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Buryat State University, Ulan-Ude

Water scarcity is a serious problem for China today. Water crisis in China is driven by such problems as pollution, ineffective water use as well as overconsumption. According to many scholars opinion, improving water governance is the key to water security in developing countries. This papers studies literature on the effects of water governance on water sector performance in terms of availability of water resources, water productivity and adequacy of drinking water.

Keywords: water governance, water law, water policy, China

Rapid urbanization and industrialization and inefficient water use caused a serious water crisis in China. According to Wang (2012), water shortage has become a constraint to food security and sustainable development in China. In addition, water scarcity in China is exacerbated by severe water pollution. For example, the Yellow River has been heavily polluted by chemical firms to the degree that it cannot be used by agriculture.

It should be noted that only half of China's urban water sources are safe to drink. In Northern provinces, about half of the groundwater cannot be used by industry, 70 % of it does not fit for human consumption. Moreover, water resources in China are distributed unevenly. Approximately half of China's population and about 2/3 of its farmlands are located in arid northern areas, which have access to only 20 % of the country's water resources. One of the measures, which China takes to address water crisis is to build more dams and canals to channel water from water rich regions (in the south) to water poor provinces (in the north).

Many scholars have confident opinion on that improving water governance is the key to increasing water security in developing countries. This paper addresses one question: what is the state of water governance in China?

Literature Review

Many scholars believe that water governance is the key to improving water security (Global Water Partnership, 2002; Rogers & Hall, 2003; Asian Development Bank, 2004; Gopalakrishnan et al., 2004;

Kashyap, 2004; Saleth & Dinar, 2005; Hoekstra & Chapagain, 2007; Ballabh, 2008; Rijsberman & Zwane, 2008; Briscoe, 2009). At the same time, there exist considerable debates in the literature. First, there are debates on the scope and definition of water governance. Second, there are debates on how to approach the study of water governance.

It is worth to mention that the existing literature is mostly descriptive and suggests little theoretical coherence. As an alternative, Araral and Wang (2013) suggest a framework to study water governance using theory drawn from: 1) public economics 2) institutional economics 3) political economy 4) public administration.

Public economics is concerned with welfare aspects of water policy (efficiency and equity). Theoretical core is market failure, which is based on the theories of public goods, externalities, commons, property rights, natural monopolies. These theories provide economic rationale for government involvement into the sphere of water resource management and water supply.

Institutional economics is concerned with the efficacy and cost effectiveness of institutional alternatives to water governance (public, private, hybrid). Theoretical core came from the theories of property rights, contract, transaction.

Political economy is concerned with the interaction between the politics and economics of water. Non-cooperative game theory and theories of collective action and public choice are used as the analytic core.

Public administration is concerned with explaining variations in the performance of water bureaucracies.

Theoretical core is based on theories of government failures, agency theory.

As for empirical studies, they are quite limited. Existing empirical literature shows that there is a positive correlation between water laws and level of economic development of the country.

Araral and Yu (2013) find that level of economic development of a country varies with water pricing. Rich countries are involved to pursue cost recovery while for low income countries raising water tariffs can be politically sensitive issue.

Results of the analysis

Analysis of the existing water governance showed that water law in China is highly centralized. Probably, it is not surprising since, in China, major river basins come under the control of central government. Water policies in China are closely linked with other policies such as land, agriculture, industrial policies among others.

For most provinces, the availability of finance for water investment is reported not to be a major problem.

As for water administration, there is a high degree of balance and functional capacity of water administration in China (balance in this case means balance between water professionals, engineers and administrative capacity).

Water sector performance refers to such indicators as 1) adequacy of drinking water, 2) water productivity (water use per unit of GDP), 3) industrial water productivity (water use per 10K Yuan of industrial output), 4) agricultural water productivity (water use per mu of farmland). The study by Araral and Wang (2015) shows that water laws in China clearly stipulate legal accountability of public officials. At the same time, it is not enough to guarantee adequate drinking water. Adequacy of drinking water is defined as an index comprising such indicators as 1) water quality 2) water consumption 3) water resources per capita. The adequacy of drinking water is related with the availability of financial resources, user participation and the degree to which poverty is addressed by water administration (i.e. water access, pricing). As well, adequacy of drinking water is related with the functional capacity and balance of water bureaucracy.

Conclusion

The central government of China provides national guidelines in terms of water laws and policies. At the same time, interpretation and implementation of water laws and policies vary considerably among provinces in terms of water adequacy and different measures of water productivity. Therefore, improving water governance would be complementary to China's main strategy of building dams and canals. ■

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Политика воды в Китае

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Недостаток воды в Китае является серьезной проблемой. Водный кризис обусловлен такими факторами как загрязнение вод, неэффективное использование вод. Многие ученые считают, что улучшение управления водой является ключевым моментом в обеспечении водной безопасности в развивающихся странах. В данной статье изучается влияние улучшения управления водой на работу водного сектора в терминах доступности воды, производительности вода, а также адекватности питьевой воды.

Ключевые слова: управление водой, законы о воде, политика воды, Китай
