

**China Council for International Cooperation on Environment and Development**  
**2015 Annual General Meeting**

**Policy Recommendations to the Government of China**

**(for AGM Discussion)**

The 2015 Annual General Meeting of the China Council for International Cooperation on Environment and Development (CCICED 4th AGM of Phase V) was held from 9 to 11 November 2015 in Beijing with the theme of *Enabling Governance Capacity for Green Transformation*.

2015 is a year to be applauded in terms of progress on environment and development. The 2030 Sustainable Development Agenda united the consensus and political commitment of international community, provided direction, objectives and approaches for global sustainable development for the next 15 years, and opened a new era for global sustainable development. There are high expectations from international communities on the outcomes of the upcoming climate change conference in Paris. CCICED members compliment President Xi Jinping's speech in the 70<sup>th</sup> UN Conference of Assembly – “Collaboratively Build New Partnership”, which specifically advocates international cooperation towards ecological civilization. The Members are also glad to notice China's significant contribution in environment and development such as global sustainable development and climate change, and important roles in advancing international agenda, as well as the major initiatives in global sustainable development. The Members have high expectations on the key initiatives and commitments taken by China, including those for South-South cooperation, “One Belt and One Road” strategy, and the AIIB.

2015 is also a symbolic year for environment and development domestically in China. China is promoting moderately high-speed economic growth, industrial upgrading and green transformation through multiple policies and measures including decentralization, market nurturing, mass innovation, upgrading of manufacturing sector, merging of internet and real economy, plus enhanced international cooperation on production capacity and ecological civilization. Promising progress has been achieved in transformation of economic development pattern and restructuring. This dominant position of the service sector has been substantially enhanced, and the contribution from final consumption to the economic growth has exceeded 50%. New economic growth drivers such as strategic emerging industries are growing. During the first four years of the 12<sup>th</sup> FYP, the COD and ammonia emission per unit of industrial value-added decreased by 36% and 40% respectively, energy consumption and CO<sub>2</sub> emission per unit GDP decreased by 13.4% and 16%. Since 2014, there has been an overall decrease of PM<sub>2.5</sub> in Jing-Jin-Ji (Beijing-Tianjin-Hebei), Yangtze River delta and Pearl River delta compared with 2013. Overall, the green development and environmental protection targets in the 12<sup>th</sup> FYP are expected to be basically achieved, or even overachieved. The relationship between economic development and resource consumption is showing a pattern of relative decoupling, and green transformation in China has achieved initial progress. In terms of ecological civilization, China has accomplished its overall work plan and top-level design for

institutional reform, with issuance of two guiding documents, *Opinions on Accelerating Ecological Civilization Construction* and *Integrated Reform Plan for Ecological Civilization*.

In 2007, CCICED pointed out the need for green transformation for China, and since then, has been providing policy recommendations for promoting green transformation continuously for eight years. Meanwhile CCICED has also witnessed the efforts of China and its achievements. The CCICED members are especially pleased with the suggestions to the 13<sup>th</sup> FYP made by the recent 5<sup>th</sup> Plenum of 18<sup>th</sup> CPC Congress. From the moderately well-off society objective and key measures raised in the 5<sup>th</sup> Plenum, especially the five concepts to achieve the objectives, it is expected that the coming five years will be a period of in-depth green transformation in China. (1) Innovation is a fundamental driver for development, and is associated with quality and effectiveness of development; (2) coordination is a basic principle of development, and is associated with balance and integrity of development; (3) green is a new call for development, and is associated with new directions; (4) opening is a method of development, and is associated with connections between China and the world; and, (5) sharing is the objective of development, and is associated with sharing of development outcomes among every social group and individuals. These five concepts are the core concepts of green development.

CCICED members believe that the 13<sup>th</sup> FYP will be the stage for achieving China's 'moderately well-off society' objective; a period for the 'China Dream' to come true, a starting period to accommodate "new normal", and a major window of opportunity for green development. Crossing over this turning point, China will be on the road towards green development; otherwise, China will have to bear higher costs. The 13<sup>th</sup> FYP is both a key period for the success of green transformation and a period with multiple difficulties and hard challenges. Becoming a well-off society requires coordination and integrated progress of political, economic, social, cultural and ecological civilization construction, in order to let all people benefit from development and share the outcomes. Currently, eco-environmental quality remains a weak link for achieving a moderately well-off society. Therefore, the 5<sup>th</sup> Plenum requires that China's ecological environmental quality shall be overall improved by 2020, with emphasis on environmental quality improvement, and that the most stringent environmental protection system shall be implemented. Such a target implies that China is likely to reach the turning point of environmental quality on the Kuznets curve ahead of the predicted time. However this achievement will need more effort, including more input of resources and building greater governance capacity.

In general, the top-level design and roadmap for ecological civilization and green transformation in China have been developed, and now the key is actual implementation. This is the most important issue associated with modernization of the national environment and development governance system and capacity, and has also been a long-term concern of CCICED. Therefore, the theme of this year's AGM is "Enabling Governance Capacity for Green Transformation". To support this theme, CCICED has established several task forces, and conducted special policy studies, policy background studies and pilots. 2016 is a beginning year of the 13<sup>th</sup> FYP, a critical point for green transformation of China to which CCICED pays close attention. Based on the findings and output of studies and AGM discussion, CCICED provides the following policy recommendations, which are expected to contribute to

the green transformation in the 13<sup>th</sup> FYP and other relevant tasks.

### **1. Stick to the strategy of ‘Greenization’, and comprehensively and thoroughly incorporate ‘Greenization’ concept into the 13th FYP**

During the next five years of development, the primary task of China is to incorporate the five concepts raised in the 5<sup>th</sup> Plenum, especially the greenization concept, into the 13<sup>th</sup> FYP. Such an incorporation should be comprehensive, covering the various aspects and whole process of political, economic, social and cultural construction. The incorporation should also be in-depth in order to ensure effectiveness, and specific to ensure the measures are practical and implementable. Meanwhile, at the current stage and in the near future, especially while the economy is slowing down, all levels of governments must maintain their strategic determination on greenization. There will be costs for green transformation; however, there will be even greater costs if not, and greater and longer negative impacts on the economy. There needs to be long-term consideration for the costs of green transformation. In the context of current slow economic growth, China cannot loosen greenization requirements, but instead should use greenization more firmly as a driving force to promote economic and social transformation.

Based on the outcomes of the International Advisory Meeting on Environment and Development China’s 13th Five Year Plan organized by CCICED in this June and the new requirements from the 5<sup>th</sup> Plenum, the following policy recommendations are proposed for the key focal areas to further advance green transformation during the 13<sup>th</sup> FYP period:

**First, in the process of the 13<sup>th</sup> FYP preparation,** strengthen participation and roles of resources and environmental departments, relevant consulting entities, NGOs and general public, and amplify the voice of “green advocates”.

**Second, in terms of the 13<sup>th</sup> FYP structure,** highlight the position of contents related to ecological civilization, environmental protection and green development, with both separate dedicated chapters on these topics and full incorporation of such content into chapters of other sectors.

**Third, focus on establishment of green industries system.** Promote greenization of industries, and integrate ‘Made in China 2025’ with green manufacturing to form a green industrial system. Nurture green transportation and green housing industry through green reform of standards and urban planning systems. Adopt environment friendly and resource efficient standards, and promote development of new technology, industries and patterns to form new industries of green growth. Vigorously develop energy-saving and environmental protection industries.

**Fourth, pay special attention to two issues of environmental protection.** One is to use measures such as main functional zoning, EIA of various plans and eco-redlining to solve the problems of reasonable spatial layout of national land and ecological protection, based on resource and environmental carrying capacity. The other is to develop environmental quality targets for key areas of air environment, water environment, soil environment and ecosystem protection, with the objective of overall

improvement of environmental quality. Use environmental quality indicators as a driver to lead environmental protection actions. Implement the most stringent environmental protection system through action plans in the fields of air and water.

**Fifth, build a new and stronger set of mechanisms to promote green growth.**

Establish an monitoring and evaluation mechanism, and incorporate green growth indicators into the performance evaluation system for party and government officials; improve market pricing mechanisms, and reform resource and energy pricing system based on market principles; build a legal framework that supports green financing and restrict financing of polluting enterprises, strengthen environmental risk control of bank loans and lower the requirements and costs for green enterprises; reform fiscal and taxation systems to increase the environmental investment from central and local fiscal resources, establish special pollution control funds, and ensure the increase rate of environmental investment is not less than the increase rate of fiscal revenue; establish a framework for global green value chain, green industrial chain and trade policies, and strengthen the forcing mechanism of environmental governance on green growth.

**Sixth, establish specific indicators for greenization and necessary binding indicators.**

The 13<sup>th</sup> FYP should include specific indicators and necessary binding indicators of greenization for fields such as industrial development, urbanization, science and technology innovation, improvement of public well-being, social governance and cultural progress in order to push relevant departments to develop actions plans. Implement green accounting for the national economy and balance sheet of natural resources to fully reflect the value increase of natural resources and turn natural capital to economic capital. Turn the concept of ‘a green mountain is a gold mountain’ into measurable and evaluable outcomes.

**Seventh, focus on systematic and coordinated planning.**

Comprehensively consider the linkages among socio-economic development and key elements of energy, land and water resources in developing sectoral targets, and systematically define specific indicators. Coordinate actions to address climate change and air quality improvement, and systematically develop policies for emission reduction of pollutants and carbon and water resource protection to achieve synergic benefits. Pay attention to the coordination between domestic objectives and international development agenda.

**2. Improve National Green Transformation Governance Capacity through Enhancement of Environmental Governance Capacity**

For a good blueprint, implementation is the key. For implementation, capacity is the key. It is clear from the historical lessons and current needs, national governance capacity is the decisive factor for the modernization of a country. China must pay high attention to governance capacity as it determines the success of green transformation and realization of a moderately well-off society. Generally, green transformation governance capacity includes decision, implementation, regulation and coordination capacity of government; resources allocation and innovation capacity of market; public governance capacity of society; rule of law, institutional and risk response capacity of different actors of government, enterprise and society, etc. At present, there is fairly large gap on the part of government, therefore, enhancing environmental governance capacity shall be considered as a breakthrough and a

priority of urgency, in order to progressively improve the capacity for green transformation.

In this regard, CCICED recommends:

**(1) Establish a scientific and effective environmental management system for environmental quality improvement.** Since reform and opening-up, China has established a quite comprehensive institutional system drawing on environmental systems from many other countries. With these years of practices, China should now conduct a scientific review of its existing environmental management system based on the country's new goals and demands in order to restructure its existing institutional system with quality improvement as the objective and efficiency/effectiveness as criteria; clarify objectives and functions of various environmental management institutions; streamline the relationships among various systems; comprehensively enhance the authority and effectiveness of environmental management system; and improve the level of scientific and refined management. For instance, use pollution emission permit as a core instrument to establish connections among basic management systems such as quality targets, emission standards, EIA, total emission control, emission disclosure and pollution fees, etc., to achieve a more simplified and effective control of point sources. Deepen EIA system reform and ensure a full play of plan EIA in spatial payout and source control of market access; simplify EIA procedures for construction projects and empower enterprises with primary responsibilities for pollution prevention and control. Improve transparency of environmental management decision making, clarify the rights and procedures of stakeholder participation, and strengthen cost-effect analysis for environmental management system.

**(2) Speed up the institutional reform for resource and environmental management to match the task of ecological civilization.** The Integrated Reform Plan for Ecological Civilization puts lots of emphasis on the management policy system for ecological civilization, but only indicates principles for natural resources assets management system, natural resource regulation system and environmental administration system. Administrative system reform and construction of a management policy system should be made mutually supportive. A sound administrative system can promote the establishment and implementation of good policy system; on the contrary, an irrational administrative system will hinder the establishment and implementation of policy. There are two prominent problems for administrative system of resource and environment management: first, relevant functions are scattered among various departments with mismatched rights and responsibilities, and the cost of interdepartmental coordination is high; second, administrative mandate and resource allocation to environmental departments is relatively weak by comparison to that of economy-oriented management departments, and to the heavy demands of tasks. Therefore, China should speed up administrative system reform for resources and environment, integrate relevant functions, allocate adequate human resources, strengthen mandate and authority, and improve staff competency to match the tasks of green transformation and ecological civilization.

For administrative system reform for environmental management, China should fully draw on relevant international experiences with consideration of the national situation, while paying attention to two basic principles: (1) maintain relative independence of

those tasked with natural resource exploitation, from those responsible for ecological and environmental protection regulation; and (2) ensure coordination of pollution control and ecological environment protection. Establish an environmental management system with matched authority and responsibility. Integrate ecological environmental protection and pollution control functions currently scattered among various departments, and strengthen the systematic nature and integrity of environmental protection. Reasonably allocate environmental management responsibilities between central and local governments. Provide adequate administrative and technical support capacity for various levels of governments.

Improve laws and regulations to clarify the principles of stakeholder identification and their participation rights, ways and procedures; improve the transparency of decision-making process; and minimize the influence from vested interests. Assign professional decision-making support staff to the National People's Congress and its Standing Committee, and strengthen professional training and capacity building.

**(3) Improve policy implementation capacity of environmental departments, especially their monitoring and regulation capacity.** Adopting direct vertical management for environmental departments below the provincial level is a key reform measure of modernization of national environmental governance system and capacity, and an important opportunity and strategic breakthrough for comprehensive reform of environmental protection system in the 13<sup>th</sup> FYP period. It will help to enhance the authority of environmental departments over the local governments and enterprises, and to improve the authenticity of monitoring data. While considering design of vertical management, attention should be paid to the need for reasonable matching between environmental protection responsibility and regulatory enforcement responsibility. Innovative vertical management is an important solution to enhance regulatory authority and data authenticity. Meanwhile, some other supplementary institutional measures should be implemented, including clarifying legal status of environmental enforcement teams and granting them necessary enforcing measures; dual performance management for leaders; professional training to enforcement staff, etc. In addition, vertical management should also take into account the different economic and geographical situations, with an active and progressive process starting with pilots. Cooperation mechanisms for regional and river basin environmental regulation and coordination organization also should receive adequate attention.

**(4) Improve information capacity of environmental management.** Strengthen capacity building on environmental data monitoring, collection, integration and feedback analysis to ensure accuracy, integrity and authenticity of data. Use smart technologies such as big data, internet, internet of things, 3S (remote sensing, GIS and GPS) and cloud computing, etc., to establish a national environmental big data network and enhance data integration, analysis and decision making supporting capacity. Innovate environmental management using big data, establish a smart environmental regulation platform, develop a “from sky to ground” environmental monitoring warning and information system, establish a unified environmental information system that provides full support to pollution permitting, and form an environmental quality oriented management system. Promote data sharing through legislation; encourage third party environmental monitoring to enable public's access to environmental information; strengthen evaluation and tracking of environmental

records by financial institutions, and promote implementation of corporate environmental responsibility.

**(5) Enhance the market's capacity to promote innovation and internalize environmental externalities.** Reform pricing mechanisms for major resource products to improve resource use efficiency. Develop financial and taxation policies to expose environmental costs in production and consumption. Stimulate markets and social creativity, and foster the marketplace for green industries with healthy competition. Through preferential tax policies facilitate environmental protection markets. Promote green government procurement and encourage leading companies to undertake voluntary initiatives on green supply chains and to lead sectoral technical and management upgrading. Establish ways to address environmental costs through corporate environmental credit system, and meanwhile provide basic information to companies on green financing sources and mechanisms. Promote cooperation among government, enterprise and research institutes on establishing a green resource and technology-sharing network. Encourage third party engagement in environmental pollution treatment and ecological protection to address fund shortages and to improve effectiveness of treatment and protection.

**(6) Build the capacity of social organizations and the public's participation in environmental protection.** Improve laws and regulations to clarify the public's environmental rights and obligations, and clarify channels and procedures for public participation. Establish social governance units within environmental protection departments with responsibilities for promoting and enabling greater participation of the public and social organizations through capacity enhancement and facilitating the formation of green values in the whole society. Improve the cooperation mechanism between government and social forces in environmental protection, and establish mechanisms for communication and coordination, information sharing and project cooperation between the departments of environmental protection at all levels and social organizations, enterprises and co-operatives engaging in environmental protection. Strengthen the governmental support for environmental social organizations especially in terms of funding, human resources and information, lower the requirements for registration of environmental NGOs, and promote orderly participation of NGOs in environmental protection. Innovate education and communication methods on sustainable consumption and environmental protection. Use internet-based platforms and technologies to promote the public's innovation and entrepreneurship in environmental protection.

**(7) Improve green technology R&D and application capacity.** Enhance green technology research and development, improve the support capacity of technical innovation to the industrialization of green growth, and increase the proportion of expenditure for green technologies in GDP. Develop a national green low-carbon development innovation action plan, and implement eco-innovation action plans for enterprises and industries focusing on environmental technology innovation. Strengthen basic research for standards, statistics, accounting and monitoring of energy saving, environmental protection, new energy and carbon emission reduction.

### **3. Reform and Innovate Green Financing**

As a new policy instrument to promote green transformation, green financing is a

driving force to nurture new economic growth under the “new normal” context, ensure eco-environment security and promote upgrading of green industries in China. It is an innovative financing system for ecological civilization. The demand for green financing in the future 15 years will be huge. According to the estimation of the Green Financing Task Force, the demand of green financing during 2015-2030 is expect to be 120 trillion yuan RMB (about 19 trillion USD). While, currently there is a serious lack of green financing supply, with a large gap of funding resources. The gap of green financing was 2.8 trillion yuan RMB (about 440 billion USD) in 2013. Meanwhile, the green financing system itself is incomplete. Thus building a green financing system is an urgent need.

In this regard, CCICED recommends:

**(1) Accelerate the establishment of a green financing system, and incorporate green financing into the 13th FYP.**

- 1) **Assign green financing as an important task of the Central Economic and Ecological Civilization Reform Group, in accordance with the arrangement by the Central Leading Group for Deepening Reform.** Form a working arrangement conducive to green financing. All government departments should closely cooperate according to their respective responsibilities to form a joint force to promote green financing.
- 2) **Build a bridge between demand and supply of green financing.** Encourage environmental departments to play better roles in promoting green financing reform, improve information communication regarding the demand side needs, and promote two-way transfer of environmental and financial information. Establish a green financing guidance and implementation entity involving the Bank of China, China Banking Regulatory Commission, China Securities Regulatory Commission and China Insurance Regulatory Commission. This entity should cooperate with environmental departments to provide guidance on financial innovation and green financing service.

**(2) Speed up the establishment of the financial supporting system and start green financing reform.**

- 1) **Establish and improve legal support system for green financing reform.** Develop and implement more stringent environmental laws, regulations and standards that in turn will influence the financial demand side. Establish legal instruments to enforce the fulfillment of environmental responsibilities by investors. Clarify the commercial banks’ legal obligations of environmental impact review and supervision in the *Commercial Bank Law*, and clarify the environmental information disclosure obligations of listed companies and bond issuing companies within the *Corporate Law*.
- 2) **Improve fiscal and taxation policies supporting green financing.** Improve interest subsidy mechanism for green financing, and develop measures for non-taxation revenue to support green financing. Coordinate overall financing demand of environmental protection, and establish a special environmental fund sourced from the central fiscal budget. Exempt corporate income tax on interest revenue for organization investors that purchase green financing bonds.
- 3) **Rationalize pricing and charging mechanisms for green industries.** Promote a



reasonable rate of return for green industries, and establish supply mechanisms guiding social capital investment in green industries. Build necessary infrastructure such as environmental risk assessment standards and procedures, green financing database, green rating system and green investment network, etc., and promote innovation of green financing products and development of a green financing market.

**(3) Clarify the key reform tasks for green financing during the 13th FYP period and promote breakthroughs in priority sectors.**

- 1) **Establish green banks.** Establish professional green financing units inside existing banks, develop green financing targets, incorporate green financing into the evaluation of banks, and strengthen the capacity for implementing environmental risk assessment. Encourage international and private capital sources to participate in the establishment of private green banks.
- 2) **Develop green bonds.** Issue green bond directives by regulatory departments. Establish environmental performance evaluation system for green bonds.
- 3) **Establish green funds.** Encourage the establishment of diversified green funds to accommodate demands of different types of green projects. Speed up the establishment of a green fund system to support PPP projects.
- 4) **Establish risk sharing institutions for green financing.** Speed up the adoption of mandatory environmental liability insurance; promote the establishment of green guarantee funds or companies.
- 5) **Include green financing in the G20 summit initiatives in 2016.** Enhance green financing international cooperation, and promote the leading role of China in global green financing, and encourage the newly established multinational financial institutions to support green financing.
- 6) **Accelerate the start of green financing reform pilot initiatives.** Develop incentive policies to guide investment into green industries, and promote nationwide implementation of green financing to accelerate green transformation of China's economy.

**4. Establish New Models of Legislation and Enforcement to Support Ecological Civilization**

Sound environmental laws and smooth implementation are the fundamental guarantee for ecological civilization construction. There are problems of sectoral silos, fragmentation and overlapping in the ecological civilization related legislation and policy systems. There is more emphasis on administrative regulation, less on market roles and social governance. Coordination among laws and regulations must be further improved. Ecological civilization concepts, principles and mechanisms are yet to be established within the current laws such as civil, commercial, economic and administrative laws. Some 'external' (e.g., some sectoral laws) are not harmonized with existing environmental laws, which creates conflicts and compromises effectiveness. There is a lack of laws in some key areas for ecological civilization, for example, there is no complete property rights law system and civil liability law system for natural resources and environment. Due to organizational system problems, it is difficult to establish a well-coordinated and effective environmental regulation system.

In this regard, CCICED recommends:

**(1) Explore a new model of environmental legislation and improve the legal system for ecological civilization.**

- 1) Clarify the connotations and extension of the environment concept, as well as its attributes as public goods or public commons in the constitution and laws. Consider ‘no deterioration of environment’ as a key legal principle to ensure that external laws do no harm to the environment. It is recommended that relevant departments should organize the drafting of an *Environmental Code*.
- 2) Revise the existing *Environmental Impact Assessment Law*, expand its application scope, and improve the assessment contents and procedures to become an integrated assessment system. Establish a responsibility system for project proponents, environmental impact assessment consultants and regulatory departments, and strengthen the legal accountability system for violations.
- 3) Develop an *Environmental Liability Law*, which includes detailed provisions for ecological damage compensation and remediation, presumption of cause and effect, investigation of epidemic causality, environmental damage evaluation, liability insurance and fund system, and dispute resolution.
- 4) Develop *Environment Standard Law* and *Pollution Emission Permit Law*. Improve development procedures for standard formulation and enhance legal authority of environmental standards with quality improvement as core objective. Incorporate key indicators of environmental quality standards and emission standards directly into the laws, and develop an *Environment Standard Law*; integrate relevant systems of pollution permit, “Three Simultaneousness”, pollution emission declaration, total emission control, environmental facility supervision and management of pollution discharge outlet, and develop a *Pollution Emission Permit Law*.

**(2) Strengthen law enforcement system and capacity to improve effectiveness.**

- 1) Strengthen judicial capacity of *ad judicial* authority. Use legislation and administrative reform to achieve reasonable vertical and horizontal allocation of responsibilities among government departments and better matching among authority, responsibility and capacity. The State Council should take a leading role in screening the functions of all departments involved in green transformation, make reasonable allocation of responsibilities among various departments and levels of government based on management demand. Gradually adjust administrative resources among existing departments to achieve sound matching of authority, responsibility and capacity.
- 2) Make the environmental regulation system more orderly and effective, ensure independent environmental enforcement by environmental departments and other departments with environmental supervision responsibilities, and prevent undue interference of local governments. Optimize the environmental management system. Establish an inventory of powers and responsibilities that have impacts on environment. Establish the legal basis for a life-time environmental accountability system. Strengthen capacity building for environmental enforcement.
- 3) Speed up the development of implementation plans for the provision of “equal responsibilities of party and government leaders, dual responsibilities (both party

and government responsibilities) for one position and accountability enforcement”, and enhance the implementation mechanisms of environmental laws.

- 4) Give full play to public participation and improve environmental litigation system. Speed up the implementation of environmental public litigation pilots, and ensure transparency of environmental administration. Strengthen the consciousness of all levels of governments to implement environmental laws and ensure the effectiveness.

## **5. Establish Sound and Effective Environmental Risk Decision-making and Management System to Guarantee Environmental Health and Ecological Security**

Currently, China is at a stage where there are frequent environmental accidents and high levels of chronic exposure to pollution. Environmental risk is becoming a significant challenge for socio-economic development and ecological civilization in China. The environmental risk management system is incomplete, and it cannot yet meet the increasing public demands for eco-environmental safety and the needs of national security. Building a robust and complete environmental risk management system is urgently needed to support the transformation towards a risk-control based environmental management model.

In this regard, CCICED recommends:

### **(1) Establish a high-level National Environmental Risk Board.**

- 1) **Establish a National Environmental Risk Management Board.** The Board is to help resolve tradeoffs among multiple risks, and between economic development goals and environmental risk control; and, to coordinate and oversee environmental risk management issues across relevant government departments in an integrated way.
- 2) **Establish environmental risk management goals and strategy with considerations of different time-scales, regions and risk types.** The Board shall conduct national and local assessment on potential environmental risks, establish national and regional environmental risk management priority list, and develop environmental risk management goals and strategies at different levels. Achieve full implementation of whole-process management and priority-based management system for environmental risk by 2025-2030.

### **(2) Incorporate environmental risk into macro-level decision making system to improve overall environmental risk governance level.**

- 1) **Launch an environmental risk assessment and prevention system for major national macro-strategies.** Carry out short-term, middle-term and long-term environmental risk assessments for national macro-strategies such as new-type urbanization, integrated development of the Jing-Jin-Ji area, the “One Belt and One Road” initiative, and the Yangtze River Delta economic zone, to develop preventive risk management strategies and environmental risk prevention and control roadmap.
- 2) **Comprehensively promote normalization of environmental risk management.**

Integrate environmental risk assessment and management into development and implementation of policy, planning and standards in all levels. Promote integration of environmental risk assessment into “Integration of Multiple Plans” (i.e. integration of multiple spatial plans, including economic and social development plans, urban and rural plans, land use plans, and ecological protection plans into one plan), and then identify priority of management areas and risks and develop ecological redlines for environmental risk control.

- 3) **Develop a transparent and effective environmental risk communication system.** Achieve sufficient communications among stakeholders including government, public, enterprises, media and NGOs on hot environmental issues of public concerns, and integrate stakeholders into the process of policy development and assessment for environmental risk management.

### **(3) Improve Legal Framework and Supporting System for Environmental Risk Management, and Strengthen Risk Prevention and Response Capacity**

- 1) **Improve the legal system for environmental risk management.** Reform the current management system of dangerous chemical which involves multiple departments. Clarify the main body of regulations, establish a unified hazard identification and risk assessment system. Develop a *Dangerous Chemicals Safety and Environmental Risk Law* that applies to all dangerous chemicals. Implement life-cycle risk management for chemicals, and enhance complete regulation for priority pollutants in production process. Develop an *Environmental Liability and Compensation Law*, and ensure the establishment and implementation of whole-process management system for environmental risks.
- 2) **Establish a collaborative multi-department environmental emergency response system with practical emergency response plan as core requirement.** Improve the effectiveness of all types of environmental emergency response at all levels. Establish a coordination mechanism with clear responsibilities and information sharing. Optimize regional environmental emergency resource allocations.
- 3) **Clarify and enforce the primary responsibility for environmental risk control on the part of enterprises.** Industrial enterprises need to implement complete responsibility system for environmental risk, establish environment health and safety (EHS) management systems in enterprises, and integrate high quality environmental information disclosure into financial statement for listed companies.
- 4) **Establish and improve a financial system for environmental risk control.** Establish financial measures to promote risk management, such as, pollution liability insurance, environmental risk deposit for high-risk industries, and compensation fund for contaminated site rehabilitation/environmental health.

### **6. Focus on Short-lived Climate Pollutants (SLCPs) and Non-road Mobile Pollution Sources, and Achieve Synergic Control of Air Pollution and Climate Change**

SLCPs and non-road mobile pollution sources have increasingly severe negative impact on air quality, food production, climate change and human health. Controlling short-lived climate pollutants will significantly reduce the rate of temperature-rise and

other climate change effects. Controlling SLCPs and non-road mobile sources have major contribution to air quality improvement. However, this relationship has often been ignored in China's current air pollution control policy frameworks which hindered the progress of air quality improvement. The *Air Pollution Control Action Plan* and the new *Air Pollution Control Law* will strengthen the regulation system for short-lived climate pollutants and non-road mobile pollution sources, enhance the effects of synergic control on air quality improvement and protect environment and health.

In this regard, CCICED recommends:

**(1) Develop and improve policies and regulations system for short-lived climate pollutant and non-road mobile pollution sources**

Improve the short-lived climate pollution emission standard system, and develop emission thresholds based on best practices technology. Develop emission reduction regulations for new and currently in-use engineering machines, agriculture machines and marine vessels to meet by 2020 the targets of emission standards based on international best practices. Implement Euro IV standard for non-road mobile sources in Jing-Jin-Ji, Yangtze River delta and Pearl River delta as early as possible during the 13<sup>th</sup> FYP. Speed up the development of more stringent marine fuels standards, promote the use of lower sulphur-content fuels in domestic ships and ocean-going ships cruising within the emission control zones, and lower the sulphur content to 0.1% as quickly as possible.

**(2) Establish and improve emission reduction management system for short-lived climate pollutants and non-road mobile pollution sources.**

- 1) **Clarify the regulatory bodies and responsibilities of relevant departments.** Integrate the short-lived climate pollutants control targets into air pollution control and climate change target systems. Identify administration authorities and cooperation departments based on different pollutants. Effectively enforce more stringent standards of ship fuel and engines. Further clarify the role of enterprises as primary responsible bodies for control of non-road mobile pollution sources.
- 2) **Establish environmental management model for non-traffic mobile pollution sources with clear responsibility allocation between national and local governments.** Develop an environmental compliance management system for new non-road mobile machines at national level including enterprise information disclosure, consistent production, compliance of in-use machines, environmental recall and environmental labelling etc., and request enterprises to disclose environmental information of their products. Establish environmental management system for existing non-road mobile machines at local level including periodic environmental inspection, random inspection, low emission control zones, upgraded emission control and accelerated phasing-out of non-compliance machines.
- 3) **Enhance emission compliance management, and innovate enforcement mechanism of emission standards.** Establish an emission monitoring and regulatory network for main emission sources of short-lived climate pollutants and major non-road mobile pollution. Develop fuel quality regulation network for non-road mobile sources. Improve environmental regulation for short-lived

climate pollutants and non-road mobile pollution sources. Enhance institutional innovation, and carry out policy research on total emission control of short-lived climate pollutants and non-traffic mobile pollution sources, green top-runner initiative, pollution trade and environmental tax. Put forward application to the International Maritime Organization when appropriate to establish ship emission control zones within coastal exclusive economic zones of China where the world's most stringent air pollution control requirements will be enforced.

**(3) Accelerate the development and implementation of a *National Clean Diesel Engine Action Plan*.**

In line with the national strategy of *Made in China 2025*, accelerate development and implementation of a *National Clean Diesel Engine Action Plan*, and focus on development of special projects for key fields of diesel engines. Speed up the installation of particulate matter filters on vehicles and engines as many and as quick as possible. Introduce a compulsory phase-out mechanism for high emission diesel engines, and use a combined method of financial and market-based approaches to encourage early phase-out of old diesel engines. Speed the construction and use of coastal electricity infrastructure to promote clean energy use of ships.

**(4) Enhance international cooperation on industrial sectoral emission reduction, and strengthen science and technology innovation.**

China should make full use of current multi-lateral international cooperation mechanisms for SLCs in its development of emission reduction strategy. Further strengthen research on synergic effects of short-lived climate pollutants on air pollution and climate change, and strengthen studies on quantitative assessment and analytical methods of co-benefits for multi-pollutant and multi-source emission reductions. Promote self-developed best practices for short-lived climate pollutants and emission control for non-traffic mobile pollution sources. Establish big data monitoring and control decision-making supporting platform for short-lived climate pollutants and non-traffic mobile pollution sources. Improve data disclosure and sharing mechanisms for research and monitoring.

**7. Recognize the Value of Soil Resources, and Strengthen Soil Environment Protection**

Soil is the source of life on Earth, and an indispensable and irreplaceable fundamental resource for national economic and social development. In general, the current situation of soil environment in China is worrying, with deteriorating pollution of soil which has become of most prominent issue in environmental protection. Soil pollution has posed significant threats sustainable economic and social development in China, and thus warrants special attention. In order to protect human health and soil environmental quality, China should start from legislations, focus on key issues of soil environment, develop and improve soil environment standards system, effectively solve current soil issues with most public concerns, and strive to reverse the current passive situation of soil pollution management with a short timeframe.

In this regard, CCICED recommends:

**(1) Identify soil protection as a basic national policy, and strengthen soil environmental protection policies and supporting measures.**

First, develop soil environment protection law, and gradually establish a sound soil environmental legal system. Second, establish a most stringent soil protection legal system to prevent soil quality deterioration and generation of new soil contamination. Third, accelerate the establishment of a supporting policy system for soil environment protection to support the implementation of soil environmental protection works. Fourth, identify basic ideas and clear framework for soil environment protection. Focus on clean soil protection and risk control of contaminated soil, with priority of clean farmland protection. Use differentiated measures to address soil pollution problems happening over different time periods. Fifth, strengthen capacity building for soil pollution management and enforcement of soil protection laws.

**(2) Update concepts of soil protection legislation, change the development of *Soil Pollution Prevention and Control Law* to *Soil Environmental Protection Law*.**

Based on current soil situation in China, the primary objective of soil legislation should be the protection of clean soil (over 80% of total national land area). Therefore, it is recommended that China should change its plan to develop a *Soil Pollution Prevention and Control Law* to the development of a *Soil Environmental Protection Law*. The main contents of such this should include: first, protect clean soil, especially clean farmland soil; second, improve current soil environmental quality and prevent deterioration; third, prevent soil pollution from human activities; fourth, control the environmental risks of contaminated land; fifth, treat and remediate contaminated soil; sixth, re-development of contaminated sites. The key focuses should be the protection of clean soil and control of environmental risks of contaminated soil.

**(3) Develop and improve a soil environmental standards system, and strengthen soil environmental regulatory capacity.**

Soil environmental standards system is an important foundation for soil protection and management works. Strengthening or improving soil pollution management requires a set of complete and scientific environmental standards. Follow the principle of considering national context, meeting demand, prioritizing objectives and keeping improvement, China shall establish a soil environmental standard system including soil environmental quality standard for farmland, guideline standard for soil pollution risk screening for construction land, regional soil baseline standard, and technical standards for soil investigation, monitoring, assessment and remediation, as well as basic soil environment standards. Soil environmental standards should include both national and local standards. Solidify the status and role of soil environmental standards in soil environmental legislation.

**(4) Establish special liability mechanisms to address legacy issues of soil contamination and effectively minimize environmental risks of contaminated soil.**

China should establish a special liability mechanism and funding mechanism to address the legacy issues of soil contamination. First, establish an explicit responsibility system, clarify the responsible bodies for the legacy contaminated sites, and define responsibilities of pollution treatment or remediation. Second, establish

special funds to ensure the remediation of historical contaminated sites. Third, organize investigation, assessments and classifications of historical contaminated sites by national and local governments.

**(5) Improve incentive mechanism for soil environmental protection and establish a multi-stakeholder governance model including government, enterprise and public.**

Develop re-development and utilization plans for contaminated sites at both national and local levels. Formulate basic process for re-development of contaminated sites, which include four steps, i.e. development plan, site investigation, remediation and development. All stakeholders involved in re-development such as governments, developers, site owners, consulting and service entities, financial institutions and insurance companies, shall bear their own responsibilities accordingly. Implement the policy of “Who invests, who gets benefit; who remediates, who have the priority for utilization” to encourage enterprises and social capital engage in site remediation. Establish a “Soil Bank”, and provide support and reward to those enterprises, institutes and individuals who protect and save the use of clean soil. Encourage and support scientific research, technology development and application of soil protection and pollution control and remediation.

Establish pilot areas for pollution control technology integration in key regions. Provide subsidies to enterprises producing organic fertilizer, slow-releasing fertilizer and low toxicity but effective pesticides, biological pesticides and fertilizers. Conduct periodic technical training to guide the use of pesticides, fertilizers and plastic film. Establish transparent soil information system, improve public participation mechanism, push enterprises to fulfill soil remediation obligations, and guarantee the rights of organizations and individuals in violation reporting and litigation.