

Research on the Legal Issues of Drinking Water Source Protection in China under the New Situation--An Empirical Study in Guangdong Province

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Abstract: Drinking water source is the foundation of people's livelihood and protection of drinking water source is the essential way to improve people's living standards. This paper makes a comparative analysis on the current situation of the relevant laws and regulations on drinking water protection in Guangdong Province. The paper compares these regulations and the contradictions between them and the main laws and regulations at the national level. It also finds that there are some problems such as inequality of strength and confusion of rules in the problems of sewage outlets in drinking water source protection areas and some penalty provisions. Based on this, through the field investigation of drinking water sources in Guangdong Province and the field investigation of water plants, this paper draws the problems in the current protection of drinking water sources. The paper analyzes the causes, suits the remedy to the case and puts forward the corresponding countermeasures. The research findings and related recommendations put forward reasonable legal suggestions for the protection of drinking water sources in Guangdong Province.

1. Introduction

The protection of drinking water source is closely related to the life safety of every citizen. The safety of drinking water source directly affects the health of the people. Therefore, ensuring that every citizen can drink healthy and high quality water has become one of the important issues of environmental protection. With the development of economic globalization, the worldwide crisis of drinking water resources is getting worse and worse. People's life and health are facing a serious threat. The focus of common concern has gradually shifted to the efficient management and effective protection of drinking water resources. In recent years, Guangdong Province has made unremitting efforts in the protection of drinking water sources, but also made some achievements. By 2018, a total of 170 qualified demonstration drinking water source protection zones had been established in the province, of which 32.94 million people benefited [1-2]. But at the same time, it also faces some problems, such as the total amount of pollutants discharged continues to rise in some areas, the water quality of drinking water sources is still not up to the standard, and the security measures of rural drinking water sources are insufficient. By the end of 2015, there are 36 main centralized drinking water sources in the province [3]. Most of them have good water quality standards, and monitoring indicators meet the standards. However, there are still a small number of water sources that are not up to standard. Therefore, we should start the construction of the relevant legal rules of drinking water sources, and strengthen the intensity and intensity of the protection of drinking water sources from the legal level.

In order to protect drinking water resources, since the 1980s, China has promulgated a series of laws and regulations, such as the "Water Law", the "Water Pollution Prevention Law" and its implementation rules, as well as the "Regulations on Pollution Prevention and Control in Drinking Water Source Protected Areas" [4-5]. In addition, at present, the standards related to the protection of drinking water sources in our country mainly include "Water Quality Standard for Drinking Water Sources", "Sanitary Standard for Drinking Water", "Groundwater Quality Standard", "Surface Water Environmental Quality Standard", "Technical Standard for the Division of Drinking

Water Source Protected Areas" and "Sanitary Standard for Drinking Water", which are the supervision of the protection of drinking water sources [6-8]. Management and evaluation provide technical basis. However, in general, environmental pollution and ecological destruction are still very serious in our country, especially water pollution, which is one of the most serious environmental problems facing our country. Taking Guangdong Province as an example, incidents of contamination of drinking water sources occur from time to time, such as the cadmium contamination incident in Shaoguan section of Beijiang in Guangdong Province in 2005 and the abuse of antibiotics in poultry and livestock farming in some drinking water sources areas in Guangdong Province in 2015 [9]. It shows that there is still a gap in the protection and management of drinking water sources in Guangdong Province.

2. Current Situation of Legal Protection of Drinking Water Sources in Guangdong Province

The overall situation of surface water in China is moderately polluted. Four, five and inferior categories account for more than half of the total water body. These polluted water resources can no longer be used as drinking water sources. After investigating the drinking water sources of 20 key cities in China, some scholars have come to the conclusion that more than half of groundwater is seriously polluted [10]. In recent years, with the rapid development of China's economy, many people and environmental problems have arisen. Various water pollution phenomena occur frequently. Water quality is gradually weakening, which is not conducive to the sound operation of social economy in the long run. At present, there are still many places in China where clean drinking water is not available, and production and living are still facing the constraints of water shortage. And the water damage will aggravate the shortage of drinking water resources. Therefore, the safety and security of drinking water sources is very important. How to protect and utilize drinking water resources has very important practical significance. First, it is conducive to safeguarding the public's environmental rights and interests, safeguarding the health of the people and promoting social and economic development. Because health is an invisible wealth of social public resources. Secondly, it is conducive to the maintenance of ecological balance, the harmonious coexistence between man and nature and the sustainable development of society. Sustainable development requires the coordination of social development and environmental resources. Because of the limitation, integrity, regionality and comprehensiveness of water resources, it is an important part of the process of sustainable development.

2.1. The Legislative Survey of Drinking Water Resources and the Theoretical Basis of Protection in China

As we all know, drinking water sources have the characteristics of public goods. Publicity is a peculiar concept in economic law, which refers to goods that can meet the public needs of society. In most cases, public goods are generally managed and controlled by the government. Contrary to the characteristics of private goods, they are exclusive and non-competitive. Therefore, the safety of drinking water sources cannot be separated from the government's supervision, and can only be managed by the government, in order to benefit every citizen. At the same time, because of the public welfare of public goods and the blindness of market regulation, the unique social standard principle in economic law also determines that public goods can only be adjusted and regulated by the government. At the same time, our "Constitution" and "Property Law" clearly stipulate that water flow and sea area belong to the state, that is, to the whole people. The subject of its rights is the state, so the state should take it for granted to protect and manage it. Therefore, the government should establish and improve a set of legislation on the protection of drinking water sources to provide a theoretical basis for the effective implementation of the protection policy.

2.2. Local laws and regulations on drinking water source protection in Guangdong Province

In the past two decades, Guangdong Province has promulgated and implemented several local regulations and regulations on the protection of drinking water sources, including the Regulations on "Water Resources Management of Guangdong Province", the "Regulations on Water Quality

Protection of Drinking Water Sources of Guangdong Province”, the “Regulations on Water Quality Protection of Pearl River Delta of Guangdong Province” and the “Regulations on Water Quality Protection of Dongjiang River System of Guangdong Province”. In addition to the above four regulations, there is also a Technical Guidelines for the Division of Drinking Water Resources Protected Areas in Guangdong Province, which provides guidance for the division of drinking water sources protected areas. Their basic information are listed in Table 1.

Table 1 List of local laws and regulations for the protection of drinking water sources in Guangdong province.

Name	Validate date	Revision date	Legislature
Regulations on Water Resources Management in Guangdong Province	2003.3.1	/	Standing Committee of Guangdong Province
Regulations on Water Quality Protection of Drinking Water Sources in Guangdong Province	2007.7.1	2010.7.23	Standing Committee of Guangdong Province
Regulations on Water Quality Protection in the Zhul River Delta of Guangdong Province	1999.1.1	2010.7.23	Standing Committee of Guangdong Province
Regulations on Water Quality Protection of Dongjiang River System in Guangdong Province	1991.2.28	2002.5.1 2010.7.23	Standing Committee of Guangdong Province
Technical Guidelines for the Division of Drinking Water Source Protected Areas in Guangdong Province	2010.7.24	/	Guangdong Environmental Protection Department Guangdong Provincial Bureau of Quality and Technical Supervision

Admittedly, all levels of departments have taken positive actions and measures on drinking water sources, which have achieved good results to some extent. However, due to the large protection area of drinking water sources, the difficulty of ensuring drinking water safety, the wide range of involvement, many illegal phenomena began to revive, the rapid economic growth led to the limited capacity of environmental protection facilities, the scattered and chaotic industrial pattern of chemical pollution enterprises in Guangdong Province has not been fundamentally changed, and the problems left over by history are difficult to eradicate. Due to the changes of social environment, some regulations are too general, vague and operable in modern society, which can not meet the needs of complexity, irreversibility of pollution and urgency of protection of drinking water sources. Moreover, there is a lack of special laws and regulations for the protection of drinking water sources. It can be seen that the safety of drinking water sources still exists which always affects the health of the people.

2.3. Problems Existing in the Law of Drinking Water Source Protection in Guangdong Province

2.3.1. Relative Lag of Legislation

Since the new revision of the Environmental Protection Law, not only the punishment for environmental violations has been strengthened, but also the provisions of environmental public interest litigation have been added. However, the laws and regulations of environmental protection in our province have not been updated in time with the new environmental protection law. For example, the newly revised environmental protection law has made a lot of improvements in the punishment system. Firstly, it stipulates "daily punishment". The purpose is to directly curb the continuation of pollution. If enterprises, institutions and other pollutant dischargers do not discharge pollutants in accordance with the regulations, the environmental protection department has already punished them accordingly, but the pollutant dischargers still refuse to correct after the event, then the penalty should be calculated on a daily basis according to the original penalty amount, with days as the time limit. The "daily penalty" system seems to violate the principle of "no more penalty for

one thing", but because of the particularity of environmental protection and the continuity of illegal acts, each punishment is only the illegal act, but in fact it does not violate the principle. In addition, there is no upper limit when punishing environmental violations, which will mean that the cost of enterprise violations is infinite in theory. Such penalty provisions seem unreasonable, but in fact they deter criminals. However, the laws and regulations concerning the protection of drinking water sources in Guangdong Province, on the contrary, stipulate a fine ceiling, which seems to contradict the effect of "daily penalty". For example, the Regulations on the Prevention and Control of Water Pollution in Guangdong Province stipulate a maximum fine of 50,000 yuan for environmental pollution exceeding the standard, and a fine of more than 50,000 yuan and less than 100,000 yuan for the random placement of solid waste. Without exception, these laws and regulations have imposed top penalties on the illegal activities of enterprises. However, for some enterprises, the existence of such top penalties makes their illegal costs relatively low. After weighing the pros and cons, some enterprises prefer to pay relatively cheap fines in order to obtain higher economic returns. This has also led to the phenomenon of some small and medium-sized enterprises secretly discharging, secretly discharging, still unable to fundamentally solve the problem of drinking water source pollution.

Since ancient Romans began to use the term "right" explicitly in "private law", people have never stopped discussing rights. From the nature of rights, environmental rights as a natural right, moral right or due right. Environmental rights are closely related to our life and production. Therefore, the legislature of our country should attach great importance to the entry of environmental rights into the law and the environmental infringement of drinking water sources. Legislators should not only make special legislation, but also stipulate more clearly the detection procedures of pollutant components, the compensation standards for pollution losses and the identification of pollution levels.

2.3.2. Imperfect Legal System of Drinking Water Source Protection Zone

The regulations listed in Table 1 only provide for the prohibition of possible activities in drinking water source protection zones and the inadequate consequences of violating the laws and regulations. To some extent, the prohibition can change the declining trend of water quality in source areas and guarantee the water quality safety of drinking water sources. However, with the development of social economy and the diversification of production and life, the types and forms of pollution are also unpredictable. Simple enumeration methods obviously can not cover all the pollution behaviors and modes of water sources. Of course, this is also due to the inherent lag of the law. It is true that the enumerated restrictions on people's production activities in drinking water source areas will play a protective role. In the long run, it will hinder the economic development of the whole region, but also bring unstable factors to society. Therefore, the law can not simply enumerate, but divide the types of pollution that may occur.

2.3.3. Lack of effective legislative protection for rivers and lakes across administrative regions

From the point of view of administration, many current administrative methods and administrative settings in China are not conducive to water pollution protection. Drinking water source has the diversity of natural environment, and it also spans many geographical areas, so the unscientific administrative measures are not conducive to the protection of water pollution. Drinking water sources will not change their inherent natural laws because of the artificial division of administrative divisions. However, in the management of drinking water sources, the departments in different regions are pushing aside each other, and the departmentalism is serious, while neglecting the comprehensive, scientific and systematic management and protection of drinking water sources from the whole river basin. In addition, due to the unclear orientation of power and responsibility, the local government has confused the protection of drinking water sources in its region, especially in a wide range of river basins. Because of the existence of local protectionism, it is difficult for the management and utilization of drinking water sources and the implementation of the scheme of allocating drinking water sources to be fully and effectively implemented, and it is difficult to ensure the fairness between regions.

3. Suggestions on Perfecting the Construction of Local Regulations for Drinking Water Source Protection in Guangdong Province

3.1. Strengthening the Local Legislation of Drinking Water Source Protection.

According to the above analysis, there are only seven regulations directly related to the protection of drinking water resources in the latest local regulations on the protection of drinking water sources in Guangdong Province, which is far from enough for the huge and complex problem of drinking water resources. The formulation of laws and regulations lags behind the actual economic development and environmental protection requirements. Therefore, in the absence of conflict with the Constitution and laws, the Standing Committee of the Guangdong Provincial People's Congress should formulate a Regulation on the Protection of Drinking Water Sources in Guangdong Province, taking into account the actual situation of the province and referring to the opinions of relevant experts. In order to cope with and control the increasingly serious pollution of drinking water resources under the rapid development of social economy. In the Chapter of Legal Liability, if enterprises and individuals that cause drinking water pollution fail to control or fail to meet the standards on time, stop production and rectify, and cause pollution of drinking water and water resources, they should be treated in time, and fined according to the situation of pollution. They must not tolerate adultery, severely punish those who violate the rules and regulations of discharging such as leaving human relations and trusting relationships.

3.2. Making normative amendments to the legal provisions.

Specific legal provisions are a powerful guarantee for the protection of drinking water sources. In the current local drinking water protection laws and regulations system in Guangdong Province, there are still some conflicts between the main laws and regulations, lack of coordination and weak systematicness. Contradictions between these laws and regulations can easily lead to the duplication of responsibilities among law enforcement departments, and also allow illegal elements to take advantage of organically, which is not conducive to the management of drinking water source protection areas. Therefore, these regulations need to be amended urgently. In order to improve the laws and regulations on the protection of drinking water sources, the following three suggestions are put forward: 1) from a holistic point of view, the departments responsible for the delimitation of drinking water source protection areas in the regulations should be unified, and the law enforcement departments responsible for the correction and punishment of illegal acts should be clearly defined so as to avoid the situation of intersection of departments' powers; 2) the delimitation of illegal acts should be revised consistently so as to avoid emergence. Discharge outlets and livestock and poultry farms mentioned above are similar; penalties for violations of the law should also be systematically stipulated. As a punitive means, the scale of penalty should be unified and the penalty intensity should be higher than or far higher than the cost of violation of the law; 3) Regulations on the protection of drinking water sources should attach importance to urban drinking water sources while improving ponds, surface wells and underground water.

3.3. Establishing cross-regional water source protection laws and regulations.

Because of geographical and environmental factors and other factors, some waters in Guangdong Province are located at the junction with the adjacent provinces. Therefore, it is necessary to formulate the procedures for delimiting the scope of drinking water source protection zones across administrative regions and the corresponding supporting protection regulations in combination with the specific actual situation and natural environmental factors. Because the water source area of the Dongjiang River is closely related to the South-to-North Water Transfer Project, it directly affects the sustainable economic and social development of the water area of the South-to-North Water Transfer Project and the South-to-North Water Transfer Project. Therefore, strict protection and management measures should be implemented to strictly limit the total amount of pollutants discharged. Because of the particularity of the South-to-North Water Transfer Project, there are many provinces involved in water source protection. Besides Guangdong Province itself, there are also provinces such as Guangxi, and many government administrative departments involved.

Therefore, unified management norms and regulations are particularly important. Therefore, it is suggested that the protection regulations suitable for the water source protection requirements of the South-to-North Water Transfer Project should be formulated as soon as possible. Local governments should also formulate relevant supporting laws and regulations. Therefore, one of the ways to solve such practical problems is to expand the administrative jurisdiction of drinking water source protection, to establish a trans-administrative drinking water source protection area, and to be the head of the protection area under the leadership of the water conservancy department.

4. Conclusion

By comparing the local laws and regulations on the protection of drinking water sources in Guangdong Province, this paper finds that there are still differences in their provisions on the delimitation responsibility of protected areas, and the definition of illegal acts is not entirely consistent, and the legal liability of some illegal acts and the correction and punishment of some illegal acts are also carried out. The law enforcement agencies that impose penalties are also different. Therefore, this paper suggests that the above-mentioned laws and regulations should be revised and perfected from a holistic point of view to unify the provisions of the delimitation responsibilities, illegal acts, legal liabilities and law enforcement departments of protected areas, eliminate the conflicts between them, and enhance the attention and management of rural and underground water sources by laws and regulations. In order to strengthen the protection of drinking water sources in Guangdong Province.

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