

Legal Considerations on Groundwater Pollution Prevention and Control under the Perspective of Ecological Civilization

Linjie Bi

Xi'an Peihua University, Xi'an, Shaanxi, 710125, China

Keywords: Groundwater; water pollution prevention and control; water environmental protection; legal issues

Abstract: Water is the most important basic resource as well as strategic resource in the world and the current water resource situation is severe in all countries, and China is no exception. The protection of water resources is an important part of the construction of ecological civilization, especially groundwater resources, which occupies a large proportion in our survival and development, and the single-minded exploitation and use has led to the frequent occurrence of groundwater problems. The current legal system of groundwater in China remains imperfect. This paper starts from the legal issues of groundwater pollution prevention and control in the context of ecological civilization, analyze and explore the groundwater environmental quality standards and legal responsibilities of groundwater pollution, and put forward a number of suggestions to improve the prevention and control of groundwater pollution, aiming to effectively prevent groundwater pollution, protect groundwater environment and achieve sustainable groundwater development.

1. Introduction

In recent years, the development of production and life in most cities in China is dependent on the development and use of groundwater resources, groundwater is therefore subject to infringement from industry, agriculture, mining, medical, living, artificial recharge and other aspects; groundwater overdraft and groundwater pollution interact with each other, intensifying the degree of harm and forming a vicious circle; the rapid development of industry and the shortage of water resources have led to serious resources damage and groundwater pollution. The increasing expansion of the groundwater funnel area has caused surface sewage to back up into the groundwater, and the groundwater will not be able to repair itself in the short term. The groundwater issue has become a major bottleneck limiting sustainable economic development, and the government has paid more and more attention to it. How to reduce the occurrence of groundwater pollution and how to alleviate the contradiction between groundwater development and utilization and groundwater pollution prevention and control, it is needed to reduce illegal acts that are harmful to groundwater from the source, and to strictly control the behavior of groundwater development and utilization, so as to subdivide and solve the problems of groundwater pollution prevention and protection issues. Under the situation of China's strategic decision to "vigorously promote the construction of ecological

civilization", the establishment and implementation of a robust and effective legal system to restrict human behavior to control groundwater pollution is a practical need for the improvement of the environmental system and a requirement of the times for the construction of ecological civilization, which has theoretical and practical significance for special discussion.

2. Legal Problems in the Prevention and Control of Groundwater Pollution in China

2.1 Unclear Quality Standards for the Water Environment

Water environmental standards are the core of water pollution control laws. Water environmental standards are a mandatory regulatory measure in the management of water pollution control. Without standards there is no way to measure the degree of harm caused by pollution, and without standards there is no way to control the spread of pollution, which reflects the importance of standard setting. So far there are 22 standards for water pollutant discharge, but there are few standards for local water pollutant discharge, and there are gaps and ambiguities in the laws and regulations in this area.

The issue of refinement of specific interest subjects or target principles for groundwater environmental standards in legislation. China currently has no legislative basis to support the specific requirements for target principle, only mentioned in the *Measures for the Administration of Environmental Standards*, but the approach discourse requirements are too vague and lack of clarity. If the standard is not established through legislation, but only at the technical level with the results of professional research, "scientific and technological determinism" is not feasible. Therefore, whether national or local standards developers, if they rely only on the technical aspects of support without refining the target principles of groundwater environmental standards, it is impossible to know what rights and interests should not be infringed or to what extent the interests of the subject should be implemented and protected at the minimum of the standards authorized by law ^[1].

The issue of the relationship between water quality standards and discharge standards. Although the "Law of the People's Republic of China on Prevention and Control of Water Pollution" stipulates that "the environmental protection department of the State Council shall set national pollutant discharge standards in accordance with national water environmental quality standards and national economic and technical conditions.", there is no guarantee that they will be effectively and reasonably implemented nationwide for example, the existence of regional differences between regions in China due to the difference of various elements, and the development of local standards and many problems, making it very difficult to directly link the national water pollutant discharge standards with the water environmental quality standards, and it is difficult to link the two standards in an integrated manner at the local ^[2]. For example, the existence of regional differences between regions in China due to the differences in various elements, and there are many problems with the development of local standards, making it very difficult to directly link the national water pollutant discharge standards and water quality standards for the environment, as well as to link the two standards in an integrated manner at the local level.

2.2 Deficiencies in the Legal Liability for Pollution Prevention and Control

2.2.1 Difficult to Investigate Civil Liability

Groundwater pollution occurs underground, this particular location has the characteristics of difficult to detect and hidden, it is because of this particularity, so it is difficult to determine the civil liability of the parties in a timely manner, which is in the field of civil liability for groundwater pollution and civil compensation for the reasons. Groundwater contamination occurs underground, and this particular location is characterized by the difficulty of detection and concealment. It is

because of this specificity that it is difficult to determine the civil liability of the parties in a timely manner, and this is the reason why there are few civil claims for groundwater pollution in the field of civil liability. It is difficult to determine how and to what extent the liability for damage to groundwater caused by the discharge of sewage and wastewater from agriculture and aquaculture industries should be investigated, so it is necessary to set out the provisions in the law. With the legislative basis, there will be legal support to investigate the liability^[3]. And as citizens' awareness of environmental rights is increasing day by day, environmental civil litigation is also being strengthened and improved, so it is important and necessary to investigate groundwater pollution as public interest litigation.

2.2.2 Too Low Illegal Cost of Administrative Liability

“Law of the People's Republic of China on Prevention and Control of Water Pollution” provides for administrative penalties but it is difficult to deter violations, and illegal groundwater discharges do great harm. It is wrong for producers to think that they can solve the problem by paying a few times the discharge fee and fines, because the damage caused by excessive groundwater discharge cannot be remedied by a few times the discharge fee and fines specified by the law. In the view of the producers, the economic benefits reaped from exceeding the emission standards for production are the main goal, and the cost of exceeding the emission standards is insignificant in front of the huge economic benefits, so the producers prefer to pay the emission charges rather than to discharge according to the emission standards stipulated by law. Too small penalties are far from enough deterrence for producers to strictly comply with the provisions of the groundwater protection legal system, which is not conducive to the prevention and treatment of groundwater pollution protection^[4]. Despite the stringent penalties under Articles 75, 76, etc., the actual application rate is very low. For a limited period of governance, ordered to rectify and shutting down are mostly the correction of violations of the laws, rather than the punishment of such violations caused by the serious consequences, that is, the lack of higher costs of violations, and these penalties are too feeble for the leaders and approvers of the administrative legal liability of enterprises for illegal emissions. These problems have led to all kinds of enterprises groundwater pollution violations, so it is necessary to increase the cost of administrative legal liability for violations, which is also the inevitable trend of sustainable groundwater development.

2.2.3 Vague Determination of Criminal Liability

Governments worldwide are currently strengthening criminal liability provisions regarding water pollution prevention and control, and the current state of groundwater in China is very unimpressive. In the case that administrative means cannot effectively curb the deteriorating groundwater damage; penalties should play a strong role as the last protective barrier for prevention and control^[4]. China's current criminal provisions on groundwater pollution are the crime of pollution of the environment. For serious pollution of the environment, the Supreme Court and the Supreme Prosecutor made 14 judicial interpretations, which provide that a part of the behavior needs to cause serious consequences to constitute this crime. This makes the determination of criminal liability standards have a lot of flexibility and ambiguity about what consequences are serious consequences and should be subject to criminal liability lack of clear provisions, and there are many acts of groundwater pollution that take a long time from implementation to serious consequences, but a long potential time span does not mean that the perpetrator did not commit a crime at that time^[5]. Furthermore, the law provides that "serious consequences constitute this crime", but in the process of establishing the crime of environmental pollution, it would be too difficult and impractical to hold people's legal liability for this crime only when there are serious harmful consequences.

3. Improve the Legal Countermeasure for Groundwater Pollution Prevention and Control in China

3.1 Strictly Regulate Groundwater Environmental Quality Standards

Our groundwater quality standards, as well as more specific water quality criteria, should include not only technical standards but also declarative target standards. The target principles of environmental standards are clearly defined and formulated in the legislation, i.e., the protection of human health as the primary principle, while taking into account the consideration of the three impacts on the economy, aquatic organism, and recreational needs, so that professionals should be guided by popular appeals and the supervision of environmental ethics and morality in the process of formulating environmental standards, and refining reasonable and detailed environmental standards that comply with the above specific principles. The progress of environmental target standard, in terms of legal logic, does not follow the development of the understanding of the material objects of science and technology, but with the importance and concern of people for environmental issues, together with the extension and transformation of target caused by moral guidance of environmental ethics in the public. In addition, the environmental quality standards shall be achieved under the premise of maintaining the existing functional division, and the development of local emission standards shall be strengthened as soon as possible. The national standards shall be proposed at a general level, while for local standards, emission standards shall be formulated for pollutants with local characteristics to change the lagging status quo of local standards. National standards are proposed at a general level, while local standards must develop emission standards for pollutants with local characteristics and change the status quo of lagging local standards^[6]. Environmental quality is constrained by many factors such as the number, type and distribution of pollution sources, population density, economic level, environmental background and environmental capacity, etc. Emission standards should not only specify emission quantities, rates and concentration limits, but also include plans and measures to achieve them. The government should set up a special institution responsible for preparing emission standards for different pollutants in each industry, which should then be promulgated by the Ministry of Ecology and Environment of the People's Republic of China in the legal form of regulations or mandatory standards with legal efficiency and should be followed by all industries. Industries for which the government has not set standards for the time being can be determined by experts after a comprehensive evaluation of the actual situation of the pollution sources, but this judgment must be supported by adequate bases and scientific information, and be technically feasible and economically reasonable, so that the laws and regulations, environmental standards and science and technology for economic development and environmental protection form an organic whole.

3.2 Strengthen the Legal liability of Groundwater Pollution

3.2.1 Strengthen the Construction of Civil Public Interest Litigation of Water Environment

Correctly apply the doctrine of liability fixation of civil legal liability and strengthen the investigation of groundwater pollution legal liability in water environment civil public interest litigation^[7]. With the increasing strengthening of the public interest litigation system in China and more detailed thinking and research, when individuals, enterprises and groups have the right to file lawsuits in the people's courts for the protection of public interests when the environment public interests are infringed. Now the subject of cases in this area is surface water, soil, atmosphere and other resources, while the groundwater as the subject of the case is still very rare, so we should strengthen the public interest litigation of groundwater. When groundwater is polluted, legal support

and protection should be provided for citizens to defend public interests in litigation, so that civil liability can be confirmed and investigated.

3.2.2 Increase the Illegal Cost of Administrative Liability

The government should reasonably increase the illegal cost of administrative liability. As for groundwater pollution behavior, it should not be only a small fine. When ordering illegal enterprises to correct, order to stop business, fine and other administrative punishments, it should clearly stipulate what kind of illegal acts and what measures should be taken, refine the legal liability provisions, so as to make the administrative legal liability for groundwater pollution prevention and protection correspond to the illegal acts, so as to prevent illegal producers from being sheltered by local governments and prevent improper punishment for groundwater pollution. Enhance the mandatory implementation of the law in real life, improve the cost of administrative violations, and improve the legal majesty and deterrence of violators. Regarding cases of groundwater pollution, the punishment shall be different according to the subjective intention of the pollution behavior, the illegal circumstances and the seriousness of the consequences ^[8]. Administrative punishments should be strict, and should increase the administrative fines for illegal pollution discharge, cancel the maximum amount, and strictly investigate the legal liability of polluters and leaders.

3.2.3 Determine the Conduct Crimes plus the Potential Damage Offense as the Standard of Criminal Liability

Reasonable determine the criminal legal liability standards. At present, when punishing the crime of water pollution to environmental pollution in China, it is considered that the crime of polluting environment mainly includes conduct crimes and consequential offense. Criminal liability for groundwater pollution should adopt the standard of conduct crimes and potential danger offense, which are both the standard of conviction for environmental pollution crimes and the standard of criminal legal liability ^[9]. This is conducive to play a strong deterrent effect of criminal law, to determine the legal consequences, so that the perpetrators deeply understand the harmfulness and serious legal consequences of the act before committing a crime; this will also help to increase the strength of the fight against perpetrators who commits the illegal act of groundwater pollution, but also to prevent the lag in the fight against the consequential offense and potential damage offense.

4. Conclusion

As we all know, groundwater resources are an important resource and foundation for human survival and economic development, and groundwater in various regions of China has suffered various degrees of loss and damage, yet the legal construction of groundwater pollution prevention and control in China is obviously lagging behind, which has been serious enough to form a bottleneck that restricts the development of groundwater pollution prevention work. Therefore, it is urgent to formulate and establish robust groundwater resources related laws and regulations. For China's groundwater environmental quality standards, groundwater pollution legal liability and other issues, it is necessary to develop groundwater environmental quality standards, clarify and refine the relevant standard provisions in the legislation, and at the same time reasonably strengthen the legal liability for investigating groundwater resources pollution, in the hope of effectively promoting the prevention and control of groundwater resources pollution, further solving the water crisis, striving to protect groundwater, maximizing the sustainable development of groundwater resources, and staying committed to accelerate the legal construction of ecological civilization.

References

- [1] Yang Lei, Ma Liping. *Groundwater Quality Assessment and Pollution Control Countermeasures - Taking Yinchuan as An Example* // Hohai University, Nanyang Municipal People's Government, Nanyang Normal University, China South-to-North Water Diversion Middle Route Corporation Limited. *Proceedings of the 2022 (10th) China Water Ecology Summit*, 2022:8. DOI:10.26914/c.cnkihy. 2022.039745.
- [2] Jing Xiaocong. *Study on Legal Issues of Groundwater Pollution Prevention and Control in China*. Hebei University of Science and Technology, 2020.
- [3] Kerstin Mechlem. *Groundwater Governance: The Role of Legal Frameworks at the Local and National Level—Established Practice and Emerging Trends*. *Water*. 2016(8).
- [4] Jiangtao Zhao. *Construction and Application of Groundwater Pollution Prevention and Control Zoning System*. *International Journal of New Developments in Engineering and Society*, 2020, 4(2).
- [5] Li Yuanyuan, Chen Fei, Yang Yan, et al. *Legislative Thinking and Legal System Design of the Regulation on Groundwater Management*. *China Water*, 2022, No. 936(06): 11-14.
- [6] Wang Baoyan, Xiao Wei. *Study on the Present Situation and Countermeasures of Groundwater Pollution*. *Environment and Development*, 2020, 32(10): 38-39.
- [7] Gabriela Cuadrado-Quesada; Joyeeta Gupta. *Participation in groundwater governance – outlining a path to inclusive development*. *Water Policy*. 2019, 21(5):1050-1064.
- [8] Chatterjee Rana. *Ground water legal aspects & way forward*. *NDCWWC Journal*. 2019(7):25-28.
- [9] Ning Junni. *Discussion on the Legal Guarantee in the Protection and Management of Groundwater Monitoring Facilities in Shaanxi Province*. *Ground Water*, 2020, 42(06):57-58.