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Beyond Discourses of Water Scarcity: Water Politics of the South-to-North Water Diversion Project in China

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## **Beyond Discourses of Water Scarcity: Water Politics of the South-to-North Water Diversion Project in China**

*Li Hua*

### **Abstract**

*Different representations of water scarcity imply distinctive values on water allocation. Among the debates on water allocation, water scarcity is often taken as an undoubted naturalized fact. However, the concept of water scarcity doesn't necessarily mean the natural shortage of water. Water scarcity as discourses could be socially constructed, providing legitimacy for water diversion projects but obscuring the political questions of who gets access to how much water when and how, besides, how the costs and benefits of the water diversion project is distributed among different actors involved. Due to the finiteness of water, to supply more water for certain group indicates the reduction of water availability for other users. Taking the middle route of South-to-North Water Diversion Project (SNWDP) as an example, this paper tries to disclose the dynamics and mechanism of water allocation shadowed in the dominant discourse of water scarcity in the context of China. Based on a close examination of "thirsty north" and "the south with rich water", it has found that these two images in contrast are simplified representation in official discourses. The selective representation of water situation in both north and south reduces water scarcity as a technological problem. Although the SNWDP aims to ease the water scarcity in the north, but among the pictured north, urban areas have priority over rural areas to get access to water. Water demand of rural areas and agricultural irrigation is actually marginalized. In the "south", the abundance of water is also constructed since water users and livelihoods in the watershed are invisible. This paper argues that the SNWDP is not neutral but value loaded, the embedded water allocation process follows the economic growth centered, urban and industrial development oriented logic. The unequal access to water between rural and urban areas is reinforced and reproduced.*

## 1 Introduction

Water is essential to life. Despite earth is called blue planet, available freshwater only accounts for 0.26% of the total amount. Water is not inexhaustible but finite on earth. Since 1990s, along with the changes of social production and ways of living, human water demand keeps climbing. Under this background, scarcity and crisis become the prominent words to depict water resources. It is estimated that 884 million people in the world are living without safe water<sup>1</sup>. In 2030, the global water demand will surpass 40% of the sustainable supply amount, until then at least half of the whole population will face the living threat posed by water shortage<sup>2</sup>. As former Executive Director of UN Environment Program Claus Topfer notes, the fiercest war in the near future would be the fight for water.

To close up the gap between water demand and water supply, various methods have been adopted like dams, reservoirs and wells building in a supply-oriented perspective and advocating water saving based on management of water demand. As for water sources, no matter what kind of technology to apply, what human being could get more is the amount of water sources but could not alter the natural storage of freshwater. Due to the constraints of temporal and spatial variation, water resources in different regions are imbalanced. Squeezed by the increased water demand and decreased water sources, allocation of water between different regions and among different individuals or groups has been reshuffled. Now that water is finite, one's use of water resources would reduce its availability for others. In terms of the exclusive feature of water, redistribution of water implicates redistribution of interests around certain water sources. According to Benedict (2012), "politics is about the control, allocation, production, and use of resources and the values and ideas underlying those activities". In this sense, water allocation is also a political process full of contestations, negotiations and conflicts. Central question to understand the reallocation process is who gets how much water, when, where and for what purpose and how the costs and benefits are distributed among the involved people.

As for China, the amount of available freshwater resources per capita is only 28% of the world's average. China is also listed in the 13 countries with the least water availability per capita. Even though, water demand and consumption keeps climbing up. Especially since the implementation of reform and opening up policy, along with the acceleration of industrialization, urbanization and economic growth, water stress pressure becomes severer. Lots of water used for irrigation has nevertheless been transferred to cities for urban and industrial use. Rising demand and finite supply has still triggered water deficit in more than two thirds cities in China, the amount of which is about 6 billion m<sup>3</sup> on average. To ease the thirst of North China Plain and maintain the local economic development, an inter-basin water transfer project was launched in 2002, known as the South-to-North Water Diversion Project, also the largest inter-basin water transfer project in the history. This project also has attracted lots of attentions home and abroad. In terms of water allocation, most domestic discussions of this project concentrate on how to allocate water to maximize economic efficiency from an economic perspective. Much less attention has been given to the equity of access to water among people in both the recipients and donor regions. Scholars abroad have done more critical studies on this water transfer project. Crow-Miller (2015) argues that the South-to-North Water Transfer Project is not political neutral rather than to maintain the high economic growth rate and further provide justification for the legitimacy of the government. By using of discourse of deflection, water stress in the north is naturalized in official discourses and ultimate anthropogenic reasons for the water scarcity are masked. Following the critical perspective, this paper tries to disclose the mechanism underlying water allocation of the South-to-North Water Diversion Project. Special attention will be paid to the power asymmetry and equity of water right in the process of water reallocation.

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<sup>1</sup> Wang Piyi. Please don't overdraw the tears of the earth. 2012-3-22  
[http://paper.people.com.cn/rmrhwb/html/2011-03/22/content\\_775151.htm](http://paper.people.com.cn/rmrhwb/html/2011-03/22/content_775151.htm)

<sup>2</sup> LianYan. Water crisis spreading to the global but the pessimistic result might be avoided. 2012-12-12  
<http://www.weather.com.cn/climate/qhbhyw/12/1758788.shtml>

## 2 Framings of water scarcity

From a cognitive perspective, different representations of water scarcity implicate various values on water allocation. Among the discussion and debates on water allocation, water scarcity being dominant discourse is widely taken as a natural fact undoubtedly. However, water scarcity doesn't necessarily mean natural shortage of water. Even in the arid areas, personal experience of water scarcity is differentiated. Water scarcity could be a discourse constructed by power and to meet the needs of power. As Foucault (2010) notes, power produces discourses, through which power could get reproduced and reinforced. However, perceiving water scarcity as discourses doesn't mean the denial of the real existence of water shortage in nature. But it could provide a perspective to shed light on what is obscured by dominant discourses. As Mehta (2001) points out, the naturalization of water scarcity in discourse could mask the real reasons contributing to water shortage. In this sense, solutions entailed under the perception of naturalized water scarcity would not be definitely effective. Furthermore, water demand of disadvantaged groups might be marginalized during water allocation. Since discourses could produce rooms for action, discourse analysis of dominant narratives is necessary to shed a light on the operation and aims of power underlying various representations of water scarcity which could shape the reality.

Among the discourse among water scarcity, there are two dominant narratives of water scarcities framing water allocation in different ways: natural water scarcity and economic water scarcity. The representation of natural water scarcity is often embodied as Malthusian statements. It highlights poor natural condition is the ultimate reason for water scarcity. While focusing on the gaps between rising water demand and finite water source supply, it tends to present the image of water crisis. Static and normative language tools are widely used in this representation. One prominent example is the adoption of average numbers and economic indexes. In a closed discourse space, the effect numbers and indexes could afford is the construction of being objective, while projecting water scarcity as an undoubted natural fact (Loftus, 2009). Take the commonly used water stress indicator as an example. This indicator is developed by a Swedish hydrologist Malin Falkenmark in 1989. In this framework, annual renewable water resource availability per capita is taken as the evaluation criterion for water scarcity. Countries in which water supply is below 1000m<sup>3</sup> experience water scarcity (Rijsberman, 2006). This indicator is widely used in policy discourse and served as reference for policy making. However, it has received lots of criticism. Many scholars point out that water stress indicator is partial in that the average numbers could shadow the temporal and spatial variations of water scarcity and various water demands and differentiated access to water (Jia, 2002; Rijsberman, 2006). As Savenijie (2000) said, average numbers of water availability per capita is "deceptive" because it fails to catch the heterogeneity and complexity of the social relations in which water problems is embedded. As Mehta (2000) argues, what is easy to be obscured underlying natural water scarcity is the unequal access to and control over water, leaving the question of how water is allocated aside. In this sense, naturalized water scarcity is an apolitical narrative and disembedded from social relations, not enough to explain the differentiated experiences of water scarcity among individuals or groups.

Compared to the narrative of natural water scarcity, the framing of economic water scarcity has taken social and economic factors on water scarcity into account to some extent. It holds that water resource storage in nature is enough to meet the demand of human beings. What results in water scarcity is the lack of investment in technologies and economies to get water. This kind of perception is inclined to frame water scarcity in the perspective of technology, which could ease water deficit by increasing the amount of water source supply. The narrative of economic water scarcity usually appears in the discourses of policies and development intervention projects. However, it follows a kind of simplifying logic which reduces water scarcity to a technological problem. Although the representation of water scarcity in technological term could justify the infrastructure building projects for water storage or extraction like wells, channels, dams and reservoirs, it could mask the equity of water allocation among water users in different sector. Technology as social construct is not neutral. As Mollinga (1998) notes, technologies could "be shaped by and in turn shape institutional and other social relation". Actually, how technology is designed and applied in increasing water source supply impose great influence on how water is allocated. To get a better understanding of projects aimed to ease water scarcity, it is

necessary to examine the obscured part in the shadow of dominant discourses and pay attention to the process of water allocation in reality. Central question needs to check is who gets how much water when where and for what use.

### 3 A brief introduction of SNWDP

The idea of diverting water from south to north is initially proposed by Mao Zedong in 1950s. During one inspection on Yellow river, Chairman Mao said, “water in the south is rich while in the north is scarce, if possible, we could borrow some water from the south”. As a strategic layout, South-to-North Water Diversion Project was launched in 2002 with the aim to ease water deficit in Yellow River, Huaihe and Haihe river basin by transferring water from Yangtze River. As Crow-Miller (2015) notes, this water transfer project is “linked to the political-economic goals within the context of China’s post-Mao development agenda”. Yellow River, Huaihe and Haihe river basin occupy a very important position in national economic development in China (Yu, 2000; Zhu, 2012). In this region, either GDP or food production accounts for at least one third of the national total amount. Nevertheless, the amount of water resources only shares 7.2% of the whole. The rapid population growth along with urbanization and industrialization, water becomes a big constraint to the sustainable socio-economic development in the river basin.

As the largest water diversion project in the world, South-to-North Water Transfer Project plans to build three vertical routes to divert water from Yangtze River and its tributary to three river basin which are Yellow River, Huaihe and Haihe river basin. In the main plan of this water transfer project, four river systems are connected in a network, constituting a water system of four horizontal lines and three vertical lines. Four horizontal lines refer to the four river basins while three vertical lines are the three water transfer routes, which are respectively west, middle and east route. The west route is designed to transfer water from the tributary in the upstream of Yangtze River to the upstream of Yellow River. The middle route connects Danjiangkou dam on Hanjiang River which is a tributary of Yangtze River with Beijing in the North China Plain through channels by gravity. The east route aims to connect Yangzhou city in Jiangsu Province located in the downstream of Yangtze River and Tianjin City through Beijing-Hangzhou Grand Canal. According to the Executive office of South-to-North Water Transfer Project, the whole project plans to divert 44.8 billion m<sup>3</sup> of water from south to north, among which, 14.8 billion m<sup>3</sup> is by the east route, 13 billion m<sup>3</sup> by the middle route and 17 billion m<sup>3</sup> by the west route. The whole project has been implemented in different periods and needs 40-50 years to finish. So far, only the implementation of west route has not started yet because of the complex geographic landscape of Qinghai-Tibet Plateau. It is still under the process of feasibility analysis. The middle route begins to transfer water in December, 2014 after 11 year’s construction. The recipient regions could get 9.5 billion m<sup>3</sup> of water from the south annually, almost 1/6 of the river volume of Yellow River. In terms of the west route, the first phase project has already finished and begins to transfer water in May, 2013. This line is designed to divert 8.77 billion m<sup>3</sup> of water from Yangtze River.

From the brief introduction of the South-to-North Water Transfer Project above, it is not difficult to find that the whole design of the project is premised on two beliefs: “water scarcity” in the north and “water abundance” in the south. The representations of those two images in contrast not only provide legitimacy for the project, but also are taken as undoubted fact which is produced and reinforced by official discourses in which water scarcity in the north is ascribed to the poor natural condition. Under the pressure of increasing water demand from cities and industries, to find new water source and divert water from the south is justified. Meanwhile, water in Yangtze River is taken as abundant and has lots of surplus. As scholars puts, “more than 94% water in Yangtze River runs off to the sea, it is a big pity without use of it.”(Yu, 2000; Tan, 2009; Zhong, 2005) Due to the naturalized representation of water scarcity in the north, real reasons resulting in the scarcity is shunned (Crow-Miller, 2015). Crow-Miller (2015) has done lots of interviews of officials in China in charge of the water transfer project and content analysis of many official documents and found officials are using the discourse of deflection to maintain the naturalized water scarcity. The ultimate reason for water scarcity in northern China is not pure

natural phenomenon but intervened by human activities. The term of water scarcity is only taken as an undoubted result justifying South-to-North Water Transfer Project in dominate discourses. However, there is no mention of the reasons why water in the north becomes scarce despite in the history, the northern China is not the “arid” place without enough water to feed the local people.

Another point needs attention is in dominant narratives, water users facing water scarcity in the north is homogenized. Under the abstract word of “north”, it seems to send the message that all the people in the north are suffering water scarcity to the same extent. In fact, people or groups with water demand are heterogeneous and their personal experience of water scarcity is differentiated. Taking Beijing City as an example, its annual water deficit reaches 1.5 billion m<sup>3</sup>. But at the same time, we could see the numbers of golf courses with high water consumption increasing, about 60 in Beijing and 100 in Hebei Province (Chen, 2013). As we known, Beijing and Tianjin are two main recipient cities of the South-to-North Water Diversion Project. It implies in the thirsty Beijing, many water claimants are not experiencing the scarcity. It estimated that in 2010, all the golf courses in Beijing have consumed 40 million m<sup>3</sup> of waters which in fact could meet the water demand of a city with a population of one million. Hence, the question of whose scarcity is closely related to how water is allocated among claimants. It is also necessary to see what is masked in the representation of naturalized water scarcity in North, to further probe into whose water demand is met and whose water demand is marginalized in the process of water allocation.

#### **4 North: whose water scarcity?**

According to the introduction of South-to-North Water Transfer Project on its website, Yellow-Huai-Hai river basin is the main water recipient regions. The three routes mainly serves for the eastern, middle and western part of North China Plain and provinces located in the middle and upper reaches of Yellow River (Yu, 2000). Although the South-to-North Water Transfer Project is to solve the water deficit in North China Plain, “north” is an abstract word as far as real water receivers are concerned. In fact, urban areas benefit most from the project while the water demand of rural areas and agricultural production is marginalized. In dominant discourse, the main goal of South-to-North Water Transfer Project is to make up the water deficit for urban and industrial use, improving the conditions of agricultural and ecological water use in the north and northwest of China. Water recipients of the middle route are mainly more than 2 cities including Beijing, Tianjin and other cities in Henan and Hebei provinces. The first phase project of the east route is mainly to meet the urban and industrial water demand in the cities along the water diversion channels. According to the executive office of South-to-North Water Transfer Project, there are three reasons accounting for letting cities as main water receiver. First, cities have a large concentrated population who has high demand of water. Secondly, social and economic development in cities grows faster than rural areas, so they are confronted with severer water constraint. Thirdly, urban citizens and enterprise have certain ability to afford water and this would facilitate the loan repayment of the whole project. In contrast with the focus on cities, water demands in rural areas are obviously put in a subordinate place. As scholars Yu and Wu (2009) point out, South-to-North Water Transfer Project might improve the water environment for agriculture in north China but the possibility to increase water supply for agricultural irrigation is slim. In official discourses on water allocation, it is said while guaranteeing the water demand for urban development, water squeezed from agricultural and ecological systems would be returned gradually. In this sense, what is undoubted is that cities enjoy priority over rural areas in access to water diverted from the south. The ethic motive underlying taking cities as main water receivers follows the doctrine of utilitarianism which hails one action as best if it produces benefit for the greatest number of people.

In fact, before the implementation of South-to-North Water Diversion Project, the north of China has already witnessed water scarcity in various extents. But inside the thirsty “north”, unequal accesses to water also have already formed between urban and rural areas. Large amount of water used for irrigation has to be transferred to non-agricultural sectors especially for urban and industrial use. According to the statistics published on China Water Recourses Bulletin, since 1997, along with the increase of national

water consumption, the proportion of water for urban and industrial use has raised while the part for agricultural use has decreased. In terms of the water allocation in Yellow-Huai-Hai river basin, Zeng (2003) has pointed out industrial sector has priority over agricultural sector to get water and the former will be first guaranteed in dry years. Due to the increase of water demand for urban, industrial and ecological use, the volume of water for irrigation has shrunk radically in recent two decades. Two big reservoirs in Beijing, respectively called Guanting and Miyun, used to provide water for irrigation and flood control, but now they have to transfer water to provide drinking water source for Beijing (Li, 2007; Huang, 2009). Even in the reshuffled process of water allocation, local rural people relying on the reservoirs are absent in decision making process. This kind of inter-sector water transfer phenomenon, especially from irrigation to non-agricultural use, has attracted much academic attentions. Wang (2007) focuses on the discussion of the impact on rural development exerted by water transfer for non-agricultural use. Case studies in Hebei Province have revealed that water transfer from irrigation to non-agricultural use not only has infringed the water right of rural people but also brought negative impact on their living, production and the local ecological environment. Due to the limited access to water for irrigation, many peasants have to change their crop patterns. To maintain their life, they are trying to diversify livelihoods, mainly migrating to cities and look for off-farm jobs, facing more risk and instability caused by the market fluctuation. Despite waving the flag of solving water scarcity in the north, the South-to-North Water Diversion Project is in fact to meet the urban and industrial water demand inside the north. Even though the water scarcity experienced by rural people is taken into the evaluation of water stress in the north which has justified the project, rural people's water demand has not received the deserved emphasis, neglected and marginalized in the actual water allocation process.

## 5 South: constructed water abundance

The other belief underlying South-to-North Water Diversion Project is water resource in Yangtze River is abundant and the volume remains stable. In dominant discourses, it is often to hear the expression like "there is lots of surplus water in Yangtze River, it is a big pity to let it flows into sea without utilization. What along with the runoffs is the evaporation of resources like coal and fossil oil. If we don't make use of the surplus river water, it will be wasted". In terms of those viewpoints, as Zhong (2004) argues, it is a "false judgment" by only taking the volume of runoffs as the evaluation criterion to see if the river has enough water to be transferred away.

Two reasons could account for this. Firstly, the representation of surplus river water is disembodied from the social and ecological contexts and reduced to a natural fact. What is masked is the relation between the runoffs and the livelihoods relying on water along the river basin. Besides, the surplus runoff also plays an important part in maintaining the ecological balance of the river basin. Secondly, the image of stable and rich water in Yangtze River is a static depiction. Actually, the river water has temporal variations, in different seasons, the volume of runoffs varies. As Guo (2008) points, about 60% to 80% precipitation and runoff of Yangtze River basin concentrates in flood seasons. During different seasons in one year, volume of runoff in Yangtze River is different and fluctuates between periods of high flow and low flow. So the water amount in the river is not at a stable state. Emphasis attached to this point is necessary because the traditional water users along Yangtze River basin could be negatively affected. Apart from this, effluent discharged into Yangtze River has entailed and strengthened the pollution-induced water scarcity in the river basin. In some part of Yangtze River basin, there is a vivid saying about this awkward satiation which is "living by the river and no drop to drink". Among this river basin, different regions are confronted water scarcity in different extents. According to the statistics in one report compiled by Changjiang River Commission, 59 cities among the whole 167 cities in Yangtze River basin are facing water scarcity in various degree and 26 of them are in severe water shortages<sup>3</sup>.

Based on the above, we could see that abundance of water in Yangtze River represented in dominant

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<sup>3</sup> Water committee of Yangtze River: Water scarcity constraints sustainable development of more than 30% percent of cities in the river basin. 2006-8-4.  
[http://news.xinhuanet.com/politics/2006-08/04/content\\_4919706.htm](http://news.xinhuanet.com/politics/2006-08/04/content_4919706.htm)



discourse fails to catch the whole picture. The river water diverted away to the north has also exerted great influence on the traditional water users in the south. Studies by Du (2011) have found that the middle route of South-to-North Water Diversion Project has brought negative impact on the social activities along the river basin such as shipping, water quality, irrigation, industrial production and urban development of downstream regions. Chen (2013) also points out that even though Hubei Province is known as the “province of a thousand lakes”, but the water resource has spatial variation inside the province. The northwestern part of Hubei Province is the driest regions than other parts. But this part has been chosen as the starting point of the middle route of South-to-North Water Diversion Project. Undoubtedly, this inter-river basin water transfer project has been posing huge challenge to the hydrological and ecological balance in the middle and lower reaches of Hanjiang river basin which is a tributary of Yangtze River.

In general, the image of abundant water in Yangtze River is a selective and simplified representation. While providing legitimacy for South-to-North Water Diversion Project, what is masked is the temporal variation of the runoff and the traditional livelihoods and water users dependent on the river. Water itself has multiple social meaning rather than being a resource only, besides, water could shape and in turn be shaped in the embedded social relations. What’s more, the simplified representation of water scarcity implicates the neglect of conventional water rights of people along the river basin. From the approach of legal pluralism, the abundance of Yangtze River water is the result of “invisibility” of conventional water rights of the local people (Franco, etc., 2013). According the Water Law in China, water resources belong to the state. In fact, the design of the water transfer project is approached under the framework of formal laws. As the law regulates, to extract water from the river should apply for permit; for the people living by the river could get few volume of water for free to meet household water demand. However, in terms of the water allocation underlying the water transfer project, the conventional water rights of local people becomes “invisible”. In the viewpoint of Huang (2007), the decision making process of South-to-North Water Diversion Project is political and concerned with the interest redistribution between the water donor and recipient regions. For the water donor regions, even the voice of local people over the water reallocation is not heard and there is no mention of the compensation of transferred water for the former water users. What water donor areas should bear is to internalize the costs of water right transfer to close up the water deficit in the cities of the north. In addition, the water scarcity already existing among Yangtze River basin would be reinforced by the water transfer project, so is the tensions between the water donor and recipient regions. The fluid feature of water could also spread the risk from one point to the whole in the connected water system.

## **6 Implication of water allocation in SNWDP**

From the discussion above, it finds that water scarcity in the north is naturalized and the abundance of water is also constructed. Reinforced by the dominant discourses, two images of water scarcity in the north and water richness in the south become the “manufactured consensus” for legitimizing the South-to-North Water Diversion Project (Mehta, 2001). What the water transfer project tries to highlight is to increase supply of water sources but has also obscured the question of how the diverted water should be allocated and how to balance the interests between water donor and recipient regions. Although the water scarcity in the north is reduced to a technological problem, the water transfer project is not neutral but political. Since the target of water supply by the project are mainly urban and industrial users, the logic underlying water allocation of the project follows the doctrine of developmentalism which centers on economic growth, urbanization and industrialization. Agricultural water users facing water scarcity in the north is put at the second place to access water. With reference to the ideology of developmentalism, economic efficiency is hailed as the golden ruler to set values for things. Maximization of economic efficiency also dominates how to allocate water. In this neoliberal line of thinking, water is projected more as a commodity from the economic perspective. Multiple values of water are reduced to the economic level. This is in the coincidence with the mainstream voices in China on water allocation which holds that water should be commodified and let market to realize the allocation for maximizing its efficiency. However, this paper shares the point that water as public resource should not be treated as commodity. Otherwise, equal water rights could not be guaranteed because the poor without ability to afford water would be excluded in the water market.

What the efficiency discourse of water allocation could entail is the justification for inter-sector water transfer especially from agriculture to non-agricultural sectors. The reason why is water used for irrigation could not bring high economic profits compared to industrial sector. Due to the finiteness of water, lots of voices advocate agricultural use of water to improve efficiency to save water. One question here deserves attention is that for whom the irrigation should save water. The discourse of water saving might help squeeze more water from agricultural use to non-agricultural uses. The study of Boelens and Vos (2012) reveals the efficiency as a concept is relative. Evaluation of efficiency should take the stand with the water users. To different water users, their values and interests varied. It is not proper to draw the same line to evaluate their efficiency of water use. The neglect of values differences between water users could contribute to the unequal and unjust water right transfer among them.

Besides, while supplying water mainly to cities, the unequal access to water between urban and rural areas is reinforced and reproduced through South-to-North Water Diversion Project, because urban areas have already got the priority to access water over rural areas before the implementation of the water transfer project. One example is the Beijing city. To maintain the water demand of Beijing with a growing population, lots of water in Hebei Province has been transferred. It is like a big piece of sponge which keeps sucking water beyond the city. In the new water reallocation structure, rural areas are again marginalized which is also the perpetuation of the former unequal water allocation structure. Since urbanization is still accelerating and water demand in cities increasing, the South-to-North Water Diversion Project is far from enough to quench the thirsty of the north. As Zhong (2004) argues, without looking for the ultimate reasons for water scarcity, the more water to be diverted, the thirstier the north is. The water diversion project could only appease the water scarcity of the north in a short time but being unable to solve the problem. Therefore, more attention should be paid to the factors creating and contributing to water scarcity in the north like urbanization and industrialization. Take Beijing, Tianjin and Hebei as an example, industries with high water and energy consumption occupy an important part in their economic structure. Although those area are trying to adjust and upgrade the industrial layout, industries with high consumption of water and energy are still in a dominant position. In Beijing, petroleum refinery, coal coking, chemical industry and steel industry are the backbone of traditional industry. For Tianjin, even though the development of industries with high consumption of water has slowed down, their important place is unshakable.

In terms of the design of South-to-North Water Diversion Project, the urban centered water allocation value has exerted influence on the layout of channels. One case in point is the observation of the author during one field visit in Hebei Province in 2012. The theme of the fieldwork is to know how irrigation water is managed in village level. There is one village very close to the water diversion channel of the middle route. One villager told us she is eager to plant wheat but they don't have water for irrigation. Although the channel crosses by the village, there is no outlet for them. It implies they could watch water running by their eyes without access to it. In this sense, the layout of the infrastructure of water diversion project has built a space boundary which excludes rural areas at a marginal place in the structure of water allocation. As Jia (2003) points out that South-to-North Water Diversion Project has the feature of "robbing the poor to help the rich", along with which, the inequality of access to water between rural and urban areas is further intensified.

## **7 Conclusion**

This paper has explored the politics of water allocation underlying the South-to-North Water Diversion Project. Discourses of naturalized water scarcity are adopted by policy makers to address the growing water deficit in the North China Plain. The selective representation of water situation in both north and south reduces water scarcity as a technological problem. Although water transfer project could increase the volume of water supply to deal with water scarcity, technological means is not neutral. What deserves attention is whose water sources are transferred and to meet whose water demand. Due to the finiteness of water, to supply more water for certain group indicates the reduction of water availability for other users. For this reason, the water reallocation brought by the water transfer project is also the

redefinition and redistribution of water rights in both water donor and recipient regions. As this paper has argued, the narrative of naturalized water scarcity has obscured not only the social reasons for the water scarcity in the north but also neglect the negative impact exerted on the disadvantaged group by water rights transfer in the north. The mechanism of water reallocation behind the water transfer project follows the doctrine of developmentalism which reproduced the unequal water access structure between rural and urban areas.

Water is closely related to public interest. How to distribute and provide water should be fully discussed among the public. Policy makers should not only guarantee the engagement of the public in the decision making process concerning water supply and allocation but also discursive and decisive power to make their voice heard and expressed. As the content of right to life, whether water right is equally distributed matters a lot to both the life and livelihood of the public. Policy makers should be careful about the win-win expectation of inter-basin water transfer project which often presents the picture of winners and losers in reality. The concretized water rights of local people should be guaranteed to avoid being grabbed for economic growth under the name of development.

## References

- Alex Loftus. Rethinking Political Ecologies of Water, *Third World Quarterly*, 2009, 30(5): 953-968
- Boelens, R. and Vos, J. The Danger of Naturalizing Water Policy Concepts: Water Productivity and Efficiency Discourses from Field Irrigation to Virtual Water Trade, *Agricultural Water Management*, 2012(108): 16-26
- Kerkvliet, Benedict J. Tria.. Everyday politics in peasant societies (and ours), *Journal of Peasant Studies*, 2009, 36(1): 227-243
- Margreet Zwarteveen, Dik Roth, Rutgerd Boelens, Water rights and legal Pluralism, in *Liquid Relations: Contested water rights and legal complexity*, edited by Dik Roth, Rutgerd Boelens and Margreet Zwarteveen, 2005, 254-268
- Mehta, Lyla. The Manufacture of Popular Perceptions of Scarcity: Dams and Water-related Narratives in Gujarat, India, *World Development*, 2001, 39(12):2025-2041
- Mehta, Lyla. The social construction of scarcity: The case of water in western India. In Peet, R., Robbins, P. and Watts, M.J.(Ed.). *Global Political Ecology*. London and New York: Routledge Press, 2011:371-386
- Mollinga, P. P. Water, politics and development: Framing a political sociology of water resources management. *Water Alternative*, 2008, 1(1):7-23
- Rijsberman, Frank R. Water scarcity: Fact or Fiction? *Agricultural Water Management*, 2006(80):5-22
- Ribot, Jesse C. and Peluso, Nancy Lee. A Theory of Access. *Rural Sociology*, 2003, 68(2):153-181
- Savenijie, H. H. G. Water Scarcity Indicators: the Deception of the Numbers. *Phys. Chem. Earth(B)*, 2000, 25(3): 199-204
- Jia Shaofeng, Zhang Junyan, Zhang Shifeng. Regional Water Resources Stress and Water Resources Security Appraisal Indicators. *Progress in Geography*. 2002, 21(6): 538-544
- Zhong Shuiying. Water Transfer and Migration: Another Perspective on Proper Allocation of Population and Water Resource. *Population & Economics*. 2004(6): 55-59
- Chen Wenke. Multidimensional Thinking of Water Crisis of China in Transition. *Forum of Han River*. 2013(2): 63-70
- Wang Xueyuan, Han Hongyun, Deng Qiming. Diverting Water from Countryside to Urban Use and Its Impact on Rural Development-A Case Study of Zhuanzhougou Village, Xinglong County, Hebei Province in China. *Journal of China Agricultural University (Social Science Edition)*. 2007, 24(1): 130-137
- Guo Haijin, Wang Zhengxiang, Zou Ning. A Review of the Water Resource of Yangtze River Basin. *Yangtze River*, 2008, 39(17): 3-5
- Du Yun, Cai Shumng, Wu Shengjun, Xue Huaiping. Effect of the Middle Route of Chinese South-to-North Water Transfer Project on Hubei Province. *Journal of Central China Normal University*. 2001, 35(3): 353-356
- Huang Zhong. The Possible Outcome of South-to-North Water Transfer Project. *South Review*, 2007(1): 20-23
- Jia Shaofeng. How to Perceive the Social-economic Impact of South-to-North Water Transfer Project? *Impact of Science on Society*. 2003(3):32-37

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