

Water Trading, What Can We Learn From Each Other?

By Luo Huaixi

Facing the challenge of water shortage, both China and Australia reformed their water legal systems in the past years. Water trading, as a market-based approach to enhance the efficient and sustainable use of water, is part of the legal reforming. Then, how water trading going on in China and Australia? What can the two countries learn from each other?

1 Water trading in China

1.1 Legislations related to water trading

According to the Constitution of China, water resource belongs to the whole country, and it is the State Council which represents the country to fulfill the right of ownership. If enterprises or individuals want to take water from surface or underground by machines or buildings, they should apply for a water-taking license from the government. Before 2002, the legislations neither recognized water-taking as a kind of right, nor denied it.¹ In 2002, the National People's Congress revised the Water Law (1988), and the new Water Law says, when enterprises or individuals get a water-taking license, they are also entitled the water-taking right.² Nevertheless, the water-taking right was formally recognized by the Property Law in 2007. So, when talking about water trading system in China, we just refer to the trading of water-taking right.

In 2006, the State Council published the Regulation on Water-taking License & Water Resource Fee Management. That regulation says, if the enterprises or individuals save water by modifying product structure or improving technology after got the water-taking right, with the government 's permission , they can trade the saved water and change their water-taking license accordingly. At the same time, the Regulation delegates the Ministry of Water Resource (MWR) to publish the rule on water-taking right trading. ³ Up to now, this Regulation is the directly legal base for water trading in China.

1.2 Some famous water trading cases

In China, very interesting, the most famous water trading cases took place before 2005. In 2000, the Yiwu county and the Dongyang county, both in the Zhejiang province, southeast China, came to an inter-government agreement. Under that contract, the Yiwu county got the water-taking right from one dam in the Dongyang county for ever, and the water quantity is limited to about 50 million cubic meters every year; as an exchange, the Yiwu county paid the Dongyang county 200 million Yuan (nearly 50 million Australia dollar) when the contract come into effect, and is required to pay 0.1 Yuan for every cubic meter water it actually took from the dam.⁴ That case led to hot discussing across the society, because the water allocation among different regions was always decided by the higher government and the local government never bought water-taking right from others in the past.

Another case that took place in the Zhangye city, Gusu province, northwest China, may be much more meaningful, because the Yiwu-Dongyang case is only a regional contract on water allocation and

¹ See the Water Law of the PRC(1988),available at: www.chinalaw.gov.cn.

² See section 48, the Water Law of the PRC(2002), available at: www.chinalaw.gov.cn.

³ See section 27, the Regulation on Water-taking License and Water Resource Fee Management, available at: www.chinalaw.gov.cn .

⁴ See the local news, available at: www.dongyang.gov.cn.

similar to a simply commercial deal. Living in the dry Black river basin, the factories and farmers of Zhangye used to take water as much & quickly as possible, because they didn't know whether water is available when a drought happened. Like a recycle, the Black river, as an inland river, was often dried up, the region's economic loss and environmental damages was more and more serious. In 2001, the city was chosen by the State Council to carry out a water friendly society experiment under a national plan. From then on, Zhangye launched water policies reforming. Take irrigation for example, at first, the local government allocated available water resource to every irrigation district and even every family based on the irrigation land of 2000, which about 385 cubic meter water per Mu⁵ is available every year to the farmers. At second, the local government issued water ticket (license) to all the farmers, and they are required to pay accordingly amount water ticket to the government when they taking water from the channel of community. At last, the farmers can trade the water ticket to other farmers freely or sell the water ticket to government by the price which is 20% higher than the price of supplying water. In 2004, more than 4 million cubic meter's water was traded among farmers. As a result of using water more orderly and carefully, the water for irrigation decreased about 10% in 2004 compared with that of 2000. The water trading has been proved to be meaningful in enhancing efficient and sustainable use of water resource.⁶

1.3 The main views on water trading

Before 2005, as an important part of water marketization, water trading was a hot topic in the media and strongly supported by many economic experts and even some government bodies. The reasons they gave include: free water inevitably means wasting water; water is a scarce good, and trading can shape its allocation to the highest-value uses; water trading means the recovering of water's real cost and attracting social investment which can enhance the development of water industry.⁷ So, from 2000, during the revising of Water Law and drafting of the Regulation on Water-taking License & Water Resource Fee Management, there were many persons who suggested that water trading should be one part of the legislation.

However, there were also lots of oppositional voice during the proceeding, that's the reason why the Water Law (2002) does not recognize water trading and the Regulation on Water-taking License & Water Resource Fee Management gives so much restriction on water trading. At first, water is essential to everyone's life and regarded as a kind of human right. People worried that if water trading was allowed, water may be controlled by minority group and affect the social stability, for example, some businessmen may buy water right from farmers and irrigation will be abolished, which could lead to the food shortage. At second, water trading means water-taking right is a marketable commodity and that is against the trend of the government strengthening controlled over water resource. People argued that if water-taking right was allowed to trading, that right should be allocated through market means such as public selling rather than administrative permission. At last, as a second allocation of water resource, water trading required the fairness and equity of the first allocation. People said that, for example, the trading of mine exploiting right was one reason that caused the disorder of mine market, and sometimes even led to the abusing of public power.

So, for many kinds of reasons, water trading developed slowly in recent years. In 2006, when drafting the Regulation on Water Allocation of the Yellow River, the suggested sections on water trading were

⁵ One Mu is about 660 square metre

⁶ See the local news and reports, available at: www.zysw.net.

⁷ Many papers are still available at: www.mwr.gov.cn.

strongly opposite and then cut off. Moreover, the Ministry of Water Resource hasn't published the Rule on water-taking right trading after been delegated by the Regulation for 3 years. During this period, there were still some water trading cases among different regional governments, but water trading is not a hot topic any more and people seemed to have lost their interest.

2 Water Trading in Australia

2.1 Legislations related to water trading

Australia inherited the full body of English Common Law, in earlier 1800s the landowner was entitled to exploit water found upon the land. According to the natural situation of Australia, from 1885, the colony states began to reform the legal system and announced the state ownership of water resource, as well as gave the landowners "water rights". During the 1990s, some important change in water policies were formulated, and the Council of Australian Governments (CoAG) produced a water reforming agenda which mainly including: trading water between users, better defining a water right and recovering real cost of water to users. The agenda led to legal system reforming and an obviously increase in water trading.⁸ In 2004, the CoAG signed the National Water Initiative, which stated again that the goal of reforming including: maximizing the economic value, establishing national water markets, enforcing price system for full cost recovery, and so on.⁹

The latest available legislation of Commonwealth on water trading is the Water Act 2007, which including such main points: government encourage the water trading in the Murray-Darling Basin, no matter within or between Basin states, both temporarily and permanent trading are permitted; the barriers to permanent trading out of water irrigation areas up to an annual threshold limit of 4% of the total water entitlement of that area should be immediately removed, no new barriers to trade will be imposed, including in the form of arrangements for addressing stranded assets; All trades should be recorded on a water register which should be compatible, publicly accessible and reliable, recording information on a whole of catchment basis; only for environmental reason can restrict extracting, diverting or using of water resulting from trade.¹⁰

There are also some legislations of state level which related to water trading. For example, the Victory State allows the transfer of ownership of "water share", as well as limited term transfers which no more than 20 years.¹¹ The Queensland State also permits the holder apply to the chief executive to transfer "a resource operations licence or a part of the licence."¹²

2.2 Water trading in the Murray-Darling Basin

In Australia, water trading is most active in the Murray-Darling Basin, where surface water trading by irrigators is widespread. According to some research papers, most trading cases still happened within the same irrigation district and were mainly seasonal water allocation trade, and water allocation trade was about 11-20% of total annual allocation in the three main irrigation districts in the Basin. At the same time, both interstate trade and water licence trade also developed in the past years, for instance,

⁸ See Shahbaz Khan(2006) *Water reforms in the Murray Darling Basin: law and policy challenges*, Hydrology and Water Law-----Bridging the Gap, edited by J.Wallace and P.Wouters, published by IWA Publishing, London.

⁹ See the National Water Initiative of Australia, available at: www.coag.gov.au.

¹⁰ See the Water Act 2007 of Commonwealth, available at: www.comlaw.gov.au.

¹¹ See the Water Act 1989 of Victory, available at: www.legislation.vic.gov.au.

¹² See the Water Act 2000 of Queensland, available at: www.legislation.qld.gov.cn.

in 2005, the transfer volume of water entitlement trade (both intrastate and interstate) reached about 100 million cubic meters.¹³

Even if the recent statically figure of the water trading in the whole Basin is very limited, some states figure is still available on the internet. For instance, in 2007/08, trade of water allocation in northern Victoria amounted to 478 GL, compared to 400 GL in 2006/07, and this is a very high volume in a year where the total allocation was only about 1,250 GL. At the same time, 218 GL of entitlements, both change of location of water shares and transfer of ownership (which may occur with or without movement), were recorded by the Victory Water Registrar as transferring ownership in 2007/08. Only 5% of water allocation trade were refused by the authority compared to a 14% refused rate of water share trade during that period. Moreover, Some up to date information is also available on the internet, for example, in the Greater Goulburn trading zone of Victory State, from July 2008 to May 2009, there were 658 water share trade cases, which resulted in a trade volume of more than 51,000 ML, and 5319 water allocation trade cases, which resulted in a trade volume of about 197,500 ML.¹⁴

2.3 The main views on water trading

Up to now, I have not collected research papers which against the water trading in Australia. It seemed that the key point of the National Water Initiative is merely supported by the whole society. However, this does not mean that there are not any passive remarks on the crucial water trading system. At first, some people criticized that the objectives of water reforming is economically, socially and environmentally sustainable development, Social-equity, however, have been largely abandoned.¹⁵ Especially in the irrigation water trading process, some farmers complained that government only cared about the urban and environment's need for water, left the rural and irrigational need at the least important., which may resulted in less and less irrigation¹⁶ At second, there were also views that current water market was not integrate, for example, in the Murray-Darling Basin, "unless the Commonwealth takes a lead on water management issues, any agreement on a uniform approach will be a result of compromise and would reflect the lowest denominator", and there is still need to address the connection of surface and groundwater system.¹⁷ At last, some people criticized that the transaction costs was too high, that includes the inefficiency of government working, high information cost and high collective working cost, in a small river basin, "Ten years ago the water planning was just starting up and those guys are still going through the process ten years later".¹⁸

3 What can we learn from each other

3.1 For both the two countries

¹³ See R Quentin Grafton and Deborah Peterson(2007), *Water trading and pricing*, Managing water for Australia, edited by Karen Hussey, etc, published by CSIRO Publishing, Australia.

¹⁴ See the statistical tables and related reports of the Victory water trade authority: www.waterregister.vic.gov.au. Thanks MR Joe. Banks of the Victory water trade authority very much for his helping.

¹⁵ See Vivian Chung, *Making waves: an overhaul of Western Australia's legislation framework for the allocation of water*, Australian Resources and Energy L.J 161 2007.

¹⁶ See Paul Martin etc, *Transaction costs and water reform: the devils hiding in the details*, CRC for irrigation future technical report 08/08, University of New England.

¹⁷ See Shahbaz Khan(2006) *Water reforms in the Murray Darling Basin: law and policy challenges*, Hydrology and Water Law-----Bridging the Gap, edited by J.Wallace and P.Wouters, published by IWA Publishing, London.

¹⁸ See Paul Martin etc, *Transaction costs and water reform: the devils hiding in the details*, CRC for irrigation future technical report 08/08, University of New England.

At the beginning of this reforming, both China and Australia seem to identify water's nature as a marketed commodity and carried out a series of new policies to expand water market, which aim at recovering real cost of water to users, ensuring water be put to most valuable use, and encouraging investment in water industry.¹⁹ It was a part of global water reforming movement which strongly supported by some international organization such as the International Monetary Fund (IMF). However, the water marketization and privatization, especially in public water supply, was widely opposed by some NGOs.²⁰ Not only Chinese wondering the meaning of water marketization, I also noticed, very interesting, there is less word about marketization in the Water Act 2007 of Australia than in the NWI.

In my opinion, both the two nations, in the process of reforming water law system and enhancing water trading, should pay more attention to social equity and environment protection rather than emphasis on economic value. Any successful legal reforming, must benefit the majority rather than damage them, while equity and environment are in most people's interest. It is true that water is an economic good, but at the same time, water is also a social and public good, or in other words, is a kind of human right. Water trading is only one means to reach the purpose of water resource saving and environment protecting, but we once seemed to take marketization itself as the purpose. Water trading would not develop in the right direction if the government continue to talk about how much money can be earned from the water industry.

3.2 For China

As discussing in this paper, in China, water trading developed slowly in recent years, and there are many reasons for that situation, such as the different views on water trading system itself, the lack of market rules, and the afraid of disorders in the water resource management. In my personal opinion, there are some things we could do to enhance the water market in the future.

At first, we should have a more fair and objective view on water trading. Compared with Australia, the academic research on water trading is relatively insufficient in China. As it to me, water trading is neither the only way nor the most efficient ways to save water, but this system has been proved to be a good means of doing so. The worries towards the water trading, essentially, are about the abusing of executive power rather than that system itself. For example, some people argue that water trading may lead to controlling of minority, but in China, water-taking right has a time limit of 5 to 10 years²¹, if the enterprises or individuals want to take water continually after that period, they should apply to the government again, so we can say that worry is groundless.

At second, we should publish the water trading rule as quickly as possible. At both the federal and state level, Australia has many laws and regulations deal with water trading, this has proved a good legal environment for water market. China also has the related legislation, but it's too abstract and need to be specified. For example, according to the Regulation on Water-taking License and Water Resource Fee Management, which trade should be permitted and which trade should be refused, is still unclear. This requires the Ministry of Water Resource to publish the Rule as quick as possible.

At last, we should develop more right for the water users. In Australia, there are both water entitlement trading and water allocation trading. In China, up to now, the legislation only recognize the

¹⁹ See the National Water Initiative of Australia, available at: www.coag.gov.au. And the Water Industry Policy of China, available at: www.mwr.gov.cn.

²⁰ See Ken Conca(2005), *Invisible hand, visible fist: the transnational politics of water marketization*, Governing Water, published by the MIT Press, London.

²¹ See section 25, the Regulation on Water-taking Permit and Water Resource Fee Management, available at: www.chinalaw.gov.cn

water-taking right, and without the water-using right, and consequently without the trading of water allocation. As it to me, in China, especially in rural area, the water-using right is more important than the water-taking right, because most Chinese farmers are unable to afford water-taking project and only allowed to use water from the communities' channel, as in the Zhangye city mentioned before. As farmers have used the irrigation water for generations, their right should be admitted and protected. With the establishment of water-using right and its trading, the water market would be more equitable, more efficient, as well as more sustainable.

3.3 For Australia

Compared with China, Australia has more developed water trading system and market, but in my personal opinion, some Chinese experience may also be useful for Australia to develop an even better legal system.

At first, Australia may consider about the possibility of strengthening basin management. According to Australian Constitution, water resource management is a state affair, and this lead to some problems, such as over entitlement in water right,²² especially among the Murray-Darling Basin states, because the legislations are different from state to state, and so does water management. In my personal opinion, the nature of water resource required basin management, as all water is integrity in a basin. So I think Australia need to centralize the water resource management to the Commonwealth, or at least, create a more powerful Murray-Darling Basin Authority.

At second, Australia may consider about the possibility of reasonable restriction on water trading. As it to me, Chinese legislation may give too much restriction on water trading, while Australian legislation may put too little restriction on water trading. For example, some research papers put forward that "sleeper and dozer entitlements became active once the enhanced value of water through the water trading"²³, which may lead to more water taking. So, some reasonable controlling of water trading may be better.

At last, Australia may consider about the possibility of a more simple water legal system. In my personal opinion, the water legal system of Australia is a little complicated, for example, there are 256 articles, 6 schedules in the Water Act 2007 of Commonwealth, which add up to more than 500 pages, and this Act is only part of the federal water legislation. What more, the similar things happened at the state level. Of course, each country has different legal and culture background, however, as it to me, it may be a heavy burden to read across these Acts, even for a lawyer.

²² See Paul Martin etc, *Transaction costs and water reform: the devils hiding in the details*, CRC for irrigation future technical report 08/08, University of New England.

²³ See Shahbaz Khan(2006) *Water reforms in the Murray Darling Basin: law and policy challenges*, Hydrology and Water Law-----Bridging the Gap, edited by J.Wallace and P.Wouters, published by IWA Publishing, London.