



**China Council for International Cooperation on Environment and  
Development (CCICED)**

**Chinese Environmental Audit System for  
the Government**

**CCICED Special Policy Study Report**

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## Special Policy Study Members

### *Co-chairs\*:*

- **WANG Jinnan**, Vice President, Chief Engineer, Professor, Chinese Academy for Environmental Planning; Chinese Co-chair of the Special Policy Study
- **Scott VAUGHAN**, President, International Institute for Sustainable Development; International Co-chair of the Special Policy Study

### *Special Policy Study Members\*:*

- **JIANG Hongqiang**, Senior Fellow, Chinese Academy for Environmental Planning
- **CHEN Jixiang**, Secretary-General of Environmental Audit Professional Committee, China Auditing Society
- **ZENG Xiangang**, Professor, Renmin University of China
- **Robert SMITH**, Associate, International Institute for Sustainable Development and Principal, Midsummer Analytics
- **Jan BAKKES**, Senior Project Leader, Netherlands Environmental Assessment Agency (PBL) and Vice-President of TIAS
- **Glenn-Marie LANGE**, Senior Economist, World Bank

### *Research Support Team:*

- **ZHAO Xuetao**, Associate Fellow, Chinese Academy for Environmental Planning
- **ZHANG Zhansheng**, Associate Fellow, Chinese Academy for Environmental Planning
- **ZHANG Wei**, Research Assistant, Chinese Academy for Environmental Planning
- **YANG Weishan**, Research Assistant, Chinese Academy for Environmental Planning
- **LU Yaling**, Research Assistant, Chinese Academy for Environmental Planning
- **SHAO Yunfan**, Member of Environmental Audit Professional Committee, China Auditing Society
- **WU Wenjun**, Research Assistant, Chinese Academy for Environmental Planning

### *Advisory Group :*

- **ZHAO Hualin**, Director General, Department of Planning and Finance, Ministry of Environmental Protection; Consultant of the Program
- **MI Jintao**, Division Director, Department of Planning and Finance, Ministry of Environmental Protection

***Coordinators:***

- **WANG Peishen**, Former Senior Environmental Expert, World Bank
- **ZHANG Jing**, Research Assistant, Doctor, Chinese Academy for Environmental Planning

*\* Co-Chairs and Special Policy Study Members serve in their personal capacities.*

## Summary of Key Findings

- **Serious environmental problems and the need for environmental performance audits of government officials require the improvement of China’s environmental audit systems**

With rapid industrialization and urbanization, the “resources and environment for growth” model in China has led to increasing inconsistencies between economic and social development and environmental protection. As an issue of national concern, environmental protection has become a policy focus for the Communist Party of China (CPC) and the national government. In spite of this, the country continues to face serious environmental challenges; excessive pollution, high levels of smog in many cities, contamination of surface and groundwater and soil degradation are just some of the challenges faced.

Strengthening the government’s environmental audit systems must be part of the solution to China’s increasingly serious environmental problems. The government and its senior officials play crucial roles in the implementation of environmental and economic policies. Improved environmental audit systems are required to review the environmental performance of senior officials and hold them accountable for performing their environmental protection duties responsibly and fully.

China already has an established economic accountability audit system for senior officials and has been actively making efforts in standardizing its systems for natural resource and environment audits. In July 2014, the *Implementation Guidelines for Regulation of Economic Accountability Audit on Leading Officials of Party, Government and State-owned Enterprises* was jointly issued by several key agencies of the Chinese government.<sup>1</sup> According to these guidelines, the economic accountability auditing of China’s senior officials should include, in addition to the quality and sustainability of economic and social development, auditing of officials’ performance with respect to environmental protection, natural resource management and improvement of people’s livelihood.

- **There is a significant gap in the scope and methods of environmental auditing methods between China and other countries**

Canada, the Netherlands, the United States, India, Brazil, Japan and South Korea, among others, have made important progress in supporting the effective implementation of national environmental policies through independent national and sub-national environmental audit systems of various forms.

The experience of these countries demonstrates that audit institutions at each level of the Chinese government should conduct audits of environmental funding, policy design and implementation, and policy and project management through their audit systems. Moreover, these systems must more fully reflect the characteristics of proper

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<sup>1</sup> The Chinese National Audit Office, the Central Commission for Discipline Inspection of the CPC, the CPC Official Management Department, the CPC Organization Staffing Management Office, the Ministry of Administrative Supervision, the Ministry of Human Resources and Social Security, and State-owned Assets Management Commission.

environmental audits as laid out by the International Organization of Supreme Audit Institutions (INTOSAI).<sup>2</sup> These characteristics include standards and methods for collecting evidence and ensuring objectivity and independence.

With the recently issued guidelines on economic accountability audit (see above), the system of economic accountability audits that is widely applied in China now highlights the need for protection of natural resources and environment. In spite of this positive development, there remain problems in the practice of environmental auditing in China. Challenges include inadequate training and knowledge of audit team members; narrow audit scopes; the absence of appropriate audit standards and procedures; weak audit institutions and others.

There are therefore large gaps in environmental audit systems between China and other countries, both in terms of the content of audits and the methods they employ. In the future, China must attach greater importance to its environmental audit systems. Improvements required include a greater emphasis on auditing the implementation of environmental policies (with the aim of improving the policies over time); the adoption of international standards for performance audits as the basis for environmental audit; improved documentation of environmental audit methods and procedures; and increased cooperation between the agencies involved in the environmental audit systems.

- **The need to improve Chinese environmental auditing is recognized but better cooperation is required to achieve this**

There is widespread consensus in Chinese society that there is greater need to focus on environmental performance in the evaluation of senior officials of government. Though the government has carried out pilot environmental performance audits of officials at various levels, there remains much to be learned; for example, the environmental knowledge of audit professionals is uneven. Additionally, a set of implementation guidelines for environmental auditing that is flexible enough to be adapted to different needs does not yet exist.

Cooperation between the agencies involved in China's audit systems is weak at the moment. Better cooperation is required both to enhance the independence of audit institutions and also to deal with the practical difficulties faced by the current audit systems. The various government agencies responsible for natural resource management and environmental protection could do much to increase their efforts to support the activities of audit institutions, while respecting the need for full independence of these institutions.

- **The Chinese government does not have a plan for strengthening its audit systems**

Though there is recognition that the Chinese government, through its audit institutions, must be more active in carrying out environmental audits, there is no national plan at the moment to accomplish this. Such a plan is needed to demonstrate how the

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<sup>2</sup> These guidelines can be found at <http://www.intosai.org/issai-executive-summaries/view/article/issai-3000-implementation-guidelines-for-performance-auditingstandards-and-guidelines-for-perf.html>.

government will establish both a solid theoretical foundation for environmental auditing as well as the strong technical support necessary to carry out effective audits.

In any plan that might be established, environmental audit activities should be expanded on a step-by-step basis, starting with pilot audits. The experience gained from the pilot audits could then be used to improve audit methods and procedures on a nation-wide basis.

It is also essential that environmental audit systems be brought into alignment with the new guidelines on economic accountability audit. This would require establishing and improving the legal basis, frameworks and technical guidelines for environmental auditing.

The scope of environmental auditing, which is uncertain at the moment, requires clarifying as part of any plan. In addition to compliance and financial auditing, environmental auditing in China should also include environmental performance auditing if the country is to align with international best practices as set out by INTOSAI.<sup>3</sup> Looked at from the perspective of environmental issues, audits typically cover issues related to water, the atmosphere, solid waste, soil, natural resources and sustainable development. This is not the case currently in China, where the scope of environmental audit is limited to financial audits of funds used for environmental protection and some aspects of compliance with environmental laws, policies and regulations. The following existing national action plans could provide a path toward strengthening China's environmental audit systems: the *National Action Plan for Atmospheric Pollution Prevention*; the *National Action Plan for Water Pollution Prevention* and the *National Action Plan for Soil Pollution Prevention*.

A plan for strengthening environmental audit systems should also help direct efforts to improve audit methods and processes and the independence of China's audit institutions, both which are in need of enhancement. The key CPC and government leaders at different levels who will be the objects of environmental audits are not clearly identified today. Nor is it clear that audit reporting is adequate or that the necessary measures are in place to ensure that audit results are acted upon. It would be appropriate that all this be carried out under the guidance of the CNAO, which would be responsible for implementing any enhancements to the audit systems.

Once the above improvements are implemented, it would be sensible as a final step to place the CNAO and related audit institutions under the responsibility of the National People's Congress. Such a move could do much to ensure the independence of China's audit institutions and, therefore, to ensure that environmental protection and natural resource management audits lead to real improvements in the quality of China's environment.

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<sup>3</sup> The INTOSAI financial audit guidelines can be found at <http://www.intosai.org/issai-executive-summaries/view/article/issai-1000-general-introduction-to-the-intosai-financial-audit-guidelines.html> and the compliance audit guidelines can be found at <http://www.intosai.org/issai-executive-summaries/view/article/issai-4000-compliance-audit-guidelines-general-introduction.html>.

## Summary of Main Policy Recommendations

In the 30 years since reform and opening up, China has achieved remarkable economic progress. However, some governments and officials, including local officials, have narrowly pursued the growth of GDP and overlooked the protection of resources and the environment, which has resulted in a significant conflict between economic development and environmental protection. Improvement of government environmental audit systems is a key institutional innovation that will advance China's creation of an "ecological civilization"<sup>4</sup> and will be of great importance in implementing scientific development and the decisions of the 3<sup>rd</sup> Plenum of 18<sup>th</sup> CPC aimed at guaranteeing the health of national economy, society and environment.

As understood for the purposes of this report, environment auditing in China includes both environmental audit of government programs as well as environmental accountability audit of senior officials after leaving their posts.

Based on China's current situation and a review of international best practices, the Special Policy Study team proposes the following five priority policy recommendations.

### **Recommendation 1: Establish and improve the legal basis for government environmental audit**

- Revise China's existing *Audit Law* and other relevant auditing guidelines with new provisions that will strengthen existing government environmental audit systems and clarify the subjects, targets and scopes of these systems and ensure their outputs are shared with the public to the fullest extent possible.
- Revise existing environmental protection laws and regulations with new provisions that will strengthen existing environmental audit laws and improve the basis for integrating the findings of environmental audits to improve the implementation of environmental law and decision making.
- Strengthen communication and cooperation between Chinese National Audit Office (CNAO) and State Ministry of Environmental Protection, to jointly issue Guidance on Government Environmental Audit to clarify their approach to mutual cooperation and to strengthening of government environmental audit systems.

### **Recommendation 2: Strengthen government environmental audit capacity**

- Undertake institutional reform of national and local audit institutions to strengthen their capacities to undertake environmental audit and enhance their responsibilities in this regard. Expand and improve the institutional support for

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<sup>4</sup> The notion of an "ecological civilization" is one in which further development of China's economy and society is pursued simultaneously with efforts to protect the ecological systems that are the basis of economic and social activities.

environmental audit systems and their application in decision-making through, for example, the establishment of an Environmental Audit Research Centre.

- Establish an environmental audit professional qualification system to standardize and strengthen the process of managing the professional qualification of auditors. Use this system to expand and strengthen human resource capacity for environmental auditing and establish an expert pool of professional auditors.
- Strengthen and expand environmental audit training and education. Develop and publish relevant training materials and technical guidelines.
- Strengthen capacity in terms of database and information technology. Improve and expand environmental statistics and accounting systems to improve data quality.
- Strengthen understanding of international audit standards and practices and increase international collaboration in audit design and implementation.
- Increase investment in government environmental audit capacity.
- Recognizing the urgent need for reform, in near-term (2 years), undertake strengthening of environmental audit systems with auditing institutions as the lead authority working in cooperation with environmental authorities; in mid-term (3-5 years), consolidate strengthening, with auditing institutions assuming full and independent control of the environmental audit systems; in long-term (beyond 5 years), reform current audit institutions; *i.e.*, establish the CNAO as a body of the National People's Congress in order to assure the full independence of its auditing. Do all that is necessary to ensure that this schedule is met or, ideally, accelerated; for example, begin immediately to educate senior officials about the environmental accountability audit system and its implications for their roles.
- Test other methods of environmental performance assessment to complement formal environmental audits.<sup>5</sup> These methods can be particularly useful in the evaluation of performance related to environmental issues with long time delays; environmental degradation caused by past economic activities; and where inter-regional pollutant flows are responsible for environmental degradation. They are also valuable in assessing the complex situations in which positive and negative influences have to be disentangled in order to present a realistic and fair assessment of performance.

### **Recommendation 3: Improve technical guidelines and standards for government environmental audit systems**

- Develop technical guidelines for different types of government environmental audit systems, in particular audits of government programs and accountability

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<sup>5</sup> It is common for western countries to employ a variety of non-audit methods of assessing environmental performance of governments; for example, state-of-the-environment reporting, periodic environmental conferences of senior government leaders, strategic environmental assessments, corporate environmental sustainability reporting and public assessments by outgoing politicians of their terms in office (see Section 2.1 for further details).

audits of senior officials, drawing wherever possible on international experiences while also considering practices in China.

- Develop:
  - *Government Environmental Audit Standards System*
  - *Technical Guidelines on Environmental Audit of Government Programs (Operational Manual)*
  - *Technical Guidelines on Environmental Accountability Audit of Senior Officials after Leaving their Posts (Operational Manual)*
- Develop:
  - *Environmental Indicator System and Application Methods for Audit of Government Programs*
  - *Environmental Audit Indicator System and Application Methods for Environmental Accountability Audit of Senior Officials after Leaving their Posts*

**Recommendation 4: Strengthen coordination between government environmental audit systems and other environmental evaluation systems**

- Strengthen coordination with other government environmental evaluation systems, including systems designed to provide future outlooks; e.g., environmental performance evaluation; pollution emission reduction targets evaluation; systems as stipulated in new *Environmental Protection Law* such as the environmental status reporting system;<sup>6</sup> accountability systems; environmental information disclosure system; and public consultation system.

**Recommendation 5: Initiate a series of pilot audits to gain experience with strengthened audit systems and gradually promote government environmental audit**

- Implement pilot environmental audits at levels of province, municipality and county governments.
- Conduct special environmental audit pilots for key environmental protection tasks such as air, water and soil pollution control and key natural capital conservation tasks such as forest and fisheries management.
- Develop an agenda of issues related to strengthening of government audit systems requiring additional research and discussion.
- Continue work with CCICED to support gradual strengthening of Chinese environmental audit systems by pursuing this research agenda and by participating in pilot environmental audits.

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<sup>6</sup> Article 27 of the new *Environmental Protection Law* requires governments at or above county level to report annually to the relevant people's congress or standing committee on the state of the local environment and on fulfilment of environmental protection targets.

# **Background and Implementation of the Project**

## **a. Background**

Rapid industrialization and urbanization combined with high rates of economic growth dependant upon massive investment and consumption and an economic performance evaluation system for government officials and political leaders focused on GDP-based targets have led to serious environmental damage due to pollution and natural resource exhaustion in China. Without improvements to the performance evaluation system through a strengthened system of environmental audits, China's environment and natural resources will continue to suffer declines, which will hinder future development.

To address this situation, the 18<sup>th</sup> National Congress of the Communist Party of China (CPC) made the strategic decision to promote the concept of ecological civilization and called for the incorporation of resource consumption, environmental damage and ecological protection into the performance evaluation system of those responsible for China's economic and social development. Further, the 3<sup>rd</sup> Plenary Session of the 18<sup>th</sup> CPC Central Committee drew attention to the need for a better institutional system to promote the concept of an ecological civilization and for strengthened institutional guarantees for environmental protection. It further set out requirement for the preparation of natural resource and environmental asset (natural capital) balance sheets to serve as information sources in conducting environmental performance audits of senior government officials when they leave their posts (either to assume a new post or upon retirement).

Environmental auditing is conducted in all countries by independent audit institutions (national audit offices, internal audit departments and certified public accountants). It is based on the principle of sustainable social and economic development and its goal is to verify the effectiveness and legality of governmental activities as they relate to the environment and natural resources. The use of environmental audit helps ensure effective management of the environmental and natural resources by audited entities according to the principles of sustainable development.

In principle, environmental audit in China includes audits of government programs related to the environment as well as the performance evaluation (audit) of senior government and political officials when they are leaving their posts. Today, China's environmental audit systems mainly focus on financial audits of the use of government funds for environmental purposes. Though they make significant contribution to the conservation and effective utilization of natural resources; environment protection; industrial restructuring; efficient allocation of the factors of production and sustainable economic development, these systems nonetheless face challenges. In particular, the following can be mentioned: an inadequate legal basis to support environmental audit objectives; inconsistent criteria for measuring environmental performance; narrow audit scope; limited awareness of environmental audit goals among the government and public; inadequately trained audit personnel and a lack of international cooperation. At the same time, carrying out government environmental audits sends an important signal that oversight function of audit is being used to promote sustainable development. Such oversight is an unavoidable requirement given the current situation with respect to environmental quality in China.

In line with China's overall scientific approach to development and the spirit of 18<sup>th</sup> CPC National Congress and the 3<sup>rd</sup> Plenary Session of the 18<sup>th</sup> CPC Central Committee to improve China's environmental performance evaluation system and promote effective environmental audit systems, the China Council for International Cooperation on Environment and Development (CCICED) organized a Special Policy Study (SPS) to consider these issues. The SPS team comprised both Chinese and international experts, with the Chinese Academy for Environmental Planning (CAEP) providing Chinese leadership with support from the Chinese National Audit Office and Renmin University of China.

## **b. Implementation of the policy research project**

With expert input from the members of the CCICED SPS team, the objectives of the project were as follows.

- Compare Chinese and international foreign environmental audit system to draw lessons from both China and abroad, bearing in mind the conditions of China and its goals with respect to the creation of an ecological civilization.
- Identify the essential elements and framework needed for China's environmental audit systems, establish the indicator system and methodology for environmental audits and prepare a roadmap for implementing improved environmental audit methods and procedures.
- Provide policy suggestions regarding environmental audit systems for inclusion in the 13<sup>th</sup> Chinese Five-year Plan and major environmental protection planning shall be made so as to promote the development of ecological civilization.

To accomplish these objectives, the study covered four separate sets of outputs.

Firstly, international theories, methods and practices in environmental auditing were studied and drawn upon, focusing on those in the United States, the Netherlands, Canada, Sweden, India, Brazil and Japan. In addition, the guidelines of the Working Group on Environmental Accounting of the International Organization of Supreme Audit Institutes (INTOSAI WGEA) were reviewed. Chinese methods and practice were also summarized in order to compare them with international practice related to the scope, content, methods, standards and processes of environmental auditing.

Secondly, drawing upon the lessons learned from international practice, a proposed framework for environmental auditing in China has been developed. The framework covers the following.

- The definition, classification, scope, object and features of environmental auditing.
- Essential elements of environmental audit systems, such as their legal basis, goals, principles and methods.
- Scope of environmental audits, including environmental regulations and standards; project planning and implementation; environmental performance; use of funds for environmental protection; pollution emissions; environmental quality; ecological preservation and natural resource management.

- The basic methods and processes used in environmental auditing.
- The results and application of environmental audits.
- The organization and implementation of audit systems, including the roles and responsibility of officials.

Thirdly, an indicator system for the environmental audit systems has been considered,<sup>7</sup> including the following.

- The principles for selecting and developing environmental audit indicators.
- The development of the environmental audit indicator system with consideration given to the measurement of environmental policies, performance, funding, emissions, quality, etc.
- The application of the environmental audit indicator system, including interpretation of the indicators, calculation methods, documentation of quality issues, data sources, evaluation methods, evaluation standards and methods for collection of evidence.

Finally, on the basis of the above activities, a roadmap for the Chinese government to improve its environmental audit systems in the future has been put forward. It covers the guidelines, basic principles and concepts, goals, implementation schedule (including pilot audits) and policy recommendations required to realize the goal of improved audit systems.

Overall, the study's goal has been to promote improved environmental audit systems in China as part of the country's efforts to create an ecological civilization and to increase accountability of government and political officials in the field of environmental protection.

Over the course of the study (March to October 2014), two seminars dealing with Chinese environmental audit systems were held with attendees from the Chinese government departments of environment protection and national audit, research institutes, non-profit organizations and all members of the SPS team. Recommendations for the improvement of environmental audit systems were raised from different angles and at different levels. The team also held several internal working meetings and teleconferences. Through the lessons learned from the review of international experience, the analysis of China's national conditions and the discussion of key policies in China, the final study recommendations reflect the knowledge and experience of both Chinese and international experts.

**Key words:** Government environmental audit; environmental audit of senior officials leaving posts; environmental performance; system; policy

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<sup>7</sup> The work of the SPS team on environmental audit indicators was inconclusive and, therefore, is not covered in detail in this Executive Summary Report. Both sides agreed that further work is required on this topic.

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## **1. BACKGROUND AND PURPOSE**

### **1.1. Significance**

#### ***1.1.1. Serious Deterioration of Environmental Quality in China***

During the 35 years since China's economic reform and opening up policy was initiated, China has experienced very high levels of economic growth, on the order of 10% per year. This continuous growth has moved the country to second place in the global ranking of economies. However, this rapid industrialization and urbanization, combined with high rates of economic growth dependant upon massive investment and consumption and an economic performance evaluation system for government officials and political leaders focused on GDP-based targets, has led to serious environmental damage due to pollution and natural resource exhaustion in China.

High levels of urban smog, contamination of surface and groundwater, soil contamination and other issues have aroused significant public concern and criticism, leading to an increasing number of mass demonstrations. China's record on environmental protection has also become a target of criticism from the international community.

#### ***1.1.2. Management Difficulties of the Chinese Government***

As an issue of national concern, environmental protection has been become a policy focus for the Communist Party of China (CPC) and the national government. In the past, principles such as sustainable development and the scientific outlook on development were proposed as means to deal with the issues. These have been more recently superseded by the "five in one" strategy for the building of ecological civilization put forth during the 18<sup>th</sup> CPC National Congress. A relatively complete system of environmental policies and regulations has been established and the former State Environmental Protection Agency has been elevated to the Ministry of Environmental Protection to enhance overall planning and coordination for environmental protection. In spite of this progress, the policies, regulations and laws formulated by central government are not well enforced and the country is left with a serious environmental situation.

One important reasons for this is that regional development led by local governments is not easily regulated, controlled or redirected by the central government on a comprehensive, scientific, timely and objective basis. Quite a number of local governments, especially those at the city and county levels, retain a narrow focus on economic development while ignoring the need for environmental protection. Some governments even intervene in normal environmental management efforts and provide undue protection to polluting industries or enterprises. Serious problems can be found in local departments of environmental protection, including false information and statements and weak law enforcement.

This situation can be explained by the following factors. First, GDP growth is still the main indicator used in the performance evaluation systems used by local governments. Secondly, local governments benefit in terms of income if their economies are growing. Thirdly, environmental damages are often externalized (that is, those who bear the costs of the damages are different than those responsible for them) and

exhibit path dependence (that is, cannot necessarily be undone by removing the cause of the damage).

Redirecting local governments' pursuit of economic development at the cost of environmental protection requires strong, top-down administrative regulation, control and correction. In the absence of such redirection, China will not have sufficient resources and environmental capacity to support its development in the future. Needed are changes to the incomplete national economic accounting and performance evaluation systems; to environmental auditing and accountability of government departments and patterns of economic growth that can be achieved without high resource consumption and pollution.

### ***1.1.3. The Chinese government needs and wants to promote ecological civilization and institutional innovation***

Establishing an appropriate system and mechanism for environmental performance evaluation of government and political leaders is essential. The current GDP-centred performance evaluation system in China has inspired great initiative and innovation on the part of governments and enterprises at all levels and it plays an important role in stimulating and promoting the acceleration of industrialization and development of the economy. At the same time, China has witnessed serious and astonishingly negative consequences by pursuing rapid economic growth while failing to care sufficiently about environmental and ecological capacity, loss of natural resources and damage of the environment.

As part of the solution to these grave environmental issues, a key goal is to establish an environmental management system administered outside local governments to change the incentives created by the current GDP-centred performance evaluation and restrain local governments' pursuit of development without environmental regard. Instead, local governments must be encouraged to seek local development through management and institutional innovation rather than simple growth.

Since the Eleventh Five-Year-Plan period, the Ministry of Environmental Protection has established and improved a performance evaluation system centring on the reduction of total pollutant emissions. The system assigns environmental targets for governments at all levels and for various sources and types of pollutants. However, the achievement of environmental targets of different governments cannot be promoted on a consistent basis since different assessment methods (such as auditing and accounting of total pollutant emissions and quantitative assessments of improvements in urban environmental quality) are used in different cases and the frequencies of the assessments vary. Besides that, improvement measures carried out after the assessments cannot be effectively monitored and supervised, making sustainable improvement difficult. As a result, the impact and efficiency of environmental protection efforts are diminished.

Since the opening of the 18<sup>th</sup> CPC National Congress, the implementation of improved environmental audit systems has gained a high level of attention as a key means for 1) independent and objective measurement and enforcement of the government's responsibility for environmental quality and 2) establishing a lifetime accountability system for officials who have control over environmental and ecological protection. Introducing natural resource consumption, environmental

damage, ecological benefits and other indicators into the current evaluation system for economic and social development is therefore needed. Establishing a system of targets, assessment methods, incentives and sanction mechanisms according to the requirements of creating an ecological civilization. All these concepts have been proposed during the 18<sup>th</sup> CPC National Congress.

In addition, the 3<sup>rd</sup> Plenary Session of the 18<sup>th</sup> CPC Central Committee has proposed establishing a complete ecological civilization system; implementing environmental audits of senior officials when leaving their posts (either for promotion or on retirement); and establishing a lifetime accountability system concerning environmental and ecological damage.

From this, it is evident that establishing and improving China's environmental audit systems and making it a key environmental protection and management tool of the country has become one of the major tasks for environmental protection today.

#### ***1.1.4. Major Issues for Environmental Audit in China***

Looking at practices in other countries, environmental auditing is commonly adopted as a means of reviewing and improving government environmental performance. Comprehensive systems of methods and processes have been established and operating for many years to support environmental audits.

In China, environmental audit was introduced into conventional financial audit systems starting in the 1980s. Since then, the statutory authorities and duties of government audit institutions for implementing environmental audits have been clearly formulated and the corresponding departments of central, provincial and regional level audit institutions have been established. Environmental audit is today carried out with an increasingly wide scope and rigorous methods and processes.

Good results are being achieved. To promote environmental quality protection and improvement and to help reduce environmental pollution, audit institutions at all levels have launched different environmental audits. Financial audits of forest resource conservation and reforestation projects, audits of sewage discharges and projects to prevent and control water contamination in key river basins, and special audits of energy conservation and emission reduction projects have all been carried out.

However, compared with environmental auditing in other countries, China finds itself still at an exploration stage in terms of both theory and practice, even after more than 20 years of effort. China's environmental auditing today mainly focuses on legal and financial compliance audits and is carried out mainly by the National Audit Office. Environmental performance audits of governments at all levels have not yet been completely carried out. Environmental accountability audits of senior officials after leaving their posts is an area of almost no experience in China, either in theory or practice.

More specifically, the following issues can be mentioned as standing in the way of more effective environmental audit systems in China: an inadequate legal basis to support environmental audit objectives; inconsistent criteria for measuring environmental performance; narrow focus on single issues; limited awareness of

environmental audit goals among the government and public; inadequately trained audit personnel and a lack of international cooperation.

## **1.2. Purpose and Objectives**

Environmental auditing is conducted in all developed countries and a growing number of developing countries (including Brazil, India, South Africa and China) by independent audit institutions (national audit offices, internal audit departments and certified public accountants). China's environmental audit systems are based on the principle of sustainable social and economic development; their goal is to verify the effectiveness and legality of governmental activities as they relate to the environment and natural resources. The use of environmental audit helps ensure effective management of the environmental and natural resources by audited entities according to the principles of sustainable development.

In principle, environmental auditing in China includes audits of government programs related to the environment as well as the performance evaluation (audit) of senior government and political officials when they are leaving their posts. It is legally conducted by the country's formal audit institutions on relevant government departments and their officials to evaluate and assess their compliance with laws and regulations; to monitor their use of public funds; to assess their environmental performance with respect to environmental pollution control, ecological protection, etc. The organization, authentication and reporting of results, and supervision of recommendation implementation of environmental audits shall be carried out by government so as to ensure the legality and scientific basis of audit procedures as well as objective and authoritative audit results. Audit institutions implement environmental audits by employing their full legal prerogatives and special functions. They therefore play a significant and irreplaceable role in promoting and ensuring environmental management.

Environmental auditing in China makes a significant contribution to the conservation and effective utilization of natural resources; environment protection; industrial restructuring; efficient allocation of the factors of production and sustainable economic development. Carrying out government environmental audits sends an important signal that the oversight function of audit is being used to promote sustainable development. Such oversight is an unavoidable requirement given the current situation with respect to environmental quality in China.

Environmental auditing should also play an important role in strengthening the ecological protection responsibilities of senior officials through its proposed role in performance evaluation system for officials who are leaving office. This should help to fundamentally change the GDP-centred development focus that currently dominates in China.

Taking into account national realities and the requirements to create an ecological civilization – and focusing on the 13<sup>th</sup> Five-Year Plan and longer-term development – this report is intended to contribute key recommendations for the development of an institutional framework for environmental auditing in China (both for environmental audit of government programs and for performance evaluation of senior officials when leaving their posts). The report also presents an implementation roadmap for the proposed systems and makes policy recommendations on how environmental auditing

might be incorporated into the 13<sup>th</sup> Five-Year Plan, thereby promoting institutional capacity building for an ecological civilization.

## **2. OVERVIEW OF ENVIRONMENTAL AUDITS AT HOME AND ABROAD**

### **2.1. International Experience**

Environmental auditing began in the late 1960s and 1970s, when national audit offices in some Western countries began to examine the effectiveness of government policies related to natural resources such as forests, water, agriculture and fisheries. For example, the United States Government Accountability Office conducted an audit for a water pollution abatement project in 1969. Other western countries, such as Canada, also began to implement environmental auditing.

Around this time, some private businesses in the West also embarked on environmental audits out of need to address concerns arising from rapidly growing economies and the emerging understanding of the need for environmental sustainability. They made use of environmental consultants to conduct the audits and the results were used by senior managers to improve environmental performance and reduce raw material consumption.

It was during the 1980s that environmental auditing truly emerged as its own discipline and gained a significant role as a macro management tool. It expanded to address a broader series of government actions related to pollution abatement, freshwater management, biodiversity, regulatory design and enforcement, and adherence to international environmental agreements.

Environmental audit has since become an important tool in formulating and implementing environmental policies. During the last two decades, there has been particularly rapid development of the discipline. The United Nations Conference on Environment and Development, held in Rio de Janeiro in 1992 was a collective global response to environment and development problems. Agenda 21, the outcome document adopted during the conference, pointed out that environmental problems would become the main challenge faced by human beings in the 21<sup>st</sup> century and called for focused attention of all countries on environmental issues.

During the 14<sup>th</sup> congress of the INTOSAI, held in the United States in 1992, the membership expressed a strong interest in assisting national audit institutions to deal more effectively with the issues related to environmental auditing. The formation of a Working Group on Environmental Auditing (WGEA) was therefore initiated and approved at the Washington congress. The WGEA aims to improve the use of national audit mandates and instruments to promote effective environmental protection policies.

The 15<sup>th</sup> congress of the INTOSAI, held in Egypt in 1995, again considered environmental auditing in depth and resulted in the *Cairo Declaration*:

“international auditing organizations [should] advocate that all supreme auditing institutions take environmental problems into consideration while

exercising their auditing responsibilities in view of the importance of protecting and improving environment”.

It was further decided during the 16th congress of the INTOSAI (held in Uruguay in 1998) to establish regional working groups of the WGEA. The support thus given to environmental auditing greatly promoted its development.

At present, national environmental auditing is carried out in most countries. According to the INTOSAI, national audit institutions have undertaken more than 2,000 environmental audits since the late 1990s. Canada, the Netherlands, the United States, Norway, India, Brazil, Japan and South Korea, in particular, have carried out a wide range environmental, conservation and sustainable development audits focusing on the use of fiscal instruments, procurement, environmental quality monitoring, sustainable fisheries and other topics. These efforts have been effective in helping promote the implementation of national environmental policies.

For example, audits conducted in Canada by the Office of the Commissioner of the Environment and Sustainable Development discovered, among others, the following shortcomings.

- The Canadian Coast Guard had weak command and control coordination to respond to major oil spills from tankers, which led to a two-year program to improve the central command structure.
- Canada’s liability limits for offshore oil platforms were significantly below world levels, which led to the federal government introducing legislation to increase the limit to \$1 billion.
- Inspections of energy pipelines by the National Energy Board were inadequate to understand risks, which led to \$14 million budget increase.

In addition to the work of national audit institutions, other methods of assessing governments’ environmental performance are commonly used in western countries; for example:

- policy assessment through state of the environment reporting (e.g., 2012 PBL Assessment of the Netherlands);
- periodic meetings of senior government officials (e.g., the indicator-based *European Semester*);
- strategic environmental assessments;
- corporate social responsibility reporting (e.g., the *Global Reporting Initiative*).

All of these methods are annual or biennial and all require substantial but not enormous quantities of human and financial resources. All synthesize many types of information and make use of indicators along with other forms of evidence to assess performance. None addresses the performance of individual leaders; rather, they focus on institutional performance. Experience with them suggests that they work best when a separate scoping phase is conducted by an independent agency to formally determine the scope and targets of the assessment. The use of “traffic lights” (red, yellow, green icons) to summarize and compare the state of complex situations in a

visually appealing and simple manner has been shown to be effective (*e.g.*, by the OECD).

In the Netherlands, for example, the state-of-the-environment (SOE) reporting conducted by the national environmental assessment agency (PBL) is used as a tool to assess the effectiveness of Dutch environmental policy. PBL's independent SOE reports are used as a basis for parliamentary debate and a chance for government to explain its performance record. The reports address questions of ambient environmental quality, natural resources, policies and trends. They are based on statistics, models and political science and are complemented by statistical data compendia and future outlooks.

Another example is the so-called *European Semester*, which is an annual spring meeting of European heads of state. There is extensive preparation for these events, which make use of indicators as the basis of assessment. There is sectoral/country-oriented coordination of opinions. Formal milestones are set and regulations put in place. A wide range of issues is discussed and countries set self-imposed performance targets. The event is essentially a type of peer review that fits well in the specific style of governance unique to the European Union. The process is carefully structured in terms of governance mix, with distinctions made between hierarchical/centralist, market-driven and network-based approaches. The semester is currently one of the few ways the European Commission can "take the measure" of national governments in the EU.

Both of these approaches (SOE reporting and the *European Semester*) actually have more influence on policy than do formal audits in Europe, except in the case where audits expose actual wrongdoing.

## **2.2. History and Current Status of Environmental Auditing in China**

Since its foundation in 1983, the Chinese National Audit Office (CNAO) has used environmental audit as an important measure for promoting environmental protection and sustainable development in China. This is consistent with the *Cairo Declaration* (see above).

Today, the statutory authorities and duties of Chinese government audit institutions regarding environmental audit have been clearly formulated and the corresponding departments of the central, provincial and regional audit institutions have largely been established. Environmental audit is now being carried out with an increasingly broad scope and refined processes and good results have been achieved. During the restructuring of the government administration of 1998, the State Council strengthened the basis for environmental audit by approving the restructuring plan of CNAO. This included the establishment of the CNAO's Department of Agriculture, Resources and Environmental Protection Audit and clarified its environmental auditing functions. The 18 regional offices of CNAO along with the audit institutions of China's 31 provinces, autonomous regions and municipalities have all set up departments specializing in environmental audit. CNAO has reinforced its environmental audit functions, increased the number of relevant institutions and departments and carried out a series of audits of natural resources and environment.

In 2013, after a number of years of auditing experience, CNAO's Department of Agriculture, Resources and Environmental Protection Audit clarified its definitions of environmental auditing. It proposed that environmental auditing refer to the auditing of the legitimacy, legality and effectiveness of revenues and expenditures and management activities related to natural resources and environment carried out by governments, relevant authorities and enterprises and institutions engaged in creating an ecological civilization and promoting sustainable development.

### ***2.2.1. Content of Environmental Auditing***

Natural resource audits carried out by audit institutions in China include audits of the development, utilization, and protection of natural resources and of the management of related revenues and expenses. Areas of focus include land resources, mineral resources, energy conservation, water resources and forestry resources.

Environmental auditing mainly includes audits of pollution prevention and control, supervision, protection and improvement of the environment and management of related revenues and expenses. Areas of focus include auditing of water pollution control, air pollution control, solid waste management, heavy metal pollution and pollution reduction.

In general, natural resource and environmental auditing focuses on four issues: 1) management of funds; 2) policy implementation; 3) program management; and 4) project management.

- (1) Audits of the management of funds include those focused on the collection, management, and use of funds, including government financial funds and special funds for natural resources and environment. Their primary focus is the legitimacy, compliance and effectiveness of the management of the funds.
- (2) Audits of the implementation of environmental policies include those focused on the fulfillment of national policies, laws, plans and measures for natural resource management and environmental protection, the achievement of the policy's objectives and the implementation of recommendations resulting from policies.
- (3) Audits of the fulfillment of environmental program responsibilities by government departments include fulfillment of the responsibilities and objectives related to the delivery of public services and management activities related to natural resources and environmental protection as specified in China's laws.
- (4) Project management audits include those focused on the management and operating conditions of major natural resource and environmental projects, as well as the impacts of other major projects on natural resources and the environment.

### ***2.2.2. The Organization of Government Environmental Auditing***

Environmental auditing in China has evolved a specialized organizational approach in which environmental audits are integrated into audits of other sectors/disciplines. Audit institutions began to consider coordination of resource and environmental auditing with other audits following the establishment of the *Environmental Audit Coordination Leading Group* by the CNAO in 2003. Since then, the responsibility for

environmental auditing has shifted from a single audit department within CNAO to all audit departments. Under this integrated approach, all departments are expected to pay attention to natural resource management and environmental protection issues when conducting audits in their specific domains. They must incorporate environmental considerations into their audit plans in accordance with national policies and laws for natural resources and the environment. Such an integrated approach reflects the characteristics of economic and social development in China and the country's special needs for natural resource management and environmental protection.

### ***2.2.3. Environmental Audits of Senior Officials***

In China, a unique audit system focused on the economic accountability of senior officials of the government and the CPC has evolved during the expansion of economic and political reform in the last decades. It is recognized as an innovation of the modern audit system in China. Article 25 of China's *Audit Law* (as revised in February 2006) clarifies the legal basis of such "economic accountability" audits. The CNAO published its opinions on strengthening natural resource and environment auditing in 2009, which specified that "in auditing fiscal, investment, financial, enterprise, foreign investment and economic accountability, audit bodies at each level should incorporate resource and environment into audit plan for implementation" and "economic accountability audits should keep a watchful eye on officials' performance of resource management and eco-environmental protection responsibilities, especially on the accomplishment of goals with respect to energy conservation and emission reduction as well as agricultural land (particularly basic farmland protection), while disclosing resource and environment problems resulting from poor decision-making, improper performance of duties and poor management".

In line with the spirit of these statements and to strengthen the laws, regulations, methods and scientific development of economic accountability audit, the General Office of the CPC Central Committee and the General Office of the State Council issued *Regulations on Economic Accountability Audit for Leading Cadres of the Party and Government and Leaders of State-owned Enterprises* in October 2010. These regulations specify that economic accountability audit is to be used to encourage senior officials to contribute to the scientific development of China's regions, departments and units and to pay close attention to the scientific outlook on the development of the economy. In the organization and execution of economic accountability audits, special attention should be paid to the economic, social and ecological benefits generated by major decisions made by senior officials.

The CNAO has clarified how economic accountability auditing is to be used in natural resource and environmental auditing in its audit documentation and institutional standards. In 2012, it proposed *Guidance for Economic Accountability Audit* that stated, "for senior officials of the government, economic accountability audits should be focused mainly on the implementation and effects of policies with respect to...energy conservation, environmental protection...based on an overall review of financial balance scale, structure and performance".

According to the *Implementation Guidelines for Regulation of Economic Accountability Audit on Leading Officials of Party, Government and State-owned*

*Enterprises* jointly issued in July 2014 by several key government agencies<sup>8</sup>, the economic accountability audit of Chinese senior officials should focus on:

“quality, benefits and *sustainability* of economic and social development; economic, social and *environmental benefits* of management and decisions related to senior officials’ economic responsibility; debt borrowing, *natural resource assets management, environmental protection*, improvement of people’s livelihood, technology innovation; and issues for which senior officials shall assume direct responsibilities.” (Italics added)

As the italicized phrases suggest, these guidelines are highly relevant to the management of natural resources and environment in China.

#### **2.2.4. Difficulties in Environmental Auditing Faced by the Government**

Progress has been made in natural resource and environmental auditing in China. However, difficulties remain:

- the concepts underlying resource and environmental audits must be further refined
- audit quality and efficiency must be further improved
- audit breadth, depth and effort must be further expanded, and
- the capabilities and knowledge of audit personnel must be further improved

These issues are taken up further below.

##### **(1) Weak theory and incomplete standards**

Though progress has been made in establishing the theory and standards for natural resource and environmental auditing in recent years, some basic questions remain unsolved. For instance, the fundamental definitions of resource and environmental auditing remain uncertain and the relationship between natural resource auditing and environmental auditing is not fully clear. These and other issues require further study.

Secondly, complete regulations, standards and evaluation measures have not been established for resource and environmental auditing. This not only leads to inconsistent audit measures and a questionable audit basis but also affects the legitimacy and credibility of audit outcomes and, therefore, their acceptance by audited institutions and individuals.

##### **(2) The Breadth and Depth of Natural Resource and Environmental Auditing Must Be Improved**

Currently, the breadth of natural resource and environmental auditing in China is not sufficient. Audits are largely concentrated on land-transfer fees, water pollution prevention and control projects and investment in forest management. Many other

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<sup>8</sup> The CNAO, the Central Commission for Discipline Inspection of the CPC, the CPC Official Management Department, the CPC Organization Staffing Management Office, the Ministry of Administrative Supervision, the Ministry of Human Resources and Social Security and the State-owned Assets Management Commission.

important domains remain uncovered. Few audits have been conducted in relation to mineral resources, air pollution, nuclear waste, non-point source pollution from agriculture, ecological protection or biological diversity.

Similarly, the depth of resource and environmental auditing is not sufficient. The majority of audits are focused on the legitimacy and legality of the collection, management and use of funds related to natural resource management and environmental protection projects. Few audits are focused on the performance of such projects.

### **(3) Natural Resource and Environmental Audit Teams Must Be Strengthened**

Generally, the availability of audit professionals trained in natural resource and environmental auditing does not correspond to the importance of natural resources and the environment in economic and social development. Natural resource and environmental auditing not only requires audit personnel to have solid training in financial auditing but also to have professional knowledge of natural resource management and environmental protection and to be familiar with environmental polices, laws and technical/operational standards. These special requirements related to natural resource and environmental knowledge mean that qualified personnel for resource and environmental auditing are urgently required in China.

## **3. DESIGNING AND IMPLEMENTING STRENGTHENED ENVIRONMENTAL AUDITING SYSTEMS IN CHINA**

This chapter discusses the design and implementation of strengthened government environmental auditing systems in China. The purpose is to lay out the basis necessary for China to create systems that:

- are focused on the appropriate measures (financial management; compliance and performance) and targets (government programs and senior officials)
- have a strong legal basis, and
- are implemented by objective and independent auditing institutes.

### **3.1. Objective and Basis of Environmental Auditing**

#### ***3.1.1. Objective of Environmental Auditing***

Governments at all levels have the responsibility to protect the quality of the environment and to comply with environmental policies and laws. The purpose of environmental auditing is to provide objective and independent information on the performance of government's and their officials in meeting these responsibilities. The objective is improved government actions and environmental decision-making and, ultimately, improved environmental quality and sustainability.

#### ***3.1.2. The Basis for Environmental Auditing***

Environmental auditing rests on three pillars: laws and regulations, institutions and processes.

- Clear, sound and comprehensive laws and regulations are essential for ensuring that environmental audits are legitimate and that their results have credibility.
- Auditing institutions must be (and be seen to be) independent of the institutions and individuals that are the targets of their audits; must be staffed by properly trained professional audit staff; and must be mandated to undertake audits across the full scope of relevant issues.
- Finally, audits must be based on clear, sound and comprehensive processes, including principals, ethics, guidelines, procedures, methods and indicators.

Currently, there is insufficient basis for implementing environmental auditing in China. Laws and regulations are not adequate. Auditing institutions require further strengthening to ensure their independence, equip them with strong audit teams and permit them to broaden their audit scopes. Audit processes are not clear enough to ensure high quality audit results.

## **3.2. Audit Institutions and Their Targets**

### **3.2.1. Audit Institutions**

Audit institutions are responsible for the quality and effectiveness of environmental audits. Their success depends in the first instance on their independence from the targets of their audits. In the case of government environmental audit, this means audit institutions must be independent of the government departments and the officials they are charged with auditing. Only such independence can ensure the objectivity and credibility of audit outcomes and, therefore, the effectiveness of the audit outcomes.

In China, there is need to strengthen the independence of audit institutions. Four possibilities for doing so are given below. Table 3-1 discusses the advantages and disadvantages of each.

- **Option 1 (status quo)** - Environmental auditing falls under the responsibility of audit institutions at the central, provincial and regional levels. These institutes are agencies within their respective governments.
- **Option 2** - Environmental auditing falls under the responsibility of the People's Congress. Under this option, audit institutes at the central, provincial and regional levels are mandated by and accountable to their respective People's Congress, which provides supervision for the audit systems.
- **Option 3** - Environmental auditing falls under the responsibility of environmental protection agencies at the central, regional and local levels.
- **Option 4** - Environmental auditing is a joint responsibility of environmental protection agencies and auditing institutions at the central, provincial and regional levels. Auditing institutions are specifically responsible for audit management, planning, implementation and publication. Environmental protection agencies are responsible for technical matters, drafting of auditing reports and implementing auditing recommendations.

**Table 3-1 Comparison of Institutional Options**

<b>Responsible body</b>	<b>Independence</b>	<b>Feasibility and Cost</b>
<b>Audit institutions</b>	Independence of audit processes and outcomes is, in principle, assured but, as agencies of the government, the institutions are possibly subject to government influence.	Audit institutions suffer from a number of shortcomings that limit their ability to effectively carry out environmental audits; in particular, lack of professional audit staff with environmental knowledge. The cost of institutional transition is high.
<b>People’s Congress</b>	Since audit institutions are accountable to the People’s Congress, full independence of the audit systems from government agencies and officials is assured, greatly reducing the possibility of government interference in audit processes and outcomes.	Lack of environmental auditing expertise within the People’s Congress would limit its ability to hold audit institutions accountable for their work. The cost of the institutional transition from the current situation is high.
<b>Environmental protection agencies</b>	The independence of audit processes and outcomes is not assured because the same agencies that will be the targets of the audits will also be responsible for them. High likelihood of influence of the outcomes by government.	Audit teams will benefit from the environmental knowledge of staff in the environmental protection agencies. The cost of institutional transition is low.
<b>Audit institutions and environmental protection authorities jointly</b>	Independence of audit processes and outcomes is, in principle, assured by the independence of the audit institutions, though the involvement of the environmental protection agencies greatly increases the likelihood of government influence.	Audit teams will benefit from the environmental knowledge of staff in the environmental protection agencies. The cost of institutional transition is low.

Each of the four options has advantages and disadvantages. From the point of view of audit processes, the joint responsibility option (#4) scenario is attractive because it offers the opportunity to limit government interference and also secure the expertise of staff knowledgeable in environmental issues to take part in audit teams. It also offers low transition costs. It brings an increased risk of government influence, however, due to the direct involvement of environmental protection agencies in audit processes.

From the perspective of China’s long-term socio-economic development, the option of making audit institutions accountable to the People’s Congress is particularly attractive, as it offers the surest protection of audit processes and outcomes from government influence. The relatively high transition costs of this option mean that it cannot be adopted in the short term however. For now, the status quo, in which audit institutions accountable to the government are – with appropriate strengthening – responsible for environmental auditing is the best option to mitigate the distrust between the government and public on environmental matters and reduce the possibilities of social crises. Thus, we recommend strengthening of the status quo in the short term followed by reform of the institutional arrangements in the longer term to make audit institutions accountable to the Peoples’ Congress.

Environmental auditing not only requires knowledge and experience in finance and accounting but, equally importantly, knowledge of environmental issues and the science underlying them. This includes knowledge of ecology, biology, engineering, physics and chemistry in relation to air, water and soil. A set of systems to cultivate and identify professionals with this knowledge to work as environmental auditors is needed in China, since audit institutions currently have few such staff. Consideration should be given to establishing a qualification examination system that could be used to certify the knowledge of environmental auditors

### **3.2.2. Target of Environmental Auditing**

A core principle underlying environmental auditing is the notion that governments, businesses and individuals have responsibilities to protect the environment and that they can be held publicly accountable for the fulfilment of those responsibilities when they have been entrusted with them by the nation. Article 6 of China's newly revised *Environmental Protection Law* clearly defines these responsibilities:

- Governments at all levels are to assume responsibility for the environmental quality of their administrative regions;
- Enterprises, institutions and other producers should prevent and reduce environmental pollution and environmental damage and bear responsibility (in accordance with the law) for any damage they are unable to prevent;
- Citizens should be aware of the need to protect the environment and live in accordance with this need by, for example, adopting low-carbon, sustainable lifestyles.

According to the new *Environmental Protection Law* (Article 26), governments and their officials at all levels may be targets of environmental auditing. Enterprises also may be audit targets (Article 42).

### **3.3. Audit Types**

Environmental auditing includes, in principle, the same three audit types as does government auditing in general: financial auditing, compliance auditing and performance auditing. In terms of its environmental scope, it includes audits focused on water, atmosphere, pollution, natural resources and ecosystems.

Again in principle, there are no significant differences between the conduct of environmental audits and audits in general. Environmental financial audits focus, like all financial audits, on the legality and legitimacy of the management of state funds devoted to natural resource management and environmental protection.

Environmental compliance auditing focuses on whether the audited organizations and officials are acting in accordance with the environmental programs, plans, policies and standards stipulated by the state.

Environmental performance auditing considers whether government organizations and officials have fulfilled their natural resource management and environmental protection responsibilities; in particular:

- whether their activities achieve their intended objectives;
- whether their use of financial resources is cost-effective;
- whether their efforts result in permanent changes, and, ultimately
- whether environmental quality has actually improved.

### 3.4. Audit Process

The audit process can be broken into four phases:

**Preparation:** Environmental auditing objectives and implementation and guarantee mechanisms. Establish the requirements and basis for environmental auditing in accordance with the major environmental objectives and programs of the state. Establish annual audit schedules and work plans, define clear working responsibilities and tasks and set up corresponding systems to ensure that audit recommendations are acted upon.

**Implementation:** Establish systems and processes in accordance with the objectives of environmental auditing and define the responsibilities of different audit professionals. Establish qualification certification systems for audit team professionals. Prepare technical guides and specifications for different types of environmental audits.

**Reporting:** The legal status and authority of environmental audit reports must be made clear and reporting guidelines introduced. Data sources used in audits must be clearly documented to ensure the objectivity of results. Audit reports should include both audit conclusions and recommendations to correct deficiencies found.

**Post-audit monitoring:** Systems must be established to publicize environmental audit results to increase their transparency and credibility. The management of environmental audit information, materials and files must be improved to improve audit efficiency.

### 3.5. Audit Evidence

#### 3.5.1. *Requirements of Audit Evidence*

To ensure the legitimacy and fairness of environmental audit and to reduce risks of errors in audit processes, the collection and analysis of audit evidence is of fundamental importance. The adequacy of evidence must be taken into account during its acquisition and auditors must exercise good professional judgment in determining this. There are several principles that must be kept in mind.

**Completeness of evidence:** Evidence must be collected to cover the full range of issues relevant to the target of the audit and the type of audit being conducted. The overall audit should be broken down into individual elements and evidence should be collected and classified according to these elements. The classification should be established from the bottom up and the evidence should be collected to form a complete system adequate to underpin the audit results and recommendations.

**Coherence of evidence:** The collection and evaluation of audit evidence must be linked with audit objectives and the relationships among individual pieces of evidence

must be made clear; merely collecting and presenting a mass of evidence is not sufficient. Relationships among pieces of evidence are determined by relationships among auditing items themselves.

**Objectivity of evidence:** During the collection and evaluation of audit evidence, auditors should never replace objective evidence with their own subjective opinions. Audits must be based on facts collected through, for example, field observation and monitoring, as explained next.

### ***3.5.2. Acquisition of Audit Evidence***

Several methods are available for the collection of appropriate audit evidence.

**Examination of laws and related databases:** In the process of collecting evidence for environmental audits, examination of existing laws, policies and regulations and the associated databases should be the first approach. Relevant databases include the financial accounts, administrative records and other standard reporting systems maintained by government departments and agencies. Other relevant databases include official statistics, environmental monitoring data and reports, and performance assessment reports.

**Statistical sampling:** Audit institutions must investigate thousands of separate issues during the course of their work. The burden of evidence collection associated with this can be substantial. In case of insufficient resources to collect comprehensive data, statistical sampling can be considered as a valid means of reducing the burden and cost of data collection while maintaining the overall quality of the data collected.

**Field surveys:** When auditors require a deep understanding of a natural resource management or environmental protection activity, they should carry out direct field surveys of the relevant organizations.

**Standardized questionnaires:** The use of standardized questionnaires (*e.g.*, self-assessment reports) is an effective means of collected audit evidence in some cases. Audited organizations may be requested to fill in a questionnaire aimed at collecting, for example, general information on environmental management activities or environmental performance. Questionnaires can also be used to collect information related to the public's satisfaction with the management of environmental quality.

## **4. POST-TERM ENVIRONMENTAL AUDIT SYSTEM FOR SENIOR OFFICIALS**

Generally, post-term audits of senior officials refer to review, verification and overall evaluation of the fulfillment of the economic accountability responsibilities of the officials during their entire tenure. As the senior officials of the government form a special group in China, such economic accountability audits are already regularly carried out when senior officials leave their posts (either to assume a new role or to enter retirement). In contrast, environmental accountability audits are not yet implemented. Since senior officials decide upon the allocation of substantial economic and social resources in China and, therefore, have great influence on

economic and social development and environmental protection in the regions where they hold office, senior officials should be the subject of post-term environmental accountability audits.

Compared with general government environmental auditing (discussed in the preceding chapter), post-term environmental accountability audits have several unique features. First, environmental accountability audits are specific only to the special group of senior officials with significant powers to allocate resources. Second, environmental accountability audits are implemented only when senior officials are leaving their posts rather than during their tenure. Thirdly, environmental accountability audits focus on a given senior official's specific responsibilities, which makes them much narrower in scope than government environmental audits are typically. Fourthly, only the Human Resources Department of the government or institutions authorized by this department can undertake such audits and act upon their results.

## **4.1. Audit Institutions and Targets**

### ***4.1.1. Audit Institutions***

Generally, environmental auditing institutions in China include the state auditing institution (CNAO), internal auditing departments of government departments and agencies and social auditing agencies. As senior officials are a special subject in China, in practice it is not possible for environmental accountability audits to be undertaken by social auditing agencies, as they will face obstacles in evidence collection and application of results. Therefore, environmental accountability audits must be the responsibility of the CNAO and internal auditing departments.

### ***4.1.2. Auditing Target***

The target of environmental accountability audits follows the definition of senior officials in China. Generally, this group refers to the senior officials of the Communist Party of China, the People's Congress and state-owned enterprises, as defined in relevant national laws and regulations.

According to the leadership system that is in place in China, the local head of the Communist Party have primary responsibility for environmental protection in their administrative region. Therefore, these officials are subject to environmental accountability audit first, followed by senior officials and, as relevant, other personnel of government departments and state-owned enterprises.

## **4.2. Audit Types**

As with general government environmental audit, environmental accountability audits include three types of audits.

First, there are **financial** audits of senior officials' management of funds allocated for environmental protection purposes. These audits focus on the legality and legitimacy of senior officials' collection and use funds under their direct administration and their efforts to guarantee compliance with laws in the investment and use of funds by departments and agencies under their control.

Second, there are audits of **compliance** with responsibilities to enforce laws, policies and regulations designed to ensure environmental protection. Senior officials are expected to take action to enforce these by, for example, supervising and encouraging relevant departments and lower-level authorities to carry out legally required environmental protection responsibilities and ensure that national environmental protection objectives are achieved.

Finally, there are audits of the **performance** of senior officials in carrying out their responsibilities for environmental protection, which are aimed at the actual protection and enhancement of environment quality. These audits focus on, for example, performance in meeting targets for environmental quality and pollutant control.

### **4.3. Audit Implementation**

There are two possibilities for the implementation of environmental accountability audits of senior officials. One is to add such environmental audits to the current process for economic accountability audits, making environmental performance an important - or even key – basis of evaluation of the overall performance of officials. The second possibility is to implement environmental accountability audits as separate category of audit for senior officials that are leaving their posts.

#### **4.3.1. Legal Basis**

A legal basis for environmental accountability audits is potentially offered by in the *Measures for Comprehensive Evaluation of the Local CPC and Government Leading Group and Leading Officials as Required by the Scientific Outlook on Development* (trial) promulgated by the Central Committee of the Communist Party in 2006. These measures include three evaluation criteria that are related the environmental performance:

- environmental protection,
- resource consumption and workplace safety, and
- natural resource (*e.g.*, arable land) management.

These criteria have not yet been broken down into indicators that could be suitable for evaluation purposes at the national level however.

At the end of 2013, a circular entitled *Improving Performance Appraisal of Local Communist Party and Government Leading Group and Leading Cadres* was promulgated by the Central Committee of the Communist Party. It outlined requirements for improvements to the performance appraisal of local party officials and other senior officials, noting that efforts to promote ecological protection should be a consideration in performance evaluation. In parallel with China's strategy of classifying land into development areas considering, *inter alia*, ecological carrying and population density (main functional area strategy), many local governments have already put forward requirements that accountability audits of senior officials leaving their posts should focus on environmental protection in order to motivate them to take their responsibilities seriously. However, as there are many problems still to be resolved in the implementation of environmental accountability auditing, no actual audits have yet been conducted.

## **5. ROADMAP AND POLICY RECOMMENDATIONS ON IMPLEMENTATING IMPROVED CHINESE ENVIRONMENTAL AUDIT SYSTEMS**

### **5.1. Roadmap for the Environmental Audit Systems**

#### **5.1.1. Objective**

The objective of this roadmap is:

- To set up unified, scientific and practical government environmental audit systems nationwide. The audit systems are to cover auditing of government programs and accountability auditing of officials leaving their posts (either because of promotion or retirement). The ultimate goal is to standardize and institutionalize activities of environmental auditing.
- To promote the implementation of environmental audit systems nationwide (beginning with a series of pilot audits) in order to support the improvement of environmental performance for officials at all levels of the government and, in particular, environmental accountability of senior officials.
- To provide policy recommendations for the improvement of environment audit for inclusion in China's 13<sup>th</sup> Five-Year Plan and other important environmental initiatives, thus promoting the creation of an ecological civilization.

#### **5.1.2. Focus**

Currently, Chinese environmental auditing is mainly centred on financial and legal compliance audits of the use of public funds for environmental purposes and not on the government's environmental policies and regulations or environmental planning and performance. As a result of this relatively narrow audit scope, China's existing audit systems are failing to reveal the country's deeply rooted environmental problems.

To correct this, the focus of future improvements to environmental audit systems should be:

- To increase the scope of the auditing of government environmental programs in alignment with priorities for environmental protection to include, for example, energy saving and emission reduction audits, rural development program audits, air pollution prevention and control action plan audits, water pollution prevention and control action plan audits and soil protection action plan audits.
- To establish cooperation mechanisms between audit institutions and all other departments, while fully ensuring the independence of the audit institutions.
- To carry out environmental accountability audits of senior officials when they leave their posts (either for promotion or upon retirement).
- To establish and improve frameworks and criteria for environmental auditing.

- To explore new processes, operating modes and technical methods of environmental auditing.

### ***5.1.3. Proposed Schedule***

**Stage 1 – Development stage (2015):** During this stage, the basic methods and processes of government environmental audits and environmental accountability audits of senior officials when leaving their posts will be designed. The theoretical foundation for future work will be laid down. Technical guidelines will be developed and a program of pilot audits will be designed to provide practical experience for the expanded scope of environmental auditing.

**Stage 2 – Pilot audit stage (2015-2020):** During this stage, pilot environmental accountability audits of senior officials leaving their offices in selected regions and cities will be undertaken in order to gain experience, explore methods and processes, demonstrate the feasibility of national implementation and provide improvement suggestions.

**Stage 3 - Post 13<sup>th</sup> Five-year Plan period (Beyond 2020):** During this stage the improved environmental audit systems for government programs and environmental accountability of senior officials will be implemented on a nationwide scale on the basis of the experience gained during the pilot stage. Periodic reviews of the audit systems (every three years) will be carried out so as to adjust and guarantee the sustainability of the system and ensure on-going, standardized national environmental audit systems remain in place.

### ***5.1.4. Institutional Reform and Coordination***

Every effort will be made to fully understand the importance, urgency and difficulty of developing and implementing the new environmental audit systems and to strengthen organizational leadership for implementation and adoption of necessary policies. Building upon the opportunity offered by the decision of the CPC Central Committee related to comprehensively deepening China's reforms, special reform groups should be established for environmental auditing, beginning with a reform group for the environmental audit of officials who are leaving their posts.

To ensure the success of the new systems, China's audit institutions should strengthen their cooperation with the Ministry of Environmental Protection, the Ministry of Water Resources, the Ministry of Land and Resources, the State Forestry Administration and the State Oceanic Administration to work out the development of the systems together and define clear responsibilities, while ensuring the full independence of the audit institutions. Efforts shall be made to strengthen coordination to ensure the necessary reforms and unify efforts relating to the environmental audit systems. Regular meetings will be held to study and solve the major problems encountered in the process of promoting reform of the systems.

## **5.2. Policy Suggestions for Improved Environmental Audit Systems**

### ***5.2.1. Improving the Legal Basis and Capacity Building***

#### ***5.2.1.1 Improving the Legal Basis***

It is urgent to put forward suggestions for the revision of existing audit rules and environmental and natural resource regulations so as to provide a sound legal basis for environmental audit.

- Revisions are required to China's existing *Audit Law* and other relevant auditing guidelines to introduce new provisions that will strengthen environmental audit systems by clarifying their subjects, targets and scopes and ensuring their outputs are shared with the public to the fullest extent possible.
- Revisions are required to existing environmental protection laws and regulations to introduce new provisions that will strengthen environmental audit laws and improve the basis for employing the findings of environmental audits to improve environmental decision making.

#### *5.2.1.2 Developing Technical Guidelines and Standards*

The development of technical guidelines and the formulation of standards for environmental auditing must be the focus of a major effort. A standard system for environmental auditing should be established along with clear operating rules to ensure the institutionalization and standardization of the scope, contents, procedures and methods of environmental auditing and to ensure their legal and evidence bases.

- Technical guidelines for the different environmental audit systems must be developed, drawing wherever possible on international experiences while also considering practices in China. In particular, the following guidelines should be developed:
  - *Government Environmental Audit System Standards*
  - *Technical Guidelines on Environmental Audit of Government Programs (Operational Manual)*
  - *Technical Guidelines on Environmental Accountability Audits of Senior Officials when Leaving their Posts (Operational Manual)*
  - *Environmental Indicator Systems and Application Methods for Audit of Government Programs*
  - *Environmental Audit Indicator System and Application Methods for Environmental Accountability Audits of Senior Officials when Leaving their Posts.*

#### *5.2.1.3 Strengthening Capacity Building*

##### **(1) Improving auditor training**

Given the shortcomings in the knowledge, skills and capacity of existing environmental auditors in China, efforts should be made to strengthen training for auditors, broaden their expertise and increase their knowledge. The goal should be to create high-quality environmental audit professionals and strengthen audit teams. Auditors should be encouraged to master environmental audit knowledge and improve their audit skills, so as to build professional audit teams that can meet the requirements of the new environmental audit systems.

- An environmental audit professional qualification system should be established to standardize and strengthen the process of managing the professional qualification of auditors. This system should be used to expand and strengthen human resource capacity for auditing and establish an expert pool of professional environmental auditors.
- Environmental audit training and education should be strengthened and expanded. Relevant training materials and technical guidelines should be developed and published.

## **(2) Encouraging innovation and improving audit methods and processes**

In order to meet the China's socioeconomic development requirements, the country's audit systems must keep up with best practice and ensure constant innovation to improve and strengthen audit efforts. China's current information base for environmental management is weak and its environment statistics programs started later than those in other statistical domains; thus, environmental statistics are not as complete and standardized as economic and social statistics.

For these reasons, efforts should be made to increase innovation in auditing methods and processes, strengthen environmental statistics and accounts (along with other databases) and increase the country's overall capacity to compile environmental data. China should more actively collect basic environmental data and ensure their accuracy and authenticity. The country must have a reliable and transparent system of environmental statistics and accounts to provide a comprehensive, timely and credible information basis for environmental management, decision making and evaluation.

## **(3) Improving coordination**

Environmental audits involve various departments, so China must improve inter-departmental coordination to strengthen its audit systems. There is a need to define clear working arrangements between CNAO, Ministry of Environmental Protection and Ministry of Finance in order to do this. In the near-term (2 years), strengthening of environmental audit systems should be undertaken with auditing institutions as the lead authority in collaboration with environmental authorities. In the mid-term (3-5 years), auditing institutions should assume independent control of the strengthened environmental audit systems. In the long-term (beyond 5 years), the current audit institutions should be reformed such that the CNAO becomes a body of the National People's Congress. Such a change in the oversight of the CNAO would best assure the full independence of its auditing methods, processes and results.

### *5.2.1.4 Strengthening Institutional Capacity*

Efforts should be made to strengthen national and local audit institutions and improve institutional capacity-building efforts. Consideration should be given to the creation of an Environmental Audit Research Center.

To move beyond the current situation in which audit teams are made up primarily of auditors with traditional accounting expertise, it will be necessary to build interdisciplinary audit teams. These must include experts from the fields of natural resource management, environmental protection, ecology and economics selected from institutes of forestry, agriculture, mining, geology, water resources, marine

resources and environmental engineering. Joint training programs building upon the strengths of academic institutions focused on finance and economics with those focused on natural resources and the environment should be created. Consideration must also be given to strengthening international cooperation in developing environmental audit skills and expertise.

### **5.2.2. Improving the Impact of Audit Results**

#### *5.2.2.1 Strengthening Coordination between Environmental Audit Systems and Other Environmental Evaluation Systems*

To strengthen China's environmental audit systems, they must be coordinated with the other evaluation systems used by the government. Due attention should be given to this need when considering improvements to the legal basis for environmental auditing, since China has entered a period when a single measure can influence many processes.

Coordination with the following systems is required: systems designed to provide future outlooks; pollution emission reduction targets evaluation systems; environmental status reporting systems<sup>9</sup>; accountability systems; environmental information disclosure systems; and public consultation systems.

#### *5.2.2.2 Increasing the Use of Audit Results*

##### **(1) Using Audit Results to Tighten Environmental Accountability**

China should ensure that environmental audit results are actively used to evaluate the environmental performance of senior officials. This should include examination of performance in the context of promotion, retirement and dismissal of officials and the giving of rewards and punishments. The agencies of the Chinese government with the responsibility for human resource management (discipline inspection and supervision departments, departments of finance and state-owned assets supervision and administration departments) should make use of audit results to exercise their full authority in accordance with the law and handle cases of violations of environmental laws in a timely fashion. Accountability systems should be implemented using audit results.

##### **(2) Strengthening Disclosure of Audit Results**

China is undergoing rapid economic and social transition and the disclosure of audit results is of great importance in respecting citizens' environmental "right-to-know" (that is, their right to be informed about the quality of the environment and how it might affect their personal well-being). Public disclosure of audit results will help promote participation in the political management of the country, democracy and law making. Disclosing audit results ensures that the performance of the officials who are responsible for ensuring environmental quality is known by the general public and not just by a minority. This supports broad public engagement in the process of holding officials accountable for their performance in ensuring a healthy environment for all

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<sup>9</sup> Article 27 of the new *Environmental Protection Law* require governments at or above the county level to report annually to the relevant people's congress or standing committee on the state of the local environment and on fulfillment of environmental protection targets.

citizens. Institutionalized and legally required disclosure of audit results and widespread public participation in their use is an effective means of preventing pollution and corruption, thereby contributing to the promotion of sustainable development in China.

### ***5.2.3. Initiating Audit Pilots***

The theory and practice of environmental audit in China remain at the exploratory stage. As a means of ensuring accountability for environmental performance, environmental auditing is a huge and complex task. Pilot audits in representative regions of the country on typical projects are, therefore, a sound means of laying the foundations for long-term improvement in audit systems, particularly given the need for these systems to reflect Chinese characteristics. By studying new situations, solving new problems and summarizing new experiences gained during pilot audits, the path toward improved systems can be fully explored. This will permit the required deep reforms of the environmental audit systems to be achieved in a sound and sustainable fashion.

Pilot audits should be undertaken first at the level of provinces, municipalities and counties. Following this, pilot national audits for key environmental protection activities such as air, water and soil pollution control and key natural resource management activities such as forest and fisheries management should be undertaken. Based on the results of these pilots, an agenda of issues related to strengthening of audit systems that requires additional research and discussion should be developed. Further work with CCICED to support the strengthening of Chinese environmental audit systems should be undertaken to pursue this research agenda. It would also be beneficial to pursue the pilot audits with the involvement of CCICED.

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