



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

Task Force on the Rule of Law and Ecological Civilization

CCICED Task Force Report

**CCICED 2015 Annual General Meeting
2015.11.9-11**

Task Force Members

Co-chairs:*

- **Youhai Sun**, Director of the Institute of Applied Law of the Supreme People's Court of the People's Republic of China; Professor, Tianjing University.
- **Donna Campbell**, Former Independent Chair of the New South Wales (NSW) Marine Compliance Taskforce, and former Executive Director, Legal Services of the NSW EPA, Australia.

Task Force Members:*

- **Jiwen Chang**, Vice Director and Researcher of the Research Institute of Resources and Environment Policies under the Development Research Center of the State Council; Professor, the Law Institute of Chinese Academy of Social Sciences;
- **Fengchun Wang**, Vice Director of the Bill Office of the Environment Protection and Resources Conservation Committee of the National People's Congress;
- **Tao Bie**, Deputy Director-General of Policies and Regulations Department, the Ministry of Environmental Protection;
- **Deqiang Han**, Director of the Environment Justice Research Center of the Applied Law Institute from the Supreme People's Court;
- **Ulf Bjälås**, Former President of the Superior Environmental Court, Sweden;
- **Ludwig Krämer**, Senior Lawyer, ClientEarth and Head of EU Aarhus Centre;
- **James Thornton**, Founding CEO of ClientEarth, UK;
- **Sabine Schlacke**, Professor of Public Law, Director of the Institute for Environmental and Planning Law, University of Münster;
- **Alex Wang**, Acting Professor of Law, UCLA School of Law;
- **Wanhua Yang**, Legal Officer, Division of Environmental Law and Conventions, United Nations Environment Programme;

Chinese Consultant Experts:

- **Jin Wang**, Professor, Peking University;
- **Yi Wang**, Director of the Institute of Policy and Management, Chinese Academy of Sciences;
- **Canfa Wang**, Professor, China University of Political Science and Law;
- **Ke Zhou**, Professor, Renming University;

- **Hongchun Zhou**, Director, the Research Institute of Social Development under the Development Research Center of the State Council;
- **Xuejun Wang**, Professor, Peking University;
- **Jinnan Wang**, Vice President of the Chinese Academy for Environmental Planning;

Chinese Supporting Experts :

- **ZhonghuiTang**, Associate Researcher of the Development Research Center of the Ministry of Water Resources of P.R.China;
- **DanLi**, Associate Researcher of the Ministry of Environmental Protection
- **MinDing**, Associate Researcher of the Bill Office of the Environment Protection and Resources Conservation Committee of the National People's Congress;
- **PingWu**, Research Division of the Research Institute of Resources and Environment Policies under the Development Research Center of the State Council;
- **ZhaoxiaYang**, Associate Professor, Beijing Forestry University;
- **Heng Jiang**, Researcher of the Chinese Academy of International Trade and Economic Cooperation;
- **Qiuying Dai**, Associate Researcher of the Institute of Applied Law of Supreme People's Court of the People's Republic of China;
- **Li Guan**, Judge, Environmental Resources Division of the Supreme People's Court;
- **Yanli Si**, Judge of the Supreme People's Court;
- **Xinlin Zhu**, Associate Researcher of the Institute of Applied Law of Supreme People's Court of the People's Republic of China;

Coordinators:

- **Jianqin Liang**, Chinese Academy of Social Sciences;(Coordinator)
- **Bingcheng Zhu**, China University of Political Science and Law (Coordinator)

* *Co-Chairs and Task Force members serve in their personal capacities.*

Summary of Key Findings

China's environmental legal system has evolved over the past three decades with the country's new framework law, the Environmental Protection Law, adopted in 2014.

While China's system of environmental laws is broad ranging providing many of the legal tools used in developed countries, the system is not unified and contains gaps and weaknesses.

Overlapping regulatory responsibilities between government departments have resulted in fragmented, overlapping and inconsistent laws as well as gaps in the system. The fragmented and incomplete management of toxic and hazardous chemicals is one example posing an immediate risk. Other examples include lack of soil pollution control legislation and inconsistencies between environmental laws and specific resource laws relating to water, forestry, grasslands, agriculture and energy.

Environmental laws, from their making to their implementation, are generally treated as lower level laws. Civil, economic, administrative and other related laws are on a higher level but do not take account of environmental principles such as sustainable development.

Nor do these laws recognize the ecological values of natural resources for the benefit of the whole community. Environmental laws can be challenged on the basis of their inconsistency with the higher-level laws and there is no clear legal responsibility for environmental damage or for compensation measures.

The provisions in the legal system for the strategic environmental impact assessment of development plans and programs are limited. There is also a need for a comprehensive and unified set of laws governing the ownership and management of natural resources, biodiversity conservation and natural reserve management. Laws to facilitate market-based mechanisms are also required.

Implementation of existing environmental laws has been weak. In particular, the use of existing legal tools has not been optimized towards achieving China's environmental goals. These tools include environmental standards, environmental impact assessment for projects, the three simultaneous system (pollution control measures should be designed, installed and put into operation simultaneously with the project), pollution registration and pollution emission cap programs.

Planning, evaluation and issuing pollution control permits are not carried out in an integrated, coordinated process and post approval monitoring and supervision are neglected resulting in poor compliance and enforcement.

Environmental quality standards and emission standards need strengthening. Their legal status is unclear and there is inadequate review and assessment during the standard setting process to ensure the standard has a sound scientific and technical basis.

Many laws are expressed in terms that are too general for effective implementation. Vague goals and principles result in variations in the way the law is implemented and the decisions at the local level cease to be fair, consistent, predictable and law-like.

Powers and responsibilities of the central and local governments are not divided appropriately and supervision is weak. Some environmental problems have regional impacts but the responsibilities of the regions are not clearly defined and regional coordination is lacking.

Environmental agencies at all levels lack authority and power to match their current responsibilities. The Party and all levels of government do not have the same responsibility to exercise their environmental functions according to law. There are no guarantees to ensure that relevant agencies can exercise their environment protection responsibilities without improper interference.

Local environmental agencies are generally very small and lack the resources, staff and professional skills to perform the work that is currently expected of them.

Public participation, judicial supervision and public interest litigation continue to be weak and have not been used to deliver trust and the compliance necessary to achieve environmental goals.

Looking to the future, capacity and willingness to enforce and validate compliance with the law will be essential if market-based mechanisms such as pollution trading programs are to succeed.

• Implementation –legislative design and adequate support are key factors

The success of any environmental legal system depends on the behavior of the regulatory agencies that put the laws into operation. These agencies ultimately determine how legal tools are used and how compliance will be monitored and enforced.

General laws that state principles and environmental goals without considering requirements for implementation often prove to be aspirational rather than attainable, particularly when imposed on a local agency faced with unique local problems. The law will be ineffective if the local agency lacks capacity and resources and has been given no guidance.

On the other hand, there are risks if environmental laws are too prescriptive. International experience has shown that prescriptive rules can limit flexibility and lead to foolish and uneconomic results. Environmental regulatory agencies in particular are expected to exercise discretion and professional judgment to achieve the most cost effective and practical outcomes to suit the local circumstances, but with the strong safeguards of effective supervision – bureaucratic, public and judicial.

Lawmakers are constantly faced with the challenge of finding the right balance between the general and the specific. Regulations, publicly available policies and guidelines are important for supporting local agencies to make good decisions in a manner that is fair, predictable and consistent. It is important, however, for support and guidance to be developed in collaboration with local agencies to ensure it is practical and effective.

• **Importance of implementation capacity and accountability**

A critical role of every regulatory agency is ensuring compliance with the law. In this role, the agency exercises discretion as a matter of course. It has to decide where and how to focus its compliance and enforcement effort based on its resources. In jurisdictions worldwide, choices have to be made because of ambiguous or conflicting mandates, the need to respond quickly to changing conditions and the inability to do everything.

Given that regulatory agencies at all levels will inevitably exercise discretion both in implementation (such as in evaluating environmental impact assessments for permit applications) and in compliance and enforcement, they must have the professional skills, authority and resources to do the job. They must also be held to account to ensure that environmental goals are achieved fairly, a level predictable playing field is created for industry and corruption is avoided.

This means that the roles and responsibilities at all levels of government must be clear and they must have the capacity, authority and power to match responsibilities. There must also be effective accountability mechanisms. These include bureaucratic and judicial supervision supported and enhanced by clear legal requirements for public disclosure of information, public participation and public interest litigation.

• **The general direction of environmental management institutional reform.**

The new environmental law requires institutional change. Governments at all levels must lead by example in complying with environmental laws, and must make urgent institutional changes to ensure that government entities and decision-making processes reflect and actively promote the objectives of an ecological civilization.

Successful further reform will be dependent on raising the strategic position of ecological civilization through a range of institutional measures and incorporating ecological civilization into all aspects of economics, politics, culture and society.

Institutional changes will certainly face some opposition and take time. Reform efforts need to be focused on areas of greatest risk, public concern and potential gains and be guided by the comprehensive gap-analysis of existing arrangements undertaken by this task force.

The general direction of environmental management institutional reform should be to: follow the rule of law and set clear laws and prescriptions to protect the environment; encourage and mobilize all stakeholders to engage in environmental protection in order to form a multi-stakeholder governance system involving the government, the market and society; and increasingly use an environmental management approach under which the 'State provides macro guidance and supervision, while localities focus on independent innovation.'

Summary of Main Policy Recommendations

Legislation

Recommendation 1: Toxic and harmful chemicals and soil pollution

(i) Reform the multi-department regulatory system for the management of toxic and harmful chemicals by creating a unified supervision system that will prevent and minimize risks to public health and safety. Integrate the fragmented supervisory functions of a number of departments (environment protection, safety, transport and public security) and provide for the co-ordination of these functions to be led by the environment protection department.

(ii) Create a unified and comprehensive regulatory framework for the management of toxic and harmful chemicals from cradle to grave, including managing risks posed by environmental accidents and providing for adequate response measures, and clarifying legal responsibilities of producers, users and supervisors.

(iii) Formulate a law on soil pollution prevention and control as a priority.

Recommendation 2: Environmental impact assessment

(i) Expand and strengthen laws relating to environmental impact assessment (EIA) and guarantee their application to government plans and policies that are likely to have a significant impact on the environment.

(ii) Clarify the relationship between EIA, spatial planning and ecological redlines and between EIA and the issue of permits. Ensure the laws are designed to coordinate evaluation processes and avoid duplication.

(iii) Improve EIA preparation and approval procedures including procedures for stakeholders consultations, and strengthen the role of EIA in balancing the interests of the various parties involved.

(iv) Enhance the supervision and regulation system for third-party assessment of the EIA by combining industry self-regulation with oversight from administrative authorities and the community thereby improving the independence and scientific foundation of the EIA.

Recommendation 3: Environmental standards and permits

(i) Require that national environmental quality and emission standards must be approved by the State Council.

(ii) Consider creating standards using the best available technology or best reliable and feasible technology (BAT /BREF documents) as used in the European Union, and determine emission standards and total amount emission control based on this approach.

(iii) Reform the process for setting environmental quality and emission standards to

ensure evaluation and review by independent professional technical agencies. Expand public participation to ensure full public review by all stakeholders.

(iv) Strengthen important environmental standards by incorporating them into environmental laws.

(v) Streamline and optimize the use of legal tools through better integration with the permitting process, including environmental standards, EIA, “three-simultaneous system”; emission declaration, environmental monitoring, pollutant registration, total quantity control (emission cap program), and end-of-pipe installations.

Implementation and enforcement

Recommendation 4: Clarify and strengthen responsibility and supervision

Improve the environmental supervision system to make it coordinated, orderly and efficient. Ensure that the responsibilities of environmental departments and other regulatory authorities at all levels are clear and appropriate for their capacity and that they are able to independently implement and enforce environmental laws without undue interference from local governments.

Recommendation 5: Party-government shared responsibility

Draft and implement the measure of “Party-government shared responsibility” and reinforce the environmental laws’ supervision mechanism.

Recommendation 6: Capacity, education and public participation

(i) Enhance capacity by ensuring that the resourcing and skills of government officials, prosecutors, experts and judges match the enhanced tasks they will be required to perform.

(ii) Promote education and support for industry and the community to comply with their legal obligations as a cost effective means of promoting compliance. Educate the community about the benefits of environmental regulation and its compatibility with economic growth.

(iii) Bring public participation and public supervision into full play by developing standard procedures on how and when public participation must be conducted, and how and when information must be disclosed, and then auditing that it is done.

(iv) Strengthen and encourage public interest litigation to build public and central government confidence in effective implementation and enforcement.

(v) Standardize the use of special environmental protection funds

Background and implementation of the Project

• Background

The Fourth Plenary Session of the 18th CPC Central Committee reviewed and passed the “*Decision of the CPC Central Committee on Major Issues Pertaining to Comprehensively Promoting the Rule of Law*” (“Decision”) in October 2014. The key recommendation is to “establish a socialist legal system with Chinese characteristics and build a socialist state ruled by law”.

Promoting the rule of law is critical to building a moderately prosperous society proposed by the 18th CPC Central Committee and for the top-level design of the comprehensive reforms proposed by the Third Plenary Session of the 18th CPC Central Committee.

The “Decision” stresses the need to use a strict legal system to protect the ecological environment and to accelerate the establishment of a legal system that effectively constrains development activities and promotes green development, circular development and low-carbon development.

It also stresses the need to strengthen the producer’s legal responsibility for environmental protection and to significantly raise the cost of law violation.

Finally, it proposes a sound legal system for natural resources, improvements to the legal system for the protection and development of national land space and the development and improvement of laws for ecological compensation, for the control of water, soil and air pollution and for marine environmental protection.

The recent *Environmental Protection Law* provides an important opportunity to apply the rule of law for China’s environment protection and development. The legal system for ecological civilization will integrate green development, circular development and low-carbon development and enable China to develop from a critical state of environmental pollution into overall environmental quality improvement.

The China Council for International Cooperation on Environment and Development (CCICED) has long been dedicated to promoting the green transformation of China’s environment and development. Focusing on “management system innovation in green development”, CCICED has adopted “national governance capabilities in green transformation” as the theme in 2015 and aims to propose strategic and forward-looking policy initiatives for ecological civilization construction and green transformation promotion along with China’s efforts to realize the “fifth modernization”- modernization of governance capacity and governance system.

The law is a critical tool for national governance, and the rule of law is an important basis for national governance systems and management capabilities. Good laws are a prerequisite for good governance and the rule of law is imperative for building national governance systems and realizing governance modernization.

The CCICED task force on “Management system innovation in green transformation” in 2014 determined that the modernization of the national governance system and of governance capacity would require the constant improvement of institutions, the rationalization of systems and mechanisms, the protection of the ecological environment by institutions, building a legal system and economic system conducive to environment quality improvement, and creating a government-led “multi-party” environmental governance mode. These findings lay a solid theoretical foundation for

this TaskForce.

In light of its theme for 2015, CCICED established the “Rule of Law and Ecological Civilization” Task Force to carry out research in 2015-2016 drawing on CCICED’s previous and ongoing work and on international experience.

• **Implementation Process**

The objective of the Task Force’s work is to comprehensively promote the rule of law as follows:

Identify the legal issues in the environment and development fields that are not consistent with the target of modernizing national governance systems and governance capacity. Identify how to ensure comprehensive and coherent legislation, strict law enforcement, fair administration of justice and nationwide compliance in order to better co-ordinate social forces, balance the interests of society, harmonize social relations, and regulate social behaviors, so that China can achieve its goal in comprehensively deepening reforms, and realize economic development, political stability, cultural prosperity, social justice and ecological protection, thus effectively promoting ecological civilization construction.

To this end, the Task Force considered the following questions:

1. How to implement “the Decision” and build the legal system for ecological civilization, after considering the legislation and its implementation, law enforcement, administration of justice and compliance and examining how to promote integrated implementation and law enforcement within the field of natural resources and the environment and double the efforts in solving ecology-damaging issues according to the law.
2. How to give play to the role of the rule of law and virtue together in ecological civilization construction, how to rely on the educating effect of virtues based on the rule of law, and how to strengthen virtue’s supporting role in protecting ecological civilization and environmental culture.
3. How to develop a roadmap for pollution prevention legislation and accelerate the transformation and upgrading of the rule of law to meet the challenges of the new environmental normal including the hot key issues of soil, water and air pollution.
4. How to achieve green, circular and low-carbon development through appropriate governance and laws based on international experience.

The recommendations in this report are based on consideration of these questions.

Since its inception in March 2015, the Task Force has held two meetings among national and international members, and had detailed and comprehensive discussions on the implementation process, the scope of the research and the expected outputs.

On June 3, 2015, the co-chairs of the Task Force held the project initiation meeting and the first working meeting. It finalized the implementation plan and follow-up arrangements. The meeting agreed that the research scope for the first phase in 2015 would focus on improving the environmental legislation and improving implementation and enforcement.

The second phase in 2016 will focus on improving and strengthening environmental justice, improving citizens’ awareness of the environment and the need for compliance with environmental laws, and comprehensively promoting ecological civilization

progress.

The Task Force had a second working meeting on September 4, 2015 and has held several internal meetings and teleconferences. It gave full consideration to the views and recommendations of both national and international experts. Other exchange of views were also carried out through e-mails and other means to ensure the quality and practical significance of the report and policy recommendations.

Accordingly, this first report of the Task Force focuses on the legislation and its implementation and enforcement. In 2016, the Task Force will focus on strengthening the environmental judicial system and promoting general community environmental awareness and compliance with environmental laws. A second report on these topics will be submitted to the 2016 CCICED General Annual Meeting.

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Part 1 Improving environmental legislation to promote ecological progress

1. Existing laws and their major problems

In the 30 years since the reform and opening up, China has revised and promulgated many basic laws, including the Constitution, the General Principles of the Civil Law, the Real Rights Law, the Tort Liability Law, and the Criminal Law. These have created legal norms relating to use of resources and environmental protection.

The Tort Liability Law provides for tort liability for environmental pollution and damage. The Criminal Law has a myriad of fundamental provisions so as to guarantee natural resources ownership, protection of the ecological environment and reasonable use of resources.

Three laws providing for the transition of industries, green energy and spatial planning have been enacted, namely, the Law on Promoting Clean Production, the Law on Promoting Circular Economy, and the Urban and Rural Planning Law. They provide a legal foundation for speeding up economic growth transition and proper land planning.

Ten laws regarding resources utilization and management have also been enacted, including the Land Management Law, the Mineral Resources Law, the Law on the Administration of the Use of Sea Areas, the Coal Industry Law, the Energy Conservation Law, the Renewable Energy Law, the Forest Law, the Water Law, the Grassland Law and the Fisheries Law, Environmental Protection Law, the Marine Environment Protection Law, the Law on the Prevention and Control of Water Pollution, the Law on the Prevention and Control of Air Pollution, the Law on the Prevention and Control of Environmental Pollution by Solid Waste, the Law on the Prevention and Control of Environmental noise Pollution, the Law on the Prevention and Control of Radioactive Pollution, the Environmental Impact Assessment Law, the Law on the Protection of Wildlife, the Water and Soil Conservation Law, the Law on the Prevention and Control of Desertification, and the Island Protection Law.

These laws form a comparatively complete legal system for environmental protection in China with multi-layered laws, regulations and specifications (national laws, administrative regulations and local regulations).

However, the current system has some problems that need to be rectified to promote ecological civilization progress. There are three in particular.

1.1 “Gaps” in environmental legislation

There are gaps in some key areas and weaknesses in the design of some legislation. Emphasis is placed on administrative regulatory measures such as planning, assessment and approval while neglecting market-based mechanisms, public involvement, monitoring and supervision of the approval process, and post-approval implementation.

With China’s growing economy and accumulating ecological issues, damage caused by soil pollution and harmful and toxic chemicals to human health and the environment has become increasingly serious. However, the current regulation of soil pollution and harmful and toxic chemical substances is weak.

Regulatory responsibilities among different authorities overlap. There are no effective regulatory mechanisms, no rigorous risk prevention or control measures, and there is no independent regulatory institution. Environmental and social risks have reached a point where they can no longer be ignored.

Legislation is urgently needed to regulate and tightly control soil pollution and harmful and toxic chemicals. Though necessary administrative regulations and supplementary technical norms in the areas of nuclear safety, biodiversity protection and natural reserve management are already in place, they are at a low level and they are fragmented. Special laws are needed to unify regulation.

BOX 1: REGULATION OF HAZARDOUS MATERIALS IN THE U.S.

U.S. regulation of the storage and discharge of hazardous or toxic substances emphasizes planning, emergency response, transparency, and public supervision. In the wake of the 1984 Union Carbide accident in Bhopal, India, American citizens called for stronger regulation of hazardous materials.

In 1986, Congress passed the Emergency Planning and Community Right-to-Know Act (EPCRA). EPCRA required U.S. states to create state emergency response commissions (SERCs) and local communities to establish local emergency planning committees (LEPCs). LEPCs are required to create emergency response plans. Companies are in turn required to provide to SERCs, LEPCs and local fire departments annual reports regarding the identities, locations and amounts of hazardous chemicals on-site.

Perhaps the greatest innovation of the EPCRA was the creation of the Toxics Release Inventory (TRI), which required certain facilities to provide annual reports to EPA regarding emissions of up to 600 or more toxic chemicals. TRI information was made available to the public through a national computerized database.

The U.S. Congress created the TRI in the belief that open information about toxic chemical releases would raise public awareness and provide the public with the tools to bring pressure to bear on companies to reduce use and emissions of toxic chemicals. In the first year after the TRI was implemented, reported emissions declined by 39 percent according to one study, and emissions have declined in nearly every subsequent year.

A subsequent program, the EPA Risk Management Program, required emitting facilities to prepare Risk Management Plans with:

- A history of accidental releases occurring during the previous five-years;
- A summary of the facility's accidental release prevention program;
- An offsite consequence analysis, which is an analytical determination of the potential impacts to the environment and the public in a hypothetical worst case accident scenario and alternative accident scenarios;
- A summary of the facility's emergency response plan.

Congress also authorized the U.S. Chemical Safety and Hazard Investigation Board, an independent board established to investigate the causes of major chemical accidents.

BOX 2: MANAGEMENT OF CHEMICALS BY THE EUROPEAN UNION

The European Union (EU) early considered the need to establish a balance between ensuring the free marketing and trade of chemical products on the one hand and protecting human health and the environment against the risks from chemicals on the other

One of the main challenges was to overcome the gap that numerous chemicals are put on the market or used by industry, for which not enough knowledge about the risks for humans or the environment exists. To overcome this problem, the EU set up a European Chemical Agency (ECHA) with a staff of some 600 people and the task to manage chemicals.

Chemical substances, on their own, in preparations or in articles must not be placed on the EU market until they have been registered with ECHA. Any request for registration must be accompanied by detailed information on the chemical, and in particular, a safety report following a safety assessment of the chemical. According to the quantity to be marketed, the risk of the chemical and other conditions, testing proposals must also be made. The responsibility to provide data on a chemical substance is thus deliberately placed on the economic operator.

ECHA must evaluate all substances. It may ask for further information and for further tests to be carried out. Substances found to be of very high concern - these are in particular substances that are carcinogenic, mutagenic, toxic for reproduction, bio accumulative, persistent or toxic for reproduction - must be authorised by the EU and supplementary information on the substance is required.

Normally, an authorisation is given for a certain use of the substance. Substances of concern for humans or the environment may be restricted in use, after detailed scientific and socio-economic consultations.

All these provisions are detailed in the REACH-Regulation (Regulation 1907/2006) as well as in numerous delegated and implementing Acts. The provisions apply all over the EU, i.e. to some 500 million people.

Active substances used in biocidal products are also subject to an assessment and evaluation of ECHA and then authorised by the European Commission. Active substances contained in pesticides as well as genetically modified organisms undergo a detailed scientific examination of the European Food Safety Authority (EFSA), before they may be authorised and then used within the EU.

Member States, manufacturers, importers, and traders who disagree with decisions by ECHA or the European Commission, may appeal to a court against the decision. Individual persons and environmental organisations only have limited access to courts to have a chemical or a substance banned or restricted in use.

In order to prevent major industrial accidents caused by chemicals, the EU has binding directive 2012/18 similar to the US model described in BOX 1.

Legislation for resource use and environmental protection lag behind the reform of the Chinese market-oriented economy. There are major weaknesses in legislative design. The position between the government and the market is unclear; administrative instruments and measures are favored over market-based mechanisms and public participation and supervision; resource use mostly relies on the administrative approval of projects and administrative targets.

The administrative control system plays a prominent role and rules and measures such as financing, tax, price, credit, trade and the like are still relatively piecemeal and barely regulate the use of resources and the environment. The legal framework governing the ownership and management of natural resources and the environment is also lacking.

There is no clear-cut distinction between the government's public management function in the field of natural resources and its function to operate natural resources markets. Major resources management authorities regulate the market while participating as agents of resources and property. Measures adopted in the planned economy still govern resource utilization.

Legal provisions concerning public environmental rights and interests are commonly inoperable. Substantive and procedural requirements for information disclosure and public participation are still limited, with few channels available for public participation so social oversight is hardly ever put into practice.

Oversight and post-approval implementation is lacking. Most laws and rules lack necessary procedures for implementation. This affects the operability and effectiveness of important legal tools such as environmental standards, environmental impact assessment and permits for resource use and environmental protection.

The existing requirements are expressed in terms that are too general, containing only principles. Necessary legal norms and procedures have not been established for the effective implementation of environmental standards, environmental impact assessment and permits. This leads to extremely wide and unclear discretion in the hands of regulatory authorities in implementation and enforcement.

Some necessary legal norms and supplementary provisions are absent for new approaches, including ecological redlines, ecological compensation, ownership of natural resources, asset management, administrative oversight on natural resources, planning main functional zones, spatial planning and use control, environmental damage liability and compensation.

1.2 “Gaps” in other important laws

Philosophies, principles and mechanisms consistent with ecological progress and sustainable development are not yet integrated into civil law, commercial law, economical law and administrative law. An integrated legal system that takes account of the ownership of natural resources and the environment, as well as civil liability for environmental damage, has yet to be established. This greatly diminishes environment protection.

For example, the precautionary principle is not reflected in the civil law. A party to a contract may be prevented from taking early prevention measures to control risks caused by hazardous waste. The principle of sustainable use of natural resources is also missing. There is nothing to prevent someone from causing a severe threat to ecological safety or human existence when using soil or water resources.

The civil law does not create environmental rights to protect common environmental interests. There are no measures to protect the public need for clean soil and water, fresh air and a beautiful environment.

In other countries, there are many cases in which judges consider the violation of an environmental right as the infringement of a human right, and provide civil remedies for the victims. However, in China, there is no such remedy for victims.

China's *Property Law* also fails to account for the environment and natural resources and does not recognize environmental rights. The public nature of the environment means that it cannot be "directly possessed for exclusive use" by anyone. Air, rivers, oceans, forest and grassland, as components of the environment, cannot be an object of real rights. This makes it difficult to protect the environment under the *Property Law*.

Without an explicit obligation to protect the environment and to prevent and reduce pollution and ecological damage, it is difficult to guide the use of resources rationally and effectively. The *Property Law* imposes insufficient requirements on types of usufruct and on exercising rights.

There are also many problems with the tort liability system where provisions are scattered and inconsistent. The provisions on environmental tort responsibility are scattered in the *General Provisions of the Civil Law*, the *Tort Liability Law*, the *Environmental Protection Law*, the *Civil Litigation Law*, as well as in special laws relating to environmental protection such as the *Law on the Prevention and Control of Air Pollution* and the *Law on the Prevention and Control of Water Pollution*. They are often expressed in very general terms and conflict with each other.

In current environmental tort cases, it is common to see victims demand that polluters reduce pollution to below the required standard and to install and operate environmental facilities in compliance with the requirements of environmental authorities. However, there are no detailed provisions on the forms, approaches and procedures to prevent a breach of the pollution laws from occurring. Polluters are only held responsible after the harm has occurred. Inadequate compensation mechanisms often result in little compensation even for significant impacts and severe implications.

It is hard for victims to obtain relief. Complex environmental tort cases pose insurmountable problems, for example, disputes may go beyond one administrative jurisdiction, or may be long-term with unknown causes and difficulty in identifying the person responsible.

1.3 Institutional frictions

Overlapping regulatory responsibilities between government departments have resulted in fragmented, overlapping and inconsistent laws.

The legal tools to protect ecological systems are artificially separated by various regulatory departments. For example, in the case of water conservation, there is an array of substantially similar conservation systems. Thus, there are systems for the prevention and control of water pollution artificially divided into water functional areas or zones. There is also overall basin planning and water resources conservation planning, with a variety of water indices such as a water assimilative capacity index, a water environmental capacity index and a total water index.

A complete natural and ecological system is regulated by different departments by a variety of laws and regulations, isolating species protection from habitat conservation,

animals from plants, and terrestrial from aquatic species.

It is also common for management systems to be isolated and fragmented inside departments. For example, the management of environmental data and information in the Ministry of Environmental Protection contains five sets of data and information systems including environmental monitoring, environmental statistics, pollutant discharge reporting and appraisal, pollutant emission reduction and pollution source census. Gathering, processing, reporting, reviewing and final generation of each set of data and information are also carried out by different departments or bureaus. Overlap and inconsistency is conspicuous among data channels.

There are duplicate requirements and systems between the *Environmental Protection Law* and each separate sectoral law for pollution prevention. The use of legal tools involving planning, standards, monitoring, assessment, information, permits, oversight and inspection is fragmented and segregated.

Duplications lead to overlapping management imposing unnecessary administrative burden on departments and organizations. For example, there are a string of systems for construction projects, such as flood resistance evaluation, soil and land conservation assessment, water and energy saving evaluation. This forces the project owner to conduct a number of technological verification repeatedly, and these are subjected to endless review and approval of administrative authorities. In fact, all of these could and should be included in a single assessment system.

The following boxes show some good practices in other countries in environmental impact assessment, permitting and use of standards.

BOX3: STRATEGIC ENVIRONMENTAL ASSESSMENT IN THE EU

Projects that significantly affect the environment require an Environmental Impact Assessment (EIA). European and German Law also provide for a Strategic Environmental Assessment (SEA) for plans and programs (e.g. regional, landscape, spatial and local planning or sectorial planning (e.g. waste management plans)).

The SEA aims to assess the environmental impacts of a plan or a program at an upstream level, in other words at a very early stage. The key elements are the same as those for the EIA: screening and scoping of the plan, submission of all relevant documents by the planning institution/authority (EIS), involving other affected public authorities, public participation, a summarizing presentation about environmental impacts, evaluation, consideration within the decision making process and publishing of the results.

The two-step-approach – SEA followed by an EIA – allows an assessment of alternative actions/measures at an early stage which is more effective than at the project level, where alternatives e.g. for compensation for nature interventions or the location of an industrial project often do not exist. Furthermore it allows public participation at a stage where concrete decisions are not yet taken. Finally the Environmental Impact Assessment has to take into account the results of the Strategic Environmental Assessment so that a doubling of environmental assessments can be avoided.

BOX 4: PERMITS AND EIA

In international jurisdictions, an environmental impact assessment process (EIA) is applied to large infrastructure and industrial projects as early as possible in the development of the project. The project must not commence until the EIA has been assessed by the relevant authority.

The purpose of an environmental impact assessment is to identify and describe the direct and indirect impacts a project may have on people, animals, plants, land, water, air, climate, landscape and cultural environment and on the management of materials, raw materials and energy, land, water and the physical environment in general.

The EIA process is closely linked to the permitting process. An application for a permit must contain an environmental impact statement (EIS) setting out in full the information that emerged during the EIA process. The permitting authority must consider this before granting a permit and setting the permit conditions.

Examples of the kinds of matters that must be addressed in the EIS include:-

- an analysis of any feasible alternatives to the carrying out of the project having regard to its objectives, including the consequences of not carrying out the project;
- a detailed description of those aspects of the environment that are likely to be significantly affected;
- a full description of the measures proposed to mitigate any adverse effects of the project on the environment; and the reasons justifying the carrying out of the project infrastructure in the manner proposed, having regard to biophysical, economic and social considerations, including the principles of ecologically sustainable development.

Full public consultation is required during the EIA process. For example, the full EIS must be released to the public for comment and those comments must be taken into account when considering whether a permit should be granted. It is not uncommon for projects to be modified as a result of the public consultation process.

The permitting authority must refuse a permit application if an EIA is not adequate. Permitting decisions can be challenged in the court on the grounds that the EIA has not been adequately carried out.

EIAs are carried out by private consultants engaged by the applicant. While there is some public concern that the consultants are not independent, there are safeguards. Firstly, the EIA must satisfy staff of the relevant authority who are competent to assess its adequacy. Secondly there is public consultation of the full

**BOX 5: INTEGRATED ENVIRONMENTAL PERMITS - STANDARDS
USING BAT AND BREF**

The objective of integrated environmental permitting is to establish legally binding environmental requirements for fixed sources of emissions (factories and other large point sources) in a transparent and predictable manner in order to protect human health and environment.

The requirements resolve conflicts between private economic interests in conducting activities that adversely impact on the environment on the one hand and the public interest in ensuring that the environment is protected on the other.

Integrated environmental permitting is an approach that has long been used in Sweden and Australia and in recent years it has also been used in the EU. The requirements are imposed by state or municipal authorities through a permitting process that results in conditions often expressed as maximum allowable emissions of pollutants to air and water, and as limitations of other environmental aspects such as waste and noise (Emission Limit Values, ELVs).

The main advantage of the approach is that it provides for an integrated assessment of the various impacts of a project. This results in better environmental outcomes than if impacts are assessed separately with separate permits for air, water, noise and waste. Industry and the community also welcome the integrated approach because it means a “one stop shop” resulting in one clear and consistent set of operating rules.

BAT (Best Available Techniques) is an important decision-making criterion for the formulation of conditions. The basic philosophy is to limit the pollution as much as technically possible, environmentally justified and economically feasible.

The EU has developed specific BAT identification documents for various industry sectors (BAT Reference Documents, BREFs). In these often voluminous documents, BAT is described by means of emission limit values (ELV) within a range that allows taking account of local conditions. However, there is no simple rule of thumb for applying BAT in each case. An informed judgment by the permitting authority is always a part of the permitting process.

It should be noted though that any deviation of the decision from the BREFs must be properly justified.

In the Swedish Code there are general rules of consideration, which a permitting authority has to consider before granting a permit and setting the conditions (as described in BOX 7 on the Swedish Code)

For businesses of a certain type, there are also pre-determined emissions limits that they must comply with.

BOX 6: PERIODIC REVIEW OF PERMITS IN NSW

In New South Wales, Australia, the law requires the EPA to review permits (called environment protection licenses) at least every 5 years. In addition, the permit conditions can be strengthened at any other time if necessary to protect the environment.

It is very rare for the EPA to shut down a facility. If an older facility is not able to achieve the environmental performance of new facilities, the EPA negotiates a pollution reduction program with the license holder requiring steps to be taken over a specified period to bring its performance up to the new standard.

This may be achieved by phasing in new technology or adopting improved production processes. The steps in the pollution reduction program are attached as requirements in the license and it is a criminal offence not to comply.

2. Recommendations for filling the gaps and creating a unified legal framework

2.1 Short-term recommendations

2.1.1 Reform the current fragmented system for managing hazardous chemicals

Firstly, reform the current multi-department management system (including safety, environment protection, transport and public security) by integrating the supervisory functions and establishing a unified independent system to prevent and control environmental and safety risks.

Secondly, establish a unified legal system for identifying dangerous chemical substances and for risk evaluation drawing on the experience in foreign jurisdictions.

Thirdly, revise and improve current administrative requirements to establish a complete system for reporting and registration of new chemical substances and a system for the market entry of chemicals.

Fourthly, clarify fundamental requirements and measures to restrain (for example, by contents limits) or to eliminate high-risk chemical substances contained in varieties of products, based on actual demand.

Fifthly, in line with process requirements “from the cradle to grave”, clarify risk management requirements for toxic and hazardous chemical substances and products throughout their entire life span from R&D, production, use, consumption, import and export, transport, storage, abandonment and final disposal.

Sixthly, build an overall emergency response system for accident emergency and environmental pollution handling.

Finally, develop a comprehensive liability system for safety and environmental protection by clearly imposing legal liabilities on producers, consumers and regulators.

2.1.2 Strengthen and streamline EIA for plans and projects

Firstly, expand the scope of EIA to major economic and technological policies and comprehensive economic plans that are likely to have significant impacts on the environment, (planning EIA) by strengthening EIA-related laws.

Secondly, improve substantive and procedural requirements for planning EIAs and project EIAs. Require the following important considerations to be taken into account for both planning EIA and project EIAs: Key functional zone planning approved by the State Council, major land use planning and ecological redlines. Plans and construction projects that fail to satisfy these requirements should not be approved.

Thirdly, strengthen the role of EIA by providing for integrated environmental assessment, gradually bringing EIA for the use of resources and ecological protection into the current EIA system, and reduce overlapping administration and duplicated assessment required by different authorities.

Fourthly, improve EIA preparation and approval procedures; further improve the procedures for stakeholders consultations while enhancing professional EIA technical review; and strengthen the role of EIA in balancing the interests of the various parties involved.

Fifthly, enhance the supervision and regulation system for third-party assessment of the EIA by combining industry self-regulation with oversight from administrative authorities and the community thereby improving the independence and scientific quality of the EIA.

Finally, create a liability system where owners, the third-party experts who prepare EIAs and regulatory agencies are held to account and intensify efforts to pursue EIA violations.

2.2 Medium-term recommendations

2.2.1 Strengthen permitting and integrate with EIA

Firstly, elevate the legal status of discharge permits and make it clear that no discharge is allowed without a permit.

Secondly, make the permit comprehensive so that it regulates all forms of pollution - water, air, solid pollutants (except those conditions specially permitted by other laws.)

Thirdly, clearly identify responsibilities of environmental agencies at all levels in relation to the permitting process and in particular, the responsibility to monitor and enforce the conditions of the permit. Establish effective institutional arrangements for inspection, supervision and enforcement at the national and local levels.

Fourthly, streamline and implement various legal tools and integrate them into the permitting process, including environmental standards, environmental monitoring, EIA, “three-simultaneity”, pollutant registration, total amount control (emission cap program), end-of-pipe installation and other environmental management tools. Integrate them into the permit as much as possible.

Fifthly, create procedures for permit applications and for issuing permits and for relevant supervision, such as regular reporting and on-site inspection.

Finally, integrate existing liability-related provisions to create set a complete liability

system.

2.2.2 Strengthen environmental standards

Firstly, make clear that environmental quality and emission standards are mandatory legal norms; require that national environmental quality and emission standards be prepared by environmental protection departments and approved by the State Council.

Secondly, establish standards using the best available technology or best reliable and feasible technology (BAT or BREF), and determine emission standards and total amount emission control based on BAT.

Thirdly, reform existing technical assessment and review when setting environmental quality and emission standards to clarify that these standards should be prepared by environmental authorities, and evaluated and reviewed by independent professional technical agencies. Expand public participation based on the legislative procedures to ensure full public review by all stakeholders

Fourthly, build complete environmental quality and emission standards at the national, regional and local levels, and integrate the total amount target into emission standards; set up regional emission standards across administrative jurisdictions.

Finally, implement environmental standards in an integrated manner with other legal tools to create an effective environmental standard implementation system.

2.2.3 Reforms concerning natural reserves and natural resources

Firstly, reform the existing overlapping management system by various agencies of natural reserves, scenic attractions, geological parks, forest parks and other kinds of conservation areas; establish a unified classification system; integrate laws, administrative regulations and technical specifications to create a relatively complete and unified system.

Secondly, establish the ownership of natural resources, and the rights to use natural resources, improve regulations on property right transactions. Develop laws and supporting regulations to reform the asset management system of state-owned non-profit natural resources to gradually develop an administrative and institutional system for natural capital delegation, management and auditing.

2.3 Long-term recommendations

2.3.1 “Green” other laws to promote ecological progress

Firstly, the Constitution and other laws should recognize and protect the environment as a public resource.

Secondly, the promotion of ecological civilization progress should be integrated into the civil code. It should not merely be confined to creating traditional property rights but also reflect humanistic and ecological considerations, for example when creating property rights, and tort liability.

The precautionary principle and sustainable use should be promoted and environmental rights recognized and guaranteed by law.

Tort liability provisions should be improved by creating liability for ecological damage, for example, for water and soil losses, the permanent destruction of agricultural production conditions and the devastation of living conditions.

Establish a social aid mechanism for environment-related tort liability by extending the scope of environmental liability insurance. Businesses should have absolute responsibility for environment-related tort liability with insurers bearing the second layer of responsibility. However, for massive tort liability cases, damage compensation, for example nuclear accidents, a mechanism of last-line compensation by the states required.

2.3.2 Develop an environmental code for China

There is merit in codifying environmental laws to harmonize them and ensure a coordinated and consistent approach avoiding gaps and inconsistencies. However, this is an enormous task and needs to be approached in a step wise process, starting with clarifying the relationship between the Environmental Protection Law and other pollution prevention and control laws and also reducing repetition.

Two options for codification have been considered. The most ambitious is to codify both pollution prevention laws and resource protection laws. The second option is to codify just the pollution prevention laws. This is a more manageable task and would have the benefit of providing a code with Chinese characteristics suited to the administrative system at China's current stage. The code could enrich, strengthen and integrate environmental management systems and drastically cut repetitive terms and conditions facilitating implementation.

It is recommended that further study be conducted into the process for developing of an environmental code for China.

BOX 7: SWEDISH ENVIRONMENTAL CODE

The overall purpose of the Swedish Environmental Code is to promote sustainable development to assure a healthy and sound environment for present and future generations. It replaced 16 former Acts and took ten years to develop.

The Code was first introduced in 1999 to harmonize environmental legislation, ensuring a consistent approach and avoiding gaps and inconsistencies.

It applies in principle to all human activities that may harm the environment or human health and must be applied in such a way as to ensure that:

- Human health and the environment are protected against damage and nuisance, whether caused by pollutants or other impacts;
- Valuable natural and cultural environments are protected and preserved;
- Biological diversity is preserved;
- The use of land, water and the physical environment in general is such as to secure a long term good management in ecological, social, cultural and economic terms; and
- Reuse and recycling, as well as other management of materials, raw materials and energy are encouraged with a view to establishing and maintaining natural cycles.

Important overarching principles, policies and goals are laid down in the Code and must be followed by agencies and the Court when applying it. For example, when considering a permit application and imposing conditions on any permit approval,

the relevant agency must consider the following principles, policies and goals:

- Polluters pay principle
- Precautionary principle
- Prevention principle
- Burden of proof
- Best available techniques
- The location of activities
- Reuse and recycling
- Cost-benefit balancing.

General provisions in the Code promote the principle of sustainable development. Examples include provisions concerning :

- The management of land and water areas
- Protection of nature
- Protections of animal and plant species

The principle of sustainable development in the first section of the Code must be applied when the Government or agencies under the Government make rules and regulations based on the Code.

The Code also contains special provisions relating to particular activities including:

- Environmentally hazardous activities and health protection
- Activities that cause environmental damage
- Water operations
- Chemical products and biotechnical organisms
- Waste and producer responsibility.

The Code also contains also a great number of procedural rules.

3. Recommendations to improve the quality of legislation

3.1 Build an institutional mechanism to ensure Party rule making is consistent with national laws

Set up an institutional mechanism to ensure Party regulations are in line with national laws in the formulation process. This would meet the strategic requirements for modernizing the national governance system set forth in the 4th Plenary Session of the 18th Central Committee of the CPC.

Use the revision of the Law on Prevention and Control of Water as a trial.

3.2 Build an institutional mechanism for the legislative drafting process to avoid departmental conflict of interests

Departmental conflicts of interest heavily restrain environmental legislation in China. To ensure this does not happen, it is essential to set up an institutional mechanism in accordance with the decision of the 4th Plenary Session of the 18th Central Committee of CPC.

Firstly, the formulation or modification of laws should be decided by the NPC according to its inspection, enforcement or surveys; or initiated by the State Council when submitting a proposal to the NPC or its Standing Committee for deliberation. Various ministries, commissions and bureaus should be able to provide comments before the decision of the State Council.

Secondly, if any new or amending law is required to be enacted by the NPC or its Standing Committee, the text must only be drafted by the NPC Standing Committee's special committee or a designated working committee. It should not be entrusted to the Office of Legislative Affairs of the State Council, nor to ministries, commissions and bureau for drafting. This is to ensure the fairness and integrity in the environmental law drafting process.

Once a draft is prepared, the special committee or a related working committee that drafts the text of NPC may call for comments and recommendations of the Legislative Affairs Office of the State Council as well as those of ministries, commissions and bureau.

3.3 Improve environmental legislation by providing the whole package

Laws containing only general principles make environmental laws inoperable by leaving too much discretion to the government agencies that implement and enforce the laws.

It is recommended that wherever possible, laws should not be too general and lacking in detail. It is imperative to give a complete package of provisions when promulgating laws. It's also necessary to anticipate possible implementation problems in advance and deal with them. If it is impossible to lay down all the provisions, deadlines for the creation of supplementary norms and standards should be provided.

3.4 Further strengthen information disclosure and public participation

Insufficient information disclosure and low public participation has become a great

impediment constraining social forces to rise as a third pole of the environmental management system. Accordingly, in the modification or formulation of environmental laws and regulations in the next stage, it is essential to expand and provide detailed provisions on information disclosure and public participation. Further development is required of the *Regulations on Environmental Information Disclosure and Public Participation*.

3.5 Integrate the multi-planning process

Integrate “multi-planning-in-one” and make plans that accord with Chinese realities and with the requirements for national governance strategy. Environmental plans, economic and social development plans, urban and rural construction plans, overall land use plans should combine into one blueprint, making environmental protection a binding factor in a real sense.

“Multi-planning-in-one” is in line with the requirement for Chinese environmental management and is an important means of avoiding the waste of precious resources. Therefore, it should be firmly put into practice. Currently, China is carrying out “multi-regulations-in-one, in counties and cities. Hainan Province has launched its trial program as a provincial trial zone. In 2016, China should summarize this experience to extend the trial programs.

It is important to learn from the EU by reconstructing a system of environment policies and regulations, and enhancing the status of environmental plans and standards in the legal system. China can define and achieve its environmental goals by planning and by developing appropriate environmental standards, laws and regulations to meet economic development needs while addressing China’s current environmental challenges.

Part II: Implementation and Enforcement – Achieving the Aims of the Legislation

1. Implementation and enforcement problems in China

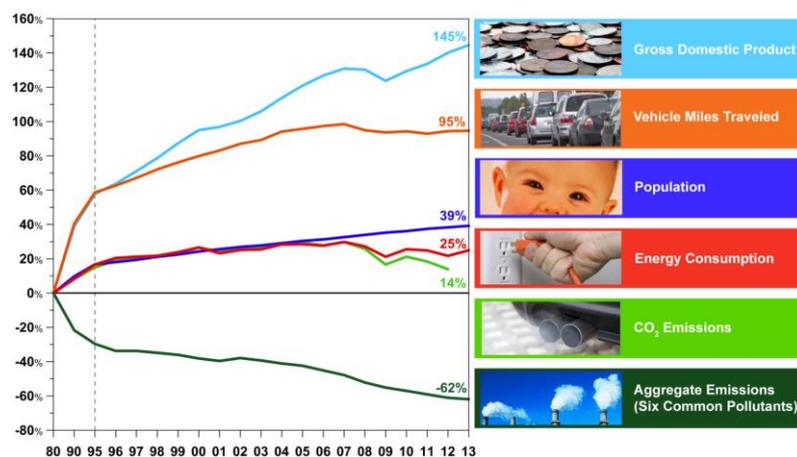
The implementation of the new Environmental Protection Law marks a new era for environmental protection in China. There have been achievements such as significant improvements in urban air quality and a rapid growth in the number of enforcement cases.

However, continuing environmental problems, especially air, soil and water pollution reflect extensive economic development for decades combined with lax law enforcement.

BOX 8: PERSUADING PUBLIC THAT ENVIRONMENTAL PROTECTION COMPATIBLE WITH ECONOMIC GROWTH

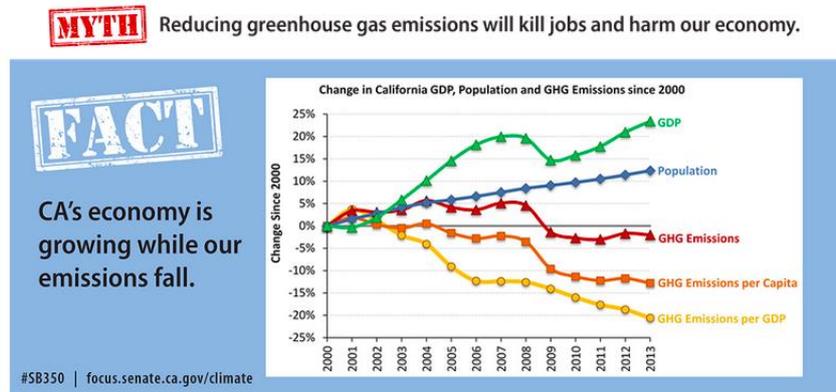
Debates over environmental regulation in China still too often treat environmental protection as incompatible with economic growth. This box uses examples from the United States to highlight the importance of persuading the public not only that growth and environment are not incompatible, but that environmental regulation can actually be a driver of growth. American regulators (both federal and state) regularly emphasize the net benefits of environmental regulation in terms of economic growth, health, and other metrics. For example, the U.S. EPA regularly highlights the fact that substantial reductions (-62%) in criteria air pollutants (SO₂, NO₂, ozone, CO, PM, lead) have been achieved even as GDP has increased by 145%, vehicle miles traveled have nearly doubled, and population as well as energy consumption have increased (see figure).

US Air Quality Improvements (1980-2013)



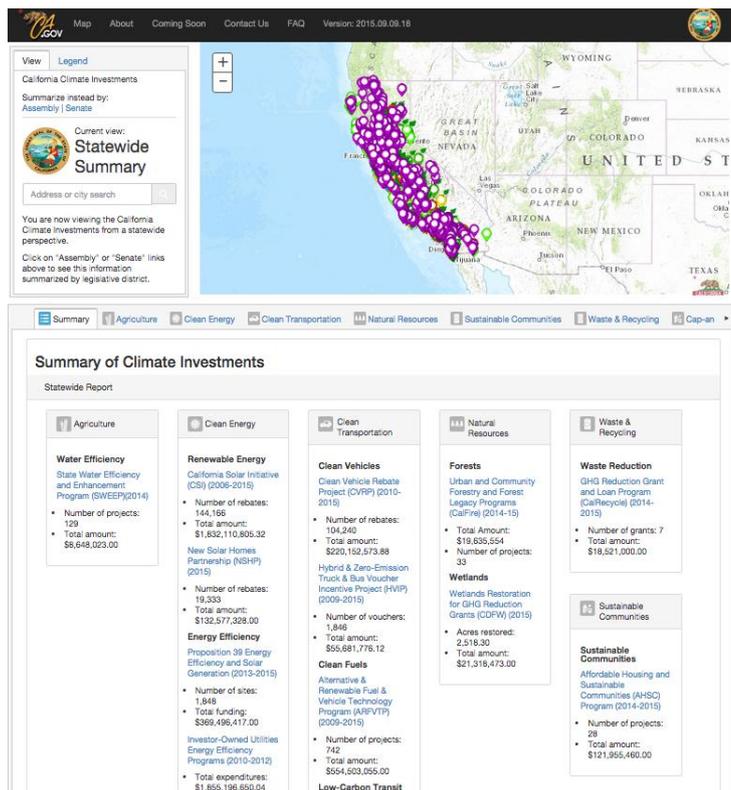
<http://www.epa.gov/airtrends/aqtrends.html>

California EPA uses similar statistics to illustrate that greenhouse gas emissions regulation is compatible with economic growth.



<http://focus.senate.ca.gov/climate/sb350-facts>

California has also created an online map highlighting the numerous investments associated with climate change regulation. The point is to remind the public that environmental regulation can generate economic growth.



The Chinese government is now promoting a similar message. Green development and economic transformation are the keys to a cleaner, healthier, and more prosperous future in China. Government officials, environmental regulators, NGOs, and concerned citizens in China need to strengthen their ability to highlight these benefits of environmental regulation to counter the still prevalent idea that environmental regulation presents an either-or choice between growth or the environment.

1.1 Problems caused by the laws themselves

1.1.1 Environmental protection law is a lower-level law and weak in playing its coordination role

A basic law is a higher-level law. A prerequisite for a law to become a basic law in China is that the law is adopted by the NPC. However, the new Environmental Protection Law is adopted by the NPC Standing Committee, so it does not have the status of a basic law of China.

The new Environmental Protection Law is a comprehensive and foundational law intended to reach every aspect of environmental protection including the ecological red line system, the protection of natural ecological regions, ecological restoration, security, compensation and the protection of agricultural ecological systems.

However, because it is not a higher-level law when compared with laws such as the Agricultural law, the Forest law, the Grassland Law, and the Water Law, its authority is weakened. Until this issue is addressed the Environment Protection Law will continue to lack authority and will be unable to play its coordination role.

1.1.2. Poorconnection between laws and weak coordination between systems

Pollution prevention laws and natural resources laws are only weakly connected and this has not been addressed by the new Environmental Protection Law. There is overlap and conflict with specific laws and systems relating to natural resources. One example is conflicting requirements for monitoring.

Low linkages between laws inevitably leads to ineffective coordination between legal systems and administrative departments, increasing the risk of environmental accidents.

Take the recent Tianjin Port Explosion as an example. The lack of clear division of administrative powers and responsibilities between the work safety department and the environmental protection department prior to the accident resulted in great risks to the port area.

A production safety emergency drill was held in the port area on July 20, shortly before the accident, but it did not have the desired effect. Poor communications between the environmental protection department, the work safety department and the fire department after the accident led to inadequate emergency measures and inaccurate information about dangerous goods such as cyanide. This seriously endangered the health and safety of the local residents.

1.1.3. Laws and regulations strong in principle, but aspirational rather than effective

The environmental laws and regulations are often criticized for their low operability and the lack of supporting laws and regulations. An environmental law that cannot be implemented effectively exists in name only.

The new Environmental Protection Law has gone some way to addressing this issue and the Ministry of Environmental Protection has introduced a number of legal tools including performance review, ecological redlines, ecological compensation, public interest litigation, and stricter penalties. Furthermore, a number of supporting regulations have been made, for example, regulations providing for daily penalties,

halting production and the disclosure of information by enterprises and public institutions.

However, there are still gaps. For example, there are no provisions for objective assessment or for time limits for the establishment of standards, rules, policies, and plans by the competent administrative departments and local governments. Supervision responsibilities remain unclear.

In addition, China does not have any evaluation mechanism or indicator system for measuring the effectiveness of implementation and enforcement, of the law. Local governments and competent administrative departments should be urged to enforce the law strictly by giving them scores based on the effectiveness of implementation and enforcement.

BOX 9: COMPLIANCE AND ENFORCEMENT PERFORMANCE MEASUREMENT

Many OECD countries have developed and used performance measurement indicators to measure the performance of environmental enforcement authorities since early 1990s. An OECD 2010 report analyzing the experience of ten OECD countries in the design and implementation of quantitative indicators indicated that four categories of indicators are widely used over the years: 1) inputs indicators (e.g., time, staff, funding, materials, equipment, and other resources); 2) outputs indicators (e.g., the number of inspections performed, the number of compliance promotion activities and the number of enforcement actions); 3) intermediate outcomes indicators (e.g., improved environmental management and reduced environmental impact); and 4) final outcomes indicators (e.g., improved ambient water or air quality and reduced soil contamination, etc.).

Traditionally, compliance and enforcement performance has been evaluated by inputs and outputs indicators. In recent years, many environmental enforcement authorities realize that input and output indicators alone do not reflect the effectiveness of various enforcement activities. Therefore, more meaningful outcome-based measurement indicators have been developed to focus on the improvements in environmental conditions or behaviors of the regulated community. Generally speaking, six types outcome-based performance measurement indicators are often used:

- Compliance rates;
- Measures of recidivism and duration of non-compliance;
- Pollution release indicators;
- Indicators of improved environmental management practices and reduced risk;
- Measures of effectiveness of individual compliance assurance instruments; and
- Environmental quality (final outcome) indicators.

OECD countries experiences show there are three approaches in designing outcome-based indicators of compliance and enforcement:

- Performance assessment focused on the effectiveness of compliance assurance instruments across regulations and environmental problems (e.g., US EPA measures the improved behavior of the regulated community, inspections and enforcement actions as well as ensuing pollution reductions).

- Performance assessment focused on specific environmental problems reflecting the competent authority's strategic priorities (e.g., UK, Denmark and Ireland use this approach to track high-risk industrial incidents, emissions of priority pollutants, etc.).
- Multi-tier performance assessment focused on pollutant-specific results of regulatory actions at the lower level and on the overall programme effectiveness at the higher level (e.g., Environment Canada looks first at reductions of individual regulated pollutants as a result of compliance and then aggregates them into a composite measure characterizing the environmental impact of these reductions).

From the scope of the indicators, the experiences from around the world show four types of compliance and enforcement measurement indicators:

- Comprehensive National Indicators to assess the overall effectiveness and improve management of the national environmental agency's compliance and enforcement programme. For example, the US EPA's national ECE indicators. For more information see <http://www.epa.gov/compliance/planning/reuslts/index.html>.
- Comprehensive Sub-National Indicators to assess the overall effectiveness and improve management of the compliance and enforcement programme of a regional or district office of the national environmental agency, a state or provincial agency, or a local municipal agency.
- Focused National Indicators to assess the effectiveness and improve management of a focused national initiative to address a specific noncompliance pattern or environmental risk. For example, Environment Canada's focused national ECE indicators. For more information, see <http://www.ec.gc.ca>.
- Focused Sub-National Indicators to assess the effectiveness and improve management of a focused initiative to address a specific non-compliance patter or environmental risk at the regional, provincial/state, or local/municipal agency, use focused sub-national indicators.

However, there are some major challenges for developing and using compliance outcome indicators, including resources limitation for data collection and treatment, complexity of scope definition, difficulty of designing statistically-valid indicators, uncertainty in linking outputs with outcomes, and low comparability of indicator, etc.

It is not possible to identify a "best practice" approach or a set of "flawless" indicators. The design of the measurement indicators ultimately depends on their purpose and suitability for joint analysis with the enforcement authority's resource (input) and activity (output) indicators.

Sources:

1) OECD Environment Working Paper No. 18 (by Eugene Mazur), *Outcome Performance Measures of Environmental Compliance Assurance* (2010), available at:

http://www.oecd-ilibrary.org/environment/outcome-performance-measures-of-environmental-compliance-assurance_5kmd9j75cf44-en

2) INECE, *The Performance Measurement Guidance for Compliance and Enforcement Practitioners, Second Edition* (2008), available at:

<http://inece.org/indicators/guidance.pdf>

1.1.4. Problems in legal tools design and lack of shared governance

In the current environmental legal system, environmental control mechanisms predominate over market mechanisms

Rules for public participation are mainly established in pollution prevention and control laws and regulations, and rarely seen in other environmental legislation.

With increasing public environmental awareness today, the design philosophy of the environmental legal system should be broadened from just regulating acts and punishing illegal acts of enterprises and citizens to also include guiding and supporting enterprises and citizens to comply with the law consciously.

BOX 10: COMPLIANCE AND ENFORCEMENT- BEST REGULATORY PRACTICE

The role of a modern regulatory agency is to enforce the law when necessary, but also to inform and educate, provide support, monitor compliance, and encourage higher performance.

Range of tools for compliance

International experience has shown that the most cost effective way to achieve compliance is through education and support, backed up by strong enforcement

There are many drivers of non-compliance and these include a lack of knowledge or understanding of the rules, unclear or contradictory rules, a low likelihood that a breach will be detected, a low likelihood that sanctions will be imposed or sanctions that are too low to act as a deterrent.

These drivers are addressed by a combination of positive motivators and incentives for compliance, (education and support, clear coherent rules, public acknowledgment of good performers), and by effective deterrents for those who break the law (a suite of escalating sanctions).

When setting policy and drafting regulations, the Hampton Review¹ of effective regulation in the United Kingdom recommended that they should be written in consultation with stakeholders so that they are easily understood, easily implemented and easily enforced.

Explicit consideration should also be given to how they can be enforced using existing systems and data to minimize the administrative burden imposed. The agency also needs to provide education and support.

Exercise of discretion - accountability

Regulatory agencies exercise discretion in compliance and enforcement as a matter of course – at the managerial level in the allocation of resources and at the field level in choosing how to respond. This is often unacknowledged and not understood.

The modern regulator explains to the community how it will prioritize its focus and target its resources. It also explains the strategies it will apply when dealing with regulated facilities so its actions and responses are predictable and consistent. It reports to the community annually on its performance and achievements.

Risk-based approach and performance measurement

In determining priorities, modern regulators adopt a risk-based approach devoting resources to areas where they will make the biggest difference and manage the biggest risks.

The UK Environmental Agency is considered an exemplar in risk-based regulatory practice with the transparent disclosure of its risk-based targeting, licensing and inspection approaches through the Operator Pollution and Risk Appraisal system (OPRA).²

EPA Victoria has recently adopted a similar risk based approach in Australia after an extensive review of regulatory best practice.³

Implementing recommendations of the review, the agency has published a new Compliance and Enforcement Policy explaining its methods and priorities for ensuring compliance and using its compliance and enforcement powers. This approach is standard practice for regulators today.

It has also published an annual Compliance Plan informing the community of the EPA's planned and proactive compliance activities for the year ahead. These are divided into strategic compliance activities, compliance maintenance activities and pollution response. Each category requires a different approach to risk assessment, resource allocation and problem solving.

The agency reports to the public annually on its performance in achieving the objectives of its Compliance Plan. The public is also able to read about the outcomes of EPA's compliance and enforcement activities by following it on social media and on its website.

1. *Hampton Report March 2005.* www.hm-treasury.gov.uk/media/AAF/00/bud05hampton_641.pdf.
2. *Environment Agency UK website* www.environment-agency.gov.uk
3. <http://www.epa.vic.gov.au/our-work/compliance-and-enforcement/ce-review>

1.1.5. Parts of the legal system are out of date and incomplete

Pollution discharge fees are too low and fail to reflect regional differences. The system for licensing pollution discharges has not been effectively implemented for a long time. Pollutant discharge standards are out of date and do not match the standards required for environmental quality and public health. There are not enough industrial and regional pollutant discharge standards.

The environmental impact assessment system does not cover all decisions and policies that can have a significant impact on the environment. Wrong environmental decisions and policies will inevitably lead to serious environmental consequences, greater than that of general environmental pollution behavior and environmental accidents.

The environmental legal system needs to adjust to the current environmental pollution problems in China. In the past, the main focus has been on prevention and control of point source pollution. However, our environmental problems have evolved from point source pollution to non-point source pollution crossing multiple administrative regions

and watersheds and affecting multiple provinces and municipalities. So it is necessary to adjust the current system and make it more suitable for the problems of today.

1.1.6. Poor coordination in planning without full consideration of environmental protection

Environmental planning should be considered together with economic and social development planning, urban and rural construction planning, and overall planning for land use.

Resource use should not go beyond environmental bearing capacity. Environmental planning by many local governments should be integrated with economic and social development planning, urban and rural construction planning, and overall planning for land use. Otherwise, each department acts only in its own interests and the environment becomes the victim of struggling interest groups and regionalism.

2. Law enforcement problems

2.1 Barriers to effective implementation and enforcement

Roles and responsibilities of all levels of government in the implementation and enforcement of environmental legislation are unclear. There are conflicts between regional administration and vertical administrations in China.

Conflicts between resource departments and environment protection departments make coordination of their functions difficult and hinder overall planning for environmental and natural resource protection. This damages the government's credibility, for example, through inconsistent announcements and data.

In addition, staffing, staff authority and funding of local environmental protection departments are in the hands of local governments with the potential for improper influence by local governments in compliance and enforcement.

Under the Environmental Protection Law, local governments are responsible for environmental quality. However, apart from the evaluation mechanism, the relevant laws fail to guide and assist local governments to fulfill their responsibilities. The environmental protection departments always become the target of criticism for poor regulation.

2.2 Party committee not responsible or accountable for illegal intervention in environmental protection

Enterprises are responsible for environmental pollution incidents and regional haze pollution incidents. The government is responsible for supervising these enterprises. However, the governments are led by party committees. These committees should assume leadership responsibility for environmental protection and receive party discipline punishment and policy discipline punishment for weak supervision.

In practice, it is difficult to make the officials from party committees accountable for environmental accidents because they are usually not involved in day-to-day regulation over specific affairs.

The vast majority punished for environmental events and accidents are government officials. Nationwide, it is hard to find a standing committee member of party committee in charge of environmental protection. The objective of the struggle of a

government deputy head in charge of environmental protection is to become a standing committee member and avoid responsibility for environmental regulation.

Deputy heads of governments in charge of environmental protection are usually low ranking and requests for resources for environmental protection do not receive the attention they deserve.

2.3 Lack of trans-regional coordination and unclear division of responsibilities

There are three major environmental problems in China: atmosphere pollution, watershed pollution, and soil pollution. Solving them requires trans-regional coordination.

Take watershed pollution prevention and control in China as an example. The river water has the characteristics of trans-regional and even trans-national flow, but the watershed pollution prevention and control are carried out based on administrative jurisdictions. This results in unbalanced rights and obligations and unfair results. The downstream region suffers from pollution discharged by the upstream region while the downstream region can be a “free rider” of pollution control carried out by the upstream region. This threatens social stability in river basin regions.

The current regulatory system for watershed pollution does not provide for joint prevention and control authorities, except for the important rivers and lakes. The lack of a coordination authority ultimately affects the interests of residents in these regions.

2.4 Departmental protectionism causes weak cooperation in law enforcement

The complexity and particularity of environmental problems distinguishes environmental law enforcement from general law enforcement. In daily practice, it is necessary for an environmental protection department to cooperate with other departments or peers in other regions, to ensure the job is well done. Experience has shown that environmental problems cannot be solved by the efforts of a single local environmental protection department or a single local government.

The predicament of law enforcement is largely caused by conflicts of interest between government departments. Some environmental issues come within the jurisdiction of both the environmental protection department and other departments, while others don't come within any department's jurisdiction. This has become the biggest obstacle to the implementation of environmental laws and regulations.

A government department inevitably interprets provisions of a declarative or vague nature in its own interests, either “passing the buck” or seeking to further its own primary objectives.

Local governments and departments need to cooperate with each other in law enforcement to deal with regional or watershed environmental problems. However, they are only likely to take the initiative to solve an environmental problem through collaborative law enforcement when the case is extremely serious.

3. Attitude to Environmental Law Enforcement

3.1 Local governments require pressure from the central government to carry out local environmental law enforcement

The new Environmental Protection Law has been in force for more than eight months. It has resulted in stricter and more pragmatic environmental law enforcement and greater public awareness and participation in environmental protection.

In the first half of 2015, under great pressure of the central government, the environmental protection department inspected more than 620,000 enterprises/times nation-wide, ordered 15839 enterprises to suspend production and 9325 enterprises to shut down business, collected daily penalty of more than 230 million Yuan, handled 1814 cases involving seizure or detainment of property, transferred 782 administrative detention cases to the public security organs, and transferred 740 alleged pollution crime cases to the procuratorial organs.

The Ministry of Environmental Protection suspended the review and approval of all proposed new projects within 5 cities with prominent emission reduction problems, ordered 37 enterprises to complete rectification within specified time limits under public supervision, and required thermal power enterprises that failed desulfurization facility inspections to make additional payment for pollutant discharges amounting to 510 million Yuan.

Provinces and municipalities directly under the central government can be divided into three levels in term of their environmental quality and enforcement attitude.

The first level has good environmental quality and local governments take the initiative to enforce environmental laws and regulations. The second level is where the environmental quality is just so-so and the local governments fulfill their duties in accordance with the law but in a manner that may be described as "in the middle of active and passive law enforcement". The third level is where environmental quality is poor and the local governments often have to be urged by the central government through inspection and supervision to improve law enforcement capability.

Currently, the provinces at the third level are economically developed regions where it is harder for environmental laws and regulations to be implemented. The driving force for implementation in these regions is mainly the pressure from higher levels of governments and the central government. For example, from February to June 2015, the environmental protection departments questioned the principal leaders of Cangzhou, Wuxi, and Linyi on the issues of environmental quality, environmental law enforcement, people's livelihood, and economic development.

It is clear that enforcement across China has not yet reached the state of active enforcement everywhere, and monitoring and supervision by the central government is still required to a large extent.

Economic downward pressure has increased especially since June this year, making employment growth the main goal of local governments. According to local environmental protection departments, local governments have become more reluctant to carry out enforcement.

3.2 Local selective law enforcement and campaign-style law enforcement are common

In order to improve administrative efficiency, Chinese environmental laws and regulations give environmental protection departments certain discretion in administration. However, the departments often use this discretion to take a weak approach to enforcement. They tend to enforce selectively where it is easiest to do so and do not take a broader, fairer and more strategic approach. Other difficulties causing this weak approach to enforcement include problems of geographic location and the concerns of a superior authority.

At present, local environmental protection departments prefer to crack down on violations by launching campaigns to achieve rapid improvement of regional environmental quality. The so-called campaign-style law enforcement mainly refers to the well-organized and targeted large-scale law enforcement or joint law enforcement through the centralization of manpower and material resources by the environmental protection departments.

However, in the absence of a strategic enforcement framework, campaign-style law enforcement only curbs violations in the short term, resulting in the endless loop of "violation - punishment - violation - punishment".

3.3 Improper local administrative interventions in environmental protection are common

The environmental protection departments often don't dare to enforce the law because of the intervention of the local governments and party committees. Environmental protection departments are then criticized by both sides. The public is dissatisfied if they don't enforce the law and local governments and party committees are dissatisfied if they do.

Strict law enforcement is seen as affecting local employment and revenue growth, thereby affecting the performance evaluation and political future of officials. In spite of the independence of environmental protection departments in law enforcement, the appointment of environmental officials is still under the control of local party committees and governments.

4. Supervision of Law Enforcement

4.1 Inadequate legislative guarantee for social supervision and inadequate People's Congress supervision

The new Environmental Protection Law provides a legal basis for public participation and supervision in environmental law enforcement. However, the provisions are of a declarative nature and are soft in creating implementation responsibilities. It is far from effective in relation to public participation and supervision. To achieve the intent of the legislation, civil society groups must have the right of supervision by law.

The new Environmental Protection Law provides the environmental protection departments with powerful law enforcement measures, such as administrative detention and blame-taking resignation. However, the number of environment law violators sentenced to administrative detention after the implementation of the new

Environmental Protection Law can be counted on two hands. None have been forced to resign.

This reflects poor enforcement rather than an absence of violators. The People's Congress supervision and public supervision are not effective. At present, the People's Congress tends to use reports as the main method of supervision, it has yet to make inquiries or to held officials accountable for their violations.

The environmental situation is grim and the public can do almost nothing. Social groups feel powerless particularly about regional and watershed environmental pollution problems, reflecting the weakness of social supervision. They have to vent their discontents through network platforms, such as Weibo and WeChat, triggering social conflicts.

In addition, some for-profit media agencies and opinion leaders forge or tamper with environmental information for their own interests, such as increasing clicks to attract attention. They kidnap public opinion by exaggerating environmental problems causing panic and mass incidents. This results in the misdirection of enforcement activities.

4.2 Low level of information disclosure and public participation

Public participation has always been important in environmental law enforcement and its low level has been widely criticized in China. The new Environmental Protection Law has a whole chapter of provisions to increase information disclosure and public participation. Public participation is widely regarded as an essential element of policy making at the top level and of law enforcement at the grassroots level.

However in Hebei Province, public participation is mainly passive participation in the form of information acceptance. Active participation is mainly reflected in reporting and supervision of unlawful acts and law-enforcing acts. Judicial review mainly takes the form of civil public interest litigation. Public participation remains at a low level and has not become an important part of environmental decision-making and law enforcement.

The Tianjin Port Explosion in 2015 provides one example. According to laws, the safe distance between a hazardous chemical warehouse and surrounding buildings is 1000 meters. However, more than 5600 households were found living within a radius of 1000 meters from the burst point after the accident. The real estate developers claimed they had not received any notice saying the nearby general logistics warehouse would be reconstructed into a hazardous chemical warehouse. The opinions of nearby residents had not been sought on environmental issues. It appears that the parties concerned in the establishment of the hazardous chemical warehouse failed to fulfill their legal obligations for information disclosure and environmental impact assessment.

BOX 11: INFORMATION, PARTICIPATION AND ACCESS TO JUSTICE

Successful implementation and enforcement of environmental law is the duty of public authorities. The European Union and especially Germany have developed legal instruments for access to information, participation and judicial review building public and government confidence in effective implementation and enforcement.

Based on the Aarhus Convention (Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters), which came into force 2001, the European Union and their member states adopted several legal acts which:

1. Oblige public authorities to provide access to environmental information for private individuals without having the duty to claim an infringement of interest or right (passive information) and
2. Oblige authorities, other public offices in the parties' sphere of influence, and international organizations to publish documents with environmental impacts (active information).
3. Give the right for the civil society (private persons) to participate in approval procedure with the aim of permitting large-scale projects with environmental impacts.
4. Provide access to justice for individuals with an infringed interest or right and non-governmental organizations to control the approvals of large-scale projects.

Free access to all relevant accurate data, and actively publishing that data, has enabled civil society to monitor public authorities and their enforcement practices. The produced transparency has improved decision-making and promoted not only trust in the authorities' actions but also acceptance of its decisions.

Legal remedies are provided because without them, there would be a risk that the first (access to information) and second pillar (participation) of the Convention would peter out with no effect, and other environmental requirements would not be monitored.

NGOs

In order to avoid improper use of the right of access to information, participation and access to justice, the German law requires NGOs to apply for governmental recognition. The German Environmental Appeals Act provides a list of requirements. An association must be recognized if it:

- predominantly promotes the objectives of environmental protection according to it by law
- has corresponding activities
- existed for a minimum period of three years
- guarantees proper performance of its functions
- pursues public benefit purposes
- allow any person who supports the objectives to become a full right member of the association with an exemption for umbrella organization.

The recognition is issued by the Federal Agency for Nature Conservation.

Upstream bureaucratic supervision

In Germany, the task of monitoring agency compliance and enforcement actions is not simply left to individuals and NGOs. Supervision of public authorities at the local level is also carried out by public authorities at the regional or state level (upstream-supervision).

Conclusion

The lessons learnt by the European and German implementation experiences are: There will be no effective enforcement, acceptance and trust without transparency, participation and judicial review of public authorities' decision-making processes and enforcement. Upstream bureaucratic supervision is also important.

4.3 Lack of accountability for failure to implement environmental laws

Though the new Environmental Protection Law makes several innovations such as imposing a responsibility system, an evaluation system and a blame-taking resignation system, it is still doubtful how well these systems will work to serve the public interest.

Under the blame-taking resignation system, principals must take the blame and resign, but there is no system for investigating and discovering that a principal should be blamed. In addition, the leading party and government cadres who take the blame and resign then go to other work places with a corresponding rank after consideration is given to factors such as their general performances, qualifications, specialties, etc. Consequently, many officials who violate the discipline have nothing to fear.

The public cannot take any action under the Environmental Protection Law if a local government fails to hold the personnel concerned accountable in accordance with the law or fails to take tough administrative punishment measures, such as daily penalty and administrative detention.

4.4 Narrow scope of Public Interest Litigation

Public interest litigation is regarded as the most important measure in the recent amendments to the Environmental Protection Law.

On July 1st, 2015, the Standing Committee of the National People's Congress authorized the Supreme People's Procuratorate to carry out administrative or civil public interest litigation pilot work. Thirteen provinces, autonomous regions and direct-controlled municipalities are the pilot areas, including Beijing, Inner Mongolia, Jilin, Jiangsu, Anhui, Fujian, Shandong, Hubei, Guangdong, Guizhou, Yunnan, Shaanxi and Gansu, have been nominated as pilot areas.

However, the law only provides for civil public interest litigation, and not administrative public interest litigation. Administrative public interest litigation supervises the government to protect the public interest according to law and has an important role in perfecting the environmental legal system in China. It is difficult for the community to gather the evidence and file a suit to safeguard their own legal rights and interests.

5. Weak Law Enforcement Capacity

5.1 Improper institutional structure (inverted pyramid structure) unable to meet enforcement needs

Problems exist in the institutional arrangements of environmental protection departments. It is difficult for implementation of the new Environmental Protection Law to “go to the grassroots units”. On the whole, the environmental protection departments in the central and provincial levels have relatively stronger capacity, with relatively prominent professionalization and more senior research talents; while those in the municipal and county levels have less.

The enforcement capacity of the environmental protection departments takes the structure of an inverted pyramid, with strong capacity in the central and provincial levels but weak capacity at the municipal, county and township levels. Some county-level environmental protection bureaus have only one or two staff to maintain their daily enforcement, and some rural towns even have no enforcement at all. These grassroots units are also required to provide guidance to a vast number of enterprises.

The goals of the Environmental Protection Law cannot be achieved because of this lack of capacity and resources at the lower levels.

5.2 Uneven professional capacity

Environmental laws are developed by high-level personnel in China and implementation of the laws requires personnel with relevant expertise. Enforcement is complicated and difficult work. Laws are general and abstract and must be applied to circumstances that are numerous and diverse. Officials must be able to understand the law and choose how to enforce it in the particular circumstances.

Moreover, with China’s environmental protection legislation becoming more and more professional, the requirements for the professionalization of environmental protection departments increases, especially for the staff in charge of grassroots environmental law enforcement.

However, many environmental law enforcement officials lack knowledge of the laws and are untrained. Indeed, many districts and counties employ contract workers or temporary workers who are always of lower educational levels and lack the capacity for general law enforcement.

This lack of professionalization in environmental protection departments at county and township levels results in poor implementation and enforcement.

BOX 12: ENVIRONMENTAL AGENCIES IN OTHER JURISDICTIONS

US EPA

The US EPA is a national agency employing 18,000 permanent staff with an annual budget from Congress of US \$8 billion. It serves a population of 320 million covering an area similar in size to China.

More than half of its full time staff is professionally trained – for example, engineers, scientists and environmental protection and education specialists. Other groups include legal, public affairs, and financial and information technologists.

The agency regulates 800,000 facilities nationwide.

One of the agency's seven key themes is “embracing the EPA as a high performing organization”. Staff are hired, trained and supported to enhance their performance in all areas, including in compliance and enforcement.

NSW EPA

The NSW EPA is an Australian agency at the State level employing 450 permanent staff, with a current annual budget from the State government of AUD\$158 million. It serves a population of 7.5 million covering 10% of Australia. The agency directly regulates 2000 facilities across the State.

Staff have similar professional qualifications to staff of the US EPA. Core capabilities for which the agency provides on-going training include incident management, gathering evidence and conducting investigations, policy development, leadership and management.

National network to support regulatory staff

The Australasian Environmental Law Enforcement and Regulators Network (AELERT) is a collective of environmental regulators from all levels of government across Australia and New Zealand. It provides a platform for environmental regulators to connect and collaborate in their work and is modeled on the International Network for Environmental Enforcement and Compliance (INECE).

Member officers connect through AELERT to exchange resources, knowledge and experience about environmental regulatory practice and work together to drive continuous improvement and new approaches to the ‘regulatory craft’.

For example, it provides a Professional Development and Training Program coordinating and delivering a suite of accredited and non-accredited courses that are open to environmental regulatory practitioners.

Accredited courses are delivered by Registered Training Organizations to a standard set by the Australian Skills Quality Authority (ASQA) established by the National Vocational Education and Training Regulatory Act 2011. These courses are designed to assess competency against a range of skills and knowledge relating to the area of study. AELERT offers these courses in Government & Environmental Regulation, Environmental Auditing as well as in Investigations.

5.3 Weak financial and technical support

With the causes of environmental problems becoming more complex and the environmental protection laws needing to become more professional, the requirements for funds, technology and information to support implementation and enforcement are becoming higher and higher.

At present, China's fiscal allocation for environmental protection within its financial budget is smaller than that of other fields. Moreover, as a result of inadequate financial support, environmental protection departments, especially those in the grassroots units, inevitably choose the path of "profit-driven law enforcement".

Environmental administrative law enforcement is different from general administrative law enforcement activities and requires a lot of technical support for environmental monitoring. For example, technology is required to determine whether the discharged pollutants exceed the standards and whether the components of pollutants have changed.

On a daily basis, law enforcement officers face the problem of being unable to investigate illegal acts because of a lack of technical support.

6. Recommendations for Improving Environmental Enforcement Effectiveness

The following recommendations are to ensure the effective implementation of the Environmental Protection Law and other environmental protection laws

6.1 Improve the environmental regulatory system and environmental monitoring system

6.1.1 Optimize the environmental management system, combine centralized regulation and decentralized regulation, and integrate law enforcement and supervision

Firstly, establish a uniform Environmental Administrative Organization Law to create a clear division about the rights and liabilities of competent environmental administrative departments as well as other relevant departments.

Clarify the differences between unified monitoring and separate responsibility under the Environmental Protection Law.

Give comprehensive coordination and unified management authority to the environmental protection departments to avoid the occurrence of buck passing arising from unclear rights and liabilities.

If possible, follow the ideas of super-ministry system reform to establish a super-ministry of environmental protection responsible for unified guidance, coordination, and supervision of environmental protection activities.

Secondly, optimize the division of duty for environmental regulation between central and local governments. It is necessary to re-evaluate the effectiveness of the current system of simplifying administrative procedures and delegating powers to lower levels according to the principle of "combining central-level supervision and local-level regulation and integrating higher-level assessment and lower-level accountability".

Launch a new round of environmental governance reform, delegate administrative licensing and regulatory power to lower levels, and give intermediary organizations a role in providing technical services. Take back supervisory and assessment power from lower levels.

Apply the principle of "accountability of party committee and government", so as to ensure the local party committees and governments maintain a positive attitude to environmental regulation and fulfill their regulatory duties. This work could be started in the early stage of the 13th five-year plan.

Thirdly, build a high-level environmental management coordinating body for the current problems, especially for watershed and cross-regional pollution problems.

For example, set up a national environmental protection committee, locating the general office in the Ministry of Environmental Protection, set up a watershed environmental protection coordination body within each watershed, and set up a coordination body within each key area for atmospheric pollution prevention and control. This work may be started in the early stage of the 13th five-year plan.

6.1.2 Improve accountability and supervision of party committees and governments at all levels for environment protection

There are two reasons for making the party committee and the government accountable in the field of environmental protection. Firstly, the progress of environmental protection requires the joint efforts of local party committee and local government. Secondly, in environmental management activities the local government is often held accountable for environmental pollution or accidents while the local party committee keeps out of it.

Generally speaking, major local decisions are made at the standing committee meeting or government work meeting. This means that the local party committee takes part in local environmental decision-making and so should also be responsible for the consequence of the decision-making.

The concept of "two responsibilities for one post" should be applied in the field of environmental protection because the protection of the environment is not just the responsibility of environmental protection departments alone, but also requires the cooperation of other departments. If an investment promotion department only cares about the economic benefits of an enterprise to an area and ignores the possible environmental damage it may cause, there will never be an improvement in the environment no matter how strictly the local environmental protection department enforces the laws.

To implement the system of "accountability of party committee and government, two responsibilities for one post, and accountability of delinquent officials", the Ministry of Environmental Protection should work with the Organization Department of the CPC Central Committee and the Central Commission for Discipline Inspection (Ministry of Supervision) to formulate the procedural rules for questioning, accountability and rectification from September 2015 onwards, in accordance with the Measures for the Accountability of Party and Government Leaders for Damages to Ecological Environment (for Trial Implementation) issued by the General Office of the CPC Central Committee and the General Office of the State Council.

The procedural rules should provide for who will start the process of questioning a local party secretary, who shall cooperate, who shall investigate and collect evidence, and

who shall impose punishment.

In addition, the National People's Congress and its standing committee should work for the relevant reforms, formulate the measures for the implementation of supervision and accountability for the environmental protection activities by local People's Congress and its standing committee at all levels, and require local People's Congresses and their standing committees to supervise and call the parties concerned to account for environmental problems in accordance with such measures.

6.2 Independent administrative law enforcement in accordance with law, without improper interference of local governments

The independent exercise of powers by environmental protection departments according to the law has always been a key to improving the environmental management system and strengthening environmental law enforcement. Much attention has been paid to the abuse of power by these departments and to their capture by political power.

For example, the Water Pollution Prevention and Control Law promulgated in 2008 gave the environmental protection department power to order violators to dismantle illegally built drain outlets. However, the environmental protection departments have seldom exercised this power and it exists in name only. How to solve this problem? The answer is to emphasize the independence of the environmental protection departments.

The first recommendation is to strengthen the leadership responsibility of governments, especially local governments. Require that "the local people's governments at or above the county level must assume the leadership responsibility for environmental law enforcement and regulation within their respective administrative areas" as specified in the Circular of the General Office of the State Council on Strengthening Environmental Regulation and Law Enforcement, letting the government be the backer of the environmental protection department, and thereby getting the environmental protection department out of its current predicament.

The second recommendation is to establish and improve the mechanisms for specifying government authority and responsibilities. In accordance with the requirements of the Decision of the CPC Central Committee on Major Issues pertaining to Comprehensively Promoting the Rule of Law adopted at the fourth plenary session of the eighteenth CPC Central Committee, clarify the responsibilities and authority of the environmental protection department and related departments to ensure that the government carries out all its statutory functions and duties in accordance with the law. This work may be started at the end of 2015.

6.3 Strengthen and promote environmental legal responsibility, enhance public participation and supervision

6.3.1 Establish and improve the tenure accountability system

The recent Circular of the State Council General Office on Strengthening Environmental Regulation and Enforcement proposed a life-long investigation system for liabilities for eco-environmental damage. This system needs to be perfected.

The purpose of the system is to address the situation where directors and staff of environmental protection departments do not carry any responsibility for failures to enforce the law after transfer or retirement.

The new Environmental Protection Law gives environmental departments powerful teeth in the form of daily penalties and administrative detention. Up until now, the system has focused only on administrative punishments. It needs to be extended to examine the use of the powerful new tools provided by the new law.

6.3.2 Improve civil public interest litigation, establish administrative public interest litigation, and give play to public supervision

China has launched various attempts at environmental public interest litigation. The following recommendations are based on experience gained from these attempts.

Firstly, improve the system of the procuratorate filing requests for public interest litigation. There is an irresistible trend for the procuratorate itself, as the organ of legal supervision, to file public interest litigation in place of the social organization. There are differences between the procedures of litigation filed by the procuratorate and social organizations.

To improve efficiency, set up two procedures for the procuratorial organs filing environmental administrative public interest litigation. One should be for suspected illegal acts involving administrative organs. Under this procedure, the procuratorate should be able to make recommendations asking the administrative organ for rectification within a specified time. If the administrative organs think that they've done nothing wrong or refuse to rectify, then it will enter into the second procedure automatically.

According to the intra-Party regulations, before initiating environmental administrative public interest litigation, the procuratorial organs should submit the evidence for the case to the local Party committee at the same level for discussion. If the standing committee of the local Party committee coordinates successfully and the administrative organ corrects its mistakes in time, the procuratorate will not file the case. Otherwise it will. This method recognizes the organic connection and coordination between the intra-Party regulations of environmental protection and national legislation to reduce political risks.

Secondly, loosen the restrictions on social organizations filing public interest litigation. The social organizations willing and able to file environmental public interest litigation are really limited. This undermines the whole system. The qualifications allowing social organizations to take part in environmental civil public interest litigation needs to be broadened to make it easier for environmental protection organizations to file litigation. For example, reduce the time limits for specialized environmental protection public interest activities and reduce the requirements for registration. It is recommended that registration according to law anywhere in the country should be enough.

The third recommendation is to establish a system of environmental administrative public interest litigation allowing individuals and organizations to file these cases during 2025-2030 after the completion of economic and social transition. This is a medium-term goal.

6.4 Strengthen capacity for implementation and enforcement

Implementation and enforcement of environmental laws requires adequate staff with capacity to do the job, adequate financial resources and the support of the public. It is necessary to build talented teams, use special funds, conduct publicity and mass

education, and to introduce and develop advanced technology to guarantee effective implementation and law enforcement.

6.4.1 Set up the entry qualifications for law enforcement personnel, and strengthen training of law enforcement personnel

Implementation and enforcement is carried out by people, many of whom work at the grassroots level. If they are unqualified to do the work assigned to them, the goals of the legislation will not be achieved. The quality of environmental administrative enforcement officials directly determines the efficacy of environmental laws and regulations. Consistent with the provisions of the Circular of the State Council General Office on Strengthening Environmental Regulation and Enforcement, this reports makes the following training recommendations.

Firstly, establish the entry threshold for environmental law enforcement and regulation personnel in terms of profession, education background, qualifications and record of service, laying a foundation for the building of a qualified environmental law enforcement and regulation team.

Secondly, there should be a strong emphasis on the training of enforcement officials at the grass roots level. They are the front line of environmental administrative enforcement. Only by improving the quality of grassroots enforcement officials can we make the fundamental improvement required for effective implementation and enforcement of China's environmental laws.

Thirdly, there should be training of all the current environmental enforcement officials. Only after being tested and meeting the standards for a position, should they be able to undertake the functions of that position.

6.4.2 Reinforce public education

Publicity and mass education are important ways to lead the public to take part in environmental law enforcement. It will reinforce the authority of environmental laws, improve public awareness of the need for environmental protection, and gain public support for the work of environmental protection departments

The decision of the Fourth Plenary Session of the 18th Central Committee of the Communist Party of China (CPC), clearly resolved to “perfect the publicity and mass education mechanism of law popularization” and to “bring law-related education into the contents of constructing spiritual civilization, launch mass law-related cultural activities, perfect the public interest law popularization system of media, and strengthen the utilization of new media and new technology in law popularization to improve its effectiveness.”

Therefore, publicity and mass education about environment protection must continue to be reinforced, thereby promoting and increasing meaningful and orderly public participation.

6.4.3 Standardize environmental law enforcement and monitoring equipment

The standardization of monitoring equipment would help the environmental protection departments to regulate a great number of enterprises with limited manpower.

The Circular of the General Office of the State Council on Strengthening Environmental Regulation and Law Enforcement recognizes, for example, for the need for equipment for investigation and evidence collection, and the need to ensure the availability of vehicles for grass-roots regulation and enforcement. More than 80% of

the environmental monitoring agencies are required to be equipped with and use portable handheld terminals for the standardization of law enforcement activities by the end of 2017.

The Circular also requires technical monitoring to be strengthened, for example, automatic monitoring, satellite remote sensing, and unmanned aerial vehicles as well as improving the mechanism to ensure adequate funding by including the funds for regulation and enforcement into the financial budget. The Circular establishes a timetable for the popularization of advanced monitoring technologies among the environmental monitoring agencies, showing China's firm resolution of stepping up efforts to promote the application of advanced monitoring technologies.

As a practical example of what can be achieved, Shaoxing started the preparation and establishment of the automatic pollution source monitoring system in 2007, and it has invested 70 million Yuan for environmental monitoring capacity building as of 2011. The system has covered 80% of wastewater discharge enterprises in Shaoxing city. It monitors the waste water discharge situation of the city effectively, and masters the regular patterns of waste water discharge from pollution sources by comparing the enterprise waste water discharge data from different seasons and times, providing an important basis for the rational use of resources for law enforcement.

6.4.4 Standardize the use of special funds for environmental protection

As environmental protection becomes more and more important and complex, the funds required also increases. Special funds are essential. The environmental protection special fund is a major initiative. This report makes the following recommendations for perfection of the environmental protection special funds.

Firstly, perfect supervision and accountability for the funds. Separate construction from management to avoid the situation where the one department is both the “chess player” and the “rule maker”.

Secondly, introduce performance audits of the use of environmental funds, evaluating both the expenditure of the funds as well as the performance of environmental protection departments and their staff.

Thirdly, establish detailed procedures for the use of funds to ensure due process and supervision.

Acknowledgments

Our gratitude first goes to China Council for International Cooperation on Environment and Development (CCICED) for establishing and supporting the research project “Rule of law and ecological civilization construction” which provides a platform for Chinese and foreign experts to discuss and communicate with each other. We also want to extend special thanks to CCICED chief foreign adviser Dr. Hanson and supporting expert panel member Dr. Konate for their advice in project implementation, and to the Secretariat and International Support Office of CCICED for their organization and coordination.

The task force of “Rule of law and ecological civilization construction” also receives the support and assistance from environmental law experts at China University of Political science and Law, Renmin University of China and Peking University, and our sincere gratitude also goes to them.

This report is submitted by the CCICED Task Force on Rule of Law and Ecological Civilization.