

# **Water Environment Protection Legislation and Policies in China**

**Guo Jinlong**

Department of Pollution Control, State Environmental Protection Administration

No. 115 Xizhimennei Nanxiaojie, Beijing 100035, China. E-mail: guo.jinlong@sepa.gov.cn

## **Abstract**

The environment protection and its legislation in China are briefly reviewed firstly. Then, the legal system about water environment protection is systematically elaborated from different levels as national law, administrative regulation, ministerial rule and environment standard, and the main water environment protection policies established by the relative laws and regulations as Total Water Pollutant Discharge Amount Control, Integrated River Basin Management and Source Water Protection Zonation, etc. are analyzed. Finally, the general water environment status in 2006 is presented.

**Key Words : Water Environment, Legislation, Policies, China**

## **Introduction**

The environment protection of China starts in the field of water protection. The foundation of GuanTing Reservoir Water Pollution Treatment Office in 1972, which was ratified by Premier Zhou Enlai, is a milestone for the water pollution prevention and control and the environment protection in China. Then, the First National Environment Protection Conference was hold in 1973, which initiated the general environment protection work in China.

Environment protection is one of China's basic national policies, and Chinese government pays great attention to the environment legislative work. To promote the coordinated development of economy, society and environment, China enacted and implemented a series of principles, policies, laws and measures for environment protection from the 1980s. Up to now, China has established an environmental statutory framework that takes the Constitution of the People's Republic of China (PRC Constitution) as the foundation and the Environmental Protection Law of the People's Republic of China (PRC Environment Protection Law) as the main body.

The PRC Constitution stipulates: The state protects and improves the living environment and

the ecological environment, and prevents and remedies pollution and other public hazards. The state organizes and encourages afforestation and the protection of forests. The PRC Environment Protection Law is the cardinal law for the environment protection in China, which has established the basic principle of coordinated development for economic construction, social progress and environmental protection, and defined the rights and duties of governments at all levels, all units and individuals as regards the environmental protection. Based on PRC Constitution and PRC Environment Protection Law, the legal system for water environment protection in China was setup.

### **Water Environment Protection Legislation in China**

Water environment protection is always the most important field of environment protection work. China has enacted and promulgated quite some special laws and regulations on the protection of water environment as well as on the related natural resources.

The Standing Committee of the National People's Congress (NPC) has approved the Law of the People's Republic of China on Prevention and Control of Water Pollution (PRC WPPC Law) in 1984 and revised it in 1996, approved the Water Law of PRC in 1998 and revised it in 2002, and approved the Law of PRC on Water and Soil Conservation in 1991.

Chinese government has enacted some administrative decrees regarding water environment protection, including Interim Regulations on the Prevention of Water Pollution in the Huai River Valley (Order of the State Council of PRC, No. 183, Promulgated in 1995), Implementation Rules for the PRC WPPC Law (Order of the State Council of PRC, No. 284, Promulgated in 1989 and revised in 2000), Regulations on the Administration and Use of Pollution Discharge Fee (Order of the State Council of PRC, No. 369, Promulgated in 2003), etc.

The concerned ministries and departments of Chinese government have issued a number of administrative rules on water environmental protection, which include Interim Measures on the Administration of Key Water Pollutants Discharge Permit in Huai River Basin and Tai Lake Basin (Issued by State Environmental Protection Administration of China (SEPA of China) in 2001), Interim Measures on the Administration of Water Pollutants Discharge Permit (Issued by SEPA of China in 1988), Provisions for the Administration of the Prevention and Control of Pollution in Protected Areas for Drinking Water Sources (Issued by SEPA of China, Ministry of Water Resources, Ministry of Construction, etc. in 1989), Measures on the Supervision of Sewage Treatment Facilities for Environmental Protection (Issued by SEPA of China in 1988), Measures on the Administration and Use of Pollution

Discharge Fee (Issued by Ministry of Finance and SEPA of China in 2003), etc. What is more, some technologies and policies about lake eutrophication prevention, urban sewage treatment and pollution prevention, industrial wastewater treatment, etc. were issued.

Environment Standards, which are an important component of China's environment statutory framework, include environment quality standards, pollutant discharge or emission standards, basic environmental criteria, criteria for samples, and criteria for methodology. As stipulated in Chinese law, the environment quality standards and pollutant discharge standards are compulsory standards, and those who violate these compulsory environment standards must bear the corresponding legal responsibility. The water environment quality standards of China include Environmental Quality Standards for Surface Water (EQSSW, GB 3838-2002), Sea Water Quality Standard (GB 3097-1997), Quality Standard for Ground Water (GB/T 14848-93), and Standard for Irrigation Water Quality (GB 5084-92), etc. The water pollutant discharge standards include Integrated Wastewater Discharge Standard (GB 8978-1996), Discharge Standard of Pollutants for Municipal Wastewater Treatment Plant (GB 18918-2002), and the discharge standards for the paper-making, chemical, brewery and other industries. A series of criteria for water environment monitoring and methodology were also issued.

To implement the state's water environmental protection laws, regulations and standards, people's congresses and people's governments at local levels, according to the specific conditions in their own areas, have established and promulgated a series of regulations and standards on water environmental protection.

Up to now, the water environment protection statutory framework, which is based on the PRC WPPC Law, is basically established, and a series of effective water environment protection policies as total pollutant discharge control, environment impact assessment, information publication and public participation have been setup, which have played an important role in the water environment security in China.

## **Main Water Environment Protection Policies in China**

### ***Total Water Pollutant Discharge Amount Control Policy (TWPDAC Policy)***

The PRC WPPC Law (Article 16) stipulates: With regard to water bodies where the standards for water environment quality established by the State still cannot be attained although the discharge of water pollutants has conformed to the discharge standards, the people's governments at or above the provincial level may institute a system for control of the total discharge of major pollutants, and a system for making an estimation before deciding on the quantity of major pollutants to be discharged by an enterprise who is charged with the task of

discharge reduction.

TWPDAC means that the total water pollutant discharge amount to certain area (administrative area, river basin or water environment function zone) in a certain period should be limited in certain amount, which was determined by environment objectives or functions. Compared with the concentration control under the discharge standards, TWPDAC has three main factors, i.e. the total amount, region and time of discharge. The TWPDAC can be classified into two types, and one type is Objective-oriented while the other is Capacity-oriented.

Objective-oriented TWPDAC indicates that the TWPDAC Plan of China, which was proposed through the coordination of economy development and environment protection, will be determined from national level. Then the planned national discharge amount will be divided and sub-divided to the local government of different levels as their TWPDAC target, and they must achieve this target in certain time. At present, because of the large amount of water pollutant discharge and poor water environment status in some area, most of the TWPDAC in China is Objective-oriented.

The Capacity-oriented TWPDAC target is determined on the basis of water environment capacity for certain pollutant load. In this type TWPDAC, the water bodies (rivers, lakes, etc) will be separated into different environment function zones, and the dilution and assimilation capacity of each function zone will be calculated, based on which the bearable pollutant load will be determined and set as the TWPDAC target for this function zone. Then, the national Capacity-oriented TWPDAC target can be estimated by summarizing that of each water body. China has carried out quite some work about the water environment capacity calculation, which has provided solid foundation for the Capacity-oriented TWPDAC.

TWPDAC policy can rationalize the distribution of the industries, optimize the industrial structure, and improve economy increasing mode, which has played an important role in the water pollution prevention and control in the key basins of China. At its Fourth Session in March 2006, China's Tenth NPC adopted the Outline of the Eleventh Five-Year Plan of PRC for National Economic and Social Development, in which the COD (Carbon Oxygen Dioxide) reduction target from 2005 to 2010 was established, i.e. 10 percent (from 14.14 million ton to 12.73 million ton).

### ***Integrated River Basin Management Policy (IRBM Policy)***

According the PRC Water Law, the State shall formulate the strategic plan for water resources of the whole country. The development, utilization, preservation and protection of water

resources, and the prevention and control of water disasters, shall be planned in a unified way on the basis of river basins or regions. In order to draw up a river basin plan, a comprehensive scientific survey and an investigation and assessment of water resources must be undertaken first, and the region plan within a river basin shall be subject to the river basin plan. The development and utilization of water resources shall take into consideration the interests of upstream and downstream areas, of the left and right banks, and of all regions concerned, thus to make full use of the comprehensive benefits of water resources.

The PRC WPPC Law formulates the integrated river basin pollution prevention and control policy, and it stipulates as follows: To prevent and control water pollution, it is necessary to make unified plans on the basis of river basins or regions. The water pollution prevention and control plan for major river basins, which should be put forward by the environmental protection and concerned departments under State Council, together with the people's governments of relevant provinces, shall be submitted to the State Council for approval. The water pollution prevention and control plan for other trans-jurisdictional river basins should be approved by the people's government of higher jurisdiction level. Once approved, the water pollution prevention and control plan shall serve as the essential basis for prevention and control of the river basin, and any modification of such plans shall be subject to approval of the original departments that approved the plans. In accordance with the approved river basin (water) pollution prevention and control plan, local people's governments at or above the county level shall work out plans for water pollution prevention and control of their own administrative regions.

From 1995, Huaihe River, Haihe River, Liaohe River, Taihu Lake, Chaohu Lake and Dianchi Lake were listed as the major basins for water pollution prevention and control by NPC, and the ninth (1995-2000), tenth (2000-2005) five year plan for the pollution prevention and control of these major basins were approved by State Council and then implemented. Up to now, the water pollutant discharge in the major river basins decreased greatly, the deterioration trend for the water environment was basically controlled, and the quality of some water bodies improved obviously.

### ***Source Water Protection Zonation Policy (SWPZ Policy)***

Drinking water security is vital for the public health and industrial and agricultural production. Since the water pollution can not be fully controlled for the economic and technological reasons, the source water protection is one of the most important barriers for the drinking water security.

According to the PRC WPPC Law (Article 20), The people's governments at or above the

provincial level may delineate surface Sources Water Protection Zones (SWP Zone) for domestic and drinking water. Certain water areas and land-based areas near the intakes of domestic and drinking surface water sources may be delineated as the First-grade SWP Zone. Certain water areas and land-based areas beyond the first-grade protection zones may be delineated as the Second-grade SWP zone and protection zone of other grades.

The SWP zone delineation principles are as follows, to ensure the water quality of First-grade SWP zone meet the Grade II Standard under EQSSW, and to ensure the water quality of Second-grade SWP zone meet the Grade III Standard. The principle and methods are listed and illustrated in the Technical Guideline for Delineating Source Water Protection Areas (HJ/T338-2007). Up to 2005, about 70% percent of the centralized drinking water source has delineated SWP zone of different grades for protection.

Within the First-grade SWP zones for drinking water, the construction or expansion of any projects that have no relation with water supply facilities and protection of water sources is prohibited. Within the Second-grade SWP Zone for drinking water, the new-construction or expansion of any projects that discharge pollutants into the water body is prohibited. Any reconstruction projects in the Second-grade SWP Zone must cut down its pollutant discharge.

### ***Environmental Impact Assessment Policy (EIA Policy)***

In order to implement the sustainable development strategy, take precautions against adverse impacts on environment of plan implementation and project construction, and to promote the coordinated development of the economy, society and environment, China has enacted and implemented the Law of PRC on Environmental Impact Assessment in 2003. Environmental Impact Assessment means the analysis, prediction and evaluation of the possible environmental impact of plan implementation and project construction, the measures and actions putting forward to prevent or mitigate the adverse effects on environment, and the following monitoring.

The construction projects can only start after the ratification of its EIA report, and the water environment protection facilities must be planed, implemented and developed synchronously with the project construction (the Three Synchronizes policy), thus to control the environment pollution and ecological damage at its origin. Water environment is one of the most important factors that should be considered during EIA, and the implementation of the EIA and Three Synchronizes policy has played an active role in the water pollution prevention and environment protection.

According to the Environment Protection in China (from 1996 to 2005, The State Council

Information Office, June, 2006), until 2005, more than 1.46 million construction projects implemented the EIA policy while more than 0.63 million new construction projects carried out the Three Synchronizes policy, which accounts for 99.3 and 96.4 percent of all the projects respectively. Moreover, the pilot work on planning EIA has been initiated in an all round way.

### ***Pollutant Discharge Charging Policy (PDC Policy)***

Based on the Polluter Pays Principle, the idea of PDC was brought forth in late 1970s, and the pilot study was carried out from 1978 to 1981. With the enactment and implementation of the Interim Measures on the Collection of Pollution Discharge Fee (1982), Interim Measures on Compensatory Use of the Special Fund for Source-Pollution Control (1988), and the Regulations on the Administration and Use of Pollution Discharge Fee (2003), PDC became an important policy for environment protection.

According to Article 15 of the PRC WPPC Law, enterprises and institutions that discharge pollutants into a water body shall pay a pollutant discharge fee in accordance with the State regulations, and the pollutant discharge fee must be used for prevention and control of water pollution and may not be used for any other purposes. On one hand, the PDC Policy has contributed greatly to the reduction, treatment and reuse of the industrial pollutants. While on the other hand, it expanded the financing channel for the pollution prevention and control work. According to the Environment Statistics Bulletin of China (2006), the pollutant discharge fee in 2006 reaches 14.4 billion RMB, and all of it will be used to solve the urgent environment protection problems.

### ***Environment Information Disclosure Policy (EID Policy)***

Public participation in the environment protection is encouraged, and the EID Policy is established through a set of regulations and measures. Interim Measures for Hearing the Administrative License in Respect of Environmental Protection (2004) and Interim Measures for Public Participation in the EIA (2006) require the EID during each stage of the EIA process for project construction. Measures for the Disclosure of Environmental Information (for Trial Implementation, 2007) prescribed the subject, scope, procedure and responsibility about EID, which greatly promoted the EID policy. At present, the information about environment laws and regulations, standards and methods, statistics and investigation, protection plans, quality situations, main pollutant discharge, EIA, etc. is open to the public through different media.

### ***Other Policies***

Some other helpful policies as Water Pollutant Discharge Permit, Pollutant Discharge Registration, Joint Ministerial Meeting for Environment Protection, etc. were also setup for the

pollution prevention in China, and the implementation of these policies contributes greatly for the water environment protection.

### **Conclusions**

The enactment and implementation of the water environment concerned laws, regulations, standards and policies played an important role in the control and mitigation of the water pollution, the protection of ecological and public health, and thus contributed greatly to the sustainable economic and social development of China.

According to the Report on the State of the Environment in China of 2006 (SEPA), the overall quality of surface water across China is under intermediate pollution. Among the 745 monitoring sections of surface water under national environmental monitoring program, 40 percent meet Grade I~III standard of EQSSW, 32% meet Grade IV~V standard. Among the seven big rivers in the mainland of China, the Pearl River and Yangtze River enjoy good water quality, the Songhua River, Yellow River and Huaihe River are under intermediate pollution, while the Liaohe River and Haihe River are under heavy pollution. The water of Taihu Lake and Dianchi Lake fails to meet Grade V Standard and the water quality of Chaohu Lake is Grade V. The quality of much coastal sea waters across China is good, while heavy pollution in part of sea areas. The quality of distant sea waters is quite good.