Introduction of Water Rights System and Water Rights Trading in China

China Water Exchange 2023. 9

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1 Introduction of Water Rights System

According to China's present laws, water resources are owned by the

State while 'water rights' refers to the right to use those water resources.



Constitution of the People's Republic of China

Water Law of the People's Republic of China

According to the diverse subjects that hold water rights, they are mostly divided into three types: regional water rights, water withdrawal rights and irrigation users' water rights.

Regional water rights are usually held by the
local people's government and are
determined by water allocation programs for
rivers, groundwater control targets and
approval documents connected to water
transfer projects.



South to North Water Diversion Project

The water withdrawal rights are typically made clear to the user of the water via the water abstraction permits.

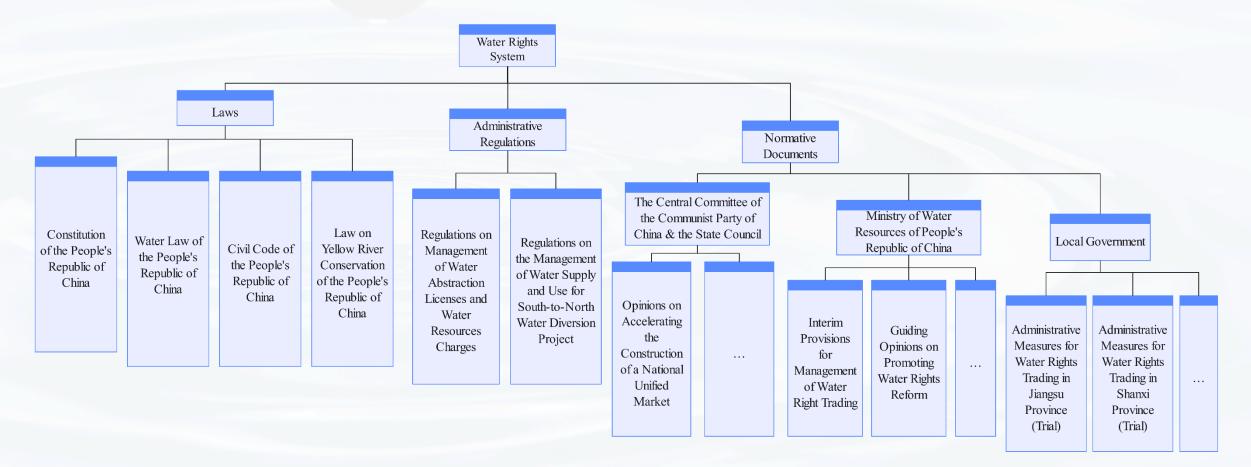
Irrigation users' water rights are usually explained to irrigation users within the irrigation district via the water rights certificates.



Water Abstraction Permit



In the theoretical and practical exploration, the framework of the water rights system is composed of laws, regulations and normative documents that have been formed over time.



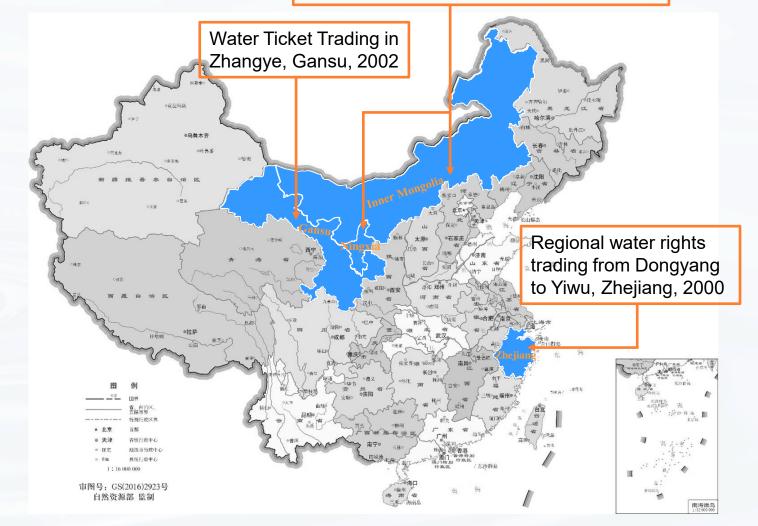
2 Progress of Water Rights Trading

In China, the water rights trading practice can be roughly divided into three stages: initial exploration, pilot practice and high-quality development.



Initial Exploration (2000-2011)

In 2003, Ningxia and Inner Mongolia carried out a pilot project on the conversion of water rights in the Yellow River.



A number of regions have explored

water rights trading, and formed diverse

trading models such as **Dongyang-Yiwu**

regional water rights trading, Zhangye

water tickets trading, Yellow River

water rights conversion in Ningxia and

Inner Mongolia.

Pilot Practice (2012—2020)

In 2012, the report of the 18th Party Congress decided to carry out pilot water rights trading actively.
In 2014, Chinese President Xi Jinping put forward the water governance principle of "prioritizing water conservation, balancing water distribution in time and space, taking a systematic approach to water management with synergies between government and market" and proposed requirements to establish a water rights system and cultivate water markets.



Pilot Practice (2012—2020)

- In 2014, the Ministry of Water Resources (MWR) launched a pilot water rights program in seven provinces and regions, including Ningxia, Jiangxi, Hubei, Inner Mongolia, Henan, Gansu and Guangdong.
 In 2016, the Ministry of Water Resources (MWR) and the Beijing Municipal Government together
 - established the China Water Exchange (CWEX), the only one national water rights trading platform.



China Water Exchange Listed in the 70th Anniversary of the Founding of the People's Republic of China Large-scale Achievement Exhibition

High-quality Development (2021-present)

With the inclusion of water rights trading in the novel stage of high-quality development of water conservancy, water rights trading has synchronized into a new stage of development.

 In 2021, the Opinions on Establishing and Improving Mechanisms for Realizing the Value of Ecological Products planned to "explore innovative and perfect water rights trading mechanisms in key river basins such as the Yangtze River and the Yellow River."
In 2022, the Opinions of the Central Committee of the Communist Party of China and the State Council on Accelerating the Construction of a Nationally Unified Big Market planned to "build a nationally unified water rights trading market, implement unified and standardized industry standards and trade regulatory mechanisms."

High-quality Development (2021-present)

In 2022, the Ministry of Water Resources (MWR) constructed and deployed a nationally unified
water rights trading system to sustain the completion of the whole procedure of all kinds of
transactions online, and to unify trading rules, technical standards and data specifications.



Web and mobile interfaces of the National Water Rights Trading System

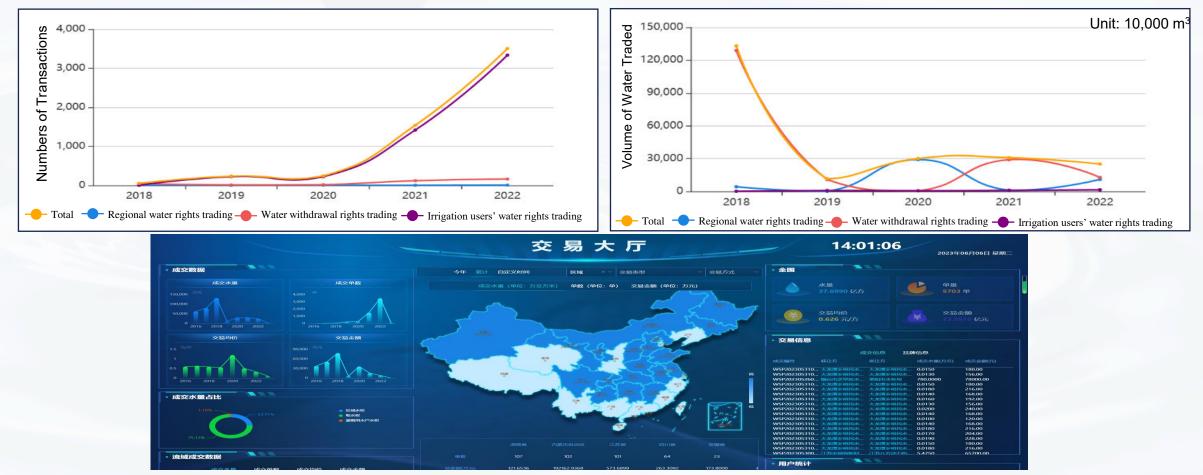
2.2 Overall Progress

By the end of 2022, 23 provincial-level administrative regions across in China had carried out regional water rights trading, water withdrawal rights trading, and irrigation users' water rights trading in accordance with local conditions.



2.2 Overall Progress

By the end of 2022, 5,620 water rights transactions had been carried out via the national water rights trading platform, with 3.447 billion cubic meters of water traded.



There were 20 regional water rights transactions, with a total volume of 894 million cubic meters and a transaction amount of 701 million Yuan.

Example: Pingdingshan and Xinmi South-to-North Water Diversion Regional Water Rights Trading, Henan Province. **Background**: The South-to-North Water Diversion allocated to Pingdingshan City had a surplus; Xinmi City was short of water resources. The two cities had built diversion projects with water transmission capacity, and reached a deal through negotiation. **Content**: Pingdingshan City sold 24 million cubic meters of water rights to Xinmi City for a period of three years at a unit price of 0.87 Yuan per cubic meter.

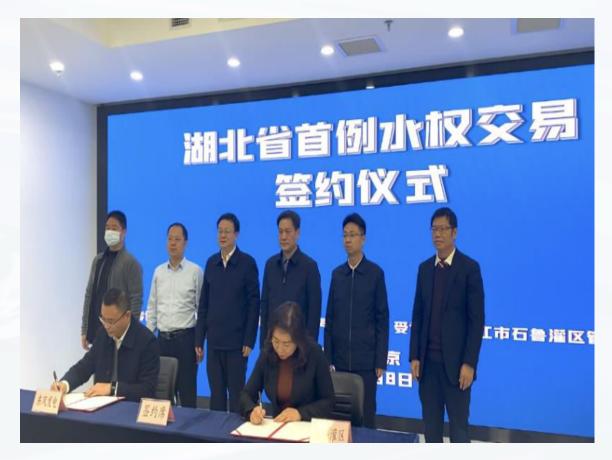


There were 449 water withdrawal rights transactions with a total volume of

2.84 billion cubic meters and a transaction amount of 1.654 billion Yuan.

Example: Trading between Irrigation District and Power Generation Enterprises in Yichang City, Hubei Province.

Background: Yichang City has a localized inconsistency between water supply and demand, and is able to optimize the allocation of water resources using a market-based approach. **Content:** Dongfeng Power Generation Company sold its 10 million cubic meters of water rights to the Shilu Irrigation District Management Center at a price of 0.10 Yuan per cubic meter for the urban water supply.



There were 5,365 irrigation users' water rights transactions, with a total volume of

44.34 million cubic meters and a transaction amount of 6.64 million Yuan.

Example: Water Rights Trading for Irrigation Users in Panzhihua City, Sichuan Province.

Background: Panzhihua City explained the water rights for the village. Throughout the mango planting season, Villager A had a well-equipped drip irrigation system and had surplus water rights after irrigation was completed. Villager B had used up all his water rights but had not irrigated all his land that needed irrigation. The two irrigation users conducted a transaction. **Content:** Villager B purchased 200 cubic meters of water rights from Villager A at a price of 0.5 Yuan per cubic meter using the national online water right trading APP.



In addition, several places have explored the trading of non-conventional water

resources such as reclaimed water and drained water.

Example: Reclaimed water rights trading has been carried out in Lingshi County, Jinzhong City, Shanxi Province. Background: Lingshi County no longer has surplus surface or groundwater withdrawal targets, since the government unified storage of reclaimed water is available at the sewage treatment plant, authorizing the Water Resources Bureau as a seller to the three coal chemical enterprises to trade reclaimed water rights. This solved the excessive water demand.

Content: The annual volume of water traded is 7.2 million

cubic meters, the trading period is 5 years, and the trading

price is 0.35 Yuan per cubic meters.



3 Future Outlook

The existing and future periods are important times in the construction and modernization of a harmonious coexistence between humans and nature, an in-depth implementation of Chinese President Xi Jinping's water governance principle, significant speeches and instructions on water management, the use of market mechanisms to endorse the optimal allocation and intensive use of water resources is becoming ever more prominent.



With the speeding up of the national water network's construction, the deployment and application of the unified water rights trading system and the increasing practice of water rights reform, the water rights system will continue to be enhanced, the scale of water rights trading will increase significantly, the types of trading will become much more abundant, and the construction of a unified national water rights market will be accelerated. The effect of this will be the accumulation and formation of additional experiences in the construction of the water rights market that are rich in Chinese characteristics and can be shared worldwide.

Thank You!

China Water Exchange