



The improvement on the implementation level of environmental policies is demanded in China

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Received: 18 December 2017 / Accepted: 29 October 2018 / Published online: 3 November 2018
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Abstract

So far, on the national level, 52 environmental laws, 266 environmental regulations and rules, and 983 environment standards have been issued in China from 1979. However, environmental qualities are still far away from the goals of environmental policies. The implementation process of environmental policies might be one of the key negative reasons. The implementation of environmental policies in local agencies remained at a rather low level not matching the demands corresponding to the rapid development of economy in the nation. A significant improvement of environmental conditions could be achieved if proper environmental protection policies are executed completely and local agencies are active in their administrative, supervising, and educational responsibilities.

Keywords Environmental policies · The implementation of policies · China

Environmental policies have been implemented in China from 1979 (Florig et al. 1995). In the past 40 years, the formulation and improvement of environmental policies have developed rapidly and one progressive environmental management system has formed, which aims to protect environmental qualities mainly by regulating environmental behaviors of enterprises and public, and embodies the principle of the pollution prevention in ecological protection.

Environmental policies in China cover a wide range and the system consists of environmental laws, administrative regulations, environmental standards, local regulations, and international treaties. So far, on the national level, 52 environmental laws, 266 environmental regulations and rules, and 983 environment standards have been issued (MEP 2016a). According to the applicable stages and their essential attributes, environmental policies presently implemented in China can be divided into three categories: firstly, preventive environmental policies prior to environmental behaviors of enterprises, then those

directly controlling environmental behaviors of enterprises and thirdly, those posterior to environmental damage (Fig. 1). The first category aiming to prevent environmental pollution includes the policies on environmental planning, environmental impact assessment, three simultaneousities of the construction projects, and environmental standards. The second category includes the policies inducing environmental behaviors by economic benefit and those of behavioral controlling directly. Economic benefit induced policies consist of environmental tax, ISO 14000, emission trading system, and financial credit system. Policies directly imposed on behavioral controlling cover pollutants' discharging permit system, environmental monitoring, environmental on-site inspection, etc. The remedial policies form the last category which contains environmental pollution accident reporting and emergency system, recovery and compensation system for environmental pollution, etc.

In addition, over the past 10 years, environmental regulations have been modified frequently. "Law on Prevention and Control of Water Pollution" was revised in 2008 and 2017, respectively, and entered into force in 2008 and 2018. "Law on Soil and Water Conservation" was modified and put into effect in 2011. "Law on Environmental Protection" was modified in 2014 and entered into force in 2015. "Law on Atmospheric Environmental Pollution Prevention and Control" and "Law on Environmental Impact Assessment"

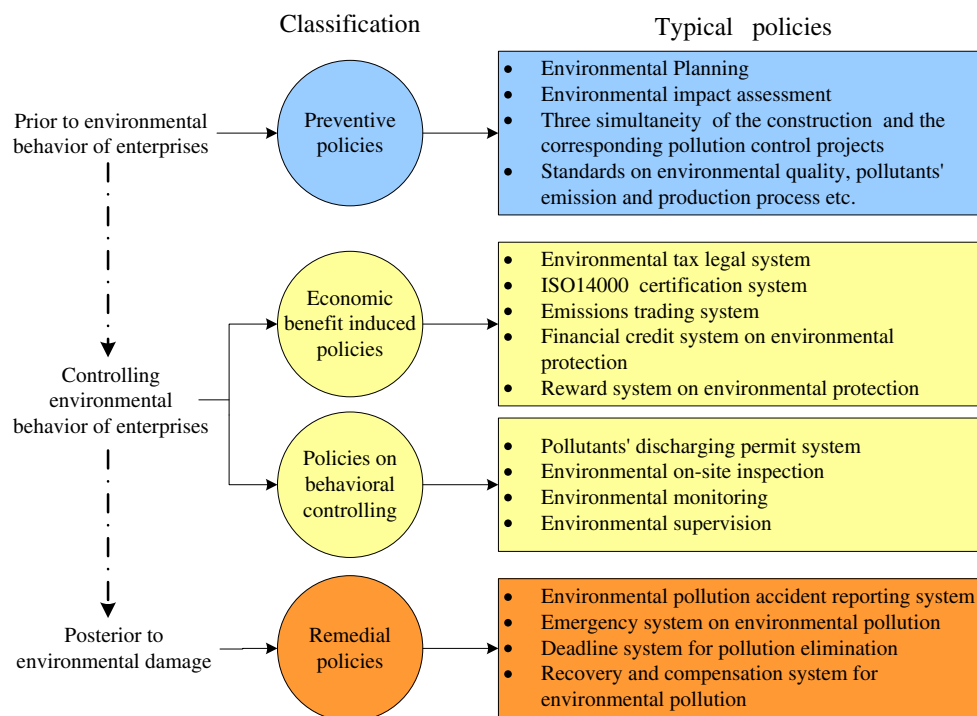
Responsible editor: Philippe Garrigues

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Fig. 1 Frame of environmental policies' system in China



were both modified in 2015 and came into force in 2016. The draft proposal of “Law on Environmental Protection Tax” was promulgated in 2016.

The frequent modification and promulgation of environmental regulations and policies show that Chinese government's understanding on environmental issues is more and more penetrating and reflects that the government's desire to improve the quality of environment is firm and strong. However, seven major river systems in the nation are hitherto confronted with the worsening of water quality; toxic haze has been occurring frequently all over the nation; the green gross domestic product (GDP) system tested in ten provinces fell on stony ground; the energy efficiency of industries was rather low (Nannan et al. 2011) and environmental pollution accidents took place frequently (Yao et al. 2016). The deterioration of the whole nation's environmental quality has threatened the health of citizens and ecological system and decreased the potentials for economic growth synchronously. These seemingly all-around policies tend to be out of accord with the expectations and China is facing challenges in her efforts to protect the environment.

The implementation process of environmental policies might be one of the key negative reasons. Early in 2007, Mario Amano, deputy secretary-general of the OECD (Organisation for Economic Co-operation and Development), has pointed out that one of the reasons leading to China's environmental damage was the soft enforcement of governmental agencies in environmental policies and one of the three suggestions to the government proposed by the OECD was to reinforce the implementation strength of

environmental policies. Actually, the weakness of environmental policy implementation in China has been discussed in tremendous studies as well as summarized in reports (Ma 2007; Ran 2013; Sarah and Genia 2014; Zhang and Cao 2015; King 2016; Craig et al. 2017). Ten years later, the problem was not solved and the situation has not been improved. Environmental qualities are still far away from the goals of environmental policies. In 2015, Bo Zhang and Cong Cao warned that the implementation and accountability of environmental regulation in China remained challenging, especially at the local level (Zhang and Cao 2015). The implementation of environmental policies in local agencies remained at a rather low level, not matching the demands corresponding to the rapid development of economy in the nation and several factors influence the implementation process of environmental policies in China.

Firstly, the environmental laws and regulations in China are mostly formulated on the national level. However, these policies are implemented by local environmental agencies, which are subordinate to the local governments. According to the theory of public choice, when the interests of the central government and the local ones are not unified, there will be distort, boycott policy behavior in the policy implementation (Buchanan and Tollison 1984). Major hurdles (such as the absence of an independent monitoring mechanism) require fully tackling and environmental policies need more transparency and enforcement. Furthermore, environmental protection has been jointly administrated by several departments. As regulated in “Law on Water Pollution Prevention” and “Law on Marine Environmental Protection,” diverse agencies,

including environmental protection, water conservancy, fishery, transport, and some other sectors, have separate responsibilities in environmental management. However, the division among diverse agencies is not very clear and sometimes there exist overlapping responsibilities and blank zones. Thus, it is inevitable that there will be conflicts of interests or the state of the edge of the unmanned management, which have weakened the effect in the implement of environmental policies.

Secondly, some important notions in environmental policies are confusing and difficult to be accurately carried out for the lack of clear and strict statement. Thus, one problem in terms of the management procedure was the invalid enforcement of environmental policies and regulations in China. As for some Chinese environmental policies, it is ambiguous in their management system and law enforcement. It was not well-integrated between the policies and the practices, and there was disconnection between scientific research and management implementation. For example, the operational level of low-carbon governance in practice lacked effectiveness and needed strong enforcement (Iwaro and Mwashu 2010; Nannan et al. 2011); the green credit policy was not fully implemented both at the national level and provincial one (Zhang et al. 2011). EIA (environmental impact assessment) is one preventive environmental policy and the report on the assessment should be submitted before the construction of the project. However, the 31st article in the “Law on EIA” stipulates that it could be submitted after the construction of the project, which makes the implementation of the environmental impact assessment policy low and the seriousness of the policy greatly reduced.

Thirdly, whether the environmental policy could be effectively implemented partly depends on the level of environmental awareness and knowledge in the whole nation. The target groups of environmental policies in China are the public and the enterprises, and these two groups’ environmental awareness and knowledge are both not optimistic (Huang et al. 2011; Yao et al. 2016; Yao et al. 2018), which has partly resulted in the failure in implementing the garbage classification and recycling system, the “plastics restriction” policy, and so on. Understanding the environmental knowledge of the public can greatly inform policy makers on what constitutes publicly acceptable environmental management strategies. To improve the level of environmental awareness and knowledge, environmental educational programs for public should be offered in communities, schools, and enterprises. In addition, Chinese government should develop some environmental policies that adapt to the level of environmental awareness of the public and the enterprises.

Besides, sufficient resources, including financial resources, human resources, and information resources, are the guarantees to achieve the intended effect. Unfortunately, these resources are very weak in environmental protection agencies

of China. Local administration in China remained a contested territory and the central government’s environmental regulations were implemented unevenly. Presently, it is difficult to rely solely on environmental administration to supervise the behaviors on environmental pollution. Non-governmental organizations (NGOs) on environmental protection should be vigorously fostered as the main force. Compared with individual citizens, NGOs are rich in the professional knowledge and have the ability to raise funds. Compared with the mode of collective supervision, the cost of the supervision dominated by NGOs is lower and thus the implementation of environmental policies could be more rational. In China, there are only 202 NGOs on environmental protection and most of them are initiated and established by local governments (MEP 2016b). It is very difficult for the small groups to carry out substantive supervision on environmental policies’ implementation.

Consequently, to improve environmental management level, a comprehensive investigation and evaluation concerning more power is needed to the executives of environmental policies in local agencies. Actually, the administrative structures and policy-making processes are complex, with a range of units and bodies at different levels. The implementation level of environmental policies is a relative and comprehensive concept. So far, it has been normal to judge environmental policies’ implementation level in local agencies by simple checkups. However, bare qualitative description is difficult to estimate whether it is high or not. Studies should be done to quantitatively evaluate the implementation of local agencies concerning environmental policies in China.

The effective implementation of environmental policies plays a vital role in augmenting and abating the environmental degradation, and China has been experiencing a profound reformation of the environmental regulatory system with things changing rapidly over time. However, the seemingly all-around policies tend to be out of accord with the expectations and the implementation process of environmental policies might be one of the key negative reasons. One independent monitoring mechanism in China is required fully tackling and environmental policies need more transparency and enforcement. Chinese government should develop some environmental policies that adapt to the level of environmental awareness of the public and the enterprises, and to improve the level of environmental awareness and knowledge, environmental educational programs for public should be offered in communities, schools, and enterprises. Non-governmental organizations (NGOs) on environmental protection should be vigorously fostered as the main force to carry out substantive supervision on environmental policies’ implementation. A significant improvement of environmental conditions might be achieved if the implementation level of the policies on environmental protection could be improved.

Funding information This work was sponsored by the National Natural Science Foundation of China (41501601), the scholarship fund of Jiangsu provincial government, and the doctoral research start-up fund of Nantong University (15B01).

Compliance with ethical standards

Conflict of interest The authors declare that they have no competing interests.

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