

Article

# **Environmental Legislation in China: Achievements, Challenges and Trends**

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Abstract: Compared to the environmental legislation of many developed countries, China's environmental legislation was initiated late, beginning in 1979, but nevertheless has obtained considerable achievements. As many as thirty environmental laws have provided rules regarding prevention and control of pollution, resource utilization, and ecological protection in China. However, China's environmental legislation still faces a series of challenges and problems, including that the sustainable development concept has not yet been fully implemented, as well as presence of gaps and non-coordination phenomena between laws and regulations, unclear responsibility, imperfect system design, imbalance between rights and obligations, higher impacts resulted from the GDP-centralized economy, lack of operability and instruments in the legal content, as well as difficulty of public participation. In contrast, China's environmental legislation has improved, as a result of learning from experience in developed countries and introducing innovations stimulated by domestic environmental pressure. Looking into the future, increased attention to environmental protection and ecological consciousness paid by China's new leaders will bring a valuable opportunity to China's further development concerning environmental legislation. In the future, there are prospects for the gradual improvement of legal approaches, continuous improvements of legislation to mitigate environmental problems, and more opportunities to strengthen public participation can be predicted.

Keywords: environmental legislation; sustainable development; legislative innovation

## 1. Introduction

Environmental legislation has become an important component of domestic and international legislation throughout the world. From a global perspective, environmental legislation dates back to the 18th Century, or even earlier. European countries, such as Finland, France and Germany, had passed acts with the purpose of improving natural resources conservation [1] (pp. 9–10); [2] (pp. 40–41). In the 1870s, the rise of nature conservation ideology prompted the creation of national park and forest protection laws in the United States [3] (pp. 10–18). Since the 1960s, environmental pollution and related incidents gradually increased in many nations, along with rapid industrialization and urbanization development, requiring national and state governments to deal with environmental pollution. Therefore, environmental legislation emerged largely in Europe and other developed countries to control pollution of air, water and land. Typical examples are the *National Environmental* Policy Act of the United States in 1970 and the Basic Law for Environmental Pollution of Japan in 1967 [1,3,4]. With the proposed concept of sustainable development, being popularized in the late 1980s, environmental legislation in developed countries began to shift, and has changed from focusing on pollution and treatment to prevention and a holistic approach to the whole process of management of natural resources development and utilization. Moreover, an accompanying shift has also been to focus on national legislation to address deals with the international common environmental issues through legislation [5] (p. 199); [6] (pp. 75–77). Today, legislation has become sophisticated and comprehensive, even with acknowledged limitations in applying it effectively. At the same time, environmental legislation in developing countries has also been improving step by step [7].

In China, the start of environmental legislation came late compared to many other nations. The first special environmental law was passed in 1979. With the rapid economic development after the reform and opening up in China beginning in the early 1970s, environmental pollution problems became prominent. Consequently, initial legislation focused upon environmental pollution control reaching a climax in the 1990s. Entering the new century, the bottlenecks and contradictions between resources development and environmental problems were apparent, and related to the long-term, accumulated development in China. Along with the concept of the Scientific Outlook on Development, the legislation on resource protection and management has been steadily expanded and strengthened, but unfortunately the legal quantity was not as satisfactory as the increasing quality, which means, legal enforcement effectiveness needs to be improved continuously.

# 2. Retrospect of China's Environmental Legislation

### 2.1. Achievements

As already noted, China's first environmental legislation was passed in 1979. The first statute was the Environmental Protection Law (Trial), which was formulated as a landmark symbol for China's environmental legislation [8]. During the development process of China's environmental legislation, a key internal motivation was the reality of increasing serious environmental pollution problems. On the other hand, growing international attention about environment and development issues in the world and increasing introduction by developed countries of environmental legislation influenced leaders in China, resulting in two peaks of environmental legislation in China. The first peak was influenced by the United Nations Conference on the Human Environment in 1972 with its interest in creating legal systems for environmental protection. It was the trigger that led to the Environmental Protection Law in 1979; the second peak was affected by the United Nations Conference on Environment and Development in 1992, for which a main target was to fill legislative gaps and improve the existing legal systems. From 1993 onwards, the National People's Congress, the highest legislative institution in China, not only adopted new environmental protection laws but also revised many existing environmental laws [9]. After thirty years of unremitting efforts, China's environmental legislation has developed from a blank space into one of the most active legal fields, as well as has been playing an important role in the Chinese legal system [10,11]. Until the end of August 2014, the Standing Committee of the National People's Congress had approved thirty laws about environmental protection and resources conservation, which include five comprehensive laws, five pollution prevention and treatment laws, eleven resources conservation and utilization laws, four energy laws, and five other various types of laws. Thus, China's environmental legal framework has been basically established. The various elements of the environment have been basically covered, and there are basic laws to relative to the main areas of environmental protection (Table 1).

**Table 1.** Existing environmental and resources laws in China.

Note	Name	Adopted	Went into Effect	Revised	Went into Effect
1	Environmental Protection Law	1979-09-13	1979-09-13	1989-12-26	1989-12-26
				2014-04-24	2015-01-01
2	Marine Environment Protection Law	1982-08-23	1983-03-01	1999-12-25	2000-04-01
3	Law on Prevention and Control of Water Pollution	1984-05-11	1984-11-01	1996-05-15	1984-11-01
				2008-02-28	2008-06-01
4	Forestry Law	1984-09-20	1985-01-01	1998-04-29	1998-07-01
5	Grassland Law	1985-06-18	1985-10-01	2002-12-28	2003-03-01
6	Fisheries Law	1986-01-20	1986-07-01	2000-10-31	2000-12-01
7	Mineral Resources Law	1986-03-19	1986-10-01	1996-08-29	1997-01-01
				1988-12-29	1988-12-29
8	Land Administration Law	1986-06-25	1987-01-01	1998-08-29	1999-01-01
				2004-08-28	2004-08-28

Table 1. Cont.

Note	Name	Adopted	Went into Effect	Revised	Went into Effect
9	Law on Prevention and Control of Atmospheric Pollution	1987-09-05	1988-06-01	1995-08-29 2000-04-29	1995-08-29 2000-09-01
10	Water Law	1988-01-21	1988-07-01	2002-08-29	2002-10-01
11	Law on the Protection of Wildlife	1988-11-08	1989-03-01	-	-
12	Law on Urban and Rural Planning	1989-12-26	1990-04-01	2007-10-28	2008-01-01
13	Law on Water and Soil Conservation	1991-06-29	1991-06-29	2010-12-25	2011-03-01
14	Surveying and Mapping Law	1992-12-28	1993-07-01	2002-08-29	2002-12-01
15	Law on Prevention and Control of Environmental Pollution by Solid Waste	1995-10-30	1996-04-01	2004-12-29	2005-04-01
16	Electric Power Law	1995-12-28	1996-04-01	-	-
17	Law on the Coal Industry	1996-08-29	1996-12-01	2011-04-22	2011-07-01
18	Law on Prevention and Control of Environmental Noise Pollution	1996-10-29	1997-03-01	-	-
19	Flood Control Law	1997-08-29	1998-01-01	=	-
20	Law on Energy Conservation	1997-11-01	1998-01-01	2007-10-28	2008-04-01
21	Law on Protecting Against and Mitigating Earthquake Disasters	1997-12-29	1998-03-01	2008-12-27	2009-05-01
22	Meteorology Law	1999-10-31	2000-01-01	-	-
23	Law on Prevention and Control of Desertification	2001-08-31	2002-01-01	-	-
24	Law on the Administration of the Use of Sea Areas	2001-10-27	2002-01-01	-	-
25	Law on Promotion of Cleaner Production	2002-06-29	2003-01-01	2012-02-29	2012-07-01
26	Law on Evaluation of Environmental Effects	2002-10-28	2003-09-01	-	-
27	Law on Prevention and Control of Radioactive Pollution	2003-06-28	2003-10-01	-	-
28	Renewable Energy Law	2005-02-28	2006-01-01	2009-12-26	2010-04-01
29	Law on Promotion of Circular Economy	2008-08-29	2009-01-01	-	-
30	Law on the Protection of Offshore Islands	2009-12-26	2010-03-01	-	-

Note: In order of adopted date; data current to 31 August 2014.

In addition, some other relevant laws, such as the Criminal Law, Cultural Relics Protection Law, Standardization Law, Administrative Punishment Law, Administrative Procedure Law, and Agriculture Law, also contain environmental terms or content in their articles. In order to implement these laws, the State Council of China has formulated twenty-five administrative regulations about environmental protection under the authority of the Constitution and other relevant laws, and the relevant ministries of the State Council and local governments have also developed hundreds of regulations or departmental rules regarding environmental protection. At the same time, the Supreme People's Court and the Supreme People's Procuratorate of the People's Republic of China have provided relevant judicial interpretations to punish environmental crimes. These rules, regulations and normative documents have covered most aspects of environmental protection, and are also constituent parts of China's environmental legal system.

Overall, China's environmental legislation has developed over 35 years from nothing to providing comprehensive coverage of various environments and natural resources, and of activities related to their exploration, development, extraction, processing, use and disposal. It is thought that China's environmental legislation is playing a positive role for the environmental protection and resources conservation progress in China.

# 2.2. Challenges

Although the formulation and implementation of China's environmental laws have played an important role in China's environmental protection work, there are still many defects and deficiencies in China's environmental legislation. The reason why China's current environmental pollution controls are ineffective, which shows the trend of partial improvement but deterioration from the overall view, the enforcement of environmental law is certainly an important reason, at the same time the existing defects and also the problems with environmental legislation cannot be ignored.

A mass of viewpoints and discourses about the shortcomings of China's environmental legislation has been discussed. Professor Zhou Ke believes that the numerous number of environmental laws did not mean good quality equally; problems with the system design of environmental laws are the root cause of poor effects about environmental protection work; people have no qualification to talk about the completeness of China's environmental legislation because there are still too many gaps inn environmental legislation between China and Western countries, whether from the view of legislative ideas, legislative techniques or legislative approaches [12]. Professor Wang Jin has also pointed out bluntly that China's environmental legislation has "no big mistakes but also no obvious effects", "everything looks perfect and extensive, but it's difficult to find a specific solution to the problem in the law provisions when facing real problems" [8]. In addition, there are also some opinions to place the problems with China's environmental legislation as the malposition of legislative concept, the lag of legislative content, and non-coordination of relevant regulations from other scholars [13]. Based on the multiple standpoints of scholars and the legislative implementation in practice, this article regards the five following problems of China's environmental legislation as the main challenges.

Firstly, the concept of sustainable development has not yet been fully implemented in China's environmental legislation. The concept of sustainable development is an important guiding principle which environmental legislation should follow. However, among the current existing thirty environmental laws, only a few new laws revised or adopted in recent years reflect the sustainable development requirements in legislative purpose and in specific contents [14]. But in many other laws, especially the resources laws, including the *Mineral Resources Law, Law on the Coal Industry, Forestry Law* and others, the concept of sustainable development has not been fully reflected, neither in the legislative purpose nor some specific contents [14]. The thinking of "Economic Interests Above All" is still a natural guiding ideology for many legal systems designs. The principle of "Prevention priority, combining prevention with control" should be emphasized, both "prevention in the first" and "treatment in the end", however, the existing legal system is more often confined to "treatment in the end", which means the pollutant emission control at the end of pipe, while the ideology of "source control" is rarely embodied.

Secondly, there are still many gaps in China's environmental legislation, and the non-coordination phenomenon between laws and regulations stands out. To check from the integrity of the environmental legal system, many legislative gaps exist at a number of important environmental protection areas. For example, there are still no specific laws in the fields of soil pollution control, toxic chemicals management, nuclear safety, bio-security, nature conservation, environmental damage compensation, and some environmental technical specifications and standards are also lacking. Especially in regard to soil pollution, it has been one of the most severe environmental problems in China, but, unfortunately, it is still not well addressed by current laws and regulations. Furthermore, some laws are often difficult to be implemented because many specific relevant regulations required by the laws were not finished in a timely manner. It has been shown from some statistical data that, in the current environmental laws that have published authorization, there are in total more than 140 regulations that should be formulated by the State Council and other ministries, but only less than 100 were finished up to now, which means the average completion rate is less than 70%. And many supporting rules and regulations were completed too slowly after the law enforcement, waiting a long time instead of simultaneously being implemented with the law, which was obviously not conducive to its functioning well [15]. Besides, problems of repetition and non-coordination between the environmental laws and regulations also exist. Take for example the "Environmental Protection Law", before its revision this time there were 31 articles out of the total 47 articles that were repeated in other environmental pollution control laws, which means the repetition rate was up to 66%; meanwhile, rules were also inconsistent in fundamental principles, basic procedures, applicable conditions, management subjects and other aspects [11] (p. 31).

Thirdly, there are problems of unclear responsibility, unreasonable system design, imbalance of rights and obligations, and lack of operability in the legal content. Many environmental laws state clearly that the local government should take responsibility for local environmental quality, but it is a pity that this rule usually exists in name only and could not be implemented very well because of the lack of investigation and affixation of legal liability mechanisms [16], the Law on Prevention and Control of Water Pollution and Law on Prevention and Control of Atmospheric Pollution are typical examples. It is known that one of the fundamental characteristics of the law is the consistency of rights and obligations. However, at present many of China's environmental laws set too much power, but too little obligations, to the administrative department, and too few rights, but too many obligations, to the administrative relative counterpart, so that the balance of rights and obligations in environmental legislation is broken [17] (pp. 20–21). It is also known that a good law should be implemented with a strong operability, but many articles of China's environmental laws were expressed vaguely without relevant supporting procedural requirements, or did not comply with Chinese national conditions, which made the laws difficult to implement effectively [16]. In addition, the tendency of departmental interests during the environmental legislative process increased the difficulty of implementing environmental laws [17] (pp. 23–24).

Fourthly, impacted by the planned economy for a long time, China's environmental legislation paid more attention to administrative control commands instead of using market economic instruments. From the aspects of guiding principles, system design and construction, approach selection and law enforcement, China's environmental laws used to emphasize the role of government and provided a lot of administrative enforcement mechanisms, but lacked experiences about rational use of market

mechanisms [9]. According to the division of China's legal system, most environmental laws belong to the administrative law department. Therefore, the main principles and legal systems largely based on the establishment of administrative control, even some measures of economic encouragement system, also depend on the administrative order [18]. "Legal articles run through administrative arrangements, while the market supply rarely enters the legal system" [9]. Nowadays, China has entered the stage of socialist market economy, which made the old method of administrative control unsuitable for the new situation. It is inevitably going to cause local protectionism on environmental protection work if the fact that legislative approaches are too dependent on administration does not change.

Fifth, the phenomenon of being administration-led stands out during legislation, and it is difficult for the public to participate in the legislative process. China's current legislative work was led seriously by the administrative departments. The data shows that among the laws adopted by National People's Congress in the last 20 years, the bills which proposed by the relevant administrative departments of the State Council accounted for 75%–85% of the total. Besides, a popular behavior was to authorize the State Council to make regulations separately when some difficult or sensitive issues appeared in legislation [19]. In addition, it is also very common to authorize the administrative department to draft the legal text in environmental legislation practice, which contributes directly to the phenomenon of administration-leadership and then increases departmental interests. At the same time, the public and other common people have a very difficult time getting the opportunity to participate in the legislation. According to Article 35 of the existing Legislation Law, only some important legal texts could be open for public comment, with the decision by chairman's meeting after the first deliberation [20]. The lack of public participation procedures in some legislative preparation stages. including legislative program planning, legal text drafting and some important articles hearings, lead to the absence of public participation, which has brought tremendous obstacles for the implementation of environmental laws, the protection of environmental rights and interests of citizens.

## 3. Analysis of Legislative Cases in Recent Years

Things are always changing with the situation. Although there are still many problems with China's environmental legislation, some positive changes have appeared in some legislative cases of recent years. By analyzing the drafting and amendment of these laws, we can conclude that China's environmental legislation is progressing gradually to integrate with international trends during the evolution of development stage.

# 3.1. Renewable Energy Law: Favorable Inspiration from International Legislative Experiences

Renewable Energy Law of China was adopted on 28 February 2005, and has been enforced from 1 January 2006. The law gave a definite legal status to renewable energy, as well as the priority of its development. There are both domestic and international backgrounds for this legislation. To analyze from the domestic side, China's energy requirements increased rapidly with the high-speed economic growth. The gap between the energy supply and requirements became wider and wider, which brought huge pressure to look for substitute energy [21]. From the international side, the international society has recognized the importance of climate change issues and attached more and more attention from the

1990s onward. In the aim of dealing with this phenomenon, the *United Nations Framework Convention on Climate Change* and the *Kyoto Protocol* were adopted [22]. The principle of "Common but Differentiated Responsibilities" was confirmed by these two international legal documents. Although China has no forced emission reduction responsibility, the fact that China has the highest GHG emissions of any country brought more and more pressure. For these reasons, the development of renewable energy became one of the major measures, and the legislation on renewable energy was soon put on the legislative agenda in China.

The main legal approaches of the *Renewable Energy Law* include the total volume objective, full-acquisition, fixed price, different price sharing and renewable energy development funds approaches. A significant specialty of this legislation is the combination of domestic practice and international advanced experiences. In the basis of China's renewable energy situation, the legislative modes and contents of Germany, Denmark, USA, UK and other countries were referenced and compared to ensure the suitable legal system for China. Here into, the progressive experience of Germany was used for reference. A brief comparison can be found from Table 2.

Renewable Energy Law of Germany	Renewable Energy Law of China
Legislative mode and goal	Legislative mode and goal
RE percentage (30%, 2020)	Total volume objective system
Duty of preemption	Full-acquiring system
Feed-in Tariffs	Fixed price system
Price balance and sharing	Different price sharing
Payment obligations	RE development funds system

**Table 2.** Brief comparison of renewable energy laws between Germany and China [21,23].

In 2009, the *Renewable Energy Law* was amended to solve some new issues according to the situation of rapid development of the renewable energy industry. It is comforting that the percentage of renewable energy in all of the energy sources has growing from 5.5% in 2005 to 9.3% in 2013 [24]. Therefore, we can draw a conclusion from the implementation effect of the *Renewable Energy Law* that the renewable energy legislation improved successfully and strongly the renewable energy industry in China.

# 3.2. Revision of Environmental Protection Law: Multiple Innovations of Legislative Concepts, Content and Model

As the newest progress of China's environmental legislation, the *Environmental Protection Law* has been revised and adopted on 24 April 2014, and will be enforced from 1 January 2015. This law, which went through four rounds of deliberations within two years, is considered the most strict environmental protection law in China [25]. Different from past environmental legislation, this revised law has two sides to its background. One side was that air pollution, especially the haze that occurs frequently and widely provoked the public's consciousness on environmental protection, made the law-amendment stronger and stronger [26]. The other reason was that China's new leaders paid unprecedented attention to the environmental protection issues, which helped to break up the rigidities in traditional legislation and produced many new bright spots in the new law. Specifically speaking,

there are three kinds of innovations, including legislative concept, administrative mechanism and legal approaches.

About the innovation of legislative concepts, the new law is located as the fundamental and comprehensive law in the environmental protection field in order to make explicit differences for the relationship with other specific laws [27]. Sustainable development concepts and ecologically conscious construction are clearly regulated as the guiding values in the new law. Meanwhile, environmental protection is also given the status of basic national policy. The new law also gave the principle of "Priority of Environmental Protection", which requires that economic development should coordinate with environmental protection [28].

About the innovation of administrative mechanisms, the new law emphasizes the multiple-governance, which means not only the government, but also enterprises and citizens, should share the environmental protection obligation burden together. At the same time, the public has been granted the rights of environmental information knowledge, participation, and supervision. Based on the principle of correspondence, the powers and responsibilities on environmental protection issues, which belong to different ministries, have also been regulated definitively and improved obviously [28]. In addition, the non-corrupt judiciary with power to imprison and impose substantial fines and other enforcement mechanisms has been also improved in this new law.

About the innovation of legal approaches, the total quantity control of pollutants, the permission of pollutant discharge, public interest litigation, the coalition prevention for cross-administrative district pollution and other important approaches are added, and the existing ones are also completed in the new law. Specifically, the government responsibility of environmental protection has been emphasized, and it will be supervised and evaluated at regular intervals [28].

One specific point that should be underlined is the innovation of legislative mode during the revised progress of *Environmental Protection Law*. As has been mentioned before, environmental quality has a direct bearing on public interest, so that this revision paid more attention to seeking opinions from all society. As a result, the revising plan changed from the partial amendment in the beginning to the full-scale revision, and the draft passed a process seeking twice as many opinions and four times the deliberation. Just by progress like this, public participation rights in the legislation have been strengthened, and reasonable opinions and suggestions can be adopted easier than before. Some information can be found from Table 3.

Time	Name of the Draft	Revise Model	Main Contents of Revise	Opinions Feedback	
August 2012	Decision on Amending the EP Law	Partial Amend	Add Government Responsibility, Strengthen Legal Liability	1th Consultation on-line, 11,748 Opinions Feedback	
June 2013	Decision on Amending the EP Law	Partial Amend	Add Public Interest Litigation, Add Daily Fine System, Strengthen Legal Principles	2th Consultation on-line, 2434 Opinions Feedback	

**Table 3.** Revised process of Environmental Protection Law [29].

Table 3. Cont.

Time	Name of the Draft	Revise Model	Main Contents of Revise	<b>Opinions Feedback</b>	
	Revised Draft of EP Law	Full-scale Revise	Expand Public Interest	Plenary Deliberation	
October 2013			Litigation Subject Scale,		
October 2013			Strengthen Target-oriented		
			Responsibility		
	Revised Draft of EP Law	Full-scale Revise	Add Public Pre-warning		
Amril 2014			System, Strengthen	Adopted after	
April 2014			Environment Publicity,	129 Members Spoke	
			Detailing Related Rules		

# 4. Prospects of Environmental Legislation in China

In 2013, the new Chinese leaders put forward a new ruling idea of constructing an ecologically sound civilization, which indicated a high degree of importance on sustainable development. It also means that the road to sustainable development in China is working toward a deeper, stronger, more all-around way, from the publication of *China's Agenda of 21st Century* to the Scientific Outlook on Development and then to the construction of the ecological civilization. However, along with the rapid economic development and the large economic aggregation, China is also facing increasingly severe environmental and resource problems. The unsustainable aspects of development are also increasingly prominent. China did not hope to repeat the mistake of "treatment after pollution" during the developing progress of some Western countries, but it is really a big challenge. Therefore, in addition to the reliance on technology innovation and economic and industrial restructuring, it is indispensable to have legal safeguards for the future of China's sustainable development.

By reviewing the development process of China's environmental legislation, it can be found that one major feature of China's environmental legislation is it is deeply influenced by national development strategies and the Chinese leadership governing philosophy. Therefore, based on the above background, China's environmental legislation is expected to open up a new period of development. Some tendencies of China's environmental legislation can be foreseen as follows: Firstly, the future environmental legislation will fully implement the concept of sustainable development, and the economic development will be accelerated to transfer from extensive mode to sustainable mode supervised with clearly defined responsibilities and legal force; secondly, the future environmental legislation will promote the construction of the ecological civilization by paying more attention to the legal practice of the concept of prevention and the whole process of managing in law; thirdly, the future environmental legislation will also encourage more and more public citizen participation as it can enhance the supervision of legal drafting and implementation by strengthening public citizens' rights, and it can also urge achieving environmental quality objectives by intensifying public citizens' duties.

From the view of specific legislative fields, the direction has been shown clearly by the Legislative Planning of the 12th Standing Committee of National People's Congress. During the next five years, China's Environmental Legislation will focus on revising and improving the existing pollution control laws and natural resources laws, such as the Law on Prevention and Control of Water Pollution, Law on Prevention and Control of Atmospheric Pollution, Law on the Protection of Wildlife, Forestry Law,

and *Mineral Resources Law*. On the other hand, the legislative work will also attach importance to some new areas, like *Law on Prevention and Control of Soil Pollution, Nuclear Safety Law, Law on Resources of Deep Sea* and so on, to fill in the gaps of China's environmental legal system [30]. What should be emphasized is that, looking ahead for the future, China's environmental legislation still needs to draw on global experiences, not only from the Western developed countries, but also other developing countries and emerging countries, which is being reflected in the legislative research on tackling climate change in China.

To look forward to the far future, without a doubt, the shortage of natural resources and energy scarcity are two of the most critical issues for China to achieve a sustainable future. That means, it is so important and urgent to enhance the legislation of resources recycling and low-carbon development to achieve the rational use of resources and security of energy supply. Fortunately, the international community has had good experience in legislation of both areas, and there are also productive practices and explorations within the national conditions in China. Therefore, it will be significant to bridge global experiences and local action by the way of legislation, not only to mitigate and adapt to global climate change, but also to establish the foundation and provide protection for the true sense of sustainable development in the largest developing countries of the world.

### 5. Conclusions

By reviewing the progress of China's environmental legislation for more than thirty years and the analysis of some new environmental legislative cases in recent years, this paper considers that China's environmental legislation will go into a brand new stage of development along with the new national development strategy of the construction of the ecological civilization raised by China's new leaders. The increasing problems of resource shortage and environmental pollution are also another reason. A large number of resource and environmental laws will appear in the next five-to-ten years. The legislative model will be in the forms of both existing law revisions and new legislation for empty fields. The legislative content will probably be the legal system improvement to achieve sustainable development by balancing economic interest and environmental interest. And the legislative procedure could be imagined to strengthen public participation to realize scientific and democratic legislation for the strategy of "Ecological Civilization".

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### **Author Contributions**

Zhilin Mu and Bing Xue designed research, performed research and analyzed the data; Zhilin Mu and Shuchun Bu wrote the paper, and all authors read and approved the final manuscript.

# **Conflicts of Interest**

The authors declare no conflict of interest.

### References

- 1. Kiss, A.; Shelton, D. *Manual of European Environmental Law*; Cambridge University Press: Cambridge, UK, 1994.
- 2. Wang, J. *A Study of the Objectives of Environmental Law*; Law Press China: Beijing, China, 1999; pp. 40–41.
- 3. Campbel, M.; Breen, F. *Sustainable Environmental Law*; West Publishing Company: St. Paul, MN, USA, 1993.
- 4. Wang, J. *Introduction of Environmental Law in Japan*; Wuhan University Press: Wuhan, China, 1994.
- 5. Mugong, G.Y. *Introduction of Public Hazard*; Youfei Press Japan: Tokyo, Japan, 1974.
- 6. Ye, J.R. Environmental Policies and Laws; Yuanzhao Press Company: Taibei, Taiwan, 1993.
- 7. Yecun, H.H. *Environmental Law in Developing Countries*; Asian Economic Institute: Tokyo, Japan, 1993.
- 8. Wang, J. Thirty Years Rule of Environmental Law in China: Retrospect and Reassessment. J. China Univ. Geo-Sci. (Soc. Sci. Ed.) 2009, 9, 3–9.
- 9. Li, Q.J. Chinese Environmental Legislation Assessment: Sustainable Development and Innovation. *China Popul. Resour. Environ.* **2001**, *11*, 23–28.
- 10. Wang, C.F. Glory Challenges and Prospects of Environmental Law. *Trib. Polit. Sci. Law* **2010**, *28*, 106–107.
- 11. Mu, Z.L. Research on the Interests of Environmental Legislation. Ph.D. Thesis, Renmin University of China, Beijing, China, 2014.
- 12. Zhou, K. Environmental System Change is the Necessary Condition of Inflection Point. *J. Chin. Youth* **2013**, *2*, 6–7.
- 13. Liu, A.J. Ecological Civilization and China's Environmental Legislation. *China Popul. Resour. Environ.* **2004**, *14*, 36–39.
- 14. National People's Congress. Searching System of China's Laws and Regulations. Available online: http://law.npc.gov.cn:87/page/browseotherlaw.cbs?rid=bj&bs=270682&anchor=0#go0 (accessed on 18 December 2013).
- 15. Sun, Y.H. Basic Experiences and Problems of China's Environmental Legislation from Reform and Opening-up. *J. China Univ. Geosci.* **2008**, *8*, 41–49.
- 16. Sun, Y.H. Research on Improving the Quality of Environmental Legislation. *J. Environ. Prot.* **2004**, *8*, 3–11.

- 17. Li, D. *Interests Analysis of Environmental Legislation*; Intellectual Property Press: Beijing, China, 2009.
- 18. Wang, C.F.; Yu, W.X.; Li, D.; Li, J.H. Dilemma and Outlet of China's Environmental Legislation: From the View of Songhuajiang River Pollution Incident. *Acad. J. Zhongzhou* **2007**, *1*, 91–97.
- 19. Ma, S.M.; Cao, K.Q. Impulse and Contain of Department Interests Legislation. *J. People's Court* **2008**, 7, 1–2.
- 20. Xin, C.Y. Legislative Law and Legislative Work of National People's Congress. Available online: http://www.npc.gov.cn/npc/xinwen/2008-05/30/content\_1466382.htm (accessed on 15 February 2014).
- 21. Shi, J.L.; Li, J.F. The Background and Basic Thinking of Renewable Energy Legislation. *J. Shanghai Electr. Power* **2005**, *6*, 551–554.
- 22. Han, W.K. Some Issues about the Renewable Energy Strategy of China. Available online: http://www.npc.gov.cn/npc/xinwen/2009-10/31/content\_1525123.htm (accessed on 16 February 2014).
- 23. Chen, H.J. Germany's Renewable Energy Law and It's Experience for Learning. *J. Environ. Sci. Manag.* **2006**, *31*, 32–34.
- 24. China National Renewable Energy Centre. *The Renewable Energy Industry Development Report* (2013); China National Renewable Energy Centre: Beijing, China, 2014.
- 25. Wang, J. Another Milestone in the History of Environmental Legislation. Available online: http://opinion.people.com.cn/n/2014/0425/c1003-24940245.html (accessed on 26 May 2014).
- 26. Mu, Z.L. Legal Thinking about the Coping with Haze Pollution. *J. Environ. Sustain. Dev.* **2014**, *I*, 52–55.
- 27. Zhang, D.J. The New Environmental Protection Law Should be Publicized and Implemented Well. Available online: http://politics.people.com.cn/n/2014/0425/c1024-24940199.html (accessed on 26 May 2014).
- 28. National People's Congress. Environmental Protection Law. Available online: http://npc.people.com.cn/n/2014/0425/c14576-24944726.html (accessed on 26 April 2014).
- 29. National People's Congress. Asking for Opinions on the Environmental Protection Law. Available online: http://www.npc.gov.cn/npc/xinwen/lfgz/flca/2013-07/17/content\_1801189.htm (accessed on 17 June 2014).
- 30. National People's Congress. The Legislative Plan of the 12th Standing Committee of National People's Congress. Available online: http://www.npc.gov.cn/npc/lfzt/lfgzhy/node\_21894.htm (accessed on 17 August 2014).
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