

Definition of the Connotation of Water Right in the Transitional Period and Research on its Management Patterns

- Based on the Reform Experiences of Several Countries

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Abstract: While the management and development of water resources requires continuous establishment and improvement of the property system of water resource assets, a premise of such establishment and improvement requires a comprehensive understanding of water rights. What kind of right is water right? What is the role of a water right system? How does it relate to the most rigorous water resource management system? Questions like these are all in urgent need for definite answers. Based on practice and explorations of several countries during recent years and through analysis of the connotation, orientation, and main patterns, this paper investigates the details of controversial questions, thus advancing research on several theoretical questions regarding the path of the water right reform in future China.

1. Introduction

Since the late 1980s, the water resource management system of China has significantly changed. Certain progress has been made in terms of irrigation district management system reforms, water price reforms, the water-taking licensing system, compensation for use of the water system, urban water affairs system reforms, water-saving management system reforms, unified water-related affairs management (to some extent), and many more. The external incentive environment for establishing a water right system and water right trade has taken preliminarily shape. Water resources are basic natural resources as well as strategic economic resources; in line with the requirements of the Decision of the Central Committee of the Communist Party of China on Some Major Issues Concerning Comprehensively Deepening the Reform, which was adopted at the Third Plenary Session of the 18th Central Committee of the Communist Party of China, the management and development of water resources requires continuous establishment and improvement of the

property system of water resource assets. A premise of such an establishment and improvement requires a comprehensive understanding of water right.

2. Basic Concept of Water Right

When analysing relevant publication in this field both domestic and international, not one “authoritative” definition of water right can be found, and the definitions provided by researchers are usually based on actual needs; the Water Law of the People's Republic of China (hereinafter referred to as “Water Law”) has also failed to offer any clear definition of water right. Currently, there are many different opinions regarding this within Chinese academic circles, and based on their understanding of the contents of water right, academics can be mainly classified into four representative types: “one-right theory”, which assumes that water right is the right of the holder to use and benefit from surface water and groundwater; this is a legal system, which is independent of the ownership of water resources and consequently, the right to use or proceed over water resources can be enjoyed by the non-owner of water resources according to provisions of the law or of the agreement of the contract; [1][2] the “two-right theory” claims that water right mainly consists of the ownership of water resources as well as the right to use water resources; [3] the holder of the “three-right theory” argues that water right is the sum of three rights, i.e., the ownership of water resources, the right to use and the right to operate; [4][5] the “multi-right theory” assumes that water right is supposed to include not only the ownership of water resources and the right to use these, but also several other rights related to these rights; i.e., a bundle of rights. Based on the management practice of our province, we tend to agree with the third opinion. The principle of separation of ownership from the right to use (i.e. water right) is in essence, the right to use a certain quantity of water resources within a certain period of time, and the right to operate these is in essence a category of the right to use and a right derived from the right to use. [6]

3. Basic Manifestations of Water Right

3.1. Ownership of Water Resources

The ownership of water resources refers to the right of the owner to possess, to use, to proceed, and to dispose of water resources. In terms of the ownership system of water resources, the general practice in the international community is to treat water resources as public property, clearly specifying ownership of water resources by the state or the whole people, thus strengthening governmental management and control. [7] For instance, the Water Resources Law of the UK, the Water Law of France, the River Law of Japan, the Outline for Water Legislation of the Soviet Republics, and many more have all specified rivers as public properties. In the water laws of Spain, North America, and Israel, the public ownership of water constitutes a very important content. According to the water laws of Romania and Bulgaria, all waters are owned by the state. At “The Second International Conference on Water Laws and Water Administrative Laws” held by the International Association for Water Law (IAWL) in Caracas (the capital of Venezuela), it was publicly advocated that all water sources should be publicly owned by the whole society for public use or directly managed by the state. It is thus clear that the public ownership of water resources has almost become a consensus among all countries of the world. [8]

According to the provisions of the Chinese Water Law, water resources belong to the state, and on behalf of the state, the State Council exercises the ownership of these water resources. The ponds and reservoirs built and managed by rural collective economic organizations are also owned and used by these rural collective economic organizations. According to the above provisions of law, water resources belong to the state, i.e., the whole people own them. The right of the state to possess, the right to use, the right to proceeds, and the right to dispose of water resources will be

realized through its management over the ownership of water resources, including water resource allocation, levies, etc. To be specific, the right of the state to use water resources will be transformed into the consumers' right to use water resources, as the state will typically not directly consume water resources. In other words, the law stipulates the State Council as the representative of the ownership of water resources, and thus allocates the responsibility for the macro management over the unified planning, unified management, and unified allocation of water resources.

3.2. Right to Use Water Resources

Property right constitutes the core of the ownership system, and consists of both complete property right and limited property right. Complete property right is the so-called ownership, and covers the complete range of functions of possession, use, proceeds, disposition, etc.; limited property right is an incomplete property right, and mainly refers to various rights of use that are separated from ownership. According to Article 118 of the Property Law of the People's Republic of China (hereinafter referred to as "Property Law"), "Regards the natural resources that are owned by the state or that are owned by the state, but used by the collective as well as those that are owned by the collective as prescribed by law, an entity or individual may possess, use, and seek proceeds from them." Thus, entities and individuals may enjoy limited property right over natural resources.

Different from land, grassland, forestland, and other natural resources, which are owned both by the state and the collective simultaneously, water resources, according to the provisions of China's Constitution, Property Law, and Water Law, are owned by the state, and the ownership of water resources is exercised by the State Council on behalf of the state. On that account, the property right over those water resources, that can be enjoyed by entities and individuals, is necessarily a limited property right; i.e., the right to use water resources. On this basis, the key to establishing and improving the property system of water resource assets lies in promoting the construction of water right system based on the right to use water resources.

3.3. Right to Operate Water Resources

Two ways exist for acquiring the right to use water resources through legal acts: acquisition through obtaining the water-taking license and paying the charges for the utilized water resources, and acquisition through transfer from other water right owners according to provisions of the law. However, in practice, the specificity of water resources typically renders it impossibly difficult for individuals or group consumers to directly use water resources without receiving the services rendered by social organizations that are specialized in water supply. [9] This means that, between the ownership of water resources by the state and the right to use water resources by consumers, there also exists the right to operate water resources.

The right to operate water resources is a derivation and extension from the right to use, in which the abstract ownership of the state is partially transformed into a specific right to use of the consumer. In particular, the right to operate refers to the right of water supply/production enterprises, hydraulic project management units, and other social organizations to process and operate water as a commodity under the premise of acquiring water or to use water resources. Typically, the right to operate water resources is owned by enterprises and public institutions that are engaged in the development and operation of water resources and, in most cases, those enterprises that are engaged in the operation of water resources also enjoy the ownership of developmental facilities, yet not the ownership of water resources.

4. Main Patterns of Water Right Management

Water right management refers to supervision and management acts and activities conducted by water administration departments at all levels as representatives of the ownership of state-owned water resources through legal, administrative, and economic means over the acquisition of water right, the fulfilment of obligations by water right holders.[10] It covers the conferring, adjustment, transformation, and trade of water rights, and the aim of strengthening water right management is to achieve fair and reasonable utilization, allocation, saving, and protection of water resources, thus maximally meeting the demands of the whole society for water and consequently realizing the greatest social, economic, and environmental benefits.

4.1. Modes of Conferring Water Right

There are mainly three modes of conferring water right, or three water right systems: the riparian right, pre-emption, and public water right.

Riparian right: It first originated from the British common law and the Code Napoleon of 1804, and was subsequently further developed in the eastern regions of the US. The principle is the basis on which the UK, France, Canada, the eastern regions of the US and other countries and regions that are rich in water resources establish their water laws, water regulations, as well as management policies. The essence of the riparian right theory lies in the private ownership of water rights, and its attachment to land right (i.e., that the transfer of land right is accompanied by the transfer of water right).

Pre-emption: Pre-emption first originated from the western regions of the US. In the course of the development of these regions during the mid-19th century and to solve problems of water shortage caused by dry climate, various states successively dropped the riparian right principle and shifted to the pre-emption principle. The pre-emption principle claims that water resources are located in public areas and are thus not owned by users; however, it acknowledges the usufruct over water, i.e., while the ownership of these water resources belongs to the public or the state, the water right acquired by water users is private. Its main rules include “pre-emption”, i.e., whoever seizes it first enjoys the priority of use; “beneficial use”, i.e., the use of water must be eligible to produce benefits; “use or loss”, i.e., a water user who has abandoned drinking water projects on a long-term basis and does not use the water (in general for two to five years) will lose the right to continuously draw or use the water. The pre-emption system emphasizes the beneficial use of water resources and is more applicable to regions with a shortage of water resources.

Public water property: This first originated from the water management theories and practice of the former Soviet Union. According to the provisions of the Water Law of the Russian Federation, all rivers, lakes and other waters within the Russian territory were owned by the state. China currently adopts the public water right system, and, according to China’s Water Law, the state also adopts the water-taking licensing system. During the early period after founding, Israel established water resources as state-owned resources under possession and controlled by the government. Public water right implies three basic principles: the principle of separation of ownership from the right to use, i.e., water resources are owned by the state, but individuals and entities enjoy the right to use these water resources under the premise that the development and utilization of water resources must comply with the economic plans and developmental plans of the state. Water resources are allocated by administrative means.

4.2. Routine Management Patterns of Water Right

US: Given that absolute ownership is incapable of solving problems of water pollution and groundwater overdraft, the current law of the US has been appropriately revised to add several

restraints, such as the reasonable development and utilization of groundwater within the bearable scope and without overdraft, and the limitation of groundwater pump age, according to the proportion of land owned without influencing the water consumption demands of others. The public owns groundwater under non-private land, and its water right is similar to that of surface water.

Israel: Israel has successively established a National Water Conservancy Management Commission and “Inter-Ministerial Commission” to take charge of the management, development, and utilization of water resources; it also introduces a water quota system into agricultural, industrial, and domestic fields for the purpose of restricting unlimited use of water.

Japan: Japan has transformed its River Law from an old law, focusing on the regulation of rivers and watercourses to a new law attaching equal importance to both the development and utilization of water resources as well as the regulation of rivers and watercourses, i.e., a wide range of customary water rights have been transformed into licensed water rights. For instance, most major agricultural water conservancy groups have submitted their customary water rights to the state, which then confers the licensed water right to them. According to the revised River Law, “Rivers are state industries, and their protection, utilization, and management shall be properly conducted to realize specified goals. Rivers are not owned by any private person.” Thus, no owner of licensed water right may trade or transfer it to any party.

UK: When the water drawing or cumulative water pump age does not exceed 1,000 gallons and it is drawn or pumped only for domestic use by the land occupant, or when surface water is drawn for agricultural use or greening purpose, there is no need to acquire a license first. When a land occupant requires the right to use water, he or she may acquire it through continued use or transfer of the license. No matter whether there is a demand for a license or not, the right to draw water can always be acquired through transfer or inheritance.

China: According to China’s Water Law, the water administration departments above county level are responsible for routine supervision and management of water resources (water right) within their respective administrative districts according to the specified scope of authority.

4.3. Modes of Water Right Transfer and Trade

US: The transfer of water rights in the US is similar to the transfer of real property, and water right is protected by law as a private property of citizens. The water right system of the US is based on provisions of state laws, and presents several regional differences. For instance, the eastern regions of the US that are rich in water resources (such as Florida and other eastern states) adopt the riparian right doctrine, while the western regions of the US with a dry climate and resulting shortage of water resources (such as Colorado and Oregon) adopt the prior appropriation doctrine. Besides regional differences, the water right system of the US also varies with different natural waters, as manifested by the differences between surface water laws and groundwater laws.

In the 1980s, the water market of the western US was still a spontaneous small-scale gathering; currently it has evolved into a “water resource marketing”-based “water market” engaged in frequent trading on the Internet. In recent years, a water-bank trading system has emerged in the western US, i.e., the annual runoff is divided into several portions according to the distribution of water rights, with the purpose of realizing a stockholding system-based management of water rights, making water right trade convenient and fully introducing economic values of water resources. The western US have also established irrigation companies based on water right as shares, and their operations are similar to the disposal and withdrawal of money from bank accounts.

Australia: The earliest water right system of Australia originated from the British “riparian right” system. At the beginning of the 20th century, Australia explicitly specified water resources as public resources, and in the 1980s Australia allowed the trade of water rights. The developmental level of the water right system in Australia varies between states, and the State of Victoria can be

cited as a typical example. Due to the increasingly prominent imbalance between supply and demand, state governments have experienced a transition from the admission of water right auctions during the 1980s to the current refusal to approval and confer water rights; at present, to seize water right, the state can only resort to water right trade. All types of water rights can be transferred according to market prices without government intervention; however, the transfer process must comply with relevant rules.

Russia: Currently no “water market” or “quasi-market” exists for the trading of the right to use waters in Russia. However, its “Water Register” project has become a feature of its water resource management and is worth studying beyond Russia. The “Water Register” is a giant systematic project that is used for the general survey and registration of water resources nationwide, the long-term and truthful recording of water consumption in Russia, and the detailed determination and analysis of water quality. This huge database project investigates, states and registers the water resources of Russia based on administrative divisions, and records these by categories and types according to an identical method. Managed by computers, retrieval and query become strikingly convenient.

China: Analysed from a spatial distribution, China’s water right trade is mainly distributed in Inner Mongolia, Ningxia, Gansu, Xinjiang, and other northern provinces, and few trade cases are reported in its developed eastern regions such as Zhejiang, Fujian, and Guangdong. Analysed from a temporal distribution, the practice of water right trade has always been continued. Analysed from the type of distribution, there are mainly the transfer of water rights from agriculture to industry, the transfer of the right to use water from regional reservoirs to cities, the trading of water tickets among peasants, and the paid transfer of water rights by the government to enterprises. Each type of trade has its own characteristics in terms of subject, object, mode, and price.

For years, China has been exploring its own water right management, and pertinent questions have constantly been addressed. Prominent examples are the phase of the path of water right reform, the nature of water right, the role of the water right system, its relationship with the most rigorous water resource management system, and the future orientation of the path of the water right reform. Based on practice as well as on explorations of several countries in recent years and through analysing the connotation, orientation, and main patterns, this paper analyses the details of controversial questions, and advances the studies on several theoretical questions regarding the path of water right reform of future China.

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