehensively advancing the rule of law." This policy is crucial for deepening reform, steady growth, and structural adjustment. In October 2014 the 4th Plenary Session of the 18th Central Committee of the Communist Party of China (CPC) adopted the *Decisions of the CPC Central Committee on Major Issues Concerning Comprehensively Advancing the Rule of Law*. It called for "the protection of the ecological environment through strict legal system and the accelerated establishment of an ecological civilization system that effectively restrains development activities and promotes green, circular, and low-carbon development." The document sets the blueprint for the rule of law and highlights the focus on environmental legislation.

China's new and "most stringent ever" *Environmental Protection Law* came into force on January 1, 2015. Environmental enforcement has been thoroughly changed thanks to the vigorous efforts of environmental protection departments at all levels. "The protection of the ecological environment through strict legal system," put forward by the *Decisions*, has been incorporated into legal texts and practices.

Both released in 2015, the *Opinions of the CPC Central Committee and the State Council on Accelerating the Construction of Ecological Civilization* and the *Integrated Reform Plan for Promoting Ecological Progress* provide top-level guidance on constructing ecological civilization.¹

The 5th Plenary of 18th CPC Central Committee, held on October 26-29, reviewed and passed The CPC Central Committee's Proposal for Formulating the 13th Five-Year Program for China's Economic and Social Development published. The Proposal stated the new targets to build a moderately prosperous society in all respects, including an improved ecological environmental quality, which includes green production and lifestyle, low-carbon performance, efficient energy use and water resources consumption, land use, total carbon emissions, total major pollutants, major functional zones, ecological safety and other relevant aspects. The Proposal also suggests the formation of an environmental governance system among the government, enterprises, and the public, and strictly enforcing environmental protection laws to achieve the core objective of improving environmental quality.

The past year witnessed new policies and initiatives in the field of environment and development. While adhering to the rule of law in building ecological civilization, government departments at all levels have explored ways to implement environmental protection. Many policy recommendations proposed by the CCICED in the past have been realized. In particular, the 2014 recommendations on green transition and institutional innovation under the theme of "Management and Institutional Innovation in Green Development" have been incorporated into the overall concept of ecological civilization.

¹ Zhao Chao, Chen Weiwei: "Timetable and roadmap for the construction of ecological civilization -- Interview with Xu Shaoshi, Director General of National Development and Reform Commission," http://news.xinhuanet.com/politics/2015-05/05/c_1115187800.htm, August 4, 2015.

(Appendix: Relevance of CCICED's Policy Recommendations in 2014 with Measures Noted in the *Integrated Reform Plan for Promoting Ecological Progress*)

1. Key Progress in China's Environment and Development Policies during 2014-2015

I. Environment and Development Overview

1. Economic and social development

2014 witnessed the start of “comprehensively deepening reform.” Faced with a complex and volatile international environment and the arduous task of national reform, development, and stability, the CPC Central Committee and the State Council, have set general directions while maintaining stability and achieving sustained and stable economic and social development in the context of lower GDP growth, often referred to as the “new normal.”

In 2014 China's GDP attained 63.6 trillion yuan, an increase of 7.4% over the previous year, making China one of the world's major economies. Urban employment reached 13.22 million people, higher than last year. Consumer prices rose 2%, and grain output reached 605 billion kilograms. The contribution of consumption to economic growth increased by 3% to 51.2%, and the proportion of value added services rose from 46.9% to 48.2%. New industries, new platforms, and new business models are emerging. During the year, national general public revenue attained 14.035 trillion yuan, an increase of 1.114 trillion yuan or 8.6% over last year. The ratio of research and development expenditure to GDP exceeded 2%. National disposable income per capita grew by 8%, faster than economic growth; the disposable income of rural residents per capita grew by 9.2%, faster than that of urban residents. Up to 12.32 million rural people came out of poverty and more than 66 million gained access to safe drinking water. New breakthroughs were made in “reform and opening up.” The government launched a series of key initiatives for comprehensively deepening reform. The goal of one-third reduction of administrative examination and approval items was achieved ahead of schedule.²

2. Energy conservation and emissions reduction

In 2014, the national emissions of chemical oxygen demand (COD), ammonia nitrogen, sulfur dioxide (SO₂) and nitrogen oxide (NO_x) fell by 2.47%, 2.9%, 3.4%, 6.7% year-on-year respectively.³ Energy intensity dropped by 4.8%, the biggest reduction made in recent years.⁴ Emissions reduction targets were achieved earlier than expected.⁵ In the first half of 2015, the

² Li Keqiang: “Government Work Report – at the Third Session of the Twelfth National People's Congress on March 5, 2015,” http://www.gov.cn/guowuyuan/2015-03/16/content_2835101.htm, August 3, 2015.

³ MEP: *China Environmental Bulletin* 2014, http://jcs.mep.gov.cn/hjzl/zkgb/2014zkgb/201506/t20150605_302991.htm, August 3, 2015.

⁴ Li Keqiang.

⁵ Targets of energy conservation and emission reduction in 2014 are compared with 2013 reductions of energy intensity, COD, SO₂, ammonia nitrogen, and NO_x emissions by more than 3.9%, 2%, 2%, 2%, and 5% respectively. Refer to the *Circular of the General Office of the State Council on Printing and Distributing the Action Plan for Energy Conservation and Emission Reduction for Low-carbon Development (2014-2015)* (SC [2014] No. 23). March 15, 2014.

COD emissions totaled 11.383 million tons, ammonia nitrogen 1.186 million tons, SO₂ 9.891 million tons, NO_x 10.028 million tons,⁶ accomplishing the 13th FYP targets ahead of schedule.

In 2014, the urban sewage treatment capacity increased by 10.70 million tons; 260 million kW coal-fired units were upgraded to allow for denitration, 240 million kW for dust removal, and 130 million kW for desulfurization. Steel sintering machines with a total capacity of 36,000 m² were upgraded for flue gas desulphurization and 650 million tons dry process cement clinker production lines saw denitration facilities installed.⁷

With the intensification of efforts to reduce emissions, environmental quality has improved significantly. In 2014, the mean PM_{2.5} concentration in the 74 cities initially covered by the new ambient air quality standards decreased by 11.1% from the 2013 level. In the first eight months of 2015, the mean PM_{2.5} concentration in the Beijing-Tianjin-Hebei region fell by 29% year-on-year; the number of days when air quality meets minimum standards in Beijing increased by 23, and the number of heavy pollution days decreased by 22.

II. Environmental Problems and Work Priorities

Although China boasts significant achievements in environmental protection, environmental deterioration has not been fundamentally reversed. In the “new normal” economy, environmental protection confronts new challenges. On the one hand, the increasing downward pressure on economic growth hampers business operations, leading local governments and enterprises to weaken pollution control efforts. On the other, with lower public tolerance for environmental deterioration, environmental disputes can easily lead to controversies or protests that put pressure on the various administrative processes put in place for environmental protection.

Understanding, adaptation, and now, lower GDP growth (‘new normal’) characterize China's economic development. Environmental protection must be considered in the context of the “new normal”.

The Central Economic Work Conference in December 2014 and the Government Work Report delivered by Premier Li Keqiang in the National People's Congress (NPC) in May 2015 have established work priorities on environment and development in 2015. The focus of work in 2014 was to comply with the people's expectations of a favorable ecological environment and opening up new paths to green, low-carbon, circular development.⁸

As noted in the 2014 Central Economic Work Conference, the “space” for energy resources and the eco-environment used to be relatively large. Now, however, the environmental carrying capacity has approached (or even reached) its limit. We must conform to the people's

⁶ “MEP releases the provincial bulletin about main pollutant emissions in the first half of 2015”, http://www.mep.gov.cn/gkml/hbb/qt/201509/t20150906_309369.htm, September 6, 2015.

⁷ MEP.

⁸ “The Central Economic Work Conference opens in Beijing,” http://news.xinhuanet.com/fortune/2014-12/11/c_1113611795.htm, August 3, 2015.

expectation for a clean eco-environment and foster new ways toward green, low-carbon, circular development. In 2015, China will strive to promote energy conservation and protect the environment, which requires both immediate measures and sustainable institutional arrangements. To restore a favorable environment, China is to adopt an approach that addresses both the symptoms and underlying causes and that includes strict source and process controls as well as disciplinary measures against violators.⁹

According to Premier Li's Government Work Report, the tasks of the Chinese government in the area of environment and development will include:

To intensify energy conservation and emissions reduction. Carbon intensity will be cut by 3.1%, COD and ammonia nitrogen emissions by about 2%, and SO₂ and NO_x emissions by 3% and 5% respectively.

To improve environmental quality. The *Action Plan for Air Pollution Prevention and Control* will be intensified and regional joint-action mechanisms put in place. Coal-fired plants will be transformed to achieve ultra-low emissions, along with efforts to promote zero growth of coal consumption in key areas. China will promote new energy vehicles, introduce vehicle exhaust monitoring, and improve the standard and quality of oil products. In major cities in key regions, Phase V gasoline and diesel will be supplied. All yellow-label vehicles registered before the end of 2005 will be phased out. China will make efforts to tackle climate change, including expanding the emissions trading pilot. The *Action Plan for Water Pollution Prevention and Control* will strengthen the control of pollution sources including rivers, lakes, oceans, and agricultural non-point sources through process-wide supervision. Third-party environmental surveillance is also encouraged. China will improve environmental tax legislation and conduct strict environmental law enforcement. There will be severe consequences for infringing laws and regulations, while authorities who tolerate shall be held liable and incur disciplined.

To develop green energy and promote green consumption. China will vigorously develop wind power, solar power, biomass, hydropower, and safe nuclear power, and exploit shale gas and coal-bed methane. Total energy consumption will be controlled and energy efficiency efforts strengthened in such key areas as industry, transportation, and construction. China will also develop a circular economy by resourcizing industrial waste and garbage. In light of the massive market potential, China plans to build energy saving and environmental protection industries into a new economic pillar.

To advance ecological protection. China will promote major ecological projects, expand key ecological services areas, and create ecological civilization demonstration zones. Pilots for comprehensive land and river governance will be carried out, and pilot eco-compensation schemes will be tested with both upstream and downstream populations, while China will intensify efforts to protect the sources of the Three Rivers (Yangtze, Mekong and Salween rivers). China will expand protection of natural forests, prohibiting commercial logging in these areas. It plans to restore 667,000 hectares of forest and reforest 6 million hectares.¹⁰

⁹ Ibid.

¹⁰ Li Keqiang.

According to the 2015 National Work Conference on Environmental Protection, the focus of environmental protection in 2015 included: 1) To intensify campaigns against air, water, and soil pollution. China will deepen the *Action Plan for Air Pollution Prevention and Control*, fully implement the *Action Plan for Water Pollution Prevention and Control*, and steadily advance the *Action Plan for Soil Pollution Prevention and Control*. 2) To fully complete the emission reduction tasks. China aims to cut COD and ammonia nitrogen by 2% over 2014 and SO₂ and NO_x emissions by 3% and 5% respectively. 3) To take comprehensive measures to optimize economic development. Environmental Impact Assessments (EIA) should be strictly implemented, and the EIA approval authority further streamlined and decentralized to decouple public institutions and EIA agencies. 4) To strengthen legal guarantees for environmental protection.¹¹

III. Major Policy Progress

1. Opinions of the CPC Central Committee and the State Council on Accelerating the Construction of Ecological Civilization and Integrated Reform Plan for Promoting Ecological Progress

In 2012, the CCICED put forward the policy recommendation that China needs to develop a medium and long-term plan for promoting ecological progress, analyzing trends and characteristics of environment and development beyond 2020 and outlining objectives, priorities and key tasks for the construction of ecological civilization.

In March 2015 the Political Bureau of the CPC Central Committee held a meeting to consider the *Opinions on Accelerating the Construction of Ecological Civilization*, and in May released the *Opinions of the CPC Central Committee and the State Council on Accelerating the Construction of Ecological Civilization* which clarified the objectives and approaches needed to build ecological civilization.

The overall objective is, by 2020, to achieve ecological improvements while building a moderately prosperous society. This requires making significant progress in building a resource-saving, environment-friendly society; putting in place systematic land use plans and zoning schemes; significantly improving the quality and efficiency of economic development; and disseminating the mainstream values of ecological civilization throughout the whole of society. Specific objectives include:

Further optimization of geographic development plans. Economic and demographic distribution will achieve an equilibrium. Land and ocean development and the size of urban areas will have been effectively controlled and the urban-rural structure and spatial layout significantly optimized.

More efficient use of resources. Carbon intensity will be cut by 40% to 45% from the 2005 level, energy intensity will constantly decline, and resource productivity will substantially

¹¹ Zhou Shengxian: “Fully accomplish the 12th FYP targets in the new normal – speech at the 2015 National Work Conference Environmental Protection,”

http://www.mep.gov.cn/gkml/hbb/qt/201501/t20150120_294355.htm, August 3, 2015.

improve. Total water use will be controlled below 670 billion m³, and water use per 10,000 yuan of industrial added value will be reduced to 65 m³. The effective utilization coefficient of water for irrigation will be increased to 0.55, and the share of non-fossil fuels in primary energy consumption will rise to 15%.

Overall improvement of the environment. Major pollutant emissions will continue to drop, and the atmosphere, coastal waters, and key watersheds will improve. The water quality compliance rate in major rivers and lakes will increase to 80%, and drinking water will be better protected. The quality of the soil will remain stable. Environmental risks will be brought under control. Forest coverage will expand to 23% and comprehensive grassland vegetation coverage to 56%. Wetland areas will be not less than 53 million hectares, and 50% or more of treatable desertified land will be under supervision. The retention rate of natural shorelines will be kept above 35%. The speed of biodiversity loss will be curbed, and national ecosystem stability significantly enhanced.

Basic establishment of systems for promoting ecological progress. Systems for source prevention, process control, compensation, and accountability will be put in place. Decisive results will be achieved in key systems, covering property rights, use and control of natural resource assets, ecological protection red lining and eco-compensation, and environmental protection management.

To achieve these objectives, the *Opinions* set out 32 specific measures grouped under eight headings: 1) strengthening land use planning and optimizing geographical development; 2) advancing technological innovation and structural adjustment to improve the quality and efficiency of development; 3) changing modes of resource use by promoting efficient use, re-use, and recycling; 4) intensifying the protection of natural ecosystems to improve the quality of the environment; 5) improving the institutional system of ecological civilization; 6) strengthening statistical monitoring and law enforcement supervision; 7) encouraging public support for environmental protection; and 8) bolstering leadership.¹²

On September 11, 2015, the Political Bureau of the CPC Central Committee adopted the *Integrated Reform Plan for Promoting Ecological Progress*, solidifying the concept and policy for the construction of eco-civilization.¹³ The plan aims to establish and implement the right philosophy to unite thinking and action. This philosophy assumes respect for, conformity to, and protection of nature. It involves natural values and natural capital, spatial equilibrium, and community.

In pursuing reform for ecological progress, China intends to maintain the public ownership of natural resources. It is suggested that an integrated system be developed for urban and rural environmental governance that combines incentives and constraints. China is to join in international cooperation while initiating its own programs, aiming for more coordinated approaches. A complete institutional framework that features clear property rights, multiple shareholders, and a combination of incentives and restraints will be essential to reform.

¹² “The Political Bureau of the CPC Central Committee considers the *Opinions on Accelerating the Construction of Ecological Civilization*,” http://news.xinhuanet.com/2015-03/24/c_1114749476.htm, August 6, 2015.

¹³ Yan Houfu: “Ecological civilization from concept to reality,” *People's Daily*, September 14, 2015, p5.

Under this framework can be found the following key elements: 1) Property rights for natural resource assets, covering determination and registration of ownership, definition of rights and responsibilities, and effective regulation; 2) a system for developing and protecting territorial space based on spatial planning and land use controls; 3) a unified, hierarchical geographic planning system; 4) a comprehensive, scientific, strict system for total resource management and resource conservation; 5) a compensation system for resource consumption and ecological damage, reflecting market values, and resource scarcity, as well as natural values and intergenerational compensation; 6) a multi-shareholder system for quality-oriented environmental governance, including unified supervision and strict law enforcement; 7) the market system for environmental governance and ecological conservation using economic levers; and 8) a system for performance evaluation and accountability for promoting ecological progress that is to fully reflect resource use, environmental damage, and ecological benefits.

2. Pilot Plan for Auditing Departing Officials Regarding Natural Resources Assets, Interim Measures on the Accountability of Party and Government Officials for Ecological and Environmental Damage, Provisional Plan for Environmental Protection Supervision and Inspection, and Program for Building an Ecological Environment Monitoring Network.

On July 1, 2015, the 14th Meeting of the Central Leading Group for Comprehensively Deepening Reforms adopted these four important documents related to the construction of ecological civilization.

According to briefings, an important starting point for promoting ecological progress is the working mechanism for environmental protection supervision and inspection. It is vital for implementing a primary responsibility for environmental protection, improving the responsibility assessment system for leaders, and investigating leadership and regulatory bodies. The *Provisional Plan for Environmental Protection Supervision and Inspection* clearly defines the objects, content, schedule, organization, and implementation of supervision and inspection. Supervision and inspection are to be focus on areas with prominent environmental problems, frequent major environmental incidents, and poor implementation of environmental responsibility. Top priority is given to air, water, and soil pollution control and to ecological progress, implementing decisions of the CPC Central Committee to solve prominent environmental problems and fulfill the primary responsibility for environmental protection. The requirement of "same responsibility of party and government leaders" and "one position with two responsibilities" should be emphasized. Both organizations and individuals shall be held liable where significant problems happen.¹⁴

The *Pilot Plan for Auditing Departing Officials Regarding Natural Resources Assets* is designed to gradually establish a set of mature and realistic audit standards that clarify the objects, content, and criteria of audit, auditing responsibilities, and use of audit results. The plan will urge officials to abide by laws and discipline, and to fulfill their duties to promote conservation, intensive use of natural resource assets, and ecological safety. The audit focuses on the physical change of natural resource assets within the area before and after the end of

¹⁴ "Xi Jinping presides over and addresses the 14th Meeting of the Central Leading Group for Comprehensively Deepening Reforms," http://news.xinhuanet.com/politics/2015-07/01/c_1115787597.htm, August 6, 2015.

term of officials. It entails an analysis of reasons including objective and subjective ones. The liability of officials will be defined according to whether or not human factors have led to the reduction or degradation of natural resource assets, environmental degradation, or serious pollution.¹⁵

The improvement of China's eco-environmental monitoring network involves networked sites established nationwide, automatic warning, and accountability. A new pattern of government-led monitoring with sector coordination, social participation, and public supervision should be created to provide a scientific basis for environmental protection. The *Program for Building an Ecological Environment Monitoring Network* sets out five measures: 1) unify planning, standards, and information dissemination for environmental monitoring; 2) highlight the linkage with the supervision of law enforcement; 3) clarify the powers and responsibilities of enterprises and governments at all levels; 4) strengthen the supervision of all kinds of ecological monitoring bodies; and 5) consolidate the comprehensive guarantees.

The key to implement environmental protection lies with leading officials. The *Interim Measures on the Accountability of Party and Government Officials for Ecological and Environmental Damage* made it clear for the first time at the central level that the party and the government share the same responsibility for environmental protection. This is the crux of environmental governance. The measures detailed 25 circumstances where accountability for both "consequences" and "acts" should be investigated. Emphasis is put on the "shared responsibility of party and government officials" and "life-long accountability." The measures also clearly defined how investigations would be triggered, thereby clarifying accountabilities for the decision-making of officials at all levels. However, resistance may arise from the practical pressure that is faced by officials under the practice of "subordinates report the accountability of superiors," in environmental and judicial departments. If people cannot withstand such invisible pressure, investigations will not proceed, and those responsible will not be held accountable.¹⁶

3. Opinions on the Implementation of Environmental Policies for Main Functional Areas

The 3rd Plenary Session of the 18th CPC Central Committee decided to implement the main functional areas and improve supporting policies, accelerate the pace of promoting ecological progress and the green economy, and create a modern pattern of harmonious development of man and nature. In line with the requirement, the Ministry of Environmental Protection (MEP) and the National Development and Reform Commission (NDRC) jointly issued the *Opinions on the Implementation of Environmental Policies for Main Functional Areas* in July 2015, taking into account the *National Main Functional Area Planning* and the newly amended *Environmental Protection Law*.

The *Opinions* proposed environmental quality objectives and policy approaches specific to main functional areas, and set out strong safeguards. It is worth noting that a lot of innovative policies and safeguards were introduced. For example, measures targeted at prohibited areas

¹⁵ Cai Mengxiao, Yuanhan: "China develops the pilot plan for end-of-office auditing for officials regarding natural resources assets," http://news.xinhuanet.com/live/2015-09/17/c_1116595954.htm, September 24, 2015.

¹⁶ Yan Houfu: "Adherence to ecological protection red line is the lifelong responsibility of officials," *People's Daily*, August 24, 2015, p5.

include 1) "promoting land acquisition by law in Grade I drinking water source protection zones," 2) "guiding the gradual transfer of population in nature reserves in core protected areas, buffer zones and experimental zones, towards a target of zero population in core areas and substantial reduction of population in buffer and experimental zones," and 3) "exploring the preparation of balance sheets and evaluation systems for natural resources."

In key ecological services areas, the *Opinions* suggested "relocating or shutting down enterprises against the functional orientation through a combination of equipment depreciation allowances, equipment loan guarantee, relocation subsidies, land replacement, and shutdown compensation." In the main agricultural producing areas, it is suggested to 1) "carry out environmental health risk assessment and zoning to identify the impact of environmental quality on different crops, and carry out ecological restoration in areas subject to pollution to ensure the quality of agricultural products," and 2) "carry out EIAs for planning and projects which highlights soil, and strictly restrict polluting enterprises from entry."

In key development areas, applicable measures are to 1) "establish a management system for urban functional zoning reflecting the environmental carrying capacity to strengthen the control of characteristic pollutants," 2) "explore an industry-based total emission management model to address regional pollution," 3) "promote health impact assessment in EIAs for projects and planning," 4) "assess the effects of pollution control on the environment and human health," and 5) "carry out health impact assessment of environmental pollution for high-risk enterprises."

In optimizing development areas, it is suggested to 1) "promote environmental impact assessment and health risk assessment in comprehensive urban planning," and 2) "explore the mechanism for compensation for environmental health damage." The proposed safeguard measures include 1) "carrying out pilots of integrated rules in cities and counties to strengthen geographical governance, and establishing a unified, functional, coordinated land use planning system," 2) "implementing the requirements of local government responsibility without compromising regional environmental quality and ecological services, and providing ecological products and environmental public services," 3) "strengthening the capability of land-air integrated environmental monitoring," and 4) "organizing a broader and finer control of new projects based on air and water quality."

In a sense, the *Opinions* can be regarded as a "national environmental policy statement" in the context of deepening reform. It represents China's latest achievements in environmental policy and is bound to exert a profound impact on environmental protection in the foreseeable future.

2. Specific Progress Achieved in 2014-2015 Related to CCICED Areas of Focus

I. Implement a Stringent *Environmental Protection Law*

In the 2014 policy recommendations, the CCICED proposed advancing the establishment of a legal framework towards the goal of creating an ecological civilization, strengthening environmental law enforcement and supervision, and quickly introducing detailed rules for implementing the newly amended *Environmental Protection Law*.

On January 1, 2015 China put into force the "most stringent ever" *Environmental Protection Law*. Governments and environmental protection departments at all levels rolled out a series of implementation rules to intensify law enforcement and greatly enhance deterrence.

In November 2014 the State Council issued the *Circular on Strengthening Environmental Regulatory Enforcement* which set out five policy measures: Protect the environment in strict accordance with the law and promote full enforcement of regulations; take a "zero tolerance" approach to environmental violations and intensify penalties for violators; actively promote "transparent law enforcement" by strictly regulating law enforcement; define the responsibilities and duties of relevant parties and create a favorable environment for law enforcement; and enhance grassroots regulatory roles and improve the capacity of civil society to be involved in environmental regulatory enforcement.

To support the implementation of the newly amended *Environmental Protection Law*, MEP released the *Measures on the Implementation of Consecutive Daily Fines by Competent Environmental Protection Departments*, *Measures on the Implementation of Seizure and Detention by Competent Environmental Protection Departments*, *Measures on the Implementation of Limiting and Stopping Production by Competent Environmental Protection Departments*, *Measures on Environmental Information Disclosure of Enterprises and Institutions*, and *Measures on Public Participation in Environmental Protection*.

CCICED also recommended: "Establish a mandatory, authoritative and independent joint-enforcement mechanism involving environmental departments and police departments to improve the effectiveness of enforcement and supervision." The new amendment to the *Environmental Protection Law* stipulates the administrative detention of business personnel responsible for serious environmental violations. Given this, in December 2014 the Ministry of Public Security (MPS), MEP, the Ministry of Agriculture (MOA), and the General Administration of Quality Supervision, Inspection and Quarantine (AQSIQ) jointly issued the *Interim Measures on Transfer of Cases of Environmental Violations Subject to Administrative Detention Executed by the Administrative Departments*, defining the types of infringement cases referred to public security departments and the procedures for referral.

On March 15, 2015 Premier Li Keqiang emphasized in a meeting with Chinese and international reporters that “environmental law enforcement is a trump card rather than a cotton swab. Any business involved in illegal emissions shall be resolutely prosecuted according to the law and even forced to pay an unbearable price”.¹⁷

In the first eight months of 2015 there were 405 cases of consecutive daily penalty nationwide involving total fines of nearly 330 million yuan, 2,400 cases of seizure and detention, and 1,524 cases of limiting and stopping production. Meanwhile, 1,116 administrative detention cases and 1,029 cases of suspected environmental crimes were referred to public security departments.¹⁸

In order to standardize environmental enforcement and enhance the capability of law enforcement officers, MEP issued in April 2015 the *Code of Conduct for Environmental Law Enforcement Officers and Implementation Program for Education and Training of Cadres in National Environmental Monitoring System (2015-2017)*.

The new amendment also strengthened the government's responsibility for environmental protection. According to the *Interim Measures of Ministry of Environmental Protection on Interviews* issued in May 2014, MEP has talked with the main responsible persons in 13 cities, urging local governments and relevant organizations to conscientiously fulfill the responsibilities of environmental protection and to solve a number of outstanding environmental problems.¹⁹

Through strict law enforcement, "the most stringent" newly amended *Environmental Protection Law* has been recognized for its serious approach by all levels of government, enterprises, and among the public. The situation where fines are considered a small cost of doing business has begun to change.

CCICED pointed out in the 2012 policy recommendations: "Revise relevant laws and regulations to provide legitimate guarantees for regional air pollution control. The existing *Law on Air Pollution Prevention and Control* cannot adequately address air pollution under the current situation. It needs to be revised to provide legitimate support to relevant policy measures for new types of pollutants. First, fine particulate matter (PM_{2.5}) and ozone (O₃) should be treated as the new core need of air pollution control. Second, ambient air quality improvement should be kept as the key objective of air environmental management, and the responsibilities and obligations of local governments clarified for compliance with air quality. Third, the punishment of violators should be strengthened with a view to make non-compliance more expensive than compliance"; "establish a clear, unified and comprehensive management mechanism for regional atmospheric pollution prevention and control, build mechanisms for regional environmental decision-making consultations and environmental impact assessment consultations, implement the joint-action mechanism

¹⁷ "Li Keqiang: Environmental law enforcement is a trump card rather than cotton swab," http://news.xinhuanet.com/politics/2015lh/2015-03/15/c_134067800.htm, August 10, 2015.

¹⁸ Chen Jining: "Hold high the banner of ecological civilization and vigorously advance eco-environmental protection", <http://www.cenews.com.cn/ztbd1/20151009/>, October 10, 2015.

¹⁹ Ibid.

for emergency response to regional heavy pollution events, to ensure early warning and emergency information is timely communicated to the public.”

On August 29, 2015 the Standing Committee of the NPC adopted the newly revised *Law on Air Pollution Prevention and Control*, which will come into effect January 1, 2016. The amendment, focusing on the improvement of atmospheric environmental quality, dedicated three chapters to "standards for air pollution prevention and control and plan for compliance within the deadline," "joint prevention and control of air pollution in key areas," and "response to heavy pollution weather events." According to the newly amended law, local governments shall be responsible for atmospheric environmental quality within their jurisdiction; MEP shall carry out assessments of provincial governments; governments of cities that are not meeting standards shall develop a plan for compliance within prescribed deadlines; and environmental departments shall talk with responsible persons of lower-level governments that fail to reach targets, so they can agree on a regional limited approval system. These institutional arrangements provide a legal guarantee for the full shift to air pollution prevention and control centered on quality improvement. In addition, the amendment included substantially increased penalties for enterprises, public institutions, and other producers and operators responsible for environmental violations.

CCICED’s 2014 recommendations also included: "Vigorously advance the environmental judicial system. Strengthen environmental judicial practice. Promote coordination between environmental departments and judicial departments. Strengthen the capacity of environmental courts and judges to increase environmental judicial ability," and "improve the environmental public interest litigation system and the ecological environment damage compensation and accountability systems. Strengthen responsibility and capacity of the judicial system to investigate environmental violations that result in injuries to people."

The newly amended *Environmental Protection Law* sets out the environmental public interest litigation system. To ensure its smooth implementation, the Supreme People’s Court (SPC) issued in January 2015 the *Interpretation on Issues Concerning Laws Applicable to Environmental Civil Public Interest Litigation Cases*. This interpretation clarifies the key terms of public interest litigation provisions in the *Environmental Protection Law* and defines the required procedures for environmental litigation and for seeking remedies. Jointly with the Ministry of Civil Affairs (MCA) and MEP, SPC also issued the *Circular on the Implementation of Environmental Civil Public Interest Litigation System*, addressing the communication and coordination of the three departments in these cases.

In line with the requirement of the 4th Plenary Session of the 18th CPC Central Committee to "explore the establishment of a system of public interest litigation by prosecutors," in July 2015 the NPC Standing Committee made the *Decision on Authorization to the Supreme People's Procuratorate for the Public Interest Litigation Pilot in Some Areas*. The Supreme People's Procuratorate (SPP) is allowed to file public interest litigation in the field of environment and resource conservation cases in pilot areas, including Beijing, Inner Mongolia, Jilin, Jiangsu, Anhui, Fujian, Shandong, Hubei, Guangdong, Guizhou, Yunnan, Shaanxi, and Gansu. Before formally filing litigation, the SPP is to urge the administrative bodies to correct

illegal administrative acts and perform their statutory duties, or is to urge and support legally eligible agencies and organizations to file public interest litigation. The pilot will last two years..

Regarding judicial remedies in common areas of environmental infringement, the *Interpretation on Issues Concerning Laws Applicable to Environmental Tort Liability Cases*, issued by the SPC in June 2015, made it clear that "a polluter shall assume the tort liability for damage caused by environmental pollution, regardless of the fault of the polluter. The people's court shall not support the polluter's position of exception from liability on the grounds of compliance with national or local emission standards." Clarification is also provided for the sharing of common environmental tort liability, burden of proof on victims and polluters, identification of proof, and response to liability. In order to strengthen the theoretical study of environmental justice, the Research Center for Environmental and Resource Justice was established by the SPC in May 2015.

II. Focus on Significant Environmental Problems

CCICED recommended in 2013: "Focus efforts to effectively address such outstanding environmental issues as air, water, and soil pollution, in order to fully meet the basic public needs for a good environment."

Since the end of 2014 initiatives have been carried out to control air and water pollution through the *Action Plan for Air Pollution Prevention and Control* and the *Action Plan for Water Pollution Prevention and Control*.

To achieve success in air pollution control, governments and environmental departments at all levels continue to implement the *Action Plan for Air Pollution Prevention and Control*. In November 2014 MEP issued the *Letter on Strengthening the Preparation and Revision of Heavy Air Pollution Emergency Plan* to guide and urged local governments to strengthen the preparation and management of emergency plans to deal with heavy air pollution and respond to heavy pollution weather incidents.

At the meantime, the *Air Pollution Control Program for Key Industries in Pearl River Delta and the Surrounding Areas* and the *Air Pollution Control Program for Key Industries in Yangtze River Delta and the Surrounding Areas* were unveiled, urging the control of air pollution within prescribed timelines in electricity, steel, cement, and flat glass industries in the Pearl River Delta and its surrounding area (Guangdong, Jiangxi, Hunan, Guangxi, and Hainan) and in the Yangtze River Delta (Shanghai, Jiangsu, Zhejiang, and Anhui).

In April 2015 the Political Bureau of the CPC Central Committee approved the *Outline of the Plan for Beijing-Tianjin-Hebei Integrated Development*. Vice Premier Zhang Gaoli called for breakthroughs in environmental protection in the implementation of the *Outline*, strengthened collaboration and joint prevention and control of air pollution while promoting coordinated development in this region.²⁰

²⁰ "Zhang Gaoli: Effectively control air pollution while promoting the coordinated development of the

In April 2015 MEP and AQSIQ jointly released national emissions standards addressing pollutants from five industries: petroleum refining (GB31570-2015), petrochemicals (GB31571-2015), synthesis resins (GB31572-2015), inorganic chemicals (GB 31573-2015), and secondary copper, aluminum, lead, and zinc industries (GB31574-2015), as well as air pollutants from crematoria (GB13801-2015). This means that emissions standards are in place for 25 key industries as required by the *Action Plan for Air Pollution Prevention and Control*.

In May 2015 MEP unveiled the *Work Priorities for National Air Pollution Prevention and Control in 2015*, setting out 34 tasks and specifying leading and participating departments.. According to the document, the annual mean respirable particulate matter (PM₁₀) concentration in cities at or above the prefecture level will be reduced by 3% compared with 2013 and PM_{2.5} in key areas reduced by 7%.

In June 2015 the 15th Meeting of the 12th NPC Standing Committee heard the Feedback Report on the Inspection Report on the Enforcement of the *Air Pollution Prevention and Control Law*. It heard also the Deliberation by MEP Minister Chen Jining that was commissioned by the State Council. The Minister introduced measures taken by governments at all levels to control air pollution and reported on progress made and future work arrangements.

Owing to these joint efforts, national ambient air quality improved in 2014. The annual mean PM₁₀ concentration in 338 cities at and above prefecture level was reduced by 2.1% over the previous year to 95 µg/m³. The annual mean PM_{2.5} concentration fell by 11.1% to 64 µg/m³ in 47 cities covered by the new Ambient Air Quality Standards, and decreased by 12.3%, 10.4 %, and 10.6% respectively in the Beijing-Tianjin-Hebei region, Yangtze River Delta, and Pearl River Delta.²¹ In the first half of 2015 the annual mean PM_{2.5} concentrations continued to decline substantially, by 17.1%, 22%, 16.2%, and 20.5% respectively.²² In 2015 the central government will allocate 11.5 billion yuan for air pollution control, of which 10.6 billion in two tranches has, by August 2015, been transferred to 11 provinces including Beijing, Hebei, and Henan.²³

To achieve breakthroughs in water pollution control, governments and environmental departments at all levels continue to conscientiously implement the *Action Plan for Water Pollution Prevention and Control*. This plan, unveiled by the State Council in April 2015, also sets out the objectives and measures of water pollution control.

CCICED recommended in 2014 that "the Government of China shall develop a roadmap and timetable for a green transition over the next 10-20 years, including issues like air, water, and soil pollution... achieving various environmental quality turning points as soon as possible."

Beijing-Tianjin-Hebei region," http://news.xinhuanet.com/politics/2015-05/19/c_1115339319.htm, August 4, 2015.

²¹ Chen Jining: Feedback Report on the Treatment of Inspection Report on the Enforcement of Air Pollution Prevention and Control Law and the Deliberation, <http://npc.people.com.cn/n/2015/0629/c14576-27225781.html> August 6, 2015.

²² Shi Xiaojing: "Initial results in pollution control, and arduous task of environmental improvement – Overview of environmental pollution prevention and control in the first half of 2015," *China Environment News*, August 3, 2015.

²³ Ibid.

According to the *Action Plan for Water Pollution Prevention and Control*, by 2020 the national water environment will be improved. Polluted water bodies will be substantially reduced. Drinking water will receive a higher level of protection. Groundwater overexploitation will be strictly controlled, and the trend toward groundwater pollution will start to be tackled. Offshore environmental quality will steadily improve, and the waters in the Beijing-Tianjin-Hebei region, Yangtze River Delta, and Pearl River Delta will recuperate. By 2030 the overall quality of China's waters will be improved, and aquatic ecosystems will start to recover. By 2050 we can expect comprehensive environmental improvements.

The main indicators include: by 2020 the proportion of water bodies with Grade III water quality or better in the basins of the Yangtze, Yellow, Pearl, Songhua, Huaihe, Haihe, and Liaohe rivers shall exceed 70%, and the proportion of "black-odor water bodies" in urban zones of cities at or above the prefecture level shall be limited to below 10%; the proportion of centralized drinking water sources with Grade III water quality or better in the cities at or above the prefecture level shall be higher than 93%; the proportion of groundwater with extremely poor water quality shall be less than 15%; and the proportion of coastal waters with good water quality (I, II) shall reach about 70%. The proportion of sections with water quality worse than Grade V in the Beijing-Tianjin-Hebei region shall be reduced by 15 percent, and water bodies worse than Grade V shall be eliminated in the Yangtze River Delta and Pearl River Delta. By 2030 more than 75% of water bodies in the seven key river basins shall have Grade III or better water quality; "black-odor water bodies" shall be eliminated in urban areas; and about 95% of urban centralized drinking water sources shall meet the Grade III or higher standards.

The *Action Plan* put forward 35 tasks in 10 measures with a view to improve the water environmental quality, and established water quality standards of different types of water bodies for work performance assessments. In addition, leading and participating departments and their roles were clarified to clarify responsibilities. These departments include not only government departments, but also party organs such as the Organization Department of the CPC Central Committee.

In order to "provide access to safe drinking water for another 60 million rural population" stated in the *2015 Government Work Report*, in June 2015 MEP issued, in conjunction with Ministry of Water Resources (MWR), the *Guiding Opinions on Strengthened Protection of Drinking Water Sources in Rural Areas*. Environmental departments at all levels and other responsible departments are required to step up water source standardization while carrying out comprehensive rural environmental governance, with reference to the *Technical Specifications for Signs of Drinking Water Source Protection Zones* and the *Environmental Protection Guidelines for Centralized Drinking Water Sources (Trial)*. Efforts should be made to strengthen the treatment and disposal of sewage, garbage, and livestock waste in areas surrounding water sources, and comprehensively prevent and control non-point sources of pollution such as pesticides and fertilizers.

In June 2015 MWR, the Ministry of Finance (MOF), and NDRC jointly issued the *Circular on Further Strengthening Rural Drinking Water Safety*. This document outlines the system of government leadership responsibility and incorporates drinking water safety into the

performance assessments of leading cadres. In line with the *12th Five-Year Plan for Drinking Water Safety in Rural Areas*, all relevant departments are to strengthen coordination and cooperation, further intensify efforts to improve policy support and guidance, and strengthen supervision and inspection.

In August 2015 the Group Session of the 16th Meeting of the 12th NPC Standing Committee conducted thematic inquiries on the report of the law enforcement inspection team on the implementation of *Law on Water Pollution Prevention and Control*. Zhang Dejiang, Member of the Political Bureau of the NPC Standing Committee and Chairman of the NPC Standing Committee, participated in the deliberations and inquiries. Vice Premier Wang Yang attended the session on behalf of the State Council. Other leaders attending included Chen Jining, MEP Minister, Zhai Qing, MEP Vice Minister, Zhang Yong, NDRC Deputy Director General, Wan Gang, Minister of Science and Technology (MOST), Miao Wei, Minister of Industry and Information Technology (MIIT), Lou Jiwei, MOF Minister, Jiang Daming, Minister of Land Resources (MLR), Chen Gao, Minister of Housing and Urban-Rural Development (MOHURD), Chen Lei, NWR Minister, and Han Changfu, MOA Minister, as well as Ding Xiangyang, Deputy Secretary General of the State Council.

When the forthcoming *Action Plan for Soil Pollution Prevention and Control* is introduced, the battle against soil pollution will begin.

In January 2015 MEP publicized the *Soil Environmental Quality Standards for Agricultural Land*, a draft amendment to *Environmental Quality Standards for Soils* (GB 15618-1995), and the draft *Risk Screening Guideline for Soil Contamination of Development Land* to solicit public comments. All these provide technical support for the forthcoming *Action Plan for Soil Pollution Prevention and Control*.

On March 7, 2015 Chen Jining, MEP Minister, said during a press conference on the 3rd Session of the 12th NPC that work in four aspects is needed to solve soil pollution. He indicated China should 1) establish the appropriate legal and standards systems that provide laws and standards to abide by; 2) strengthen environmental regulation of the mining industry, to cut off a pollution source and curb the trend toward expanding pollution; 3) practice a more systematic management of contaminated soils to control pollution and avoid the spread of contamination; 4) through pilot projects and demonstration, establish a technical system suitable for Chinese conditions and gradually ensure greater risk management, proper surveillance and management of soils and remediation measures.²⁴

On March 8, 2015 Li Ganjie, MEP Vice Minister, addressed the Subcommittee for Handling Proposals at the 3d Session of the 12th National Committee of the Chinese People's Political Consultative Conference (CPPCC). He said that the action plan for soil pollution prevention and control has gone through appropriate procedures since studied a year ago, including preparation and revisions based on to comments from relevant departments and local

²⁴ “MEP’s reply to questions concerning the overall strengthening of environmental protection,” <http://www.xinhuanet.com/politics/2015lh/zhibo/20150307c/index.htm>.

governments. The modified action plan will be submitted to the State Council for consideration and is expected to come into force this year.²⁵

To highlight the focus of work and improve the efficiency of funds, in May 2015 MEP and MOF jointly issued the *Circular on Carrying out Competitive Assessment of Heavy Metal Pollution Control in Key Areas*, identifying 30 prefecture-level cities, including Baiyin in Gansu Province, as beneficiary of the special fund for heavy metal pollution control in 2015.

The CCICED recommended in 2014 that "the public-private partnership model should be used in the construction and operation of environmental infrastructure, in order to reduce investment costs and improve operational performance."

In November 2014 the State Council issued the *Guiding Opinions on Innovative Investment and Financing Mechanism to Boost Social Investment in Key Fields*. It called for new mechanisms for investment and financing in such key fields as public services, resources and environment, ecological construction, and infrastructure. The purpose is to mobilize social capital, especially private capital. The second part of the *Opinions* ("Innovative Eco-friendly Investment and Operation Mechanisms") defined priority areas as those "to promote the pollution control market." Third-party environmental governance is also favored in electric power, iron and steel industries, and development zones (industrial parks). Polluters pay specialized environmental service companies for abatement services by way of commissioned governance, managed operations, and so on, to improve the industrialization and specialization of pollution control. The *Opinions* also called for promoting government procurement of environmental monitoring services and establishing a system for recommending third-party companies for pollution control in key industries.

In December 2014 NDRC issued the *Guidelines on Developing Public-Private Partnerships*, specifying requirements on applications, joint review mechanisms, partner selection, price management, performance evaluation, and demonstration. According to the *Guidelines*, a variety of models, including BOT, BOO, and BOOT, can take various forms such as franchises, subsidies, and government procurement, depending on local conditions and project characteristics, in order to improve the operational efficiency of projects. At the same time, the *General Contract Guidelines for Public-Private Partnership Projects* was issued as a reference to all parties involved in PPP projects. It provided safeguards and requirements on PPP project contracts on areas of concern such as equality of the parties, mutual benefit, and compliance, defined rights and responsibilities of the parties, risk sharing, liability for breach, government regulations, and performance guarantees. All phases of the different models, including investment and financing, build, operate, and transfer, are covered.

CCICED recommended in 2014 to "encourage environmental protection non-governmental organizations and create an enabling social environment. Develop rules and regulations to protect legal rights of NGOs and to provide basic guidance for their activities. Establish mechanisms to facilitate public or private funding, and where appropriate, encourage governmental service procurement include NGOs."

²⁵ Li Huan, Li Yunlu: "MEP Vice Minister: Action Plan for Soil Pollution Prevention and Control expected this year," http://news.xinhuanet.com/gongyi/2015-03/09/c_127559013.htm, August 5, 2015.

In December 2014 MOF and MCA issued the *Circular on Supporting and Regulating Governmental Procurement of Services from Social Organizations*, requiring full policy support and guidance to NGOs. They encourage a variety of ways and means — including staff training, project guidance, and venture philanthropy — to enhance the capacity of NGOs undertaking governmental service procurement. In addition, the scope and scale for government procurement of services should be gradually expanded according to the principles of public welfare. The government should enable civil society to supply public services, and give priority to organizations operating in the field of livelihood security, social management, and trade management.

In February 2015 MEP issued the *Guiding Opinions on Promoting Environmental Monitoring Dissemination*, clarifying the scope of environmental monitoring services for full and orderly liberalization. Specifically, fully liberalized monitoring services cover pollution source monitoring conducted by polluters, environmental damage assessment monitoring, EIA monitoring, cleaner production audits, and independent surveys of enterprises and public institutions. Orderly liberalized monitoring services will, according to local conditions, cover the operation and maintenance of automatic monitoring stations for environmental quality and of automatic monitoring facilities for pollution sources, solid waste monitoring, and hazardous waste identification. Where appropriate, according to local conditions, environmental protection departments could allow NGOs to undertake monitoring, by way of commissioning, contracting, procurement, and inventory management. At the same time, the supervision of NGOs involved in monitoring, should be strengthened. Relevant policies and measures should be introduced to promote institutionalized, systematic, and standardized management of environmental monitoring services.

In April 2015 MOF and MEP jointly issued the *Implementation Opinions on Promoting the Public-Private Partnership in Water Pollution Prevention and Control*. According to the document, the comprehensive environmental remediation of drinking water sources will be the focus of their partnership. To establish a return-on-investment mechanism, a combination of user fees, viability gap funding (VGF), and government payments will be used to support operational, quasi-public or fully public projects, while profitable projects, such as land development and eco-tourism, are designed to attract social capital. Financial departments at all levels are required to progressively change from subsidies for "build" to "operate" and from "forward subsidy" to "afterward award."

In May 2015 the State Council forwarded the *Circular on Guidelines on Promoting the Public-Private Partnership in Public Services* announced by MOF, NDRC, and the People's Bank of China. It encouraged the use of the PPP model in a wide range of public services, covering energy, transportation, water conservation, environmental protection, agriculture, forestry, technology, affordable housing, medical care, health, pensions, education, and culture. The PPP model is of strategic significance in maintaining stable growth, promoting reform, adjusting structure, benefiting the people, and preventing risk.

In January 2015 the State Council issued the *Opinions on the Implementation of Third-Party Environmental Governance*, outlining targets for 2020. By 2020 significant progress will be made in third-party governance of environmental utilities and industrial parks, including

substantial improvements in pollution control efficiency and professionalism, and additional stimulated vitality of social capital in the market. The reform of investment and the operations mechanism for environmental utilities will be basically completed, forming an efficient market system for supplying quality, sustainable environmental public services. The formats and models of third-party governance will have matured, giving rise to a group of environmental service companies that demonstrate strong expertise and operational management, as well as being able to access integrated credit, and to compete internationally. The *Opinions* also called for strengthened policy guidance and support. The pricing policy reflecting differentiated tariffs will be improved and implemented and tax incentives will be studied and deployed. To securitize credit assets for energy conservation and environmental protection, studies are needed on pledge financing, including energy efficiency loans, carbon finance products, energy conservation usufruct, and emission rights. Qualified enterprises for third-party governance will be allowed to be listed and to issue corporate bonds and medium-term notes.

In 2013 CCICED recommended that China "systemically reform the mechanisms for environmental impact assessment and social impact assessment. Establish an explicit accountability system, under which officials will be held accountable for inaccurate performance assessment and consequent 'failure of assessment'."

EIA is a major system for environmental protection and institutional design that relies on the "precautionary principle." In practice, however, fraud often occurs, mainly due to the linkage of interests between EIA agencies and environmental departments responsible for approving the EIA documents. The *Environmental Impact Assessment Law* clearly stipulates that "the agencies that provide technical services for environmental impact assessment of construction projects shall not have any relation of interest with environmental departments responsible for approving the EIA documents or relevant departments for approval". In February 2015 the Central Inspection Team identified "prominent profit-making intermediaries in the EIA technical service market which are likely to result in conflicts of interest and improper transfer of benefits" and demanded "decoupling the EIA agencies within the prescribed time to regulate the EIA technical service market." On March 23, 2015 the *Work Program for Decoupling the Environmental Impact Assessment Agencies in the Environmental Protection System* was unveiled by MEP.

In March 2015 MEP issued the *Regulations on Strict Self-discipline and Prohibition on Intervention in Environmental Impact Assessment Approval*. Officials of deputy director level or above in the environmental protection system, counterpart leaders of enterprises, public institutions, and social organizations, and their relatives, shall be prohibited from intervening in EIA approvals. In accordance with the *Integrity Regulations on Qualification Management of Environmental Impact Assessment Agencies* issued by MEP the same month, people responsible for qualification examination, technical review, and daily management of EIA agencies shall not hinder the honest, independent, objective, and impartial conduct of these activities, and offenders shall be held liable by law.

At the same time, the MEP-issued *Circular on Further Strengthening the Accountability for Illegal Environmental Impact Assessment of Projects* requires environmental protection

departments at all levels to impose administrative penalties, in strict accordance with law, for development projects that "start without prior approval" or "make major change without prior approval."

In line with requirements to streamline administration and to decentralize, the State Council announced in December 2014 that an EIA will no longer be a precondition for approving and developing projects, except for major and mega-projects. In March 2015 MEP released the post-adjustment *Directory of Development Projects Subject to the Environmental Impact Assessment Management of Ministry of Environmental Protection (2015)*. In this directory, the EIA approval authority was delegated to the provincial environmental departments for 32 kinds of projects, covering thermal power stations, thermoelectric stations, iron and steel plants, nonferrous metal smelting, national highways, vehicles, and large theme parks. In April 2015 an updated *Classified Directory of Development Projects for Environmental Impact Assessment* was introduced, allowing 13 kinds of projects to prepare a reporting sheet instead of an environmental impact report. The two initiatives further optimize the EIA approval procedures and processes by streamlining administration and delegating power.

In April 2015 MEP released the *Interim Measures on Ex-post Environmental Impact Assessment of Development Projects* containing provisions on scope of application, responsibility, time limit, content, qualification and management, and highlighting the primary responsibility of developers and the regulatory responsibility of local environmental protection departments.

III. Unite Development and Protection, and Promote Green Economy

The CCICED has long advocated the green transition of China's economy through the implementation of economic policies. CCICED 2014 recommendations stated that **"national fiscal, taxation, pricing and financial policies that encourage environmental protection should be expeditiously implemented," and that "the fiscal interest-deduction mechanism should be improved to encourage green credit. Financial departments, reform and development commissions, and bank supervision departments should cooperate with financial institutions to develop a set of scientific, effective and easy-to-use reduced interest plans for green projects."**

Following the release of *Green Credit Guidelines* in 2012, the China Banking Regulatory Commission (CBRC) and NDRC jointly issued the *Energy Efficiency Credit Guidelines* on January 1, 2015. "Energy efficiency credit" refers to the credit provided by banking institutions to help energy users improve energy efficiency and reduce consumption. They include energy efficiency project credits for energy users and energy performance contracting credits for energy service companies (ESCOs). Banking institutions provide credit support to energy users and ESCOs. According to the *Guidelines*, energy efficiency credits are mainly used to serve industries, buildings, and transportation, as well as other important fields related to energy saving projects, services, technologies, and equipment. Banking institutions are encouraged to give priority support to energy efficiency projects in line with the national industrial policy, or with industrial planning, under the premise of risk management and

business sustainability. Energy efficiency projects are assessed in terms of technical options, involved entities, and market potential, thereby providing references for banking institutions.

The CCICED recommended the reform of resource taxes, stating: "Implement *ad valorem* resource taxes. Apply a 10% to 15% resource tax for petroleum depending upon resource grades. Apply the same level of resource tax for imported petroleum. Collect a differentiated 10% to 15% tax on coal and apply the same rate to imported coal." In October 2014, MOF issued the *Circular on the Implementation of Coal Resource Tax Reform*, ushering in a nationwide reform that coal resource tax is to be levied *ad valorem* as of December 1, 2014. The coal resource tax rate ranges from 2% to 10%, and the specific applicable rate will be proposed by provincial tax departments and determined by provincial governments according to cleanup funds, corporate capacity, and coal resource conditions. To implement tax incentives noted in the *Circular*, the State Administration of Taxation (SAT) and the National Energy Administration (NEA) issued the *Circular on Issues Concerning the Implementation of Coal Resource Tax Incentives* in April 2015. The *Administrative Measures on the Collection of Coal Resource Tax (Trial)*, issued by SAT in July 2015, clarified the methods to determine taxable coal prices, range of freight deductions, washed coal conversion rate, and taxation methods for mixed sold and washed coal.

The CCICED also recommended that China "adopt an environmental tax based on the level of pollution emissions, following the "Polluter Pays" principle." In June 2015 the Legislative Affairs Office of the State Council issued the *Circular on the Solicitation of Public Comments on the Environmental Protection Tax Law of the People's Republic of China (Draft)*. The draft law made clear provisions on the objects of environmental protection tax, tax basis, and tax liability, and the prescribed tax rate is basically the same as that of ongoing pollutant charges. The emission of pollutants "beyond standards and total control" shall be subject to doubled environmental taxes. On the other hand, where the taxable emissions of air and water pollutants are lower than 50% of emission standards and within the range of total emission control, the provincial government can decide to halve the environmental tax on taxpayers within a certain period.

In early August 2015 the 12th NPC Standing Committee made public the latest adjusted legislative plan when it released an important signal of accelerated tax legislation process. *Environmental Protection Tax Law, Value Added Tax Law, Resource Tax Law, Real Estate Tax Law, Tariff Law, Tonnage Tax Law, and Arable Land Use Tax Law* have been added to the five-year legislative plan.²⁶

The 2013 *Action Plan for Air Pollution Prevention and Control* called for the "establishment of a Forerunner system which provides incentives to enterprises with leading performance in energy efficiency and emission intensity." To promote environmental management with equal emphasis on "bottom line constraint" and "advanced drive," the *Implementation Plan for Energy Efficiency Forerunner System* was unveiled in January 2015 by NDRC, MOF, MIIT, NEA, ASQIQ, and the Standardization Administration (SAC). Policy support will be given to over-performers to encourage enterprises and public institutions to improve energy

²⁶ Han Jie, Ren Feng, Chen Fei: "Seven tax laws covering real estate tax and VAT included in the legislative plan," http://news.xinhuanet.com/house/sjz/2015-08-06/c_1116159100.htm, August 5, 2015.

efficiency. At an appropriate time, indicators of energy efficiency advanced performance will be included in mandatory national standards for energy efficiency and consumption. The mechanism for a dynamic update of standards will be improved, constantly raising energy efficiency thresholds.

In July 2015 MEP issued jointly with MOF, NDRC, and MIIT the *Implementation Plan for Environmental Protection Forerunner System*. Environmental protection forerunners refer to producers with the highest environmental performance in both environmental protection and pollution control among comparable institutions. These forerunners are required to practice green supply chain management, adopt environment-friendly product design, use efficient and clean production technologies, attain international advanced levels of clean production, and achieve low life-cycle emissions. The forerunners' products shall be designed and put into mass production, have excellent performance, and meet quality standards. Furthermore, none of these products must have been found below standards in quality supervision and inspection over the past year. The forerunners shall be selected and publicized annually by third party agencies. Government departments shall guarantee the forerunner system by establishing standard dynamic update mechanisms, strengthening management, improving incentives, and expanding promotion.

IV. Promote Public Participation based on "Internet Plus"

The CCICED has always attached importance to information disclosure and public participation in environmental protection. **Its 2013 policy recommendations called on China to "improve the information disclosure system for corporate social and environmental responsibility in order to increase transparency" and "mobilize the media, especially new media, and improve the overall level of information disclosure, public supervision, and public participation in decision-making. Fully integrate new media technologies into the environmental information disclosure system, and build a public environmental decision-making platform."** In 2014 the CCICED recommended strengthening public supervision of environmental protection and developing a multi-stakeholder approach to governance.

In December 2014 MEP issued *Measures on Environmental Information Disclosure of Enterprises and Public Institutions* as a regulation supporting the *Environmental Protection Law*. The *Measures* detail the scope of enterprises, range of environmental information, channels of disclosure, and penalties for violations. In July 2015 MEP issued the *Measures on Public Participation in Environmental Protection*, which specify the range of public participation, participatory methods, the role of public opinion and feedback, the approach to public reporting, support for environmental public interest litigation, and purchase of social organization services. It provides an important institutional safeguard and further clarifies and highlights the weight and role of public participation in environmental protection.

The Chinese government now pays more attention to "new media" in environmental information disclosure and public participation. In July 2015 the State Council issued the *Guiding Opinions on Actively Advancing the "Internet Plus" Action*. In the context

of “Internet plus” and “green ecology,” “an environmental information and data sharing mechanism and unified data exchange standards should be put in place, to promote disclosure of information about regional emissions, ambient air quality, and water quality. Online queries and customized “push content” should be made available for the public via the Internet. The data about corporate environmental credits should be collected and analyzed, and corporate environmental credits should be incorporated into the national unified platform for credit information sharing and exchange.”

In June 2015 the first national conference on environment and the Internet took place in Jinan. It focused on environmental communication in the “Internet plus” era. Topics included opportunities and challenges, the benign interaction of environmental protection departments with the media, and achievement of consensus with Internet celebrities. Pan Yue, MEP Vice Minister, called for “the good use of the Internet and new media” in improving environmental management and law enforcement. He said that taking advantage of favorable conditions brought by the Internet and new media, the authorities should better combat illegal polluters and create a pattern of environmental publicity and education that integrates new and traditional media.²⁷ That meeting also witnessed the inaugural ceremony of MEP’s Weibo and WeChat accounts and of the National Environmental Alliance of New Media, and the release of a list of governmental new media for environmental communication.

Thanks to new media, great progress has been made in environmental information disclosure and public participation. For example, the Environmental Protection Bureau of Shandong Province opened its Weibo account in May 2013, and was followed by 17 prefecture-level environment departments and 100 county-level departments, updating environmental information and work progress, and addressing public reporting. This creates a three-level environmental Weibo system that integrates “online interaction and offline law enforcement.”²⁸

V. Set and Adhere to Ecological Protection Red Lines

Ecological protection is a major factor affecting the construction of ecological civilization. The delineation of Ecological Protection Red Lines (EPRLs) is an effective means toward ecological protection. Over the past year, China’s government has focused attention on ecological protection and EPRL design.

In March 2015 MEP’s cancellation of the Xiaonanhai hydropower station project caused great public concern. The station is located within the National Nature Reserve for Rare and Endemic Fish in the Upper Reaches of the Yangtze River. Its construction, which would have led to a shrinking of the boundaries of the protected area, sparked widespread controversy. In the *Reply to the Report on Environmental Impact Assessment of Wudongde Hydropower Station in the Jinsha River*, printed and issued March 20, 2015, MEP noted that “the planning

²⁷ “Pan Yue requires environmental departments to make good use of the Internet and new media to advance social governance and environmental law enforcement,”

http://www.zhb.gov.cn/gkml/hbb/qt/201506/t20150601_302697.htm August 10, 2015.

²⁸ “Rankings of Weibo and WeCchat accounts of environmental departments release,” http://www.cenews.com.cn/sylm/hjyw/201506/t20150601_793074.htm, July 24, 2015.

and construction of water-related projects, such as Xiaonanhai hydro station, Zhuyangxi hydro station, and other dams shall be prohibited in the nature reserves in the Yangtze River section from Xiangjiaba hydro station to the tail of Three Gorges Project and in the sections of Minjiang River and Chishui River." MEP explained that "in the last 10 years, the National Nature Reserve for Rare and Endemic Fish in the Upper Reaches of the Yangtze River has been adjusted twice due to Jinsha River Project Phase I and other factors, and the structure and function of the nature reserve has been weakened. In the future, the development of the basin must adhere to functional zoning and ecological protection red line, in order to effectively protect rare and endemic fish." There is widespread support for MEP's controversial decision, indicating profound public understanding of the importance of ecological protection.

CCICED recommended in 2014 that "the State Council develop the *Management Measures on Ecological Protection Red Lines* to specify definition and content of ecological protection red lines, classification method and management system." In May 2015 MEP issued the *Technical Guide on the Classification of Ecological Protection Red Lines* and called on all localities to set EPRLs in accordance with the guide and MEP's unified deployment. In July the General Office of MEP announced the *Notice on Convening the First Meeting of the Coordination Group for Setting and Managing the Ecological Protection Red Line*. The coordination group consists of NDRC, MIIT, MOF, MLR, MOHURD, MWR, MOA, State Forestry Administration (SFA), China Meteorological Administration (CMA), NEA, and the State Oceanic Administration (SOA). The meeting studied the general idea for EPRLs, discussed the *Management Measures on Ecological Protection Red Lines*, and deliberated on the *Work Plan for Ecological Protection Red Lines* to be submitted to the State Council.

CCICED added that China should "identify marine EPRLs through marine ecological functional zoning and other ocean spatial planning to ensure the health and security of ocean ecosystems and coastal wetlands." July 2015 saw the release of the *Implementation Plan of the State Oceanic Administration for the Construction of Marine Ecological Civilization (2015-2020)*. This is China's first overall program dedicated to the construction of marine ecological civilization. It provides a roadmap and timetable for promoting marine ecological progress during the 13th FYP period.

According to the *Implementation Plan*, a system will be established that includes important, sensitive, and fragile marine ecosystems in redline zones for compulsory protection and strict control. These zones shall be subject to routine monitoring and supervision to ensure adherence to marine EPRLs. The *Implementation Plan* also defined the roadmap for work related to marine EPRLs during the next few years: in 2015, issue the *Opinions of the State Oceanic Administration on the Establishment and Implementation of a Marine Ecological Protection Redlining System* and the *Technical Guide on the Classification of Ecological Protection Red Lines*, and carry out the marine EPRL program on a provincial basis in coastal areas; in 2016, complete the establishment of marine EPRLs, form the monitoring and evaluation methodology for marine ecological protection redline zones, and publicize the implementation measures for marine EPRL supervision and checking; and in 2018, achieve the operational monitoring and management of marine EPRL zones.

Other important policy developments in ecological protection happened over the past year. MEP, NDRC, MOF, MLR, MOHURD, MWR, MOF, SFA, SOA, and the Chinese Academy of Sciences jointly issued in May the *Circular On Further Strengthening the Supervision and Management of Development and Construction Activities Related to Nature Reserves*. It clearly states that development and construction activities that threaten the functional orientation of nature reserves are prohibited. Local government departments are required to conduct comprehensive inspections of such activities in reserves within their jurisdictions. The focus of the inspection will be on activities harmful to the environment and resources, including mining, prospecting, real estate, hydro and wind power development, reclamation and quarrying, as well as tourism development in core areas and buffer zones. In May 2015 SFA announced the *Circular on Strictly Prohibiting the Reclamation and Use of Lakes and Wetlands*. Forestry administrations at all levels are required, in coordination with the relevant departments, to include lakes and wetlands in the scope of prohibited development in the main functional zoning areas, in order to ensure the strict protection of lakes and wetlands in the national ecological spatial planning system.

VI. Join in Global Efforts to Tackle Climate Change

The CCICED has always attached importance to the issue of climate change and has repeatedly offered policy recommendations on climate change to the Chinese government. As a responsible big country, China has taken efforts to tackle climate change at national and international levels. **In 2014 the Council recommended incorporating climate change and carbon emissions into the green transition. China should develop a roadmap and timetable for a green transition over the next 10 to 20 years, including peaking greenhouse gas (GHG) emissions by 2030 at the latest, and achieving environmental quality turning points as soon as possible.**

National-level emissions trading has become a reality a year and a half after the launch of seven pilot projects. In December 2014 NDRC issued the *Interim Measures on Emission Trading*. Regarding the allocation of allowances, the *Interim Measures* reflect the idea that "the Central Government develops standards and programs while local governments are responsible for implementation within a flexible range." The competent department under the State Council (that is, NDRC) shall determine the scope and final list of covered enterprises, the total amount of emissions allowances for the whole country, provinces, autonomous regions and municipalities, and the number of reserved allowances, as well as methods and standards for the free allocation of allowances. Initially, allowances shall be allocated free of charge and, when appropriate, allocated on a paid basis, and the proportion of paid allowances will be gradually increased. Emissions trading will be carried out in a more orderly manner, and NDRC shall determine the trading mechanism and supervise its operation. On carbon accounting and verification, the covered enterprises are required to develop emissions monitoring plans and report on GHG emissions annually, in accordance with national standards or in accordance with corporate accounting and reporting guidelines issued by NDRC.

At the international level, China has issued joint statements on climate change with the United States, India, Brazil, and the European Union, and submitted the *Enhanced Action on Climate change – China’s Nationally Determined Contribution* to the Secretariat of the United Nations Framework Convention on Climate Change (UNFCCC).

In November 2014 China and the United States released the Joint Statement on Climate Change in Beijing. Chinese President Xi Jinping and US President Barack Obama announced the post-2020 action on climate change of their respective countries. The United States commits to an emissions reduction target of 26% to 28% by 2025 and will strive to cut the emissions by 28% over 2005. China aims to peak its carbon dioxide (CO₂) emissions around 2030, striving to peak early, and plans to increase the share of non-fossil fuels in primary energy consumption to 20% or so by 2030. In September 2015, the two countries once again issued a joint statement on climate change, in which China pledged to build a national carbon market by 2017.

In May 2015 the Chinese and Indian governments announced the *Joint Statement on Climate Change between the Government of the People's Republic of China and the Government of the Republic of India*. As the two largest developing countries, China and India are undertaking ambitious actions domestically to combat climate change through plans, policies, and measures for mitigation and adaptation. They take these measures despite the enormous challenges posed by social and economic development and poverty eradication.

In May 2015, the Chinese and Brazilian governments issued the *Joint Statement on Climate Change between the Government of the People's Republic of China and the Government of the Federal Republic of Brazil*. The two sides reaffirmed their commitment to reaching a balanced, comprehensive, equitable, and ambitious agreement under UNFCCC at the UN Climate Conference to be held in Paris, France late in 2015. China and Brazil will work together with other parties, in particular with other BASIC countries, towards this goal.

China and the European Union unveiled, in June 2015, the China-EU Joint Declaration on Climate Change. The two sides committed to work together to reach an ambitious and legally binding agreement at the UN Climate Conference in 2015 that enhances the implementation of UNFCCC. They urged developed countries to provide and mobilize enhanced financial support to developing countries for ambitious mitigation and adaptation actions, especially to countries that are particularly vulnerable to the adverse effects of climate change and "recognize complementary support by other countries". The two sides reiterated the commitment by developed countries to a goal of mobilizing jointly US\$100 billion per year by 2020 to address the needs of developing countries, in the context of meaningful mitigation actions and transparency on implementation.

In June 2015 China submitted the *Enhanced Action on Climate change – China’s Nationally Determined Contribution* to the UNFCCC Secretariat. Thereby, China announced internationally that by 2020 it will cut CO₂ emissions per unit of GDP by 40% to 45% from the 2005 level, increase the share of non-fossil fuels in primary energy consumption to about 15% and increase the forested area by 40 million hectares and the forest stock volume by 1.3 billion m³ compared with 2005 levels. And by 2030 China has committed to the following actions: 1) to achieve peak CO₂ emissions around 2030 and striving to reach this peak earlier;

2) to lower CO₂ emissions per unit of GDP by 60% to 65% from the 2005 level; 3) to increase the share of non-fossil fuels in primary energy consumption to around 20%; and 4) to increase the forest stock volume by around 4.5 billion m³ compared to the 2005 level.²⁹

In November 2015, the two president of China and France signed the joint statement on climate change. The two sides highlighted the urgency of climate change, indicating the political will that the two countries work together to deal with the global challenges, and reached a consensus on a series of key issues related to the United Nations Climate Change Conference in Paris. The two countries are determined to work together with leaders of other countries to reach an ambitious, legally binding agreement in Paris.

3. Conclusion

The CCICED's policy recommendations have been largely adopted over the year. With the construction of ecological civilization and the implementation of the newly amended *Environmental Protection Law*, and in particular with respect to the recommendations that focused on prominent environmental problems, policies on the green economy, public-private partnership on environmental protection, and multi-shareholder environmental governance, the year has witnessed unprecedented progress. This lays a solid foundation for future environmental policy and governance.

First, the construction of ecological civilization has been designed at the top level. Its concept and policy have been translated into concrete actions with the introduction of "speeding up the institutional reform for ecological progress" noted in the *Decisions of the CPC Central Committee on Major Issues Concerning Comprehensively Deepening the Reform, Opinions of the CPC Central Committee and the State Council on Accelerating the Construction of Ecological Civilization*, and the *Integrated Reform Plan for Promoting Ecological Progress*.

Second, the responsibility of the government, the Party, and leaders has been strengthened. An important theme relating to laws, regulations, and policies introduced this year has been to clarify government responsibility in environmental protection and the personal responsibility of Party and government leaders. Whether through interviews, regional limited approval, or "same responsibility of Party and government leaders," stringent accountability aims to mobilize local governments and their leaders to ensure that the goal of environmental protection is fully achieved.

Third, the public will have a larger role in environmental decisions and oversight of environmental violations through information disclosure, public participation, and environmental public interest litigation. The Chinese government has been increasingly aware of the important role of information disclosure and public participation in environmental protection. It has further expanded participation channels, and made full use of the Internet to publish environmental information, interact with the public, and receive public reports. These

²⁹ "China submits the report on its national determined contribution,"

http://www.sdpc.gov.cn/xwzx/xwfb/201506/t20150630_710204.html, August 9, 2015.

initiatives not only enable the government and businesses to make more informed environmental decisions, but also supplement the government's resources in environmental law enforcement and help improve the government's credibility.

Finally, the market is better leveraged to enhance environmental protection, which relies on both the government and the market. This year, China's government has significantly intensified the stick-and-carrots approach of enforcement combined with economic incentives. Incentives to environmental protection and energy efficiency "forerunners" were introduced to promote green credit, environmental tax reform, emissions trading, and a national carbon market, while the PPP model and third-party governance will motivate enterprises to fulfill their legal and social obligations in environmental protection.

2015 brings the implementation of the *Opinions of the CPC Central Committee and the State Council on Accelerating the Construction of Ecological Civilization* and the *Integrated Reform Plan for Promoting Ecological Progress*, and sees the completion of the 12th FYP. Currently, the basic design of ecological civilization has taken shape. The rule of law in the environmental field has made significant strides. And a modern multi-shareholder environmental governance system has been launched. China can now plan for greater ecological progress through the implementation of the forthcoming 13th FYP.

Appendix: CCICED Recommendations vs *Integrated Reform Plan for Promoting Eco Progress*

CCICED’s policy recommendations in 2014	<i>Integrated Reform Plan for Promoting Ecological Progress</i>
<p>Establish an efficient eco-environmental management system with adequately allocated functions, optimized structures, and properly-matched power and responsibilities.</p>	<p>(13) Improve the system for regulating natural resources. Duties and responsibilities related to regulation of use, which are currently spread among different departments, will be gradually concentrated within a single department. This department will then perform all use-related regulatory duties and responsibilities for all territorial spaces.</p>
<p>Integrate pollution prevention and control functions that are currently scattered across various departments to achieve unified supervision for all pollution sources, pollutants and environmental media.</p>	<p>(40) Improve the administrative system for environmental protection. An effective administrative system for environmental protection will be established to strictly regulate the emissions of all pollutants. Duties and responsibilities for environmental protection, which are currently spread across departments, will be assigned to one single department, progressively creating a system whereby one department is responsible for unified regulation and administrative law enforcement over urban and rural environmental protection.</p>
<p>Intensify environmental law enforcement and supervision. Speed up the development of detailed implementation rules for the newly amended environmental protection law. Establish a mandatory, authoritative, and independent enforcement system and explore joint-action mechanisms involving environmental departments and police departments to improve the effectiveness of enforcement and supervision.</p>	<p>(40) Regulatory authority from different fields and departments and at different levels will be systemically organized to create a unified and authoritative system for environmental law enforcement, strengthen the ranks of law enforcement, and provide the necessary conditions and means to enforce the law. The mechanisms linking administrative law enforcement and environmental judicial work will be</p>

	improved.
Develop and implement systems for public participation, information disclosure and environmental litigation.	(38) Improve systems for public disclosure of environmental information. Extensive efforts will be made to ensure public availability of environmental information pertaining to the atmosphere, water, and so on, to businesses that emit pollution, and to regulatory bodies. The mechanism for the public release of environmental impact evaluations for development projects will be improved. The environmental spokesperson system will be refined. Efforts will be made to promote awareness for environmental protection among the general public; the system of public participation will be improved; and more work needs to be done to ensure that the people exercise oversight over the environment in a legal and orderly way. An online platform and system will be created for the reporting of offenses related to environmental protection, and systems for offense-reporting, hearings, and public opinion-based oversight will be improved.
Reform and continue the total emission control system. Study and develop a comprehensive total emission control system for primary pollutants, coal consumption and CO ₂ emissions.	(19) Establish a system for total energy consumption management and energy conservation. A system for controlling total national carbon emissions and a mechanism for breaking down the responsibility for implementation will be gradually established. A mechanism for effectively increasing forest, grassland, wetland, and ocean carbon sinks will be set up. China's involvement in international cooperation on responding to climate change will be strengthened.
Develop relevant laws, regulations and implementation methods for an emission permit system that covers all pollution discharging entities. Reform the EIA system and three-simultaneousness system to achieve better coordination with the emission permit system.	(35) Improve the pollutant emissions permit system. A unified and fair business emissions permit system covering all fixed pollution sources will be established quickly nationwide. Emissions permits will be issued in accordance with the law. Emission of pollutants without a permit or in violation of

	a permit will be prohibited.
Improve the ecological environment damage compensation and accountability systems. Strengthen responsibility and capacity of the judicial system to investigate environmental violations.	(39) Strictly implement compensation systems for ecological and environmental damage. Manufacturers' legal responsibilities for environmental protection will be tightened, and the cost of illegal activities will be significantly increased. Legal provisions concerning environmental damage compensation, methods for appraising damage, and mechanisms for enforcing compensation will be improved. In accordance with the law, penalties will be meted out to those who violate environmental laws and regulations, and compensation for ecological and environmental damage will be determined by the extent of damage and other factors, and when violations result in serious adverse consequences, criminal liability will be pursued.
For the construction and operation of environmental infrastructure, the PPP model should be used to reduce the cost of investment and improve operational performance.	(41) Foster market entities for environmental governance and ecological conservation. All types of investment will be encouraged to enter the environmental protection market. Non-government investors may participate in the development and operation of any environmental governance or ecological conservation program where cooperation between government and non-government investment is viable. By means of government procurement of services and other methods, more support will be provided for third-party governance of environmental pollution.
Carry out environmental audits for key regions. Develop audit methods and processes and identify key CPC and government leaders at different levels as the objects of environmental audits. Enhance the independence openness and transparency of the government's environmental auditing system. Explore the possibility of	(50) Audit outgoing officials' management of natural resource assets. On the basis of preparing balance sheets for natural resource assets and making reasonable allowance for objective natural factors, active efforts will be made to explore the objectives, content, methods, and appraisal indicators for auditing outgoing officials' management of natural

<p>implementing an integrated governmental environment and resource auditing system under the National People's Congress and under the Provincial People's Congress system.</p>	<p>resource assets. Based on the changes in natural resource assets within their area of jurisdiction during their term of office, through auditing, an objective evaluation will be carried out of the outgoing official's management of natural resource assets; an official's liability will be determined in accordance with the law, and auditing results will be put to better use. Trials for preparing balance sheets for natural resource assets and for audits of the management of natural resource assets by outgoing officials will be conducted in the cities of Hulun Buir in Inner Mongolia, Huzhou in Zhejiang, Loudi in Hunan, Chishui in Guizhou, and Yan'an in Shaanxi.</p>
<p>Reform resource taxes to achieve collection on an <i>ad valorem</i> basis and adopt environmental taxes.</p>	<p>(31) Accelerate reform of resource and environmental taxes and fees. Faster progress will be made in introducing price-based taxes on resources. The scope of resource taxes will be gradually expanded to cover the use of all kinds of ecological spaces. A trial reform will be carried out in parts of northern China to levy a resource tax on groundwater. The development of legislation on environmental protection tax will also be accelerated.</p>
<p>Adopt a total energy consumption control policy.</p>	<p>(19) Establish a system for total energy consumption management and energy conservation. A reasonable target will be established for total national energy consumption and broken down and assigned to the provincial-level and major energy-consuming organizations.</p>
<p>Establish a risk-based green credit system for banks and appraisal companies. Banks and appraisal companies should introduce environmental risk factors into their loan assessments in order to establish a green credit system. Strengthen environmental risk control for bank loans to reduce the cost of</p>	<p>(45) Establish a green finance system. Green credit will be promoted, with research being undertaken into adopting methods such as government interest subsidies to boost the level of support. All types of financial institutions are encouraged to step up grants of green loans. Requirements for the due</p>

financing for green projects.	diligence of borrowers as well as their legal responsibilities concerning environmental protection will be clarified. A green rating system as well as a non-profit system for calculating environmental costs and evaluating environmental impact will be established.
Enforce mandatory green insurance for certain sectors, such as petroleum and natural gas exploitation, petro-chemical industries, iron and steel, and plastic sectors.	(45) Establish a green finance system. A compulsory liability insurance system for environmental pollution will be established in sectors involving high environmental risks.
Establish environmental information disclosure mechanism for listed companies and bond-issuance enterprises. All listed companies and bond-issuance enterprises should be required to publish corporate social responsibility reports periodically to disclose their environmental information.	(45) Establish a green finance system. A mechanism will be established for the mandatory release of environmental protection information by listed companies.
Establish a national target of China's appropriate land area to be within an EPRL. Designation should be on the basis of ecological problems, ecological sensitivity and important spatial characteristics of ecosystem services in China. This total will include some but likely not all of the existing protected areas.	(11) Improve the regulatory system for the use of territorial space. Land use regulation will be extended to all natural ecological spaces; ecological redlines will be defined and strictly observed; and arbitrary changes to land use will be strictly prohibited. Efforts will be made to protect against ecological redlines being crossed by unreasonable development and construction activities.
Further clarify and integrate various types of protection areas in terms of functions and management, and establish a nature protection area system consisting of nature reserves, national parks, scenic parks, agricultural species resources protection areas and ecological function protection areas.	(12) Establish a national park system. The protection of important ecosystems will be strengthened to ensure their sustainable use. The system of departments independently setting up their own nature reserves, historical and scenic sites, cultural and natural heritage sites, geological parks, and forest parks will be reformed. These protected areas will be reorganized by function and the scope of national parks will be determined as appropriate.
Accelerate and improve the	(32) Improve the ecological compensation

eco-compensation system. Strongly adhere to the principles of “polluter pays,” “those who damage must compensate,” and “those who protect receive benefits.” These principles can help to mobilize greater enthusiasm on the part of local governments towards protecting the environment, especially in those areas experiencing fiscal difficulties.

Establish a long-term eco-compensation mechanism and directly pay the impacted landowners or operators. Allocate key ecological improvement projects mainly to the ecological protection redline areas. Improve ecological protection fiscal transfer to match with the area and effectiveness of EPRL protection.

system. Explorations will be made into establishing a diversified compensation mechanism; transfer payments to major ecological functional zones will be increased step by step; and the incentive mechanism that links ecological protection performance with fund allocation will be improved. Measures will be drawn up for implementing a mechanism, principally for local compensation, and supported by additional funds from the central budget, by which local governments compensate each other for ecological or environmental damage and ecological conservation efforts. Local governments are encouraged to launch ecological compensation trials. Efforts will continue in carrying out the ecological compensation pilot initiative for the Xin'an River ecosystem. Help will be given to carry out trans-regional ecological compensation pilot initiatives in the Beijing-Tianjin-Hebei water source conservation area, in areas along the Jiuzhou River in Guangxi and Guangdong, and in areas along the Tingjiang and Hanjiang rivers in Fujian and Guangdong. Explorations will be made into carrying out pilot ecological compensation initiatives in the Yangtze River basin — an environmentally sensitive region.

(33) Improve the mechanism for utilizing ecological protection and restoration funds. Given the need for systematic governance of mountains, forests, farmland, rivers, and lakes, the measures for utilizing and managing relevant funds will be improved and existing policies and channels will be integrated. At the same time as efforts to comprehensively improve the conditions of rivers throughout their entire drainage basins, more funds will be spent on the protection and restoration of national ecological-security shields, such as the Qinghai-Tibet Plateau ecological shield, the Loess Plateau-Sichuan-Yunnan ecological shield,

	the northeast China forest belt, the northern China desertification-prevention belt, and the southern China mountainous belt.
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