

# T01P05 / What Can China's Water Governance Contribute to Policy Theory?

**Topic :** T01 / Policy Process Theories

**Chair :** Yahua Wang

**Second Chair :** Cecilia Tortajada (Institute of Water Policy, Lee Kuan Yew School of Public Policy, National University of Singapore)

**Third Chair :** Asit K. Biswas (Lee Kuan Yew School of Public Policy)

## GENERAL OBJECTIVES, RESEARCH QUESTIONS AND SCIENTIFIC RELEVANCE

Water governance is considered one of the most important public policy issues in China, with a tradition as long as the history of Chinese civilization. As a result of China's rapid industrialisation and urbanisation over the past three decades, the country's water policy has been constantly changing. There has been a remarkable transformation of water policy to confront the complexities brought by deteriorating water ecology, frequent water shortages and threats of flood. Water policy and associated governing practice play an important role in sustainable economic and social development in China, and water governance in China will continue to evolve and develop as China makes further progress towards a high-income economy.

Policy process research concerns stasis, change and complexity of interaction in public policy over time entailing actors, structures, cultures, institutions, and socioeconomic and biophysical conditions. The complexity of the policy process is understood by theoretical inquiry into practical reality, and development in policy theory requires constant attention to complex interactions that are defined by changing circumstances. Chinese water governance provides a unique lens to understand public policy, and yet it receives little attention in the study of policy theory. The proposed panel, entitled "What Can China's Water Governance Contribute to Policy Theory?", is co-organised by School of Public Policy and Management, Tsinghua University, and Institute of Water Policy, Lee Kuan Yew School of Public Policy, National University of Singapore. It aims to fill in this gap by highlighting the importance of Chinese water governance to the domain of public policy theory. Given that China provides unique contextual circumstances with high hydrological uncertainty, rapid economic development, an authoritarian political regime, and long-enduring Chinese culture, China's experiences with water governance have significant potential to contribute to modern policy theory, including that related to policy decisions, the policy process, policy evaluation and comparative policy analysis.

## CALL FOR PAPERS

The panel, "What Can China's Water Governance Contribute to Policy Theory?", co-organised by School of Public Policy and Management, Tsinghua University, and Institute of Water Policy, Lee Kuan Yew School of Public Policy, National University of Singapore, seeks to inspire and enrich the understanding on policy science based on empirical studies of Chinese water governance. Given that China provides unique contextual circumstances with high hydrological uncertainty, rapid economic development, an authoritarian political regime, and a long-enduring culture, this panel aims to be an initial attempt to contribute the perspective of China water governance to modern policy theory, including theory related to policy decisions, the policy process, policy evaluation and comparative policy analysis.

We welcome papers with sound theoretical focus on the impact of Chinese water policy on policy process theories, which examines how transformation and innovation of present China's water policy inform robust theoretical implications for policy science. Under this call for papers, we suggest addressing themes, including but not limiting to:

- Policy decisions
- Policy learning
- Policy process
- Policy implementation
- Policy evaluation
- Comparative policy analysis
- Policy dissemination
- Selection of Policy Tools



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## Session 1 Understanding Policy Implementation in Complex Context

Thursday, June 29th 08:15 to 10:15 (Block B 3 - 4)

### Discussants

Cecilia Tortajada (Institute of Water Policy, Lee Kuan Yew School of Public Policy, National University of Singapore)

Hongyun Han (Institution Zhejiang University)

### Context and Policy: The Underperformance of Water Users Association in Authoritarian China

Yahua Wang

Minghui ZHANG (School of Public Policy and Management, Tsinghua University)

Jingning Kang

Water users associations (WUAs), which are farmers' self-governance organizations formed worldwide to cooperatively manage water and irrigation across hydrological boundaries, are widely considered an effective policy design. WUAs were initially introduced in China in 1995 as an experiment in farmers' participatory irrigation management aimed at solving issues relating to irrigation canal systems such as inadequate primary-level terminal management, inefficient irrigation, and frequent water-use conflicts. They were subsequently promoted throughout the country. At the end of 2014, a total of 83,400 WUAs had been established to manage 18.9 million hectares of irrigated land accounting for 29.2% of China's total irrigated area. However, only about one-third of these associations are functional. This study applies Ostrom's eight design principles to examine reasons for the underperformance of China's WUA policy and to identify the enforcement characteristics of WUAs in the politically authoritarian context of China.

Data for this study, collected in July 2015 from the irrigated region of Hetao in Inner Mongolia, were obtained by the China Institute for Rural Studies at Tsinghua University. These data included survey data for 9 WUAs and 412 farming households, along with interview transcripts of sub-area administrators of Hetao's. The study's methodology entailed recoding the data according to Ostrom's eight design principles and WUA performance indicators, followed by an analysis applying fuzzy-set qualitative comparative analysis (QCA). The paper presents the underlying reasons why most of the WUAs have underperformed and identifies the degree of alignment of the enforcement characteristics of each of the nine WUAs with Ostrom's design principles. It shows how these characteristics relate to a top-down authoritarian irrigation system.

Hetao's irrigated region is China's largest canal irrigation area in which WUAs constitute primary-level governance organizations. The nine WUAs were selected from four out of five of the sub-areas of Hetao with the greatest population density. Investigators visited sub-area administrators and interviewed relevant officers using interview outlines, while WUA leaders were asked to complete questionnaires. Household-level questionnaires were administered among farmers. All of the questionnaires were based on the irrigation survey conducted by Lam (1998) in Nepal. The analysis drew on a code book obtained from the Arizona State University team. The fsQCA 2.0 software was used for configurational comparative analysis of the nine WUAs.

The findings of this study indicated that though most WUAs underperformed, outcomes were better for those WUAs that were more closely aligned with Ostrom's principles. Most of the government-initiated WUAs revealed bureaucratic features. A top-down policy design and enforcement method increased the

legitimacy of these WUAs (Ostrom's seventh principle) and ensured that they were well positioned within the government's external support system (Ostrom's eighth principle). Consequently, better infrastructural outcomes were evident. Conversely, the level of local participation in decision making, monitoring, and enforcement (corresponding to Ostrom's first six principles) was lower, resulting in less effective maintenance and conflict resolution outcomes.

This paper presents comparative case studies of WUA self-governance practices in authoritarian China. It demonstrates that successful policy design should be carefully considered its contexts.

## **Policy Implementation and Water User Associations Development in China**

Tingting Wan

Yahua Wang

China has witnessed prevalent failure of institutionalizing Water User Associations (WUAs) in rural areas. WUAs, as a type of decentralization of irrigation management, were initiated in China in the 1990s with financial support from the World Bank, aiming of effective self-governance in rural irrigation. This papers looks into how WUAs are promoted and performed in China. From the perspective of policy implementation, it analyses the process of promoting and developing WUAs in China. A Chinese mode of policy process is identified as 'top-down hierarchical push and strategic response from the local level'. On the basis of survey data from over a hundred villages and a thousand of farming households in rural China, it finds that this top-down policy implementation mode has led to rapid growth of the number of WUAs; however, WUAs development in China is in name only for completing a mandatory task, resulting in poor performance at the local level.

Using cases studies, this paper further analyses the process of promoting and implementing self-organized irrigation management in Fujian and Ningxia irrigation areas. It is found that WUAs are mainly directed by local cadres, village directors, village committee members and local water bureau officers. These WUA cases demonstrate that policy implementation of self-organization in China is based on administrative decision and forced by administrative duties. Furthermore, it illuminates that local areas are not only short of the conditions of implementing self-organization policy but also without institutional demand for self-governance. The paper argues that local culture, socioeconomic differences and institutional diversity are of importance in policy decision and implementation processes, rather than imposing uniformity in policy process. Promoting and developing WUAs in China provides a unique lens to understand Chinese irrigation management reform over past two decades, shedding light on the process of how self-organization policy is promoted, implemented and evaluated in changing socioeconomic circumstances.

## **Policy changes of water environmental pollution control in China as a learning process: where should it go?**

Hongyun Han (Institution Zhejiang University)

It is a learning process of policy making from technical learning to social learning associated with the process of institutional evolution, which could be attributed to both endogenous factors of environmental degradation, performance deterioration, and financial non-viability, and exogenous factors of macroeconomic crisis, political reform, natural calamities, technological progress, and international pressure. From the beginning of technical learning with narrow problem definitions to conceptual learning with enlarged goals and strategies, then to social learning with a specific stress on communication and interaction among actors. Although the creation of Ministry of Environmental Protection has enlarged the environmental protection apparatus' regulatory domain and has enhanced interagency coordination and its formal authority, efforts to integrate capacities for conceptual and social learning of establishing a new model of a resource saving and environmentally friendly society have had mixed success because the institutional and legal framework is still founded on technical learning. Overlapping functions of environmental agencies, poor law enforcement, lack of public participation, the inertia of regulation for agricultural NPS pollution, and the threat of nonpoint pollution from solid wastes are the causes for the ineffectiveness of environmental management. To strengthen the effectiveness and efficiency of environmental institutions and policies, it is critical to promote social action through moral socialization and forming of social capital.

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## Session 2 Policy Diffusing and Policy Learning with Chinese Characteristics

Thursday, June 29th 10:30 to 12:30 (Block B 3 - 4)

### Discussants

Yifei Yan (University of Southampton)

Tingting Wan

### Competing for Government Attention: Mechanisms for Diffusing China's Unprofitable Policy

Chen Sicheng (School of Public Policy and Management, Tsinghua University)

Yahua Wang

Policy diffusion of numerous high-quality products is one of the hot research topics within recent policy science. Large amounts of rigorous and econometric researches about Chinese policy innovation and diffusion had revealed the underlying diffusion mechanisms based on many nationwide policies. However, Chinese policies examined in these studies all shared one key common characteristic, namely the ability of local governments to profit from implementation of the policies which incentivized them to adopt the new policies. By contrast, we focus here on the diffusion mechanisms of policies that do not profit local governments. Such policies do not offer local governments sufficient incentives for their adoption, and are, therefore, difficult to promote. We seek to answer the following questions. How can an unprofitable policy be promoted? What impedes the promotion of unprofitable policies? What is the driving force behind large-scale policy promotion?

Typical examples of unprofitable policies are environmental policies aimed at addressing market failures and entailing significant positive externalities. The implementation of economic policies can bring about economic growth, while innovations in social policies can improve societal stability. However, environment policies do not generally generate short-term profits. In the absence of subsidies provided by the central government, there would be few incentives for local governments to adopt the new policies. This paper presents an analysis of policy diffusion mechanisms based on 15 years of struggle to promote an unprofitable "collect and refund" irrigation pricing policy implemented in Taocheng district, which is located in the city of Hengshui in Hebei Province. This policy captured the attention of senior officials and academics across the nation. We conducted three in-depth field investigations in July 2010, July 2016, and December 2016, respectively. During these visits, we interviewed all of the relevant policymakers in Hengshui and Taocheng who were responsible for formulating this policy and collected a large number of policy and other documents that enabled us to comprehensively analyze the policy process.

The results of the study revealed that the diffusion process for this unprofitable policy entailed competition for the government's attention. There are five layers within the Chinese governmental structure, each containing a number of specialized departments. There are two kinds of attention in each government layer, the government attention and specialized departments attention. The government attention is the agenda of the government, while the specialized departments attention is the agenda of the departments. The former has much greater influence than the latter. The limited government attention is selected from the specialized departments attention. Every specialized department compete with each other aiming to make their agenda become the government agenda all the time. The process of promoting the "collect and refund" policy demonstrated that the attention of the government of Hengshui city has been even more influential in

promoting the policy citywide compared with the attention of the MWR. The scarce government attention is the most important factor influencing the promotion of the unprofitable policy. This study contributes to policy diffusion theory by demonstrating the inevitable role of the attention of the Chinese government within each layer and the impact of the governmental structure on policy diffusion.

## **Idea and Policy Making: Why policy Learning Ineffective in China's Water Rights Policy?**

Yahua Wang

Chen Sicheng (School of Public Policy and Management, Tsinghua University)

In addition to examining traditional institutional factors, this paper aims to embed the new factor ideology within an analysis of impediments to policy learning in the context of two decades of China's water rights policy formulation. China has experienced two waves of water rights policy formulation. The main part of the first wave occurred from 2001 to 2009, while the second wave began in 2013 and is still in effect. The first wave of policy formulation was initiated by the Ministry of Water Resources (MWR). Policy during this period drew on experiences gained in Australia and along the western coast of the United States in implementing the concept of a system of water rights to conserve water. This phase of Chinese policy formulation resulted in a significant number of policy and academic outputs based on nationwide policy experiments. With the exception of a pilot initiative to transfer water rights between the departments of industry and agriculture, most of the initiatives applied in Ningxia and Inner Mongolia were demonstrably effective and sustained for a number of years. Other agricultural policy innovations such as establishing water rights and water markets are not feasible in the Chinese context because of the large number of farmers and land fragmentation. The second wave of water rights policy formulation began in 2013 following the publication of the "Decision of the third Plenary Session of the 18th CPC Central Committee." The MWR initiated a reform of the system of water rights entailing similar policy content with the first wave reform but at a much more rapid pace of policy implementation. This raises a number of questions. Why did policy learning not happen? Why did the MWR plan to reintroduce the reformed scheme with content that had earlier proven unfeasible? What factors impeded policy learning?

The analysis presented in this paper is based on the first author's participation over a period of 17 years in the water rights policy advisory system. The methodology entailed content analysis of policy documents and in-depth interviews held with all concerned stakeholders. Results indicated that the combination of a prevalent belief in market dominance and policy making structure of the second wave reform has served to obstruct policy learning. The ideology of the market's fundamental role in the allocation of resources has been conceived by key policymakers within the CPC Central Committee after the 18th CPC Central Committee. The prevailing belief that promoting a system of water rights can increase efficiency in water use has also been strengthened by the recent land rights reform implemented nationwide by the central government. Meanwhile the second wave reform implemented after 2013 is a top-down reform. To avoid vested interests from assuming a role in policy formulation, the CPC decision makers have curtailed the MWR's leadership in the policy making process of second wave reform. The relatively weak MWR can now only implement the decisions of the CPC Central Committee as best they can and cannot oppose them. The empirical results illustrate the power of an ideology conceived by Chinese key policymakers under a special kind of policy making pattern and contribute to the development of policy learning theory about the interaction between ideology and policy making pattern.

## **Understanding the Cooperation and Conflicts in Brahmaputra with a Quantitative Approach**

Yifei Yan (University of Southampton)

Neng Qian (National University of Singapore)

Amongst the increasing focus from both academia and practitioners on various governance issues, attention to comparative water governance remains new and underdeveloped (Araral and Xun 2016). Even fewer studies are available on such comparison of India and China in the specific area of river governance, despite its great implication on international relations, political economy, and beyond.

A recent comparative study that does target on river governance illustrate that interest alignment between local and central government drives China to cooperate multilaterally in the Mekong but to avoid water-sharing discussions. In India's case, electoral politics account for the eventual signing of the Ganges and Mahakali treaties (Ho 2016). However, the study does not specify in detail in which aspects and to what extent are interests aligned between central and local governments, and how these nuances in turn

influence the two country's cooperative or conflictive behaviors.

In this research, we intend to further investigate the link between interest alignment and cooperative behavior by testing it against the governance of Brahmaputra, a river in which China and India directly interact with and encounter each other. We seek to explore and explain the following research questions: 1) In which aspects and to what extent do interests converge between the Tibetan local government and the Chinese central government on one hand, and between the Arunachal state government and the Indian central government on the other? 2) How is such alignment driving the attitudes and behaviors of the two countries in Brahmaputra? 3) In addition, what are the common interests between the two countries? Are disagreements and conflicts reconcilable?

Following the methodology of Araral et.al (2016), the paper intends to have 30 samples from India and China each: half from local governments and half from the central government. If the sample of government officials is not available, we will invite NGO practitioners, think tank and university scholars instead. The abovementioned research questions will be tested by the quantitative Q-correlation between interest alignment and river cooperation. Information gained through interviews will supplement more details from the qualitative side.

Exploring the case of Brahmaputra under the intersection of river governance, international security, institutional analysis and, of course, China-India comparison, this research is expected to have multiple theoretical contributions as well as practical implications.

Theoretically, apart from testing Ho's (2016) hypothesis in a more sophisticated methodology, the research is also one of the first applications as well as an extension of the Modified Institutional Analysis and Development (MIAD) framework advanced in Araral and Xun (2016). In particular, it enriches understanding on "attributes of players" by distinguishing between the central and local players and subsequently figuring out how such differentiation influences incentives of players which in turn affects governance outcomes (conflictive or cooperative attitudes and behaviors).

Improving the much-needed understanding of the two countries on Brahmaputra also has profound practical implications. Not only can this research serve as a valuable referral point for future reactions for both parties, results generated here can also shed lights to the governance of other transboundary rivers ranging from the Mekong in South East Asia to the Irtysh and Ili in Central Asia. Finally, as both India and China are emerging powers not only in the regional but also globally, the significance of understanding their behavior on river governance also transcends bilateral, or even regional, stability.