附件一

行政院國家科學委員會補助專題研究計畫

□期中進度報告

■期末報告

「水政治」—中國西南地區的水域開發與環境治理(3/3)

計畫類別：□個別型計畫　■整合型計畫
計畫編號：NSC 100－2420－H－004－011－MY3
執行期間：100 年 01 月 01 日至 102 年 12 月 31 日

執行機構及系所：國立政治大學國家發展研究中心

計畫主持人：王振寰
共同主持人：郭承天
計畫參與人員：黃書緯、王琳棻

本計畫除繳交成果報告外，另含下列出國報告，共 2 份：
■移地研究心得報告
□出席國際學術會議心得報告
□國際合作研究計畫國外研究報告

處理方式：除列管計畫及下列情形者外，得立即公開查詢
□涉及專利或其他智慧財產權，□一年□二年後可公開查詢

中　華　民　國 103 年 07 月 25 日

目錄

中文摘要

本研究試圖以「統合式協力治理」(corporatist collaborative governance)的理論與制度研究框架，來處理中國水庫與環境治理議題，並且選擇了中國的小水電建設、南水北調工程，以及雲南的水庫移民作為研究個案。在小水電建設中，我們發現雲南地方政府為了回應「農村供電脫貧」等政治目的，會開始與私人資本聯盟興建小水電；即使這些計畫往往是無利可圖的。透過這些合作，地方政府一方面完成中央政府交辦的政治任務，另方面也促進地方經濟發展。在南水北調的個案中，我們發現快速的都市化與工業化已經造成地方政府之間的水資源爭奪，而中央政府則試圖以南水北調這個大型建設一次性地解決地方水資源衝突。與 1980 年代後改革開放過程中地方發展主義不同的是，中央政府在南水北調工程的興建過程中，不但安撫的地方政府之間的衝突，並且建立起一套鑲嵌在政治制度中的水資源交易機制，一方面作為供水區的經濟補償，另方面解決環境治理所需的經費問題。最後，在雲南水庫移民的研究中，我們發現「幹部管理體制」是中央政府過去確保上情下達與政策執行的治理模式，而地方幹部在這模式下過去都是以量化的經濟指標作為其治理地方發展時的唯一考量。但是，隨著庫區移民辦法的完善與社會導向，我們發現地方幹部的指標也慢慢從硬體建設轉向軟體建設，例如農村重建與永續發展。

關鍵字：水政治、治理、統合、雲南、北京

英文摘要

This project intends to investigate the phenomenon of water politics. We look into suitable cases of the dam construction, for example the small hydropower plants, the south-to-north water transfer project, and the resettlement communities of the dams in Yunnan in order to deeply understand the state-social relations based on our Corporatist Collaborative Governance Model. In the case of small hydropower plants (SHPS) in Yunnan, we find out that the local governments in Yunnan have responded to the political demands (rural electrification and poverty alleviation) by allying with private capital to build more SHPs to fulfill the political mission while at the same time granting other benefits to the privately-owned firms to compensate for the profit-losing SHP projects. Through this collaboration, local state bureaucrats simultaneously fulfill the central state's political mission and local economic development demand. In the case of the south-to-north water transfer project (SNWTP), we show that the rapid urbanization and industrialization in the north, plus the already water scarcity condition, has created severe water wars among local states. The realization of SNWTP was the central state's project to ease the tension generated from water shortage and from multi-scalar water wars. However, in contrast to the command and control mode of water governance in the past, this time the central state has built the governance based on a collaborative type that involved both central and local states, as well as the collaborations among local states. Finally, in the case of the resettlement communities of the dams in Yunnan, we notice that the introduction of more socially oriented policies has had direct and indirect impacts on local policy implementation and the role of the local state. Regarding the more immediate impacts, the Chinese Communist Party through the cadre management system ensures that central level decisions are passed through the government bureaucracy, and implemented by relevant government. Local level cadres are evaluated according to their performance in office causing local governments to mainly implement those policies that have quantifiable, mostly economic, targets. With the introduction of more socially oriented policies, performance evaluation is slowly shifting from a focus on hard policy targets towards soft policy goals including rural reconstruction and sustainable development.

Keywords: Water politics, Governance, Corporatist, Yunnan, Beijing

目錄

一、 前言

本計畫的研究主旨是：中國為了減少碳排放，積極開發水力資源來替代比例過大的煤炭發電，以供應沿海地區的電力需求。西南地區（本計畫以雲南為例）豐富的水利資源特別是「瀾滄江-湄公河流域」(Lancang-Mekong)豐富的水力資源，更是成為中國政府和地方政府積極建立水庫發電的集中地。本計畫主要探討中國西南區域之「水庫政治」所帶來的發電、經濟發展和環境治理的相關問題、以及少數民族遷移和社會公義等的議題。 本研究是整合型計畫「中國環境治理：統合協力治理觀點」的子計畫之一，主要以「統合協力治理」理論架構，來探討「水政治」(water politics)衍生的相關「國家與社會關係」議題。

至今為止，本計畫以該理論架構，完成三篇英文論文。第一篇「The Paradox of Small Hydropower: Local Government and Environmental Governance in China」，以地方政府層次，討論小水電開發造成環境治理的問題。該文已經投給「*Journal of Development Studies*」，很快會有結果。第二篇是全球層次的南水北調，討論中央政府如何處理中國北方缺水南方水多的問題。該文「State Rescaling and Water Governance: The South–to-North Water Transfer Project in China」將出現在我將編輯的整合性計畫的研究成果之英文書「*Environmental Governance in China*」（暫訂）之中的一章。第三篇論文是社區層次，討論中央和地方如何共同處理少數民族的水庫移民問題，論文「Coordinating Resettlement Communities - How Has The Local State Responded To The Transformation Of Central State Policy In Yunnan?」將出現在*Issues and Studies*的一個特刊中。

整體而言，這三篇論文符合原來之研究架構，但也有新的發現，那就是中國的中央和地方政府在當今愈來愈重視環境治理，對於地方官員之考核，也愈來愈重視環境治理，導致了地方官員在行政上逐漸調整行政作法。不過我們也發現，地方官員傾向採取結合符合中央環境要求，而又能帶來經濟發展的妥協式措施。以下是這三篇論文，分別都與博士後和博士生合寫完成。

二：

The Paradox of Small Hydropower: Local Government and Environmental Governance in China

Jenn-Hwan Wang

National Chengchi University

Sheng-Wen Tseng

Yu Da University of Science and Technology

Huan Zheng

Party School of the Central Committee of C.P.C.

Jenn-Hwan Wang, Graduate Institute of Development Studies, National Chengchi University, Taipei city, Taiwan, R.O.C. Add: No. 64, Sec.2, ZhiNan Rd., Wenshan District, Taipei City 11605, Taiwan, R.O.C. Email: wangjh@nccu.edu.tw.

Sheng-Wen Tseng, Department of Leisure Management, Yu Da University of Science and Technology, Miaoli county, Taiwan, R.O.C. Add: No. 168, Hsueh-fu Rd., Tan-wen Village, Chao-chiao Township, Miao-li County 36143, Taiwan, R.O.C. swtseng@ydu.edu.tw.

Huan Zheng, Center for World Party Politics, Party School of the Central Committee of C.P.C., Beijing city, P.R.C. Add: No. 100, Dayou village, Haidian district, Beijing city 100091, P.R.C. Email: zhenghuan@ccps.gov.cn.

Correspondence concerning this article should be addressed to Jenn-Hwan Wang, Graduate Institute of Development Studies, National Chengchi University, No.64, Sec.2, ZhiNan Rd., Wenshan District, Taipei City 11605, Taiwan, R.O.C. Contact: email: wangjh@nccu.edu.tw; Tel: +886-2-2938-7525; Fax: +886-2-2938-7526.

I. Introduction

Small hydropower plants (SHPs) in China refer to those hydropower stations whose installed capacity is no more than 50MW (Zhou, Zhang, & Liu, 2009).[1] Due to their characteristics such as their being small in size, flexible in so far as investment and construction are concerned, SHPs are regarded by the United Nations Development Program (UNDP) as promoting clean energy that can largely improve rural people's electricity demand;[2] thus UNDP has channeled many financial resources into promoting this type of energy everywhere in the developing countries. Similarly, the Chinese state has also used it as a tool for rural e*lectrification* and poverty alleviation (Chen, 2009), especially in recent years when rural poverty has become more pronounced. In addition, the SHP is also regarded by the Chinese central state as a clean energy that can partially replace large dams[3] and coal generating power. It is because China has become the largest greenhouse gas (GHG) emission country in the world that the global pressure against China to reduce its GHG emissions has radically increased (Yu, 2008; Chen, 2009). The Chinese central state has thus been eagerly looking for alternative energy resources that have the potential to reduce GHG emissions, including encouraging the building of a large number of SHPs (Bing, 2008).

Building SHPs has thus been regarded by central and local government officials as a political mission in the past decade. Thousands of new SHP stations have been established in remote rural and mountain areas and the electricity that they have generated has doubled the installed capacity in less than one decade since 2000 (see Table 1). Nonetheless, the huge demand for SHPs has created serious environmental damage due to the competition among firms to 'demarcate the river territories'

(*paoma quanshui*) in order to build the power stations. The intensive construction of SHPs cuts a river into pieces where fish are not able to survive in the dry segments of the river. Moreover, the SHPs have dried up some parts of the river and have seriously damaged the natural environment, including the deterioration of biodiversity along the river basin (Zhou, 2010: 166). The SHPs have indeed become the killer of the environment. One of the major newspapers focusing on the energy issue in China, *China's Energy Daily* (*zhongguo nengyuan bao)* even uses the title 'Damn the Hydropower' (*waner de xiao shui dian*) to describe the environmental damage that SHPs have created. Even more surprisingly, many of these SHPs have neither been able to gain profits from selling the electricity, nor have they been able to sell the electricity to the adjacent rural areas, in spite of the policy being originally designed to alleviate rural poverty. Now, many privately-owned SHPs have suffered deficits or have been acquired by big SOEs in recent years (Cao, 2008; Zhou, 2010).

Most existing studies on China's development of hydropower have focused on big dams and their environmental and socio-political impacts (Mosert, 2000; Liebman, 2005; Magee, 2006; Onishi, 2007; Hensengerth, 2009; McNally, Magee, & Wolf, 2009), and few have concentrated on issues related to SHPs. There are even many studies, which have either focused on the technological feasibility issue (Paish, 2002) or on the development tendency (Huang & Yan, 2009; Zhou et al., 2009), but of which very few have addressed the issues related to how the local state officials respond to the demands for social and environmental protection from the central state, while simultaneously promoting the building of SHPs even when they know that SHPs are suffering financial losses. Why, then, do privately-owned firms still intend to build SHPs when they have not been able to make a profit from this business?

This paper maintains that the competition among local governments is the main

cause of the environmental failure in regard to the SHP. However, in a way that is different from the existing fragmented authoritarian thesis (Liberthal and Oksenberg 1988; Mertha, 2008/2009), the local state corporatist (Oi, 1992/1995; Walder, 1995; Lin, 1995) and cadre personnel management approaches (Edin, 2003; Chan, 2004), this paper takes the most recent political developments in China into account and argues that local government leaders under these new circumstances tend to conform to national environmental directives by bundling the national priorities with local economic interests and compensating businesses for their financial losses with other means such as bank financing or real estate projects. Following Kostka and Hobbs' recent study (2012), this paper finds that, in the 2000s, the Chinese central state has placed much more emphasis on improvements in environmental and rural development, which has thus placed new political pressures on local officials beyond economic development. Local political leaders thus eagerly find new approaches that can combine assigned political missions with local economic development. In our case, we find that local officials tend to implement environmental and rural development projects in such a way that they collaborate with private firms to fulfill their political mission while simultaneously compensating them with other more favorable and profitable projects. As a result, there has been an environmental disaster as different levels of local officials have allowed private firms to develop different segments of water power without adequate coordination. Together, these actors have brought about the tragedy of the commons and have severely damaged the environment.

This paper will use Yunnan Province as an exemplary area to investigate the institutional factors that have been inherited in the paradox of developing SHPs. Yunnan Province is located in the southwest of China and borders Myanmar, Laos and

Vietnam. The province has more than 600 rivers, has 24 per cent of the country's hydropower potential, and already provides more than 10 per cent of China's hydropower. There are many large dams already being built along the Yangtze (*Jinsha*) and Lancang Rivers (Mertha, 2008). In addition to that, a large number of SHP stations have already been built which are fully supported by lower levels of local government. Indeed, many of the existing SHP stations in Yunnan are run by private businessmen from other provinces, such as Sichuan and Zhejiang.

The data used in this study have been collected as a result of field trips conducted by the authors in two prefectural cities in Yunnan Province and Beijing City in China in August 2011, July 2012 and August 2013, respectively. A total of more than 20 informants were interviewed face to face. Each interview was conducted by the authors, and was completed within one or two hours. Our informants were mainly high-ranking executive officials of central and local governments, the owners of SHP stations, engineers of power grid companies, executives of chambers of commerce, industrial researchers, directors of NGOs, and university professors in China.

II. Local Government's Role in Social and Environmental Governance

SHPs are mainly built in rural and remote mountain areas, which need to be approved officially and monitored by lower levels of local government. The local governments' behavior thus largely determines how and the way in which an SHP is constructed. Currently, most existing studies on local government in China have been focused on China's fragmented authoritarian state structure, its economic activism or on the cadre personnel management system which determines local officials' methods of promotion; very few have paid attention to the issues related to how local officials respond to environmental sustainability and the rural social development demands of

upper level governments (except for more recent studies by Tilt, 2009; Heberer and Senz, 2011; Kostka and Hobbs, 2012).

The economic activism of the Chinese local government has been well documented by many scholars (Oi, 1992/1995; Walder, 1995; Lin, 1995). The actions taken by local governments in relation to economic development have been reflected by the concerted manner in which economic growth is pursued in the market reform era; each level of the state bureaucracy has its own goals, and those at the lower levels are subject to the directives of the higher levels. This economic activism is certainly one of the essential elements that underpin China's rapid economic growth (Shirk, 1993; Qian & Weingast, 1996). As Oi (1995) describes, China's local development is distinguished by its reliance on existing bureaucratic networks: 'somewhat akin to a large multi-level corporation, the county can be seen as being at the top of a corporate hierarchy as the corporate headquarters. Each successive level of government is fiscally independent and is thus expected to maximize its economic performance' (Oi, 1995: 1138).

The local state corporatism thesis has found that local governments in the economic reform era had a very strong incentive to develop local economies, in which many local cadres were pioneers in leading the local economies to develop and move away from decadence (Oi, 1995). This phenomenon has been particularly noticeable in urban development where city officials have worked closely with real estate developers to greatly transform the city landscape; however, this urban transformation has been based on grabbing the land from peasants which has in turn given rise to enormous human tragedies and social unrest in recent decades (Guo, 2001; Zhu, 2004; Hsing, 2010).

As China has entered the new millennium, serious social and environmental

problems have resulted due to the unruly development of the past few decades. The central state in the new decade has thus introduced many new social and environmental policies in order to alleviate the deteriorating conditions. For example, Hu Jintao's 'concept of scientific development' which he spoke on at the Communist Party of China (CPC)'s Eleventh Party Congress in 2006 laid special emphasis on the principles of a 'humanistic center' (*yi ren wei ben*), 'active coordination' and 'ecological protection' in the government's work, in a departure from the former 'development is hard fact' approach. How have the local cadres responded to the new social and political demands from above as the central state has transformed its policy priority? The existing local state activism literature cannot adequately answer the question.

Why have local officials been so economically motivated to develop the local economy? This is the question that the cadre personnel management approach wants to answer (Edin, 2003; Chan, 2004; Heberer and Senz, 2011). This perspective argues that the local officials' strong motivation in developing the economy has been deeply rooted in the personnel evaluation system of the CCP, with its strong emphasis on the local officials' performance in promoting economic development. Therefore, although local officials have many tasks to perform simultaneously, they tend to pick economic development as their priority because this is related to their promotion. As Edin (2003: 39) observes, there are three types of performance targets: soft targets (*yiban zhibiao*), hard targets (*ying zhibiao*) and priority targets with veto power (*yipiao fojue*). While veto power implies that if local officials fail to attain these targets (mainly family planning and social order), this will cancel out all other work performances, hard targets tend to be economic in nature and the completion of hard targets is important both for receiving bonuses and for political rewards. According to Edin, local officials

tend to keep a careful eye on political targets, while concentrating their efforts on achieving hard targets (for state-owned enterprises, see Chan, 2004).

In the new millennium, the Chinese central state has met enormous challenges from society, especially from social protests that have arisen due to land grabbing in the urban areas, the failure to resolve the 'Three Rural Issues' (*sannong wenti*)[4] in the rural areas, and widespread environmental pollution (O'Brien & Li, 2006; Hsing, 2010; Chen, 2012). How, then, has the central state's concern over the decrease in social tension become a priority target to which local cadres have to respond? This is an issue that has rarely been discussed before in this thematic approach (with the exception of Heberer and Senz, 2011).

Finally, the 'fragmented authoritarianism' thesis asserts that Chinese authority was authoritarian and fragmented, i.e., 'the structure of authority requires that any major project or policy initiative gains the active cooperation of many bureaucratic units that are themselves nested in distinct chains of authority' (Lieberthal and Oksenberg, 1988: 22). Therefore, the decision-making process in China has to go through long lasting bargaining and consensus building among various agencies and spatial regions. The decision-making process thus was protracted, disjointed, and incremental. More recently, Mertha's (2008/2009) study on major dam projects and construction in China has found that the Chinese State has now become much more tolerant towards the rising civil protests and more adaptive to these protests by changing its policy. The fragmented authoritarianism thesis has correctly pointed out the bargaining and protracting processes in decision making which gave local governments incentives to flexibly interpret national policies. However, scholars who follow this theme on the one hand tend to focus on decision making at the level of the central state, while on the other hand they have paid less attention to the recent

developments in which the central government has been determined to improve the deteriorating social and environmental situation on which this paper intends to focus.

Given the above shortcomings, some recent studies have found that local governments in China have responded to the central state's demands regarding environmental issues by changing their behavior. For example, Heberer and Senz (2011) have found in their field study that environmental protection, which tended to be a kind of 'soft target' before, has currently become a 'hard' target that has been treated as a mandatory requirement for lower level government officials to accomplish in their evaluation list. Similarly, Kostka and Hobbs (2012) also found that, in order to implement the central state's demands to reduce carbon emissions, local governments develop an 'interest bundling' approach that on the one hand requires that the firms reduce the production of coal and on the other hand give the collaborated firms the privileged benefits of other items, such as bank loans. As they argue, 'officials often opt to "kill two (or more) birds with one stone" by choosing implementation pathways that balance local priorities with national targets' (Kostka and Hobbs, 2012: 766).

Our study on the development of SHPs at the local level, as will be shown later, has similar 'bundled interest' features in which local state bureaucrats have been responding to the political demands from above by binding private firms to engage in the SHP business with other local state-controlled and profitable projects, such as real estate, as financial compensation. In addition, we will also argue that, because local governments at different levels and in different places tend to develop their own SHPs without having a comprehensive institution to regulate river-shed development, this finally results in the state-designed, good-will SHP projects becoming destroyers of the environment.

III. Small Hydropower in China

The Chinese central state has implemented a series of policies to promote SHP in rural areas since the early 1950s. The first major campaign for rural electrification through SHPs was launched during the Great Leap Forward (1958-1960). During this period, rural areas were encouraged to build SHPs to initiate decentralized energy systems and to promote rural electrification (Yeh & Lewis, 2004: 442). This policy had been swung back and forth before the economic reform in 1978. In the 1980s, because of rapid economic growth in the Eastern Coastal Provinces, the whole country met a serious electricity shortage. Therefore, a series of policies were introduced to encourage investment in the energy sector, including the SHP 'self construction, self-management, and self-use' policy. By 1988, there were 63,000 SHPs installed in China, which addressed the electricity demands of one-third of China's rural counties and 40 per cent of its county-owned industries (Yeh & Lewis, 2004: 443). There had also been some notable successes in rural electrification and the achievements in this regard were quite unique in the world. In the 1990s, owing to the severe power shortages, the Chinese state began to allow foreign and privately-owned companies to invest in the electricity sector in order to meet the rapid increase in electricity demand (Liu, 2006), including SHP. In 2002, there was a market reform in the electricity sector, through which the energy sector was marketized and partly privatized (Yeh & Lewis, 2004: Mertha, 2008).

From the initial stage of its economic reform, the Chinese central state usually selected a few areas or provinces in order to experiment with specific policies and thereby encourage those areas to generate innovative strategies and create internal competition among these areas (Shirk, 1993). The provincial governments in turn also

used similar methods that they would apply to a few selected cities and counties so as to encourage the experiments and realize the assigned political goals. In encouraging the development of SHPs, the central state in 2003 selected five provinces, namely, Shanxi, Sichuan, Yunnan, Guizhou, and Guangxi, and 26 cities/counties to promote SHPs so as to expand its electrification policy, alleviate rural poverty and also protect the environment, or the so-called 'electricity for forest woods' (*yi dian dai cai*).[5] In 2006, the experiment was expanded to much larger areas throughout the country. The assignment directly imposed from above immediately became one of the evaluation indicators for the cadres' annual performance review. Therefore, the city/country governments have had to regard the construction of SHPs as one of the major political goals to be accomplished.

Due to the central and provincial governments' promotion, a large number of lower level governments allied with small privately-owned hydropower companies to develop SHPs along small branches of the rivers. Indeed, the number of SHPs increased rapidly after the turn of the century. Over half of the 2,800 counties had SHPs (about 45,000) in 2009, with the installation capacity of SHPs having increased four times as of 1990 (see Table 1). SHPs consistently accounted for around 30 per cent of all hydropower in the electricity industry, supplied electricity for over 300 million residents in rural areas, and covered up to 99 per cent of rural areas as compared to merely 40 per cent in the initial stage of the economic reform (China Water Statistical Yearbook, 2010).

Table 1 here

In the past, each SHP built its own grid, referred to as the rural or agricultural grid, that supplied electricity in the nearby rural areas. In the early 1980s, the state's policy was to decentralize power supply besides the nation-wide power grid.

Accordingly, there were 790 county grids that linked rural agricultural grids, which were also integrated into 42 regional grids that were supplementary to the national grids (Liu, 2006; Zhou, 2010). These SHPs and agricultural grids, which were controlled and managed by provincial governments and lower levels of local government, supplied the rural areas' demand for electricity and contributed greatly to the development of rural industrialization during the 1980s and early 1990s. In the process, however, the state invested very little in maintaining the existing power grids, especially those in remote rural areas.

This integration of the power stations with the grid policy was abandoned in the 2002 electricity reform. In a nutshell, there are three major elements in the market reform of the electricity sector that have largely determined the patterns of hydropower development. The first element was the principle of separating enterprise from governmental functions (*zhengqi fenli*) so as to let power generating state-owned enterprises (SOEs) run like businesses that basically follow the market principle. Thus, in the process of the reform, many power-generating SOEs were separated from the Ministry of Electricity to become independent companies. Second, the state separated the grid from the power generating sector and established a regionally competitive market in the latter sector;[6] the state invested even more in the construction of the national grid system in order to support the policy of inter-regional electricity exchange such as 'sending electricity from the west to the east' (*xi dian dong song*). Third, all the power had to be connected with the national and regional grids, and the prices of electricity were determined by the market competition mechanism. However, there were still some SHPs, which were mainly located in remote areas, that had independent agricultural grids and had not yet been linked to regional or national grids (Liu, 2006; Zhou, 2010). The principles of 'the division of operator and grid;

price competition for connecting with the grid' and 'forced connection' in the electricity reform have largely determined the fate of the SHPs since 2002.

Along with this market reform, the governance structure of the new electricity regime has been changed to the following system since 2003. While the Ministry of Water Resources is responsible for the development of SHPs, the administrative work of investing in hydropower stations was allocated to different levels of local governments (Liu, 2006; Zhou, 2010). In addition, the national power grid companies have also been expanding their market territories; they not only have gradually acquired the existing regional grid, by building high voltage transmission networks across provinces, but have also had the institutional capability to determine whether or not to buy the electricity that the power operators have generated. They have enjoyed the monopoly position in the market in which the small privately-owned SHPs have had no other choice but to be in a subordinate position.

IV. The Role of the Local Government

Local governments in this paper mainly refer to local authorities at the county or city levels. Because China is an authoritarian state where the CCP is the only party that controls the state power, the state thus simultaneously refers to the party and the state authority. As has been discussed above, the CCP uses its cadre personnel management system to monitor its members' behavior and thus ensures that the party's decisions are able to go through different levels of governmental administration (Edin, 2003; Chan, 2004). On the other hand, the upper level of the state bureaucracy also has the power to evaluate the performance of state officials at lower levels and to recruit potential talent. Thus state officials tend to follow the orders from the party or from the upper levels of the administration in order to

maintain their good record based on an annual evaluation, and especially on the hard target of economic growth that is good for their promotion. As the Chinese central state has begun to regard social harmony, rural reconstruction and ecological protection as being as important as economic development, it has become a challenge for local government officials to reconcile those new social and environmental requests from above with economic performance at the local level.

Indeed, Tilt (2009: 144) finds that the concept of sustainability has been interpreted differently at different levels of the government's environmental agency. At the township or village level, the concept of sustainability tends to be regarded by the environmental agency as promoting social and economic development, rather than as an abstract concept as the central state bureaucrats hold, so as to provide local jobs and to increase income and taxes in contrast to idealized environmental protection. This is because, at the lower level of government, environmental agencies have been very weak, have not had an independent budget, and have been directly governed by the township or city mayors or party secretaries, thereby having little independent authority.

These findings are also reflected in our field study in Yunnan. From 2006 on, because of the 'Eleventh Five-Year Plan', 'the New Rural Reconstruction Under Socialism' (*shehui zhuyi xin nongcun jianshe*) Plan and 'sustainable development' have been implemented, and have involved funneling more resources into infrastructure construction in rural areas, including enhancing rural electrification, rural irrigation systems, rural agricultural grids, telecommunications, clean water, and so on. In the years that have followed the launching of the Plan, the state-level departments' yearly Document Number One (*yihao wenjian*) have all been focused on the issues of Rural Reconstruction. This indicates that the central state has treated

rural reconstruction as one of its priority targets so as to meet the stringent issues arising from economically decaying rural areas. These actions have alerted local officials that the rural poverty problem has become an urgent issue that they have to carefully tackle.

Although Yunnan Province has an abundance of water resources, the distribution is very uneven and is mainly concentrated in the northwestern part. The central and southeastern parts always suffer from drought due to the weather conditions. In addition, because of its plateau landscape, those people who live in the mountainous areas of the province suffer the most from water shortages. Furthermore, the Karst topography of the East mountain plateau has serious impacts on the water supply for both agriculture and households.[8] Situations from the above areas have become much more severe in the past few years as the dry weather conditions have become more regular due to the global climate change. Therefore, besides the Central State's New Rural Reconstruction Plan, the provincial government of Yunnan also has its own policy on rural water preservation and on the construction or maintenance of irrigation systems. These policies include the maintenance of existing small dams and water channels, as well as the construction of new dams to preserve the water in the rainy season (roughly from June to October) for the remaining dry season. In order to mobilize the resources, Yunnan Province encourages private firms to construct water channels and to build SHPs simultaneously. The electricity market reform in 2002 has been especially beneficial to those local governments that have had no financial resources to repair and maintain the existing hydropower stations.

As the concept of scientific development has become the core political ideology and guiding principle of the central state since 2006, the city or county officials have clearly acknowledged, according to the logic of the Chinese bureaucracy, that

sustainable development (or ecological civilization) has become one of the best strategies for procuring financial resources and gaining the attention of the higher echelons of the party and administration. Thus, by promoting SHP, a local government can not only express its loyalty to the central state's policy, but can also illustrate its determination to protect the environment (forests). Indeed, in T city's official documents,[7] all strategies that are relevant to SHP are dubbed as ecological protection, sustainable development, green industries, and so on.

The local governments' promotion of SHP thus not only has political ramifications, but it also has very real financial benefits. Because the promotion of SHPs has become the central state's policy, a large quantity of financial resources have been budgeted for their construction in consecutive years. Similarly, the provincial governments have also allocated a corresponding amount to the same item. In order to receive financial support from both the central and provincial governments, the city and county governments have used every possible approach to apply for abundant financial resources from the upper level of government. As our case shows, T city obtained financial support amounting to over RMB $542 million for water resources and SHP categories during the first three quarters of the year 2011, which accounted for almost one fifth of the whole city's annual budget.[9] It is thus very clear that promoting SHP and maintaining water resources are a major economic benefit to the local government.

Furthermore, in order to ensure the implementation of the promotion of SHP, the upper level of government also uses the annual performance evaluation system as a tool to maneuver the lower level officials. In the Yunnan case, the Water Resource Department of the provincial government used the 'electricity for forest woods' policy as the main political goal to evaluate the performance of lower level city or county

officials. The lower level officials have to sign the annual responsibility contract with the upper levels so as to assure them of their target goals. The common practice is: after the annual evaluation has been done, the provincial government would announce the rankings publically. This puts great political pressure on local officials and generates severe competition among them.

Although promoting SHP is the government's political goal, the application and installation of an SHP is the company's own work. The building of an SHP starts from a private company's application to develop a power station along a river. The company has to prepare all the necessary documents and applies to the bureau of water resources at the local level. The review and approval are conducted by the Development and Reform Commission at both the local level and provincial level. The capability of the SHP will determine what level of local government has the final say. For example, the city level can only approve the capability up to 25 thousand KW; above this level up to 50 thousand KW has to be approved at the provincial level. In addition, all SHPs have to be connected to the regional or national grids. The price of the electricity which an SHP generates is determined by each province's or local government's Bureau of Commodity Prices and also has to be approved by the local government's finance department.

For local officials, those smaller-scale irrigation systems and SHPs can be better managed by private companies, because they neither have the financial resources nor the manpower to manage them. However, in order to realize the mission of rural reconstruction, local officials on the one hand have established good relationships with local businessmen, but on the other hand want to keep their power in realizing their political missions. Alternatively, as an official described:

In relation to the public utilities, the government at the current stage has to pull

back the market forces a little bit and the government has to become more involved; now the government has the power to let the market run its course. (Interview data EO1102-0804)[10]

In order to attract private investment to this SHP sector, some local governments have also offered financial incentives, for example, local tax rebates for five years, to the investors.[11] Moreover, local officials have been actively involving public/private collaboration networks in facilitating the projects. For example, in our field trip in Yunnan, we found that many of the SHPs were built by businessmen from Zhejiang, Fujian, or Sichuan. Those businessmen who came from the same province would attend the Provincial Business Association, such as the Sichuan Business Association in Yunnan, to make friends, collect information and build up social networks. Although these associations are so-called autonomous civil organizations, the secretaries of the associations tend to have a CCP party background which provides better channels to communicate with local governments, and they serve as the liaison between the local governments and business associations.

The business association we visited most of the time has a social gathering function, but it is also a place for business networking. When there is a development project, the association becomes the place to find interested partners. The secretary of the association will then be the person to communicate and bargain with local officials about the project and other related bureaucratic procedures, including the tax rate; sometimes, these businessmen will participate in real estate projects, in which local officials may share to certain degrees.

In the SHP sector, we found in our field trips that the companies would use every possible means to get closer to local officials who were in charge of water and electricity in the departments of water resources as well as of reform and development.

For example, the SHP companies tend to invite retired officials to be the companies' consultants in order to establish closer network relations with the incumbent officials, and to know more clearly the obvious and under-the-table rules. The construction of *Guanxi* is the basic rule of the companies' operations in local society. Through the above channels, therefore, local officials tend to have closer networks with local business people.

For local officials, encouraging private firms to engage in the construction of SHPs thus has many benefits. First, it fulfills the demands of rural reconstruction from above, both for rural irrigation and electrification purposes. Of course, formally, the local government would require that an SHP make irrigation its priority rather than the generation of electricity. However, the reality has always been the opposite, with the private firms' interest having been to earn money and not to focus on public goods. Second, it is supposed to have a good effect on the environment, because electrification largely reduces the rural peasants' dependence on the forest for energy that would lead to de-forestification. Thus, as one official said:

> Because of our policy of attracting private capital to investment *(zhaoshang yinzi*), our main rivers have been fully developed by SHPs. […] All in all, SHPs have created very good effects. (Interview data EO1101-0804) [12]

V. The SHP Companies

In the initial stages of the electricity market reform, privately-owned SHPs indeed earned a lot of profits in developing hydropower, the return being estimated to reach as much as 20 per cent in the late 1990s and early 2000s (Cao, 2008: 92). This was due to the fact that the government at that time was not so serious about the environmental impact, neither did it have to follow formal procedures when making

an application to construct an SHP. As long as the applicant found the water resource, the firm could then draw up the construction plan and received approval in a very short period of time. However, after 2006, the central state announced a new measure referred to as the 'Notification Regarding the Orderly Development of Small Hydropower Plants to Protect the Ecological Environment'. From then on, all the necessary procedures were set up in the application, including an environmental impact assessment. From then on, the state began to check those 'Four No-s' regarding the SHPs– no registration, no construction plan, no acceptance certification, and no suitable management – and as a consequence forced most of them to close down. Subsequently, a serious problem began to emerge, particularly in relation to the plants' profit margins. As a result, the average annual profit rate of an SHP is currently about 8-10 per cent (Interview data EO1101-0804).[13]

One of the reasons for the shrinking profit margins of the SHPs was the forced connection policy of the SHPs to the national grid. In the case of Yunnan province, it is the South Power Grid that has the dominant position in the market (which decides whether or not a SHP can be connected to the national grid), whereas the SHP has to comply with it in order to survive in the market. Although the state requires national grid companies to purchase electricity generated by the SHPs, the real situation is that these grid companies are reluctant to fulfill the obligation. One of the main reasons why the national grid does not like to buy the electric power generated by the SHP is its unstable nature. One of our interviewees referred to it as garbage electricity.[14] In the rainy season, SHPs can generate more power in a similar way to the big dams; nonetheless, the electricity provided by the latter is already sufficient for the grid to supply the market demand. As a result, the electricity that a SHP has generated has to be sold at a much lower price or be given up. On the other hand, in the dry season, the

flow of the river is not abundant enough to be used for power generation, and therefore the SHP is not able to supply electric power to the grid. In addition, the quality of the electricity is low and the operation cannot be optimized. Therefore, the grid company lacks interest in the SHPs and even adopts certain measures to prevent them from being connected to the grid (Zhou, et al., 2009: 1079). In general, the grid company is very supportive of building big dams along major rivers in Yunnan.[15]

As a result of the forced connection policy, according to a report (Cao, 2008: 43-44), there were as many as 12 provinces in which the cost of power generation was higher than what could be recouped by selling the electricity to the grid company, which thus led to the companies in these areas recording a deficit. For example, in Guizhou province, the grid company paid the SHPs only $0.15 RMB per KW/hour, and sometimes this rate was even lowered to $0.12 RMB per KW/hour. By contrast, the grid sold the electricity to rural enterprises at $0.318 RMB per KW/hour, and thus the grid company earned a large amount of profit from this transaction. As one hydropower developer pointed out: 'Hydropower has seven advantages, including the raw material (no need to worry about the sources), the market, the transportation, the quality, the inventory and the state's support. However, these seven advantages are less important than one disadvantage; that is, it is a highly monopolized industry that in practice is manipulated by the state by a lower price. Whether or not the price should be raised is not what we can say' (Guan, 2012). In fact, our field trip in Yunnan confirmed this observation, for the developers are now complaining that the lowering of the purchase price by the grid company may cause them to suffer a deficit. Some firms are even expecting to use the CDM mechanism to compensate for their currently very low profit margins.[16]

Even worse has been that the rural electricity companies have gradually been

merged and acquired by the powerful grid companies and have become their affiliates. As a result, the local rural electricity companies have totally lost their initial function of benefiting poor rural areas, as the low-efficiency and high cost state-owned power generating companies now run the whole of the power generation market in China, or in Yunnan in particular.

Why are so many private companies still interested in investing in this SHP sector, given the fact that many have suffered from heavy financial losses? We found based on our field trips that local governments would compensate those companies by means of other administrative methods, such as real estate development projects whose profits are much larger than those from the SHPs in order to maintain the alliance. According to our interviews, the owners of the SHPs usually had more than just one station each. Thus, while the profit margins of the SHPs have been shrinking over the years, they still continue to invest in more stations due to the fact that, on the one hand, there is still some amount of shrunken profits and the stations can run for a long period of time and, on the other hand, they help the local officials fulfill the political missions assigned to them by the upper levels of government, which will later lead to other returns from the local officials.[17] As one of our interviewees said:

> The SHP project has been one of the most important items that the local government has had to implement according to the national evaluation criteria. Local officials require you to accomplish the already bidded for project within a specific time duration, and they can help you to shorten the administrative procedures to a week as compared to the normal two months….Whenever you help local officials to accomplish political assignments, even though those items' profit-margins are very thin, local officials will compensate you in return on other construction items …We evaluate our project not based on a single item,

but rather in a holistic manner. (Interview data EW1102-0806)[18]

This statement clearly shows the close alliance between local officials and private capital, and the interest bundling approach through which private capital may suffer from short-term financial loss in return for much larger and long-term benefits. This may explain the paradox of the deficit-investment phenomenon in the small hydropower sector.

The close alliance between local officials and the privately-owned SHPs has given rise to a phenomenon referred to as 'demarcating the river territories' (*paoma quanshui*), indicating that the rivers have been cut into pieces by different parties for building large and smaller dams as well as hydropower stations. The phenomenon has generated widespread criticisms and reports from the media, and has finally received responses from the state in reformulating the application procedures for SHPs by adding the environmental assessment item as we mentioned above. [19]

Ironically, most of the environmental non-governmental organizations (NGOs) have paid less attention to this environmental disaster, and have instead devoted much of their limited resources to watching big dam construction, such as the 13 cascade dams along the Nu River (Mertha, 2008; also interview data ENG1101-0802).[20] It is also because big dams create a much larger scale of environmental impact than the SHPs, and therefore NGOs have devoted much energy to big environmental events compared to the smaller scale SHPs. However, NGOs were indeed aware of these impacts of SHPs on the environment in Yunnan Province and provided in-depth reports to the media. One renowned environmentalist lamented:

> The main problem with SHPs now is their blind development which results in not only electricity not being able to be sold, but also a shortage of clean drinking water because all the river water is used for generating electricity.

(Interview data ENG1101-0802)[21]

VI. Conclusion

This paper asks: how the Chinese local state officials respond to the demands for social and environmental protection from the central state, while simultaneously promoting economic development? This paper has shown that the local governments in Yunnan have responded to the political demands (rural electrification and poverty alleviation) by allying with private capital to build more SHPs to fulfill the political mission while at the same time granting other benefits to the privately-owned firms to compensate for the profit-losing SHP projects. This finding conforms to the findings of recent studies on the behavior of local governments in China that find that a new cadre evaluation system has emerged (Heberer & Senz, 2011) and that there are 'bundled interests' between local government officials and privately-owned firms on environmental issues (Kostka & Hobbs, 2012). We argue that, although the Chinese central state has begun to impose new social and environmental missions on local governments, the local governments have tended to interpret the political mission in a way that can be integrated with local economic development and to collaborate closely with private interests. Through this collaboration, local state bureaucrats simultaneously fulfill the central state's political mission and local economic development demand. Specifically, we show that due to the market reform of the electricity industry in 2002, which has resulted in the major electric power-related SOEs pursuing profit maximization, SHPs' profit margins have been radically squeezed. Nonetheless, the shrinking of profits has only further enhanced the local government officials' alliances with the SHPs by allowing these SHPs to develop other profitable projects, in order to fulfill the political mission. The result of this

collaboration has been that the hydropower stations in the upper, middle and lower streams of the rivers may belong to different companies that have conflicts of interest in terms of utilizing the rivers for generating electric power (Zhou, 2010: 163).

Although we have found that the building of a large number of SHPs in rural areas has brought about an environmental disaster, we still regard the Chinese government's promotion of SHPs as being a positive part of its climate change policy and rural poverty alleviation. What the Chinese state has not yet recognized or finds difficult to deal with is the fact that its marketization of the electricity industry has merely resulted in its policy goals in relation to SHP being doomed to failure. As a policy tool to support rural development and poverty alleviation, the state needs to subsidize the SHPs and to enable them to receive an adequate level of profit in order not to be undermined by the SOEs.

Furthermore, on the administration side, China also has to have a more coherent bureaucracy to coordinate the development of hydropower. At the present time, the application and approval of SHPs belongs to the local development and reform commission. Although the Bureau of Environmental Protection is responsible for reviewing the environmental impact, the final decision is always based on economic interests. This creates a less coherent view of the environmental impact. China needs to have more coherent bureaucratic procedures to review the applications of SHPs and to pay more attention to the functions that SHPs can perform to rescue the rural economy from bankruptcy and save the environment.

Notes

1. There are four grades below the 50MW installed capacity of small hydropower: 0.5–5MW, 5–10MW,10–25MW, and 25–50MW (Zhou et al., 2009).
2. The UN Development Programme (UNDP) has supported many countries in building small

hydropower plants which it regards as a clean energy; so does the Chinese state. As regards its mission in China and the Asia-Pacific Region, please see http://www.hrcshp.org/en/about.html.

3. Building large dams in the world and in China now creates colossal disputes not only within domestic politics but also in the international arena, especially when the river is transnational, for example the Lancang River flows into Myanmar, Cambodia, Thailand, and Vietnam. Building large dams may cut the water flow of the rivers and trigger international disputes (Mosert, 2000; Liebman, 2005; Onishi, 2007; Hensengerth, 2009).
4. The 'Three Rural Issues' (*sannong wenti*) refers to three issues highly relating to rural development in mainland China. Specifically, these issues are rural areas, agriculture, and peasants.
5. This means that by building more SHPs, rural peasants would have electricity for cooking and other domestic energy utilities. This would then reduce the peasants' incentive to cut wood from the forests.
6. The new companies include two power grid operators, namely, the State Power Grid (covering mainly the northern, northeastern, northwestern, eastern, and central China areas) and China South Power Grid (covering the Yunnan, Guizhou, Guangxi and Guangdong areas; and five state-owned electricity operators such as Huaneng, Datang, Guodian, Huadian, and the Electricity Investment Corporation. Accordingly, the existing regional and rural agricultural grids have been incorporated into the two newly-established national grid systems.
7. T city is the anonymous name we use for the city in which we did our field study in Yunnan.
8. Please see Larson, C. (2010, January 18) for the impact of Karst landscape on water supply.
9. Interview data EO1102-0804, data obtained from local informant in T city during our field study.
10. Interview data EO1102-0804, an officer from the City's Development and Reform Commission, Kunming City, 04 August 2011.
11. The value-added tax was 17 per cent in one of the cities that the authors had visited in Yunnan. Of this 17 per cent, 75 per cent went to the central state and the remaining 25 per cent was local tax. The local government would return this 25 per cent to the investor over a five-year period.
12. Interview data EO1101-0804, with an officer from the Agricultural Bureau, Kunming City, 04 August 2011.
13. Interview data EO1101-0804, with an officer from the Agricultural Bureau, Kunming City, 04

August 2011.

14. Interview data EE1101-0711, with engineers of South Grid Corp., 11 July 2011.
15. Interview data EE1101-0711, data based on interview with engineers of South Grid Corp., 11 July 2011.; also interview data EOE01-0710, data based on an interview with engineers from the Bureau of Water Resources, T City, Yunnan, 10 July 2011.
16. Interview data EW1202-0708, owner of a small hydropower plant, 8 July 2012, in T City, Yunnan. In addition, CDM (the Clean Development Mechanism) is a type of flexibility mechanism that provides trading schemes for emissions reduction projects that generate Certified Emission Reduction (CERS) units. The CDM allows industrialized countries to buy CERS and to invest in emission reductions where it is cheapest globally. Of course, China is one of the largest countries to benefit from the CDM mechanism.
17. Interview data EW1201-0707, owner of a small hydropower station, 7 July 2012, T City, Yunnan. The returns may consist of different types, and one of them may be a real estate development project which has much larger monetary profits.
18. Interview data EW1102-0806, owner of a small hydropower station, 6 August 2011, T City, Yunnan.
19. There are a lot of reports on the environmental impacts of SHPs. These documents are also one of the main sources of this research.
20. Interview data ENG1101-0802, with a local environmentalist of green NGO, Kunming City, 02 August 2011.
21. Interview data ENG1101-0802, with a local environmentalist of green NGO, Kunming City, 02 August 2011.

References

Bing, F.-S. (ed.) (2008). *Zhongguo kezaisheng nengyuan fazhan zhanlüe yanjiu congshu: shuinengjuan.* [The development strategy of China's renewable energy: Volume in water energy] Beijing: China Electric Power Press. [in Chinese]

Cao, L. (2008). *Zhongguo xiaoshuidian tourongzi zhengce sikao*. [The thinking of finance policy for China's small hydropower] Beijing: China Water & Power Press. [in Chinese]

Chan, H. S. (2004). Cadre Personnel Management in China: The nomenklatura system, 1990–1998. *The China Quarterly, 179*, 703-734.

Chen, G. (2009). *Politics of China's environmental protection.* Hackensack, N.J.: World Scientific.

Chen, X. (2012). *Social protest and contentious authoritarianism in China*. New York: Cambridge University Press.

Duckett, J. (2001). Bureaucrats in business, Chinese-style: The lessons of market reform and state entrepreneurialism in the People's Republic of China. *World Development, 29*(1), 23-37.

Edin, M. (2003). State capacity and local agent control in China: CCP cadre management from a township perspective. *The China Quarterly* 173, 35-52.

Guan, X. (2012, June 18). Guizhou minying xiaoshuidian zhangqi kuisun zao shengsijie. [The privately-owned small hydropower plants suffer from long-term deficits and vital moments in Guozhou] *Chinese Business Times.* Retrieved from http://finance.sina.com.cn/roll/20120618/022012335567 [in Chinese]

Guo, X. (2001). Land expropriation and rural conflicts in China. *The China Quarterly,* 166, 422-439.

Heberer, T., & Senz, A. (2011). Streamlining local behavior through communication, incentives and control: A case study of local environmental policies in China. *Journal of Current Chinese Affairs, 40*(3), 77–112.

Hensengerth, O. (2009). Transboundary river cooperation and the regional public good: The case of the Mekong river. *Contemporary Southeast Asia: A Journal of International & Strategic Affairs, 31*(2), 326-349.

Hsing, Y. (2010). *The great urban transformation: Politics and property in China*. New York: Oxford University Press.

Huang, H., & Yan, Z. (2009). Present situation and future prospect of hydropower in China. *Renewable and Sustainable Energy Reviews*, 13, 1652-1656.

Kostka, G., & Hobbs, W. (2012). Local energy efficiency policy implementation in China: Bridging the gap between national priorities and local interests. *The China Quarterly*, 211, 765-785.

Larson, C. (2010, January 18). Hidden waters, dragons in the deep: The freshwater crisis in China's Karst regions. *Circle of Blue/Wilson Center Reporting*. Retrieved from http://www.circleofblue.org/waternews/hidden-waters-dragons-in-the-deep/

Lieberthal, K., & Oksenberg, M. (1988). *Policy Making in China: Leaders, Structures, and Processes*. Princeton, NJ: Princeton University Press.

Liebman, A. (2005). Trickle-down hegemony? China's 'Peaceful Rise' and dam building on the Mekong. *Contemporary Southeast Asia: A Journal of International & Strategic Affairs, 27*(2), 281-304.

Lin, N. (1995). Local market socialism: Local corporatism in action in rural China. *Theory and Society, 24*(3), 301-354.

Liu, J. (2006). *China electric power industry policy and industry development*, Beijing: China Electric Power Press. [in Chinese]

Magee, D. (2006). Powershed politics: Yunnan hydropower under great western development. *The China Quarterly,* 185, 23-41.

McNally, A., Magee, D., & Wolf, A. (2009). Hydropower and sustainability: Resilience and vulnerability in China's powersheds. *Journal of Environmental Management,* 90, 286-293.

Mertha, A. C. (2008). **China's water warriors: Citizen action and policy change.** Ithaca, NY: Cornell University Press.

Mertha, A. C. (2009). 'Fragmented authoritarianism 2.0': Political pluralization in the Chinese policy process. *The China Quarterly*, Vol. 200 (2009), pp. 995-1012.

Mosert, E. (2000). *Dams on transboundary rivers*. World Commission on Dams Thematic Review V.3. Cape Town: World Commission on Dams.

O'Brien, K., & Li, L. (2006). *Rightful resistance in rural China*. Cambridge: Cambridge University Press.

Oi, J. C. (1992). Fiscal reform and the economic foundations of local state corporatism in China. *World Politics, 45*(1), 99-126.

Oi, J. C. (1995). The role of the local state in China's transitional economy. *The China Quarterly,* 144, 1132-49.

Onishi, K. (2007). Interstate negotiation mechanisms for cooperation in the Mekong river basin. *Water International, 32*(4), 524-537.

Paish, O. (2002). Small hydro power: Technology and current status. *Renewable and Sustainable Energy Reviews, 6*(6), 537-556.

Qian, Y, & Weingast, B. R. (1996). China's transition to markets: Market-preserving federalism, Chinese style. *Journal of Policy Reform, 1*(2), 149-185.

Shirk, S. (1993). *The political logic of economic reform in China*. Berkeley, CA: University of California Press.

Tilt, B. (2009). *The struggle for sustainability in rural China: Environmental values and civil society*. NY: Columbia University Press.

Walder, A. (1995). Local governments as industrial firms: An organizational analysis of China's transitional economy. *American Journal of Sociology, 101*(2), 263-301.

Yeh, E. T., & Lewis, J. I. (2004). State power and the logic of reform in China's electricity sector. *Pacific Affairs, 77*(3), 437-465.

Yu, H. (2008). *Global warming and China's environmental diplomacy*. New York, NY: Nova Science Publishing.

Zhongguo nengyuan bao [China's Energy Daily] (2012). Waner' de xiao shui dian? [Damn the hydropower] *Xinhua net.* Retrieved from http://big5.xinhuanet.com/gate/big5/news.xinhuanet.com/energy/2011-08/25/c_121909346.htm [in Chinese]

Zhongguo shuili nianjian bianzuan weiyuanhui [The editorial committee of China Water Statistical Yearbook] (2010). *China Water Statistical Yearbook 2010*. Beijing: China Water & Power Press. [in Chinese]

Zhou, J. (2010). *Zouxiang ge minzu gongtong fanrong- Minzu diqu daxing shuidian ziyuan kaifa yanjiu*. [Toward the common prosperity of every race: A study on the development of large hydropower resources in ethnic areas] Beijing: China Water & Power Press. [in Chinese]

Zhou, S., Zhang, X., & Liu, J. (2009). The trend of SHP development in China. *Renewable Energy, 34*(4), 1078-1083.

Zhu, J. (2004). Local developmental state and order in China's urban development during transition. *International Journal of Urban and Regional Research, 28*(2), 424-447.

Tables

Table 1. Development of SHP in China

Year	1949	1978	1990	2000	2009
Designed Capacity (kW)	3,634	5,266,500	13,180,300	24,851,721	55,121,211
Realized capacity (100kW)	523	997,300	3,928,300	7,998,249	15,672,470
SHP in hydropower (%)	N.A.	22	31	33	30

Source: *China Water Statistical Yearbook 2010*.

三：

State Rescaling and Water Governance: The South–to-North Water Transfer Project in China

Jenn-Hwan Wang[1]

Shuwei Huang[2]

[1] Chair Professor, Director of Center for China Studies, National Chengchi University

[2] Post-doctoral Researcher, Center for China Studies, National Chengchi University

Abstract

This paper uses the South-North Water Transfer Project to discuss the transformation of water governance by the Chinese state and its related scalar politics. China' water management system has transformed from command and control mode in the 1950s to a chaotic local competition stage in the post-Maoist reform era when local states were assigned the responsibility for promoting economic development. This paper intends to analyze how the Chinese state re-constructs cross-boundary and cross-regional governance system on water management through the building of the Water Transfer Project. We will also use Beijing city as an example to show how the new governance system has been made via the project.

Keywords: Beijing, Water governance, Political Ecology, Scale Politics

1. Introduction

Governing water is one of the most important administrative works for the state, ancient or contemporary. Taming water in ancient worlds was regarded by empires as a sacred work for its utilization of water and prevention of flood in order to survive from natural disasters and build agricultural civilization. By doing these hydraulic works, as Wittfogel (1957) argued, ancient empires developed sophisticated bureaucracies to rule the society which he called hydraulic despotic regime. Similar to ancient regimes that had to use state power to regulate water, states in contemporary world also have to develop related technologies to fully utilize water in order feed the increasing demand due to rapid industrialization and urbanization. Indeed, governing water has become a similar 'sacred' work for the contemporary state as its counterpart in ancient world (Worster, 1985; Reisner, 1993; Wehr, 2004; Swyngedouw, 2007).

China's management of water resources has evolved from the control and command mode in its initial stage of the Maoist era in which the construction of dams and irrigation system was one of the major parts of the state formation process. As China began its market reform since 1978, local states have competed fiercely on water resources due to their dynamic economic growth that even led some parts of the Yellow River to dry up many times in the late 1990s. Water wars which occurred often among local states were salient political sceneries in China during that period. A call for cross-boundary and national level of water governance had been emergent. This paper will deal with the state's role in water management, using the case of grant South-North Water Transfer Project (SNWTP) to illustrate the rescaling process.

Indeed, China has experienced very rapid economic development since it opened its door to the world, with per capita gross domestic product increasing from less than US$ 100 in 1978 to over US$ 4000 in 2010 (National Bureau of Statistics, 2012) — an 8 percent annual rate of growth over the three decades. One consequence of this growth, together with its rapid industrialization in the coastal areas, is that Chinese living standards have improved substantially. Accompanying with this achievement, however, is a significant increase of the country's total volume of water consumption. Between 1980 and 2010, total water use increased from 443.7 billion cubic meters to 602.2 billion cubic meters, with the increase of water demand coming mostly from urban and industrial sources (Ministry of Water Resources, 2011). This increase of water consumption has led to significant water supply problems in China.

It is estimated that that an aggregate demand and supply gap will reach to 201 billion cubic meters by 2030, approximately one quarter of the total demand (Rong, 2011:19), which was shown especially severe in the Northern part of China where the Capital city, Beijing, is located.

The deterioration of water supply in the north has also largely been influenced by the natural environment of China. Affected by the monsoon climate's uneven rainfall distribution, 60% to 80% of rainfall is concentrated in four months, and most of the water resources are located in southern China. According to a national research on water distribution, from 1956 to 1979, Southern part of China (refers to the south of the Yangtze River Basin) accounted for 81% of the national total water resources, whereas the Northern part accounted only for 19%. The situation has worsened from 1979 to 2005, the southern part accounted for 84%, whereas the northern part only accounted for 16% (Wang, 2010). In accounting for per-capita water resources, it is estimated that people in northern part of China have much lower level of share in terms of water resources, for example, Heibei and Shanxi Provinces have merely 201 and 251 cubic meters respectively as compared to absolute scarcity level of 500 cubic meters per person in the world average in 2009 (Rong, 2011:14). The SNWTP is the central state's response to the water scarcity problem of the north in the post-Maoist ear as to feed the continuous and growing demand of the northern part, especially the Beijing Municipality. Along with this infrastructure construction, however, has been the building of a new water governance system that had to deal with the problem of local state's competition on water supply.

Beijing is located in the dry northern part of China where water resources are relatively short of supply. The Chinese state has used many methods, including building dams, channel water from nearby provinces to supply the demand of the city since it established its rule in 1949. Nevertheless, in the past 60 years, Beijing as one of the most developed and crowded cities in China has expanded massively its urban areas in a very rapid manner, especially in the post-Maoist era, which thus requested more and more water resource from its adjacent rural areas to fulfill its needs. Beijing in fact has been competing with other provinces for water resources. How to solve the water demand from the Capital City has been an urgent problem that both Beijing and central governments have sought for. SNWTP was of course a solution to meet many purposes, not only for Beijing but also for the north in general.

This paper deals with the state's rescaling on water control. We will show that the Chinese central state has re-centralized the power of water control in order to solve the water war problem generated from local states' severe competition on economic development. However, different from the former command and control mode, this time, the new mode is much based on cross-provincial and cross-boundary collaboration. We will use the

state-created SNWTP and Beijing's collaboration with water supplying provinces as case to show the emergence of this new governance structure.

2. State rescaling and water governance

This paper adopts a political-ecological perspective on water governance, which presupposes that there is a close correlation between the transformations of the hydrological cycle in the natural world and power relations in sociopolitical sphere. As Swyngedouw (2009:56) maintains, "hydro-social research envisions the circulation of water as a combined physical and social process, as a hybridized socio-natural flow that fuses together nature and society in inseparable manners". Hydraulic environments in this perspective thus tend to be regarded as socio-physical constructions in which water is organized through a combination of social historical and metabolic-ecological processes. Because hydraulic environment is a social-physical construction, the enhancement of water supply of one area or a city may lead to change of other places' physical condition and their water supply. Therefore, water regulation is not environmentally neutral, neither is it a neutral sociopolitical process. Governing water involves political power of various levels of spatial scale in terms of utilization and controlling of natural water flows (Conca, 2006; Feitelson and Fischhendler, 2009; Swyngedouw, 2007; Bakker, 2002; Norman and Bakker, 2009). "All socio-spatial processes are invariably also predicated upon the transformation or metabolism of physical, chemical, or biological components" (Swyngedouw 2004:23).

From this perspective, water supply since ancient time has been involving the sociopolitical processes that intended to conquer natural water flows. On the national scale, one of the major tasks for every state is to use their power to control and regulate water flow in order to generate resources for sustaining living condition and build its political power (Worster, 1985; Reisner, 1993; Wehr, 2004; Swyngedouw, 2007; Wester, 2008; Molle et al, 2009). In the process of water control, the state gained even more power from the society due to its increasing administrative capacity in controlling the flow of water to cover massive areas. This is the thesis that Wittfogel (1957) has written in his thesis of oriental despotism.

The relationship between the state and its water control mechanisms formed the fulcrum of Wittfogel's (1957) inquiry into hydraulic societies. Wittfogel proposed that the strong bureaucratic regimes of East Asia were rooted in their reliance on massive

irrigation works, which conditioned the rise of highly centralized and despotic regimes. Water held such politically transformative power, Wittfogel claimed, because it lay between two extremes of agricultural inputs: regional climatic conditions and soil composition. Water, a production factor thus created a "technical task which is solved either by mass labor or not at all." Therefore, Wittfogel's central argument is that the capital investment and labor coordination required for substantial water control on big rivers demand the rise of a strong and hierarchical power center which he called the 'despotic' states of the Orient (Imlay and Carter, 2012).

Wittfogel's thesis had generated heated scholarly debates, especially the linearity he suggested between irrigation development, state formation and centralized power, and whether this evolution necessarily leads to a despotic state (Steward, 1978; Bray, 1994). Given the hot debate, nonetheless, it is still evident that there is a tendency of centralization of state power in water control on the national scale especially in the initial stage of state formation in many different parts of the world. As Bakker (2002) observes in the post-Franco Spanish case, the development of new and large-scale water resources implemented in the agricultural sector by the state during the Franco dictatorship was essential to the modernization and mechanization after the civil war. The state assumed the key role in the development of hydraulic capability, through which water resources were regulated to cover most of the farm land and redirect water for the need of Spanish industrialization. This close relationship between state formation and water control also shows in the Chinese case as we will show later.

In this state formation stage, water regulation is always controlled by the power alliance of state bureaucrats (such as water development agencies) and engineers, they tend to propose wider scale of water governance to include multiple surface and groundwater basin by framing the issue as adequacy of national water supply. Through this alliance, a water governance regime in a nation-wade level has been established (Feitelson and Fischhendler, 2009: 730). The centralization of power at the national level can be increased and facilitated by the improvements of technology that are supposed to have the capability to reduce the cost and enhance wider economies of scale. The water agencies and engineers' discourses have reinforced the national scale of water works. As Feitelson and Fischhendler (2009:730) suggest, 'The centralization of management and the associated construction of large-scale water works in modern times have been largely legitimized by a managerial discourse that justifies the redirection of water away from its natural courses'.

Nevertheless, the geographic scale of water governance is not static, it is always changing along with economic, political and social processes. Especially in the process of industrialization and urbanization, the state has to reallocate water resources in order to sustain the pace of its domestic economic development. In this process, however, the state has to negotiate or command local governments to re-build the governance system. This transformation of water control system thus indicates the state's power is being rescaling to meet the new demands generated from various sociopolitical and economic processes.

As it is commonly understood in the social sciences that scale is "socially constructed, historically contingent and politically contested" (Reed and Bruyneel, 2010), this transformation of environmental governance nowadays in the democratic societies tend to involve not only governmental agencies and social groups, but also the engagement of NGOs in the operational procedures in key issues, so as to gain legitimacy in democratic decision making (Barak, 2002;Reed and Bruyneel, 2010). Therefore, current social scientists in the West find that decision making process on environmental governance has been changing from govern*ment* to gover*nance* modes, indicating the transformation from one that exercising power by formal, hierarchical, and centralized authority to one that is based on mutually agreed upon coordination made by multiple horizontal, decentralized political and social actors. Water governance thus becomes decentralized, de-territorialized, and re-territorialized.

The Chinese case on water governance nonetheless has its own specific features. Following the economic reform logic, in which local states were granted the power to develop the economy by their own interpretation of central state policies (Oi, 1995). Local states thus tend to exploit the natural environment, especially land and water, in order to boost local economies and which was fully supported by the central state.

Indeed, as the local state corporatism thesis (Oi, 1995; Edin, 2003) has found that local governments had very strong incentive to develop local economies, especially in the initial stage of economic reform in which many local cadres were pioneers in leading the local economies to develop away from decadence. In the 1990s, because of the central state's tax-sharing reform (Oi, 1995), local cadres had very strong incentive to create 'extra-budgetary fund' (mainly by selling the land development right to real estate developers) for local authorities and develop the local economies. This strong economic activism of local bureaucrats has deeply related to the Chinese Communist Party's evaluation system in which economic development is

assigned as a hard target and priority that local cadres have to pursue for (Edin, 2003).

As local states' incentives are strong in keeping their rapid economic growth, water is channeled from rural areas to satisfy the metabolic ecological environment of big cities. Local states are competing among themselves for water supply. All the neighboring provincial and municipal city governments intend to reserve cross-provincial river's water flow in order to feed the demands of city and industry within their own territory. On the other hand, the central state also aims to maintain water supply to feed and balancing regional needs at the national scale; while in doing so, it may change water supply of the natural course and create tensions among various levels of state authority. In fact, water conflicts among local states beget the central state to step in so as to solve the water supply issue. Water governance thus is never a conflict-neutral process, it is in fact a multi-scaled articulation of institutions and actors with varying degrees of power conflict and negotiation. In the process, water is de-territorialized and re-territorialized by various levels of state power.

We will argue in this paper, China's water governance has changed from mainly central state's command and control mode to a local competitive mode. Now, because of the draught situation in the north has been worsening, and the water wars among local states become severe, the central state launched its SNWTP in order to solve the water supply problem and especially for the need of Beijing. In the process of the construction, a new collaborative governance mode has been in developing, in which central state has re-centralized its power as to work with local states to facilitate the formation of a new water governance structure in order to ease the tensions among local states, as well as to solve the problems of water supply and water pollution, which we discuss as follows.

3. Building the national water hydraulic system in China

The building of a national hydraulic system in China has been a long process and has proceeded in a fluctuated and rocky manner in the past few decades since 1949 when the CCP took over power. This construction processes can be roughly divided into three periods: the initial command and control stage, from 1949 to 1978, when China faced serious floods and shortage of hydraulic infrastructure, the Chinese state, by the help of Russian engineers, intended to solve those problems by ways of implementing

big hydraulic projects. In the second stage, from 1978 to 2000, when local states pursued for their economic interests disregarding environmental pollution and created water wars among provinces. In the third stage, from 2000 till now, the new water management system has been gradually emerged and a new national governance system has gradually established. The central state now has become actively establishing negotiation and coordination mechanisms to solve the conflict problems generated from large scale cross-boundary hydraulic infrastructures.

3.1 The initial command and control stage, 1949-1978

Water management was one of the toughest problems that the newly established Chinese central state encountered in its initial stage after 1949. The lacking of irrigation system and shortage of hydraulic system nation-wide during that time was a serious problem for agricultural production. In addition, the constant floods of Yellow River created disastrous consequences to northern China. By the assistance of Russian engineers, building big dams to tame big rivers became the key hydraulic strategy, in which "governing Yellow River" became the policy priority of Chinese central state in the north, while establishing Dangjiangkou Dam was another big project in the south (Su, 2013).

In order to prevent constant floods of Yellow River, the Chinese central state had done a series of studies in the early 1950s. In 1954, a team of 120 members, composed by both Chinese and Russian engineers, proposed to the Chinese state that building a large dam which could combine flood prevention, hydropower, and irrigation functions together was necessary. This was the Sanmenxia Dam (with height at 360 meter), which was designed by Russian, that began construction in 1957 and started to function in 1962. This dam however created serious problems due to sand sedimentation that had resulted in its rebuilding by Chinese engineers afterward.

The same pattern happened in the construction of Danjiangkou Dam. In order to prevent Han River from flooding every year, the Chinese central state began the studies in 1952, again with the assistance from Russian engineers, and started to build the dam in 1958. In 1968, with height at 162 meter, the dam began to perform its hydropower function. It was the largest reservoir in China during that time. A new city, Danjiangkou was created, populated mainly by those resettled migrants.

The Russianization of hydraulic system was based on engineering thinking that intended to solve the irrigation and water supply problem by construction more dams with little thought on the establishment of appropriate management infrastructure and improvement of governance. Therefore, there was no legal framework to regulate water in corresponding to those big hydraulic infrastructures. This situation was worsened in the period of Cultural

Revolution, during which the central state was ceased functioning in managing hydraulic system nation-wide. Small scale, autonomous small hydraulic system became the main feature during this era, with little or no financial resources being injected into the maintenance of the hydraulic system.

3.2 The local competition era, 1980s-1990s

The post-Maoist era in China has the characteristics of local state corporatism (Oi, 1995) in which local states used every possible approach to pursue for economic development. However, the autonomy of local state in pursuing for development has made the cost of coordination among different authorities extremely expensive and highly inefficient. In terms of water management, due to the fragmented water management structure, the whole country was subject to unsustainable water use and worsening of water pollution (Peng, 2012). In addition, because local states now paid much attention to the needed water to satisfy their demands for economic development, a competitive stage for water supply emerged.

Indeed, as discussed, there was no law in China before 1980s to regulate water quantity supply along major rivers. Many government authorities could arbitrarily interfere water supply, with no single government authority was directly responsible for nation-wide water affairs. In 1988, the central state promulgated the Water Law (SCNPC, 1988), which stipulated that water resource authorities at various levels of governments were responsible for water management. In order to stop water quality from deteriorating even further, the State amended the Water Pollution Act 1984 in 1996 (SCNPC, 1996). During this period, the state's attention was paid to the efficient use of water to facilitate economic growth. The laws thus only made the situation even worse because local authorities were still competing for water for the sake of economic development.

It was also during this stage that the issue of water shortage came to the fore because of rapid economic development. The coastal provinces and cities wanted to have enough supply of water, they not only unlimitedly abstracted underground water but also competed ground water for their own industrialization and urbanization. Moreover, the interior provinces and cities during this time also began to take off and wanted to keep water flows from major rivers. Tensions had been created among provinces and cities. In order to solve the water competition problems, the central state now began to promote a series of small-scale "transferring water" projects across

geographic areas, such as diversion water from Luan River to Tianjin(引灤入津), from Yellow River to Shanxi Province(引黃入晉), from Yantze river to Thai Lake (引江濟太), as well as similar project in Central Yunnan province (Ma, 2004). These cross-boundary water transfer projects however were merely based on engineering consideration; relative little endeavors were put to the improvement of governance mechanisms.

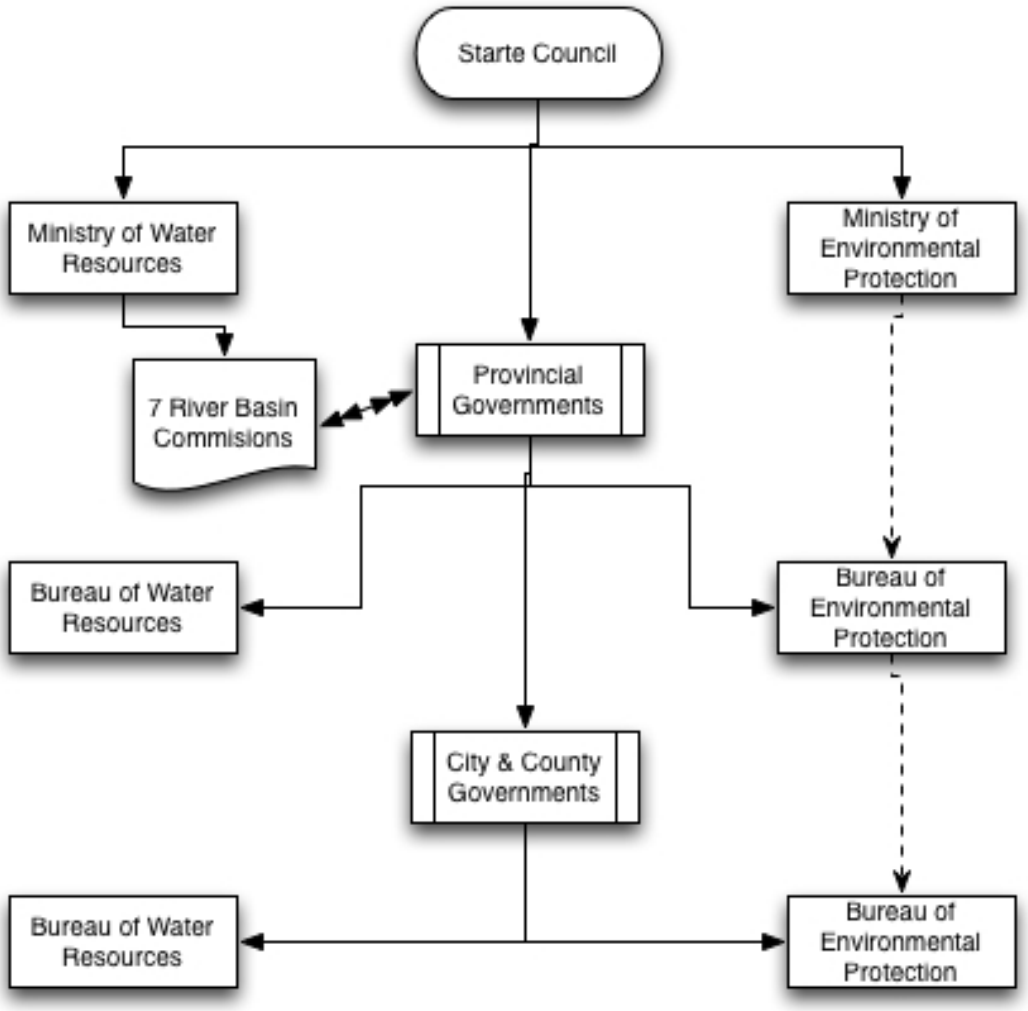
3.3. Building up a governance mechanism (2000-NOW)

In this stage, China‘s water resource management has increasingly become more integrated after a series of policy reforms and institutional restructuring. One example is the revised Water Law of 2002, which aims to extend the Ministry of Water Resources‘ (MWR) powers and to change the status quo. The government began to take a more holistic attitude toward water management by trying to achieve a balance between economic growth and preservation of the environment. According to the Water Act 2002, the power of water management in China is shared by the MWR and local (provincial level) governments. The Ministry is responsible for overall water management across the country; seven large river/lake Basin Commissions (six river basin management commissions, and the Tai Lake Basin Management Agency) are responsible for the daily administration of water management within their scope of power delegated by the MWR (figure 1). As a result of this legal reform, the power of water management has been increasingly centralized in the hands of the MRW (Peng, 2010). Moreover, much more power now was given to River Basin Management Commissions (RBMCs), which were responsible for preparing basin-wide water allocation plans and providing technical direction and guidance to local governments within the basin.

However, given these above amendments, the real operation of the system in recent years still had the features of ministerial fragmentation and friction. It was because there were many ministries that were related to water management, such as agriculture, energy, forest, etc., MWR did not have the power to do the final decision. Vertically, local provincial states still regarded economic development as their priority, they did not have the incentive to collaborate with MWR to control water usage and the MWR did not have coercive power to force them to abide by the instructions (Peng, 2010). Moreover, because cross-boundary RMBCs in China had no

representatives from the affected provinces and municipalities, they had difficulty to coordinate with related provinces/municipalities and other stakeholders (Rong, 2011: 26). For example, the Yellow River Basin Commission oversaw the allocation of withdrawal quotas among provinces, but it had no power to prevent a province from withdrawing water exceeding its allocation quota.

Figure 1. Chinese Water Management System



Source: Peng, 2012

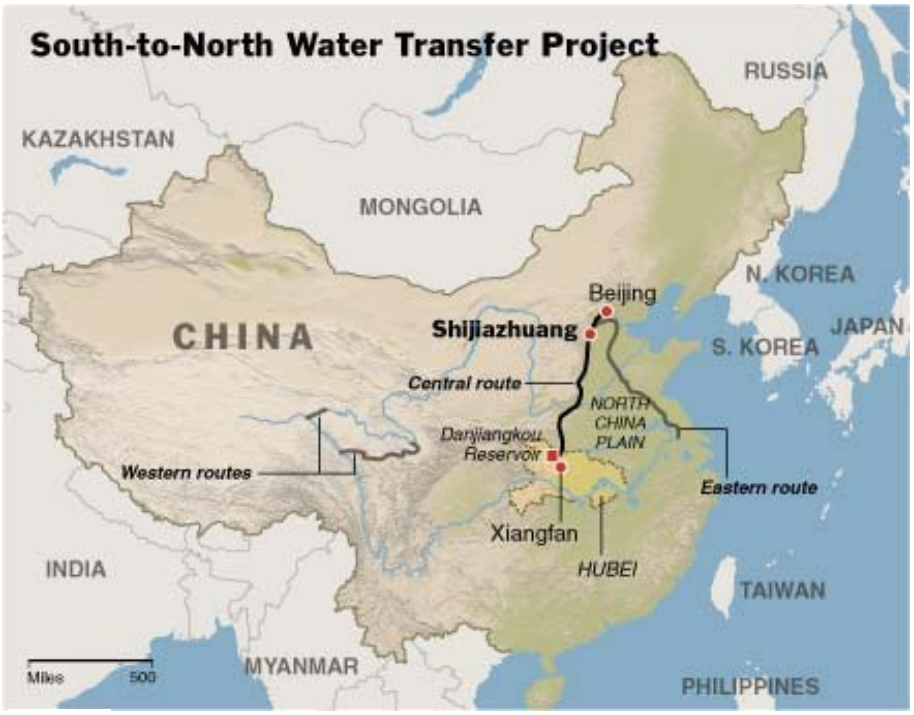
In order to amend the above administrative fragmentation problems, the Chinese central state intended to build a better and sound governance system to be more effectively allocating water resources in ?? year. The system includes features such as: to establish a new water right regime in order to build a more rational water price mechanism as to facilitate efficient water usage; to establish a more effective cross-boundary collaboration system in order to coordinate stakeholders along river basin, including resettlement issues. Many of the above ideas have been implemented

into experiments in some areas. The SNWTP was a big hydraulic project that the Chinese state wanted to do experiment as to create a new water governance system, as will be shown in the SNWTP case.

4. **The "South-to-North Water Transfer Project"**

The SNWTP is a vast and unprecedented water project in human's history and costs as high as nearly $100 billion (USD). The SNWTP was first proposed by Mao Zedong in the early 1950s, Mao said: "The South has more water than the North, if possible, it would be a good idea to borrow some water from the South to the North." Therefore, since 1953, the Yangtze River Water Resources Commission and the authorities began a comprehensive study of the SNWTP. After five years of research, the MWR proposed three water diversion routes: The Western Route diverted water from upper Yangtze tributaries in difficult and remote terrain in the Sichuan and Qinghai mountains. This project has been suspended due to serious debates and concerns about environmental damage. The Middle Route started at Danjiangkou reservoir on the Han, a major left-bank tributary of the middle Yangtze to reach Tianjin and Beijing in the north. The Danjiangkou dam was built in the 1960s that had 162 m height, it was planned to be raised up to 176.6 m height in order to increase its storage capacity. This route was planned to start to provide clean water to the north before the Beijign Olimpic Game in 2008, however it was not able to accomplish this mission and now was suspended to October of 2014. The Eastern Route takes water from the Yangtze about 100 km south of Nanjing and 250 km westward from the sea, by using the existing Grand Canal and some parallel riverbeds. This physical construction of this route has been completed and will begin transferring water to the north in the end of 2013. China formerly launched the mega-project in December 2002 and set up the SNWTP Construction Committee directly under the State Council in August 2003. Details of the three routes are shown in figure2, and table 1:

Figure 2. South-to-North Water Transfer Project



Sourece: The New York Times, 2007

Table 1: The Comparison among the Three Routes of China's South-to-North Water

	Eastern Route	**Central Route**	**Western Route**
Water transfer capacity (billion m3)	14.8	13	17
Length of diversion canal (km)	1,156 (main canal) plus 740 (branch line)	1,241 (main canal) plus 142 (branch line)	>300 (all via tunnels)
Dam construction	N/A	Existing dam heightened by 15 m from 162 to 176.6	New dam >200 m in height
Water transfer method	Pumping stations	Flow by gravity	both
Construction schedule	Started in 2002; Water was expected to begin flowing in 2007, but was later delayed to 2013	Started in 2003, water was expected to begin flowing in 2010, but was later delayed to 2014	Under planning
Water flowing areas	Jiangsu, Anhui, Shandong, Heibei, and Tianjin	Hubei, Henan, Hebei, Beijing, and Tianjin	Qinhai, Gansu, Shannxi, Shanxi, Ninxia, and Inner Mongolia
Major challenges	Poor water quality Ecological impacts of lake impoundment	Resettlement Discharge reduction of the Han River	Geological disasters Impacts on the ecosystems of the upper Yellow River

Source: Adapted from Zhang (2009) and Rong (2011)

For the purpose of this paper, we will mainly discuss the central route that starts

from Danjingkou reservoir to Beijing in the north. The total length of this route is 1230 km, with a branch to Tianjin, and the water will supply mainly to 22 cities along the waterways of three provinces. Natural channels were rejected in favor of a new canal to preserve water quality and command the full area by gravity. The first stage will divert 9.5 to 13 billion cubic meter/yr of water or 25 -35% from Han River flows at Danjiangkou, though the new heightened dam will also have important flood and water control benefits for the downstream Han River areas and to the city of Wuhan (Peng, 2012). Although the central route is designed to meet the need of the north in general, nonetheless, the final destination of this route is the most important one--- to feed the capital city, Beijing. In the first stage, Beijing is expected to receive 1 to 1.2 billion, whereas Henan province is 3.5 billion, Hebei is 3.3 billion, and Tianjin is 1 billion cubic meter of water.

5. Beijing and **SNWTP**

Beijing, located in northern China, has been the political center of China for much of the past seven centuries and is currently the capital of China. It is one of the most populous cities in the world with the size of population in 2012 was over twenty million. Located in dry northern China, Beijing has two major rivers flowing through the municipality, the Yongding River and the Chaobai River, and flow in a southerly direction. Historically, these rivers were the sources of major water supply to the city. After the revolution, the central state built up Guanting and Miyung reservoirs to provide water to Beijing and adjacent areas in Hebei province. As Beijing continued to expand its size, these two reservoirs recently supplied water only to Beijing.

At the same time, the Beijing municipal government used every possible measure to increase water supply and to reduce water consumption. Since the 1990s, the city has been implanting an industrial structural adjustment project that moved heavy industries out of the city and promoted instead those high tech industries. To avoid overuse of water, Beijing Municipal Government also adjusted water prices many times (Banchongphanitha et al, 2008). In addition, the city Government also tried other measures, such as persuade people to change their habits on water use, promote the use of recycled water by building more sewage treatment plants, in order to achieve water conservation.

Table 2. Water Resource in Beijing (2001-2008)

(Unit: One hundred million cubic meter)

	Water Resource			Water Consumption				
		Surface Water	Ground-water		Surface Water	Ground-water	Recycled Water	Transfer Water
2001	19.2	7.8	15.7	38.9	11.7	27.2	-	-
2002	16.1	5.3	14.7	34.6	10.4	24.2	-	-
2003	18.4	61	14.8	35.8	8.3	25.4	2.1	-
2004	21.4	8.2	16.5	34.6	5.7	26.8	2.0	-
2005	23.2	7.6	18.5	34.5	7.0	24.9	2.6	-
2006	24.5	6.0	18.5	34.3	6.4	24.3	3.6	-
2007	23.8	7.6	16.2	34.8	5.7	24.2	5.0	-
2008	34.2	12.8	21.4	35.1	4.7	22.9	6.0	0.7
2009	21.8	6.8	15.1	35.5	3.8	19.7	6.5	2.6
2010	23.1	7.2	15.9	35.2	3.9	19.1	6.8	2.6
2011	26.8	9.2	17.6	36.0	4.8	18.8	7.0	2.6

Source: Beijing Statistic Bureau, 2010

Through those efforts, Beijing's consumption of water has largely decreased (table 2, 3), in which the use of ground water has been largely reduced whereas the consumption of recycled water has increased rapidly. In addition, now the domestic usage of water becomes the largest share of water supply, replacing agricultural irrigation and industrial uses. However, due to the increase of population, it still suffered from serious water shortage problem. Beijing constantly is in thirsty condition. In the past decade, the shortage in some years reached as high as 2 billion cubic meter (table 3). Transferring water from the south to meet the demand of Beijing, especially for the drinking water, is a policy that the central state has to adopt. The new project creates tensions among regions and cities that call for the central state to step in to solve the conflicting water supply problem.

Table 3. Water Consumption in Beijing

(Unit: One hundred million cubic meter)

	Water Consumption	(One billion cubic meter)			Water Resource	Water Shortage	Population （100000）
		Agricultural Irrigation	Industrial Use	Urban Domestic Use			
1980	50.54	31.83	13.77	4.94	26	24.54	904.3
1985	31.71	10.12	17.2	4.39	38	-6.29	981
1990	41.12	21.74	12.34	7.04	35.86	5.26	1086
1991	42.03	22.7	11.9	7.43	42.29	-0.26	1094
1992	46.43	19.94	15.51	10.98	22.44	23.99	1102
1993	45.22	20.35	15.28	9.59	19.67	25.55	1112
1994	45.87	20.93	14.57	10.37	45.42	0.45	1125
1995	44.88	19.33	13.78	11.77	30.34	14.54	1251
1996	40.01	18.95	11.76	9.3	45.87	-7.86	1259
1997	40.32	18.12	11.1	11.1	22.25	18.07	1240
1998	40.43	17.39	10.84	12.2	37.7	2.73	1382

	Water Consumption	(One billion cubic meter)			Water Resource	Water Shortage	Population （100000）
		Agricultural Irrigation	Industrial Use	Urban Domestic Use			
1999	41.71	18.45	10.56	12.7	14.22	27.49	1257
2000	40.4	16.49	10.52	13.39	16.86	23.54	1382
2001	38.9	17.4	9.2	12.3	19.2	19.7	1383
2002	34.6	15.5	7.5	11.6	16.1	18.5	1423
2003	35.8	13.8	8.4	13.6	18.4	17.4	1456
2004	34.6	13.5	7.7	13.4	21.4	13.2	1493
2005	34.5	13.2	6.8	14.5	23.2	11.3	1538
2006	34.3	12.8	6.2	15.3	24.5	9.8	1581
2007	34.8	12.4	5.8	16.6	23.8	11	1633
2008	35.1	12	5.2	17.9	34.2	0.9	1695
2009	35.5	11.4	5.2	18.9	21.8	13.7	1755
2010	35.2	11.4	5.1	18.8	23.1	12.1	1961.9
2011	36	10.9	5	20.1	26.8	9.2	2018.6

Source: Beijing Statistic Bureau, 2010

5.1 Beijing vs water-supply provinces

The SNWTP is a water transfer project, which intends to transfer not only water but also *clean* water to the north, which necessarily affects the economy of the provinces located in the water supply area, including Henan, Hubei and Shaanxi provinces. Some of the most salient ones were:

First, the expansion of the Danjiangkou Reservoir would flood even more farmland and evacuate tens of thousands of farmers from their homeland. According to the plan, Henan and Hubei provinces have to move out a total of 330,000 people. Most of them are farmers, and most of these farmers have to migrate to the neighboring counties. Although these farmers in the relocation process can be partially compensated (each person can get RMB $600 per year for 20 years)(Ching, 2010), and can be assigned to a small piece of farmland in the new residential areas, but they have lost local connections and have difficulty to find job in the new cities, not to mention that the resettlement costs are far more than that local governments could have afforded (Lu, 2010).

Second, local governments along the cannel of the SNWTP areas also have been severely affected in terms of economic development. It is because of the SNWTP that the local government on the one hand has lost a lot of farm land to develop local agriculture, and on the other hand is forbidden to promote industrial development which may cause water contamination. As a result of both factors, the fiscal revenue of those affected local governments are becoming worsened (Yang, 2010).

Third, similar damages on economic development have affected the local governments that located around the dam areas. Danjiangkou reservoir is so big that has 4,700 km in circumference, which covers parts of three provinces of Hubei, Henan, and Shanxi. Many local states in those areas use water resource as sites to develop tourist or other industries that have resulted in the deterioration of water quality of the reservoir. In other words, reservoir has been the source of their economic development (Wu, 2009). As the date of water transfer is approaching, it is obvious that these industries have to be shut down.

Local vs local

In fact, the affected provincial governments, such as Henan and Hubei, already complained that the project has cost too much for their own provinces, because the project places too much financial burden on environmental protection at the expenses of local economic development. Especially that the closure of polluting enterprises already reduced local governments' fiscal income and those laid-off workers also caused social problems.

In addition, for the relocation of affected rural migrants, although the costs will be paid by "Central Line Water Transfer Company", local governments still have to pay the administrative expenses. Therefore, the local governments in water-supply area always ask more financial subsidies from the company. According to local immigration authorities, an immigrant' relocation probably needs to spend RMB $70,000, including resettlement housing, infrastructure and transportation. Although the central state (the company) has transferred monetary payments each year to local governments, the latter still faced the double increase of administrative expenditure and reduction of income. In the four related provinces, Hubei and Henan especially hope to get more financial subsidies and compensation that creates tension between Beijing and those provinces.

5.2 An emergent governance mechanism

The above features emerged in the process of constructing the SNWTP have created tensions between Beijing and other provinces. The central state tries to build up a new governance mechanism to reduce the tension on the above issues, which may largely reduce the phenomenon of fragmented state authorities and enhance the regional collaborations among state actors and provincial governments. This

especially shows in the following features:

First, the state enhances the existing administrative frameworks and functions. The State Council set up the Water Diversion Project Construction Committee Office in 2003, to be responsible for the administration of construction projects in the process of the construction of the SNWTP. This Committee has the Deputy Prime Minister of the State Council as its Director, and has other members such as the director of the National Development and Reform Commission, the governors of the People's Bank and the Development Bank, Ministers of relevant ministries, and also related provincial governors. The main duties of this office included drafting relevant laws and regulations; supervising the total investment and construction of the project; coordinating issues regarding immigration, environmental protection and ecological construction of the project, etc. (CSNWTPC, 2010). Besides the construction, recently, the central government also announced the "Danjiangkou reservoir area and upstream water pollution control and soil conservation implementation assessment methods" to ask local government officers to protect the water from pollution, otherwise their career paths will be affected by the quality of water (Jiang, 2013).

Second, the central state coordinated provincial and municipal government to share the financial burden of the construction fee. The central state established a "Water Transfer Company" (調水公司) in order to solve the problems of financing, which requested each water-receiving province and municipal city invest in proportion equivalent to the amount of the water they want to transfer. Take the "Central Line Water Transfer Company" as example, as a state-owned company, its total capital is shared by the central and local governments, including Hubei, Henan, Hebei, Tianjin, Beijing. By the end of 2009, Beijing already invested RMB $4.07 billion to the transfer project, Tianjin invested RMB $886.5 million, Hebei invested RMB $ 499.1 million, and Henan has invested RMB $542.5 million (CSNWTPC, 2010). According to the plan, the Water Transfer Company is responsible for the main project's financing, construction, operation, management, and repayment. In addition to the Water Transfer Company, there are also provincial and municipal water companies (水務公司) who buy the water from the water transfer company and sell it to the citizen. On the other side, the Water transfer Company would buy water from the Water Resources Company (水源公司) which set up by the central government and cooperate with the local governments in water-supply areas to manage and protect

the water recourses (Yang, 2011).

Third, ecological compensation mechanisms are established to alleviate financial burden of those water supply areas. One the one hand, the water-receiving areas should help the water-supply areas to solve its economic problem. Thus, the central state asks the water-receiving areas to donate money directly to the water-supply area for economic compensation. For example, Beijing contributed RMB 5.4 billon to the central state for the construction of SNWTP, RMB 2 billion for resettlement, all those funds were redirected to the water supply areas via the central state. In this process, the major tasks of the main office of the SNWTP were to analyze the situations and provided information for the corresponding partners. Besides, in 2012, the Beijing Municipal Government provided RMB$ 50 million funding to Henan Provincial Government as compensation (Jia, 2011; Kim, 2012). Furthermore, the Beijing Municipal Government also signed cooperation agreement with Henan Provincial Government and promised that it would invest as high as RMB$120 billion in Henan's agriculture and tourist industry (Li, 2013; Liu, 2013). This is called 'corresponding partners' (對口協作) in which water receiving Beijing in the north collaborated with water sending provinces so as to mutually develop local economies by more ecologically friendly approaches in the reservoir area. Beijing municipal government has the incentive to invest into the areas in order to divert polluting industries away from the reservoir area and to protect water from industrial and agricultural pollution.

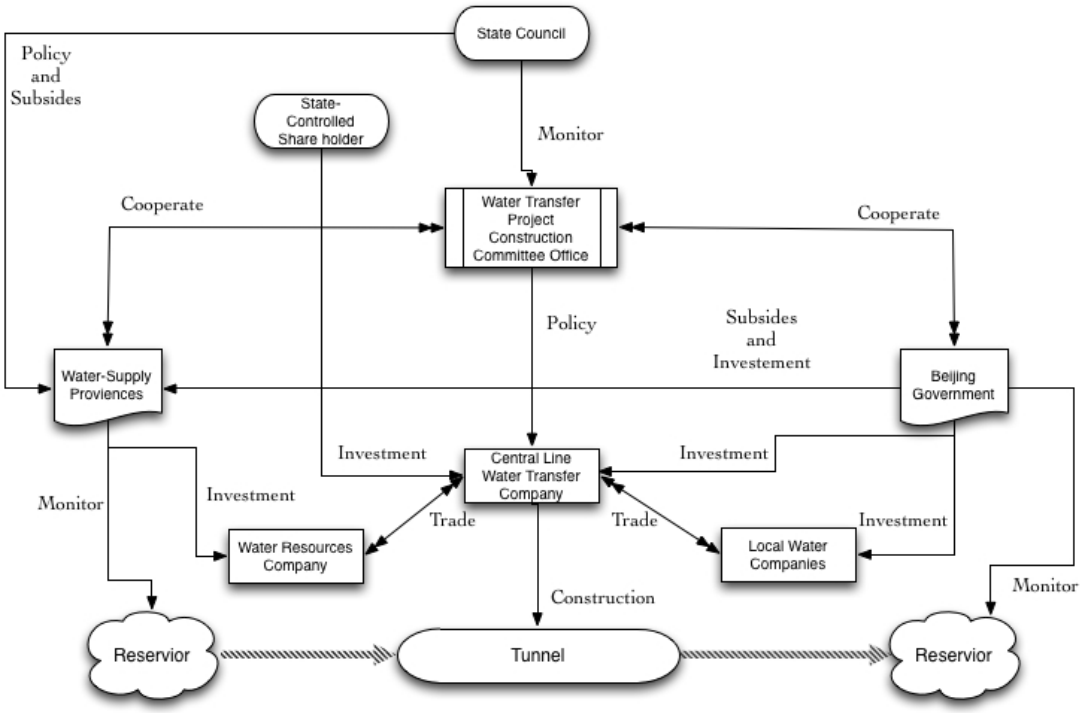
On the other hand, market-oriented compensation, via the adjustment of water price, is also installed. Through which, the water resource company receive more income from the water transfer company as to invest more money into the water resource protection. The above approaches have been developing to ease the tension between Beijing and the water supply provinces in which the central state plays an important role in the negotiation process. Nonetheless, all the processes that have gone through are directing waters to the needs of Beijing municipality.

In fact, we have found that the role of the central state has become increasingly important again due the competition among water receiving and water supply areas. For Hubei and Henan provinces, they cannot resist from the state's demand on transferring water to the north, because according to Water Law, the property right of water belongs to the central state. What they can do therefore was to ask the central

state to give more economic compensation and subsides. The central state thus transferred the requests to those better economically developed water receiving areas to share the financial burden. For Beijing, it still needs the central state to help to maintain the water quality sending from Danjingkou Reservoir, because Beijing has the same administrative status as other provinces, it cannot order other provinces to check water quality for the city. Beijing can only ask the central state for help. In other word, Beijing cannot solve the clean water supply problem by its own territorial power, no matter it is the issue of water quality or water pollution prevention, it instead needs the central state to be more actively to engage in cross-boundary governance mechanism that is based upon coordination power in a much larger geographic scale.

In sum, the central state has changed its command and control mode of governance of water to a collaborative type in which various levels of governments are cooperating to construct the SNWTP in order to solve the water shortage problem in the north; whereas the north also made their effort in compensation for the economic loss of the south by providing financial and economic assistance to the affecting water sending areas. The governance mechanism can be shown in figure 3.

Figure 3. Governance mechanisms of SNWTP



Source: Made by the authors

6. Conclusion

Water governance in China has been in the wave of transformation. This paper uses the case of SNWTP to illustrate the transformation. We show that the rapid urbanization and industrialization in the north, plus the already water scarcity condition, has created severe water wars among local states. The realization of SNWTP was the central state's project to ease the tension generated from water shortage and from multi-scaler water wars. However, in contrast to the command and control mode of water governance in the past, this time the central state has built the governance based on a collaborative type that involved both central and local states, as well as the collaborations among local states.

The state's rescaling on water governance shows in its technological capability in constructing such a large scale water transferring project, in terms of de-territorializing and re-territorializing the water from southern to northern China. It also shows in its power in building political alliance that regulates the water flows as to ease the competition among stakeholders. The combination of these two capabilities shows that, as Feitelson and Fischhendler (2009:730) argue, "the ability of state agents to centralize water management at the national level was facilitated by improvements in technology, which reduced the cost of water abstraction and conveyance and hence allowed wider economies of scale". Therefore, the governance mechanisms that go through the state-created Water Diversion Project Construction Committee Office, on the one hand creates bureaucratic cooperation among state's different department, and on the other hand build alliance between central and local states as well as among local states. Indeed, the chaotic water wars begot the central state to re-centralize its state power in water regulation, however, this is done by collaboration rather than command and control modes, which is different from the former pattern of water control.

Having studied the above state rescaling on water governance, shall we expect the emerging type of water regulation on this SNWTP is the future of China's water governance? The answer is both Yes and No.

China's environmental crisis has become exacerbated in recent years, especially on air and water pollution. It is therefore an emergent issue that every local government has to face. However, environmental issue is beyond border, it has to involve intergovernmental collaboration to be effective. It is because of this environmental crisis that the Chinese central state, under the leadership of Jin ping Xi is promoting ecological development, or ecological civilization, in his new state policy. In this sense, we can expect that collaborations between and among different levels of government will increase rapidly. In fact, the case of Beijing has shown that

the city not only made its own effort in reducing water consumption and changing citizen's life style, it also help remote water supplying areas to develop more ecologically friendly industries in order to assure Beijing's citizen can drink the clean water sending from the south.

Nonetheless, what we have observed in the SNWTP case is the lacking of non-governmental organizations (NGOs) in either the decision making or the implementation processes. Different from other parts of the world, where environmental NGOs always play important role in environmental governance mechanisms, the Chinese case mainly involves governmental agencies. However, as more and more NGOs are engaging in major environmental protection actions or sometimes in decision making in contemporary China, the Chinese central and local states seem to have much more degree of tolerance than they did before on those organizations (Lu, 2007; Zhong and Mol, 2008), a new type of governance mechanism that involves the participation of NGOs and citizens may emerge to become dominant pattern in the future.

References

Bakker, K. (2002) From state to market: Water mercantilización in Spain. Environment and Planning A 34: 767 – 790.

Banchongphanitha, Latdaphone, Chunxiao Chena, and Shinji Kaneko. 2008. "Urbanization and water issues in Beijing." P. 396 in *ConAccount* 2008.

Beijing Statistic Bureau. 2010. *Beijing statistical yearbook*. Beijing: China Statistic Press.

Bray, Francesca. 1994. *The rice economies: technology and development in Asian societies.* University of California Press.

Ching, Zheng. 2010. "The 'South-to-North Water Transfer Project' have to move 345 thousand people to other places in 2 years. It's more difficult than the 'Three Gorges'." *Want Daily* Retrieved September 26, 2013 (http://news.chinatimes.com/wantdaily/0,5253,11052101x112010063000514,00.html).

Conca, Ken. , 2006, *Governing Water: Contentious Transnational Politics and Global Institution Building.* Cambridge, MA: MIT Press.

CSNWTPC (China South-to-North Water Diversion Project Construction Yearbook Compilation Committee). 2010. *China South-to North Water Diversion Project Construction Yearbook*. Beijing: China Electric Power Press.

Edin, Maria. 2003. State Capacity and Local Agent Control in China: CCP Cadre Management from a Township Perspective. *The China Quarterly* 173: 35-52.

Feitelson, E., Fischhendler I. 2009 Spaces of water governance: the case of Israel and her neighbors. Annals of the Association of American Geographers 99:4,728 — 745.

Imlay, Samuel J., and Eric D. Carter. 2012. "Drainage on the Grand Prairie: the birth of a hydraulic society on the Midwestern frontier." *Journal of Historical Geography*. 38(2): 109-122.

Jia, Yue. 2011. "Beijing's official response to water shortages, and the south-to-north water diversion project." Retrieved March 19, 2013 (http://society.people.com.cn/GB/86800/14747468.html).

Jiang, Han. 2013. "The water quailty of the central route of the South-to-North Water Transfer Project will included into the consideration of local government officers." Retrieved September 12, 2013 (http://big5.xinhuanet.com/gate/big5/news.xinhuanet.com/politics/2013-07/12/c_116509099.htm).

Kim, Yu. 2012. "Receiving area of Beijing, Tianjin will offer the compensation to the Water Source Area of South-to-North Water Diversion Project." Retrieved March 19, 2013 (http://news.sina.com.tw/article/20121025/8135077.html).

Li, Shaofei. 2013. "Ecology and economy in parallel: the South will become a scenic corridor along the." Retrieved March 19, 2013 (http://www.gd.xinhuanet.com/newscenter/2013-01/06/c_114262265.htm).

Li, Wei. 2011. "Market failure or governmental failure? A study of China's water abstraction policies." *The China Quarterly* 208:pp 951–969.

Liu, Huan. 2013. "The Miyun Reservoir will have the water from south next year." Retrieved March 19, 2013 (http://news.sina.com.cn/c/2013-01-09/021925987800.shtml).

Liu, Yiliang. 2013. “Mu Weimin discuss with the Beijing Municipal Government about the counterpart support of the South-to-North Water Diversion Project.” Retrieved March 19, 2013 (http://www.0377888.com/news/13/0312/151505.shtml).

Lu, Yang. 2010. “The ‘South-to North Water Transfer Project’ makes the immigration’s life difficult.” *Voice of America*. Retrieved September 26, 2013 (http://www.voachinese.com/content/article-20100426-china-south-north-water-diversion-project-make-migrant-life-difficult-92092104/466872.html).

Lu, Yiyi. 2007. Environmental civil society and governance in China. *International Journal of Environmental Studies* 64 (1): 59-69.

Ma, Jun. 2004. *China’s water crisis*. Norwalk, Conn: EastBridge.

Ministry of Water Resources. 2010. *China Water Statistical Yearbook 2011*. Beijing: China Water Publication.

Molle, François, Peter P. Mollinga, and Philippus Wester. 2009. “Hydraulic bureaucracies and the hydraulic mission: flows of water, flows of power.” *Water Alternatives* 2(3):328–349.

Norman, Emma S. and Bakker, K. 2009. Transgressing Scales: Transboundary Water Governance across the Canada – U.S. Border.*Annals of the Association of American Geographers*. 99 (1): 99- 117.

Oi, Jean C. 1995. “The role of the local state in China’s transitional economy.” The *China Quarterly* 144(1):1132–1149.

Peng, Shugang. 2010. “China’s Legal System for Water Management: Basic Challenges and Policy Recommendations.” *Water Resources Development* 26(1):3–22.

Reed, Maureen G. and Bruyneel, Shannon, 2010, Rescaling environmental governance, rethinking the state: A three-dimensional review, Progress in Human Geography, 1–8, doi: 10.1177/0309132509354836

Reisner, Marc. 1993. *Cadillac desert: the American West and its disappearing water*. Penguin Group USA.

Rong, Fang. 2011. *Governing Water in China: Implications From Four Case Studies*. Laboratory on International Law and Regulation, School of International Relations and Pacific Studies, University of California, San Diego.

Standing Committee of the National People's Congress (SCNPC). 1988. "*Water Act*." Retrieved March 19, 2013 (http://baike.baidu.com/view/39059.htm).

Standing Committee of the National People's Congress (SCNPC). 1996. "*Water Pollution Amendment Act."* Retrieved March 19, 2013 (http://baike.baidu.com/view/250547.htm).

Steward, Julian H. 1978. "Initiation of a research trend: Wittfogel's irrigation Hypothesis." *Society and History*. Essays in Honor of Karl August Wittfogel, La Haya, Mouton Publishers 3–14.

Swyngedouw, Erik. 2004. *Social Power and the Urbanization of Water: Flows of Power*. Oxford University Press, USA.

Swyngedouw, Erik. 2007. "Technonatural revolutions: the scalar politics of Franco's hydro-social dream for Spain, 1939–1975." *Transactions of the Institute of British Geographers* 32(1):9–28.

Swyngedouw, Erik. 2009. "The Political Economy and Political Ecology of the Hydro-Social Cycle." *Journal of Contemporary Water Research & Education* 142(1):56–60.

Su, Xiaokang. 2013. *The Era of Dragonslayer*. Taipei: INK Literary Monthly Publishing Co.

Tilt, B. 2009. *The struggle for sustainability in rural China: Environmental values and civil society*. NY: Columbia University Press.

Wang, Hao. 2010. *Chinese water resource issues and sustainable development strategy.* Beijng: China Electric Power Press.

Wang, Yi. 2012. "China's Water Issues: Transition, Governance and Innovation." *The Management of Water Quality and Irrigation Technologies* 117.

Wehr, Kevin. 2004. *America's fight over water: the environmental and political effects of large-scale water systems*. Routledge.

Wester, Philippus. 2008. *Shedding the waters: institutional change and water control in the Lerma-Chapala Basin, Mexico*. Wageningen University Wageningen.

Wittfogel, Karl August. 1957. *Oriental despotism: a comparative study of total power*. Vintage Books ed. N. H: Yale Univ. Press.

Worster, Donald. 1992. *Rivers of empire: water, aridity, and the growth of the American West.* New York ; Oxford, England: Oxford University.

Wu, Hai-Feng. 2009. *Construction of ecological megalopolis and coordinated development of regions.* Beijing: Social Sciences Academic Press (China).

Yang, Ming. 2010. "The 'South-to-North Water Transfer Project' faces the challenge of immigration resettlement and environmental impact." *Voice of America*. Retrieved September 26, 2013 (http://www.voacantonese.com/content/article-20110607ambitious-plan-for-china-water-crisis-123344738/930663.html).

Yang, Yun-Yan. 2011. The research on the south-north water diversion project and social-economic sustainable development of central China. Beijing: Economic Science Press.

Zhong, Li-Jin, and Arthur P. J. Mol. 2008. Participatory environmental governance in China: Public hearings on urban water tariff setting. *Journal of Environmental Management* 88 (4): 899-913.

四、

Coordinating Resettlement Communities - How Has The Local State Responded To The Transformation Of Central State Policy In Yunnan?

Sabrina Habich, Lecturer
University of Tübingen, Germany.
sabrina.habich@uni-tuebingen.de

Jenn-Hwan Wang, Professor
National Chengchi University, Taiwan, R.O.C.
wangjh@nccu.edu.tw

Abstract

In 2002, Hu Jintao introduced his concept of a harmonious society (和谐社会) that together with the scientific development concept (科学发展观) represents the Hu administration's vision for China's future economic and social development. This new direction of development, despite of being aimed at a variety of policy areas, had profound implications for rural and regional development strategies. One of the main themes that President Hu introduced as part of the scientific development concept was to put people first (以人为本), a guiding principle of many policies to come, including the new resettlement regulations governing water resources and hydropower projects published in 2006.

Drawing on fieldwork conducted in resettlement communities along the Lancang River in Yunnan province, this article aims to analyze the impact that more socially oriented resettlement policies have had on the way in which local governments implement resettlement policies. It will be shown that in line with upper level requirements, local cadres have begun to devise a variety of strategies including soft coercion, negotiation, and propaganda work to implement resettlement policies, providing evidence of a softer type of authoritarianism on the grassroots level.

Introduction

As of July 2006, a total of 25 million people had been resettled in the course of water resource projects in China, of whom 22.9 million were rural migrants. It was estimated that the dams being planned, at that time, would require the resettlement of another 600,000 people (Du, Zhong et al., 2011: 6). The director of the resettlement bureau in Nujiang Prefecture referred to dam-induced resettlement as the "number one difficulty under heaven" (天下第一**难**事) (Li, 2013). The construction of the Three Gorges Dam, in particular, has drawn the attention of scholars and bureaucrats to the problem of resettlement induced by large hydropower projects spurring the development of new resettlement regulations in recent years. These new regulations are in line with the new focus of the central government on social development which has found expression in development paradigms that have surfaced during the Hu-Wen era such as the concept of building a Socialist Harmonious Society (社会主义和谐社会) and the Scientific Development Concept" (科学发展观).

This article aims to trace the change of resettlement regulations, and the way in which these have been implemented by local governments (i.e. county and township governments) in Yunnan province. In doing so, this article intends to contribute to the discussion on central-local relations and the extent to which the central state is able to encourage local policy implementation according to central level goals. Yang Zhong (2003) suggested that, due to the increased autonomy of the local state and the concomitant potential for discrepancies between central policy stipulations and local policy implementation, the center has to rely on Party organization and discipline in order to control possible centrifugal tendencies. Earlier research has

shown that the cadre management system[3] in China has led to two main developments: first, due to the fact that the assessments of achievements by local cadres are undertaken by higher government levels, the former tend to respond to the demands of their superiors rather than to local communities. Second, local cadres prefer to implement policies that have measurable (hard) targets, rather than non-quantifiable (soft) targets. Since the former mainly involve economic targets, local governments tend to implement economic policies instead of more socially-oriented policies (O'Brien and Li, 2006).

Accordingly, a large number of studies on central-local relations have focused on the way in which the local state has responded to economic reform policies introduced by the central government during and after the 1980s. Montinola, Qian and Weingast (1995) observed the development of Chinese-style federalism which, in their view, has acted as the motor for China's rapid economic growth. In line with this development, a number of researchers have emphasized the role played by local government autonomy in developing the economy in their jurisdictions. Blecher and Shue, for example, distinguished between "developmental" and "entrepreneurial local states" (Blecher, 1991, Blecher and Shue, 1996, 2001), arguing that some local governments fulfill strikingly similar roles to those that have been identified among newly-industrializing countries in East Asia.

In a similar vein, Oi (1992, 1995) and Walder (1995) illustrated the ways in which local governments at county level function as corporate entities, a phenomenon that Oi has called the "local corporatist state". Wang et al. (forthcoming) have extended this thesis to explain how the local state has dealt with the more socially and environmentally oriented policies introduced by the central state in recent years. In

[3] For detailed accounts on the management of government cadres, see Burns (1989), Edin (2003), Landry (2008) and Manion (1985).

their analysis of small hydropower development in Yunnan province, they suggested that local states, in order to fulfill the requirements of poverty reduction and environmentally-friendly electricity provision, find innovative means to collaborate with the private sector. This does not only proof that local states, instead of only focusing on economic development have begun to pay attention to (formerly) soft policy targets, such as environmental protection; but it also shows that local cadres are able to come up with innovative strategies in order to implement central level demands under severe financial constraints.

In these studies on local state-society relations, society merely comprises economic actors, while the relations between local state agents and the communities in their jurisdictions have frequently been neglected. Those studies that have touched upon local state behavior towards local communities mostly paint a bleak picture of local state-community relations. Pressured to increase GDP growth in their jurisdictions, local cadres reportedly resort to land grabbing, excessive taxation, and violent evictions (e.g. Zweig 2000; Hsing 2010).

This article attempts to reassess the role of the local state in their dealings with local communities in the face of the more socially-oriented policies mandated by their superiors at central and provincial levels. We ask the question to what extent the 'human-oriented (以人為本)' rhetoric of the central state is taken up by local cadres, and to what extent it is applied to processes of local policy implementation. The hydropower and resettlement bureaucracy is taken as a case to show that even under hard budget and time constraints imposed by profit-driven energy companies, local cadres choose to follow the official line of 'human-oriented resettlement'.[4] It will be

[4] For an analysis of various types of pressures put on local cadres by the hydropower industry, see Habich (2013).

shown that throughout most of the resettlement process, local cadres refrain from applying outright coercive strategies when relocating migrant communities, providing evidence of a softer type of authoritarianism on the grassroots level, as well as the ability of the central state to steer local policy implementation through central-level policy adjustments.

The present article draws on empirical findings collected throughout three rounds of field research conducted in Yunnan province between 2011 and 2013. Most of the interviews used in the present article took place in two resettlement villages in Pu'er municipality that have been resettled in the course of the construction of the Nuozhadu Dam[5]. Additional interviews have been conducted with industry representatives, academics, NGO activists and government representatives at central, provincial, county, and township levels. In order to protect the anonymity of our interview partners, the names of the resettlement villages and interviewees have either been changed or omitted.

The next section introduces changes in China's resettlement policy. This is followed by an analysis of implementation strategies applied by two counties in Yunnan. It will be shown that the local state now devises a strategy of, what we term, *soft coercion* including extended processes of negotiation with migrant communities, the introduction of participatory rights, and an increase in propaganda work to implement resettlement policies. Finally, we suggest reasons for this shift towards soft coercion, and discuss its implications for central-local relations in China.

[5] The Nuozhadu Dam is the fifth of an eight-dam cascade, the construction of which is planned for the middle and lower reaches of the Lancang River in Yunnan Province. The project falls within the borders of Pu'er, a prefecture-level city, and Lancang Lahu Autonomous County.

‘Putting People First’ in Dam-induced Resettlement Policy

Although the government introduced its first resettlement regulations in 1953 (see Xinhua, n.d.), resettlement before the 1980s has been regarded as an unsuccessful endeavor, even by Chinese officials (Heggelund, 2004: 62). Wang (2010: 78) even argued that, before the 1980s, China did not have any specific resettlement rules or regulations, or any standards regarding resettlement planning, let alone any appropriate standard for resettlement compensation. Due to the lack of adequate planning and compensation mechanisms for development-induced resettlement, the living conditions of dam migrants have constantly remained precarious (Jun, 2000; Heggelund, 2004).

During the 1980s, the Chinese government developed a basic framework for reservoir-induced resettlement compensation, an effort that found full expression in 1991, when the State Council announced the first specific rules on resettlement planning, implementation and compensation: the “Regulations for Land Appropriation and Resettlement Induced by Large- and Medium Sized Water Conservancy and Hydropower Projects (大中型水利水电工程建设征地补偿和移民安置条例)” (State Council, 1991). A revised edition of these regulations was circulated in 2006, highlighting the continued importance of dam-induced resettlement processes. Among others, the new regulations raise the amount of compensation paid to resettled people, clarify the bureaucratic structure of resettlement administration, and introduce a more “human-oriented” resettlement. Compared to the 1991 regulations, the new policy goes into much more detail regarding resettlement planning, post-resettlement support and the monitoring process (State Council, 1991; 2006a).

Furthermore, the principles to which compensation and resettlement work should

abide by have changed. While the first principle of the 1991 regulations was state-centered in that it demanded “the resettlement community and the host community to obey to the way interests are arranged in the state as a whole” (State Council, 1991: Section 1, Article 4, No. 1), the 2006 regulations focus on the resettled people in stating that “resettlement and compensation shall be people-oriented (以人为本)” and “the legitimate rights of the resettled people have to be guaranteed and their livelihood and development needs satisfied” (State Council, 2006a, Section 1, Article 4, No. 1). Other changes include the amount of compensation paid for land, which was raised from three to four times the average value of land to 16 times of its average value during three years prior to land requisition. Furthermore, specific standards governing the maximum amount of compensation to be given to resettled people were removed from the new regulations in 2006.

As already mentioned, the new regulations include a separate section regulating post-resettlement support. In order to further strengthen post-resettlement support and integrate the different policies that have governed “left-over problems” until then, in 2006, the State Council published the “Opinions on Improving Post-Reservoir-Resettlement-Support Policies (国务院关于完善水库移民后期扶持政策的意见).” Starting from July 2006, both people who have been resettled before that date as well as new resettled people are entitled to an annual amount of 600 yuan for 20 years.

China’s central government is increasingly aware of the importance of resettlement work for the country’s hydropower strategy, and acknowledges past mistakes in this regard. After a cabinet meeting held in May 2011, the State Council released a statement that officially acknowledged the problems caused by the Three Gorges Dam, and promised to increase efforts to reduce negative environmental and social

impacts in areas affected by the dam. It was pointed out that the government will undertake efforts to curb water pollution, promote biological diversity and raise the standard of living of relocated residents, by "stick[ing] to the principle of putting people first and promoting sustainable development in post-construction work" (Xinhua, 2011).

The next section of this article draws on fieldwork conducted in resettlement villages in Yunnan province to show how these policy changes towards more "human-oriented" resettlement have led the local government to apply softer forms of coercion when relocating migrant communities.

Soft Coercion as the New Strategy

> *The biggest change of the policy has been the addition of the human-oriented aspect. Now we have to respect the opinions of the people when resettling them* (Official from township resettlement bureau in Pu'er, 13 February 2013).

For the Yunnan provincial government and the corresponding resettlement bureau the central level policy update meant to design more specific regulations which would make the broad central policies applicable to the local situation in Yunnan. This is why in 2008, the provincial government issued opinions on implementing the new resettlement regulations published by the State Council (Yunnan Government, 2008). Accordingly, in 2008 Pu'er government also issued new regulations governing resettlement work within its jurisdiction, thereby replacing the city's former 2004 policy (Pu'er Government, 2008).

Resettlement officials on the county and township government level in Pu'er are the ones responsible for undertaking the relocation of migrant communities. In order to come to terms with the new demands introduced by policy changes in the field of

dam-induced resettlement, and the need to relocate migrants according to the tight schedules specified by project developers without causing social instability, local governments have begun to devise a variety of strategies to convince migrants to leave their homes, and relocate to new villages.

The changes of local government behavior brought about by resettlement policy change can be summarized as follows:

- Increase in propaganda and thought work by county and township level governments: Local cadres now spend extensive periods of time in villages about to be resettled. Through brochures and meetings, migrants learn about China's hydropower strategy, the dam for which they have to relocate, the relocation process and relevant laws.
- Expansion of grassroots government work after resettlement: First, individual cadres are made responsible for smooth resettlement processes of the villages. The system of sent-down cadres is now also applied to resettlement. In addition, in order to strengthen political work in resettlement villages, local governments have begun to recruit dam migrants into the resettlement bureaucracy.
- Introduction of participatory rights for resettlement communities: Migrants now get the choice to decide about certain aspects of the resettlement process, including resettlement mode and resettlement village.
- Responsiveness of local government to migrant demands: There has been an increase in negotiations between local cadres and migrant communities as regards resettlement processes. Rather than suppressing migrant protests, local cadres try as much as possible to solve societal demands.

The major reason for why local cadres follow the newly introduced resettlement

policy instead of sticking to former measures of hard coercion is the design of the cadre evaluation mechanism.

Just like in other policy fields, local governments have to sign an annual responsibility agreement with their superiors, determining the targets that need to be achieved within one year. In the case of dam-induced resettlement, the agreements set out the general responsibilities of the government during the resettlement processes, including the number of people that have to be resettled within one year as well as the necessity to fulfill new policy goals, such as the *yiren weiben* principle (State Council 2006a; Interview, NE120218).[6] In addition to these agreements, in recent years, resettlement bureaucrats have begun to introduce the "one-item veto rule" (一票否决) into resettlement administration, meaning that if local governments do not meet designated targets, achievements in all other policy fields are offset, seriously limiting local cadres' chances of political advancement. In particularly this applies to the number of letters and visits a government unit receives from dam migrants (e.g. Yunnan Government, 2012). Thus, in order to keep complaints by migrants at a minimum, local cadres increasingly tend to give in to migrant demands, and to ensure smooth resettlement processes.

Apart from the cadre management system, another reason for why local cadres have begun to implement soft policy targets in the course of dam-induced resettlement processes is the stark increase in cadre training programs on 'human-oriented' resettlement which have raised awareness among local officials that "military-style" relocation campaigns are unable to contribute to successful resettlement results, and that social instability caused by dam migrants is a serious political issue (Interviews,

[6] For an in-depth analysis of environmental performance evaluations, see Heberer and Senz (2011).

NJ130304; SM110812).

In the following, the new strategies applied by local governments during resettlement processes will be presented in more detail.

Propaganda and Thought Work

Preparations of resettlement work for the Nuozhadu Dam began in 2002, when the local government began to compile an inventory of all the objects located and people residing within the future construction and reservoir areas (Simao Local History Committee, 2003: 163). The recording of the inventory was organized by county governments which, in turn, ordered township and village cadres to undertake the survey work in their respective jurisdictions. Depending on property ownership, cadres had to sign an agreement with each household and village collective confirming the value of all objects to be compensated and the number of people eligible for resettlement compensation. In addition, each migrant household had to sign an agreement confirming their willingness to resettle before a specified date.

In order to inform villagers about the upcoming resettlement process and get them to sign the agreement, one local government team was responsible for 'propaganda and thought work,' which included several rounds of meetings with the entire village population, and, more recently, also the distribution of a booklet that introduces China's hydropower strategy, the Nuozhadu Project as well as the resettlement process and related policies. According to the booklet, throughout the resettlement process, every migrant has the right to participation, information, choice, expression, and supervision. First of all, migrants have the right to participate in the processes of preparing and revising the property investigation as well as the compensation and

resettlement plans. They furthermore have the right to choose their preferred mode of resettlement, and to supervise the usage of compensation paid out to the collective. Moreover, migrants are entitled to participate and supervise the implementation of official policies by local cadres. In case, policies are not implemented to migrants' satisfaction, or other problems occur during the resettlement process, migrants have the right to appeal in accordance with the law. In return, migrants have to comply with all laws, rules and regulations related to their resettlement. They also have the responsibility to support national construction projects, and follow all related requests to give up farmland and/ or move out of their homes. During the whole resettlement process, migrants should actively participate and support resettlement work (Pu'er Resettlement Bureau, 2011).

In addition, about one year before relocation began, representatives from district, township and village governments came to the village to introduce the national hydropower strategy, and to explain the necessity to construct the Nuozhadu Dam, asking future migrants to support the state's efforts. The group consisted of twenty to thirty local cadres who frequently came to the village for a period of one year. It was their task to hold meetings both with village representatives and with the whole community. Additionally, they walked from door to door to speak with affected households individually.

One villager explains:

> Before our move, the working group came to the village every day for at least two months. They held meetings every single day to tell us about the greatness of the new dam they were about to build. The government was especially warm [热情] to us so we believed them everything. They told us that everything would be fine after resettlement and that they would take care of all potential problems. They also explained that they cannot tolerate any resistance, because

this is a state project (Interview, NDH1208032).

As is the case with most people who are informed about the fact that they have to leave their houses and move to a new home, the villagers at first did not want to be relocated, and refused to sign the resettlement agreement with the local government. According to the group leader (组长) of one resettlement village, in the process of the negotiations between the government and the migrants, the former has applied a particularly skillful tactic to convince the latter to move. The group leader calls the tactic "cheat, fool, threat (骗，哄，吓):"

> *Pian* refers to the fact that the government told us that the resettlement village we were about to move to was a particularly nice place where men can find beautiful women, and where it would even be possible for them to have more than one women at a time. […] All in all they told us that the region of the resettlement village is especially fun [很好玩]. […] *Hong* means that in the beginning the government was very nice to us, and gave us a lot of benefits which later on they deducted from our resettlement compensation. So before the move, in order to convince us that resettlement is good for us, the government gave us 2000 yuan per *mu* of contracted land, and told us that this was a special advantage that we would be granted. The cadres called this money 'field input subsidy [园地投入补助费].' It was paid out to the collective. So the collective received a large amount of money which made us very happy. That's why we thought it's not such a bad thing to move. However, later, after resettlement, the government deducted this field input subsidy from the compensation they still owed us. So in the end that wasn't a special benefit at all. They just paid it out early to convince us to move. […] *Xia* refers to the threats from the government in case we didn't comply with their request to leave our homes. They threatened us that, if we don't move, they would just drag us out of the buildings and move

> us by force. So in the beginning they were really nice, and used sweet words to convince us, but they always added that, if we dare to resist, they had no choice but to make us leave by other means (Interview, ZW130217).

What is worth noting here is that first, the local government emphasizes the scale of the dam project, its importance for China as a country, and the fact that the project is initiated by the central government. In that way, local governments try to win over the hearts of the migrants, and attempt to make them feel as part of a larger undertaking designed to further the nation's future development. It can be assumed that cadres deliberately stress the state's role in the dam project rather than that of large energy corporations that are actually behind these schemes (Interview, KM130222). In doing so, cadres appeal to the migrants' identity as citizens of the PRC which they are now given the opportunity to serve. Second, cadres make sure to be particularly friendly to the villagers, and built up a good relationship with them. This is to increase the trust of the people into the government, and to lower the likelihood of villagers to resist resettlement, and accompanying government demands.

However, a nonresistant migrant community before and during relocation has not been the only consequence of local government propaganda work. Instead, there have been instances in which migrants made use of information provided by the local government to advance their own claims with regard to resettlement. For example, in 2008, the deputy township head visited the village as part of an investigation on the current situation of resettlement preparation. During a meeting with the villagers, the deputy made sure that the overall spirit for resettlement was positive, additionally encouraging the villagers to comply with the local government's resettlement plans. Additionally, he reassured future migrants of the positive future that lay ahead of them. According to the deputy head, one of the

reasons for this was a new policy that central and provincial governments were currently working on and which was going to be implemented in the resettlement village. The policy he was referring to was the long-term compensation mechanism (长效补偿补助)[7] which compared to the formerly dominant big agricultural resettlement (大农业安置) does only provide for the allocation of a small area of land after resettlement, and instead supports migrants financially over a period of up to fifty years depending on the time of operation of the hydropower station in the course of which resettlement took place (Du, Zhong et al., 2011: 27). The deputy township head introduced the mechanism and explained how it would serve as an additional source of income for those who continued to cultivate land or took up jobs in the city, and how it would be especially suitable for the older generation who might rather want to retire than continue to work on their fields.

However, when the deputy head propagated this innovation of the government for resettlement villages, the long-term compensation mechanism was not an official policy, yet, but was merely in the process of being discussed by the provincial government and hydropower companies in Yunnan. When the villagers were subsequently relocated, the mechanism was only being implemented as an experimental program in certain resettlement villages along the middle reaches of the Jinsha River in northern Yunnan (Yunnan Government, 2007) as well as in Lancang County in Pu'er (Lancang Government, 2008).

Therefore, when the deputy head propagated the new policy, the mechanism was only being implemented on a small scale, without any detailed implementing guidelines for how long-term compensation was to be realized in the area affected

[7] The official name for this locally developed mechanism is the "16118 Resettlement Compensation Method" 16118 移民补偿安置方式 (see China Energy News, 2013).

by the Nuozhadu project in Simao. Nevertheless, after hearing about the new policy, the migrants wanted the policy to be implemented in their village which is why they began to pressure the local government.

What is interesting to note here is how the deputy head used the long-term compensation mechanism as a tool to convince farmers of the advantages accompanying resettlement without even knowing how or whether the mechanism would benefit migrants at all. Little did he expect the perseverance with which the villagers continue until this day to pressure the local government towards implementing the long-term compensation mechanism. Thus, in the present case, the impact of the increased flow of information from the government towards the migrants has been twofold.

One the one hand, the propagation of China's hydropower strategy and the importance of the Nuozhadu Dam for Pu'er and China more generally, have lowered resistance against resettlement among the migrants. All villagers that have been interviewed argue that they do not mind resettlement as such, but wish that the government would fairly implement resettlement policies designed to support migrants before, during, and after relocation. On the other hand, this provision of information has caused migrants to follow up on the process of implementation, and make sure that the local government actually acts according to what they originally promised. Thus, while the increased intensity of 'propaganda and thought work' in policy implementation may cheat migrants into leaving their homes without resistance, thereby undermining their right to know, the bits of information provided on resettlement policy have at the same time also increased migrants' knowledge about how resettlement is supposed to be implemented. Even if some of the policy details given by the governmental working group were incorrect, the migrants did not hesitate to remind the resettlement bureau of their previous promises.

Grassroots Government Work After Resettlement

Before, during, and after resettlement street-level bureaucrats play a major role in the resettlement process. Especially those villages that are considered as more conflict-prone receive a higher degree of attention from local governments. Grassroots government and party work in resettlement villages takes up three different forms. First of all, local cadres employed in the resettlement bureaucracy are responsible for resettlement villages within their jurisdictions. Second, in order to strengthen political work in resettlement villages, local governments in Pu'er have begun to recruit dam migrants into the resettlement bureaucracy. Third, the system of sent-down cadres has been applied which refers to urban officials "adopting villages (包村)" and helping them during the process of adaptation after resettlement.

Work units and departments at all levels of the Chinese party state take part in village adoption, creating opportunities for economic development in poor village communities. Apart from fostering industrial development by improving local infrastructure, sent-down cadres also have the responsibility to bolster local Party organization. As such, the cadre is tasked with ameliorating the oftentimes antagonistic relationship between rural communities and local governments, and with "stitch[ing] up the torn garment that is Chinese [rural] society" (Rolandsen, 2012: 69).

Hostility between local governments and rural masses, as well as conflicts within local communities are particularly prevalent in resettlement communities that are mostly dissatisfied with resettlement work undertaken by local governments. In addition, dam migrants often find it difficult to rebuilt livelihoods in their new

environments. Due to these reasons, in Pu'er, government departments adopt resettlement villages, making each official of those departments responsible for a group of households within each village (帮户).[8] The officials regularly visit the villages where they speak to the households that have been assigned to them. Their work mostly revolves around helping migrants adapt to their new environments both socially, and in terms of their productive activities.

In addition, county and township governments dispatch working groups (工作组) that are stationed in the villages for certain periods of time after resettlement. These working groups have a similar function to the dispatched cadres. However, while the latter additionally carry out their daily tasks within their work unit, working groups are stationed in one village permanently, and within that time, are only concerned with this particular village. In one of the villages visited for this research, a working group was stationed for about one year after the resettlement process had been completed. The group consisted of ten officials from various departments of the local government who came to the village on a daily basis to talk to the villagers and monitor the process of adaptation. During their time of duty, the cadres went from household to household to inquire about migrant problems. This method of sending down officials is not applied in all resettlement villages, but rather in those villages with a greater number of problems which, in the eyes of local officials, have the potential to jeopardize social stability.

The third method of the local government to get a better hold of the migrant community is to recruit village group leaders into their resettlement bureaucracy to make them directly responsible for social stability within their resettlement

[8] Usually, one department is responsible for one village, and each cadre within that department is responsible for a certain number of households within the village.

community. This was a constantly used method to prevent social instability and migrant protest. In Menglian (孟连) County, for example, three dam migrants act as deputy township governor, deputy village party branch secretary, and assistant director of the resettlement village, respectively. Officially, this effort is to solve conflicts between local governments and migrant communities, as migrants themselves are supposed to act as intermediaries between the two groups, and are expected to have a greater understanding of both government and migrant perspectives (Na, 2010).

In one of the villages, all three village group leaders have been recruited by the local government as assistants to the working group. In return for paying each migrant 200 yuan per month, they have to work about five days each month. Their main work consists in supporting the working group with implementing resettlement work, and facilitating communication between their fellow villagers and cadres. For the migrants-turned-cadres such appointments mean high pressure from both the government and the migrant community. While the working group requires the group leaders to calm their migrant community down, and prevent them from staging any protests, their fellow migrants blame the group leaders for not solving their problems. Furthermore, the fact that the group leaders receive money from the working group has caused many migrants to accuse them of being part of the government bureaucracy considered as incapable in solving migrant problems.

Letting Migrants Decide

In recent years, migrants frequently get the choice to decide about certain aspects of their resettlement process themselves, rather than having the resettlement bureaucracy deciding it for them. One of these aspects that migrants are allowed to

decide about is the resettlement mode. Dam-induced resettlement in China is categorized depending on the distance of resettlement; by whom resettlement is organized (by the local government or the migrants themselves); and whether migrants from the same community are resettled together or separately. The Chinese terminology used for these different forms of resettlement is *waiqian* (外迁) for outward resettlement; *houkao anzhi* (后靠安置) for resettlement in the vicinity of migrants' former homes; *tongyi anzhi* (统一安置) for government-organized, and *zixing anzhi* (自行安置) for self-organized resettlement. Each household has the right to apply for the latter and depending on the government's decision, organize resettlement by themselves including the choice on where to move.

Among the migrant families resettled to one of the villages studied here, several households had chosen self-organized resettlement instead of government-organized resettlement. One of these households were the Wangs who, instead of following their fellow villagers to the new resettlement village, had decided to stay in their original township and organize resettlement by themselves. In order to do so, they had to apply with the township government and were subsequently required to find a new place to live, built a new house, and negotiate with the local population over acquiring land from them.

When asked why he decided to organize resettlement by himself, Uncle Wang replies that he was "backwards" back then. He wanted to have the freedom to decide about his own life, and not always follow the decisions of the collective and the government (Interview, ZW13021702). After the move, Uncle Wang realized that self-organized resettlement is not as good as he had thought in the beginning. Although it gives migrants the freedom to choose where they want to move to, they also miss out on part of the compensation that they are entitled to, as not everything is paid out to individual households, but is instead given to the collective.

Furthermore, after Uncle Wang and his family had moved by themselves, they realized that it is very difficult to negotiate with their host community about contracting land. While under the government-organized resettlement mode, township and county governments are responsible for allocating land, Uncle Wang had to do this by himself. Uncle Wang explains,

> If one has problems, one can rely on the party and the government. We couldn't do this, because we had decided to leave the collective. So in the end, we wanted to return to the big family. However, by then, the other batches of migrants didn't want us anymore (Interview, ZW1302172).

As early as 2006, Uncle Wang and his family started to consider the possibility of applying for a transferal from self-organized resettlement to government-organized resettlement. His family recognized that they had made a mistake by leaving the collective. Although at first the district government had told migrants that the resettlement mode could not be changed once the agreement has been signed, a representative from the local resettlement bureau explains that there are exceptions to this rule. In fact, the government has realized that in those cases in which migrants have chosen to organize relocation by themselves, the process of adaptation is more difficult than if the government organizes resettlement. This is because in the former case, migrants have to organize land, housing and schooling by themselves, and they are removed from their former community. Although the families decide on this by themselves, they oftentimes overestimate the advantages of being able to stay in the vicinity of their former homes, and at the same time underestimate the burden related to finding land.

> If the households want to switch to government-organized resettlement, we have no choice but to at least look into the case, and see if it is reasonable for them to transfer. Although they have signed a contract with us, in the Chinese

> countryside, these written arrangements don't mean anything. If the villagers want to move, they just move. This is why in 60 to 70 percent of cases, we allow them to transfer to government-organized resettlement, if they apply for it. This is better than not helping them at all, and causing more conflicts (Interview, SM130218).

What this explanation by a resettlement bureau representative shows is that the local government, in order to limit social conflicts, is willing to revise formerly signed agreements with migrants and transfer them to government-organized resettlement, although this increases the workload of local governments who after having approved self-organized resettlement have to make arrangements for transferals to government-organized resettlement.

Another aspect of resettlement over which migrants are now allowed to decide about for themselves is the resettlement village to move to. Before relocation, the resettlement bureau of the local government presented the villagers with three resettlement villages to choose from. Originally, the migrants had hoped to be resettled within the same township so as not to be too far removed from their former homes and land. They requested the resettlement bureau to look into the matter to see, if this was possible, however, later the migrants were informed that resettlement within the same township was not possible in their case, and that the provincial government wouldn't approve that. The reasons for this were rather practical: there was not enough land available in the vicinity of the villagers' former homes.

In general, plans for the location of resettlement villages and for the allocation of land are first drawn up by the provincial government together with relevant experts from industry and academia. In the present case, experts on the provincial level did not agree with the villagers' request to be resettled within their home township, but made them choose from among three resettlement villages in a neighboring

township. The selection of villages that was presented to them included ZW, NDH and a third village that was between one and two hours away from ZW and NDH respectively, and that was located about half way between the migrants home village, and their new resettlement villages. Before relocation, the local government organized a tour to each of the three villages to let representatives of each household see for themselves, and decide on where they would like to move.

The group leader of one of the resettlement villages reports that household representatives paid attention to several factors when making their decision on where to relocate to. The most important of which were the quality of land they were supposed be allocated in the resettlement village, the difference in climate between the resettlement village and their home village, and the location of the resettlement village in terms of distance from adjacent cities, schools and hospitals. After having considered all these factors, the majority of household representatives belonging to the villager small group decided to move to NDH, because the land was of better quality than in the other two villages, because there was only a little difference in the climate, and because the location was favorable in terms of schooling, nearby hospitals, and the city center, providing them with more options for finding employment outside the village.

Giving in to Migrant Demands

Dam-induced resettlement in China has been frequently accompanied by protests on the side of those having to leave their homes, or those who have already left, and feel that they have been left alone by the government after resettlement. Two of the starkest examples occurred in 2003 and 2004 when first, the Kunming-based NGO Green Watershed organized villagers to raise their grievances about the planned

Xiaowan (小湾) Dam and the Nu River Project in Yunnan; and second the biggest demonstrations after Tiananmen took place in Sichuan where protesters organized themselves against the planned Pubugou (瀑布沟) hydropower project (Sun and Zhao, 2007: 150; Mertha, 2008).

Apart from these large protests, migrants frequently show their frustrations on a much smaller scale by visiting the local resettlement bureau, and submitting formal complaints and requests through the letters and visits system. This has also been the case in the field research sites where dissatisfied migrants frequently call upon the township and county governments to help them solve their problems caused by resettlement. Issues of contestation in the present cases have been related to the registration process of migrants, their living expenses, land compensation, housing compensation, and the long-term compensation mechanism. It is beyond the scope of this article to go into detail about each issue of contestation. What shall be elaborated here briefly is the protest strategy that migrants have developed so as to get the local government to deal with their problems as well as the reaction of the local cadres to migrant demands.

In one of the study sites, the group leader explains the village's protest strategy in the following way:

> First, five people go to the local government together to talk to the officials. We cannot be more than five people, because according to the letter and visits regulations, if more than five people go to visit the government, this would be considered as making trouble [*naoshi*, 闹事]. Then we wait and see what the government tells us, and if we are not satisfied with their response, then we write an official document in which we explain our problem to the government. After we have submitted the document [to the local government], we wait for two to four weeks. If the government doesn't respond, we go to protest at the

power station (Interview, NDH1302201).

Until December 2012, migrants of the resettlement village have applied this strategy three times: first, in 2010, when migrants wanted the local government to provide financial assistance due to increasing poverty among the migrant community; second, in 2011, when the migrants heard that the local government had paid out a higher amount of compensation to other villages, but not to their own; and third, in 2012, when the migrants learned that the local government was paying out an increase in housing compensation in a few villages, but again not in their own village.

In the first two cases, the migrants went to the hydropower station to block the road, after no agreement could be reached with the local government. As for the contestation about financial assistance, the migrants blocked the road at the Nuozhadu Dam for 24 hours when local cadres who had followed the migrants to the dam eventually caved in. The head of the People's Congress of Simao District, the director of the resettlement bureau, and the director of the Organization Department agreed to pay out 900 yuan to every migrant of the resettlement village. In the second case, when migrants demanded the local government to pay out land compensation, on the day they had picked for the protest in May 2011, the villagers first drove to the local government, before moving on to the power company, and eventually to the power station. The only difference was that this time, their protest did not last for one full day, but instead ended after four hours when government officials decided to give in. The officials agreed that within less than a month of the protest – before June 15 – they would pay the money to the migrants.

In the third case, the local officials wanted to prevent the villagers from blocking the roads in the first place. Every protest has the potential to draw attention from higher government levels threatening the political future of local cadres. This is why the

government decided to pay out the raise in housing compensation which amounted to 40,000 yuan for each household in NDH. The present case was based on an official policy guideline published by the city government, a fact that might have led the district government to give in more quickly when compared to previous cases of contestation involving migrants.

The protest strategy that the migrants had developed was based on several premises: first, migrants wanted to avoid as much as possible to break the law, but to instead refer to official policies when formulating their complaints. They did so during their negotiations with government representatives as well as in the letters that they wrote to the local government. In these letters migrants frequently cite both official policies, and statements of local cadres who had propagated resettlement in their village before relocation. This is in line with what O'Brien and Li (2006) have termed "rightful resistance." Second, as soon as they realized that the local government was not going to help them with their problems, migrants aimed at attracting attention from government representatives higher up in the hierarchy than those representatives they had originally addressed their complaints to. Normally, once the first premise of law-abidance could not be uphold (because the government would not help to solve respective problems), migrants followed with their second premise to attract attention. In two of the above cases, the presence of government representatives from the district's Organization Department and other bureaus is likely to have encouraged officials from the resettlement bureau to relent.

All in all, resettlement policy change has in one way empowered local migrant communities both by granting them more rights, and by providing them with more information before relocation. In another way, this empowerment has gone hand in hand with heightened requirements for local governments that have to implement new and more demanding policies given down from above, while at the same time

having to respond to the claims by empowered migrants. As a result, local governments now apply softer strategies of coercion that allow local cadres to achieve resettlement targets without inciting social unrest.

Conclusion

The Chinese leadership has acknowledged the problems related to the unfettered pursuit of economic growth, and has begun to design more socially oriented development policies. Ideological reforms such as the concept of building a Socialist Harmonious Society and the Scientific Development Concept seek to limit overall social disparities and promote balanced economic development (Holbig, 2007). These new concepts indicate a shift that is taking place – at least at the central government level – away from the traditional development paradigm with its mere focus on economic growth towards a more balanced approach to social and economic development (Lam, 2006). The introduction of more socially oriented resettlement policies after 2006 has to be regarded in this context. The question is what these new policies mean for the local state and resettlement processes.

As this article has shown, the introduction of more socially oriented policies has had direct and indirect impacts on local policy implementation and the role of the local state. Regarding the more immediate impacts, the CCP through the cadre management system ensures that central level decisions are passed through the government bureaucracy, and implemented by relevant government bodies (Edin, 2003; Chan, 2004; Heberer & Trappel 2013). Local level cadres are evaluated according to their performance in office causing local governments to mainly implement those policies that have quantifiable, mostly economic, targets. With the introduction of more socially oriented policies, performance evaluation is slowly

shifting from a focus on hard policy targets towards soft policy goals including rural reconstruction and sustainable development (Wang et al., forthcoming).

This article has shown that the social turn in policymaking has also manifested itself in the field of dam-induced resettlement. New resettlement regulations require local cadres to increase consultation with local migrant communities throughout the whole resettlement process, and ensure the restoration of livelihoods after relocation. What is striking here is that local cadres implement these softer policies although this might cause a delay in the resettlement process, or at least take up much more time and effort than what had been required before the policy shift. While Wang et al. (forthcoming) and Kostka and Hobbs (2012) came to the conclusion that local governments link newly introduced central level policies in areas such as environmental protection with local (business) interests such as GDP growth, in the case presented here, local cadres invest more time and energy in resettlement without necessarily fulfilling two goals at the same time.

When it comes to propaganda and thought work before resettlement, in the cases presented above, county and township level governments have tried to make use of newly introduced policies to their own advantage so as to fulfill the demands of higher government levels and get the migrants out of their homes. However, once the demands of their superiors are fulfilled and local communities have been relocated to make room for project construction, local cadres face the demands of migrant communities who, after having been resettled, realize that the reality of resettlement is less rosy than the picture they had previously been presented with. Ensuing contestations require the local state to coordinate community interests within the provisions made by resettlement plans as well as within the limits of their own organizational and financial capacity.

Apart from introducing new methods of disclosure to policy implementation, policy

change at central and provincial government levels in the area of dam-induced resettlement over the past few years has also brought with it new mechanisms of consultation with migrant communities introduced by local governments. In the present case this applied to the choice of resettlement village by migrant household representatives, and the method of resettlement itself, be it unified and government organized, or dispersed and self-organized. However, these measures of enhanced consultation merely provide migrants with the ability to steer resettlement in a direction that, at least at first, seems to be most suitable (or for that matter least unfavorable) to the households without giving migrants the ability to control the process of resettlement. Nevertheless, such kind of policy concessions empower migrants vis-à-vis the local government, as it provides them with reference points in their negotiations with local officials, and even if no particular policy entitles them to certain claims migrants make, it still gives them the impression that the central government is on their side, encouraging them to make their voices heard. Compared with the local corporatist state that has developed as a result of the economic reform policies that have been implemented, the local state is now adapting to newly introduced policies that are more socially oriented and require local cadres to increasingly accommodate migrants' demands. Throughout most of the resettlement process, local cadres refrain from applying outright coercive strategies when relocating migrant communities. Instead, local states now devise a variety of strategies including soft coercion, negotiation, and propaganda work to implement resettlement policies, providing evidence of a softer type of authoritarianism on the grassroots level, as well as the ability of the central state to steer local policy implementation through central-level policy adjustments.

Bibliography

Blecher, Marc (1991) “Developmental State, Entrepreneurial State: The Political Economy of Socialist Reform in Xinji Municipality and Guanghan County.” In G. White (ed.), *The Chinese State in the Era of Reform: The Road to Crisis*. Houndmills: Macmillan.

Blecher, Marc. Shue, Vivienne (1996) *Tethered Deer: Government and Economy in a Chinese County*. Stanford: Stanford University Press.

Blecher, Marc. Shue, Vivienne (2001) “Into Leather: State-led Development and the Private Sector in Xinji.” *The China Quarterly*, 166, 368-393.

Burns, John P. (1989) *The Chinese Communist Party's Nomenklatura System: A Documentary Study of Party Control of Leadership Selection, 1979-1984*. Armonk: M. E. Sharpe.

China Energy News (2013) 对“16118 移民长效补偿安置方式”的思考 [Thoughts on the '16118' Long-term Support Resettlement Mode]. People. paper.people.com.cn/zgnyb/html/2013-03/18/content_1213150.htm (accessed Jan. 24, 2014).

Du, Jingcan, Zhong, Zongwen, Gong, Heping, & Bian, Binggan. (2011) 水电工程移民长效补偿研究 [Research on Long-term Compensation for Dam-induced Resettlement]. Beijing: Waterpub.

Edin, Maria. (2003) “State Capacity and Local Agent Control in China: CCP Cadre Management from a Township Perspective.” *The China Quarterly*, 173, 35-52.

Habich, Sabrina (2013) *Dam-induced Resettlement Along the Lancang River: Policy Change and Implementation*. Unpublished PhD Dissertation, National Chengchi University, College of Social Sciences.

Heggelund, Gørild. M. (2004) *Environment And Resettlement Politics In China: The Three Gorges Project.* Aldershot: Ashgate.

Heberer, Thomas. Senz, Anja. (2011) “Streamlining Local Behaviour Through Communication, Incentives and Control: A Case Study of Local Environmental Policies in China,” *Journal of Current Chinese Affairs*, 3:77-112.

Heberer, Thomas. Trappel, René. (2013) “Evaluation Processes, Local Cadres' Behaviour and Local Development Processes.” *Journal of Contemporary China*, 22(84), 1048-1066. doi: 10.1080/10670564.2013.795315

Holbig, Heike. (2007) Demokratie chinesischer Prägung: Der XVII. Parteitag der Kommunistischen Partei Chinas,” [Democracy, Chinese Style: The 17th Party Congress of the Chinese Communist Party] *China Aktuell - Journal of Current Chinese Affairs*, 2, 32-55.

Hsing, You-tien. (2012) *The Great Urban Transformation: Politics of Land and Property in China*. Oxford: Oxford University Press.

Jun, Jing. (2000) “Displacement, Resettlement, Rehabilitation, Reparation and Development

- China Report." *World Commission on Dams Thematic Review 1.3*.
Lam, W. (2006) Chinese Politics: The Bargaining Treadmill. *Issues and Studies*, 3, 11-41.
Lancang Government. (2008). 澜沧县糯扎渡水电站和景洪水电站库区实物指标分解细化工作实施细则 [Lancang County Details on Material Index Survey for Reservoirs of Nuozhadu and Jinghong Hydropower Stations] http://wenku.baidu.com/view/fa9de93f376baf1ffc4fad5d.html (accessed Jan. 24, 2014).
Landry, Pierre F. (2008) *Decentralized Authoritarianism in China: The Communist Party's Control of Local Elites in the Post-Mao Era*. Cambridge, Mass.: Cambridge University Press.
Li, Guilin. (2013) 解读水电工程建设移民安置长效补偿政策 [Reading the Policy on Long-term Compensation for Dam-induced Migrant Resettlement]. http://xxgk.yn.gov.cn/ZT_SZ/newsview.aspx?id=157671&departmentID=6149 (accessed Jan. 24, 2014).
Mertha, Andrew. (2008) *China's Water Warriors: Citizen Action and Policy Change*. New York: Cornell University Press.
Montinola, Gabriella, Qian, Yingyi, & Weingast, Barry R. (1995) Federalism, Chinese Style: The Political Basis for Economic Success in China. *World Politics*, 48, 50-81.
Na, Fubin. (2010) 普洱市水电移民安置情况调研报告 [Pu'er City Dam-induced Resettlement Situation Research Report]. Pu'er Pu'er Municipal Party Committee Policy Research Office.
O'Brien, Kevin J. Li, Lianjiang. (2006) Rightful Resistance in Rural China. Cambridge: Cambridge University Press.
Oi, Jean C. (1992) "Fiscal reform and the economic foundations of local state corporatism in China." *World Politics*, 45, 99-126.
Pu'er Government (2008) 普洱市人民政府办公室关于执行"云南省澜沧江糯扎渡水电站建设征地及移民安置规划报告补偿费用概算"（审定）的通知 [Pu'er People's Government Office Notice on Implementing the Approved Edition of the Compensation Budget for Land Appropriation and Resettlement Plan Report of Yunnan Province Lancang River Nuozhadu Hydropower Station].
Pu'er Resettlement Bureau (2011) 普洱市糯扎渡水电站建设征地补偿和移民安置 [Compensation for Land Appropriation Compensation and Resettlement in Course of Nuozhadu Hydropower Station Construction in Pu'er Municipality]. Handbook for Propagation.
Rolandsen, Unn Målfrid H. (2012) Stitching It All Back Up: The Role of Sent-down Cadres in Rural Community Building. In A. Bislev & S. Thøgersen (Eds.), *Organizing Rural China, Rural China Organizing*. Lanham: Lexington Books.
Simao Local History Committee (2003) 思茅年鉴 [Simao Almanac]. Simao: Dehong Minzu Chubanshe.

State Council (1991) 大中型水利水电工程建设征地补偿和移民安置条例 [Regulations for Land Appropriation and Resettlement Induced by Large- and Medium Sized Water Conservancy and Hydropower Projects]. http://www.xymWZ.gov.cn/show.aspx?id=304 (accessed Jan. 24, 2014).
State Council (2005) 信访条例 (Regulations on Letters and Visits). http://www.china.com.cn/chinese/PI-c/759356.htm (accessed Jan. 25, 2014).
State Council (2006a) 大中型水利水电工程建设征地补偿和移民安置条例 [Regulations for Land Appropriation and Resettlement Induced by Large- and Medium Sized Water Conservancy and Hydropower Projects]. http://www.gov.cn/WZgk/2006-08/13/content_360853.htm (accessed Jan. 24, 2014).
State Council. (2006b) 国务院关于完善水库移民后期扶持政策的意见 [State Council Opinions on Improving Post-Reservoir-Resettlement-Support Policies]. http://www.gov.cn/gongbao/content/2006/content_389912.htm (accessed Jan. 24, 2014).
Sun, Y. F., & Zhao, D. X. (2007) "Multifaceted State and Fragmented Society: Dynamics of Environmental Movement in China." In D. L. Yang (Ed.), *Discontented Miracle: Growth, Conflict, and Institutional Adaptations in China*. Singapore: World Scientific Publishing.
Walder, Andrew. (1995) "Local Governments As Industrial Firms: An Organizational Analysis Of China's Transitional Economy." *American Journal of Sociology*, 101:22, 263-301.
Wang, Jenn-Hwan, Tseng, Sheng-Wen, & Zheng, Huan (forthcoming). "The Paradox of Small Hydropower: Local Government and Environmental Governance in China." Unpublished Working Paper.
Wang, Yingzheng. (2010) 中国水利水电工程移民问题研究 [Study of the Resettlement Question in China's Water Conservancy and Hydropower Projects]. Beijing: Waterpub.
Xinhua. (2011) "China Vows to Curb Environmental Deterioration in Three Gorges Project Areas by 2020." http://news.xinhuanet.com/english2010/china/2011-05/18/c_13881197.htm (accessed Jan. 24, 2014).
Xinhua. (n.d.) 国家建设土地办法 [Measures for Land Appropriation in National Construction]. http://news.xinhuanet.com/ziliao/2005-01/06/content_2423639.htm (accessed Jan. 24, 2014).
Yunnan Government. (2007) 云南省人民政府办公厅关于印发云南金沙江中游水电开发移民安置补偿补助意见的通知 [Yunnan People's Government Office Notification on Publishing the Opinions on Resettlement Compensation for Hydropower Development along the Middle Reaches of the Lancang River in Yunnan]. http://www.ynsym.cn/html/2012/shengzhengfuzhengce_0712/17.html (accessed Jan. 24, 2014).
Yunnan Government (2008) 云南省人民政府关于贯彻落实国务院大中型水利水电工程建设征地补偿和移民安置条例的实施意见 [Yunnan People's Government Opinions on

Implementing the Regulations for Land Appropriation and Resettlement Induced by Large- and Medium Sized Water Conservancy and Hydropower Projects]. http://xxgk.yn.gov.cn/zmb/newsview.aspx?id=2082340 (accessed Jan. 24, 2014).
Yunnan Government (2012) 移民动态 2012 第 1 期 [Resettlement Situation, 2012/1].http://www.ynsym.cn/html/2012/gongzuodongtai_0718/60_3.html (accessed Feb. 28, 2014).
Zhong, Yang. (2003) *Local Government and Politics in China: Challenges from Below*. Armonk: M.E. Sharpe.
Zweig, David (2000) "To the Courts or to the Barricades: Can New Political Institutions Manage Rural Conflict?" in: Elizabeth J. Perry and Mark Selden. Chinese Society: Change, Conflict and Resistance. Abingdon: Routledge.

五、結論

以上是本研究計畫的初步成果。在第三年，本計畫嘗試在既有基礎上，往中國大陸當今減碳作法成效卓著的太陽能和風力發電的領域來摸索，因此在第三年的移地研究中，改變過去到雲南實地研究的作法，去到甘肅做移地研究。我們的移地研究主要研究的地點在甘肅酒泉。甘肅省是大陸風力和太陽能發電的主要省分之一，而酒泉更是其省內的主要的發電地區。

酒泉市是甘肅省第二大市，也是中國大陸第一個千萬千瓦級的風電基地。區域內有著名的戈壁大沙漠，具有豐富的太陽能資源。2007 年 11 月中國大陸發改委批覆同意在酒泉開展世界首個千萬千瓦級風電基地及配套電網工程的前期工作。截至 2012 年 11 月，酒泉市已建成風電裝機 556 萬千瓦。此外，酒泉的風電設備製造業也居中國大陸前列，酒泉工業園區為中國大陸產業規模最大的風電設備製造基地，被其科技部命名為「酒泉國家風電設備高新技術產業化基地」。2013 年底，甘肅省發電總裝機量 3489.32 萬千瓦，其中，風電裝機容量 702.81 萬千瓦，同比增長 17.69%，占全省總裝機容量的 20.14%，居大陸各省第三位；光伏（太陽能）發電裝機容量 429.84 萬千瓦，同比增長 1025.24%，占全省總裝機容量的 12.32%，居中國各省第一位

與小水電類似，風力和太陽能電力都有圈地和棄電的問題，也就是地方政府在中央的支持下，大力與國/私營資本合作開發電力，但是相對的輸電系統卻未必願意或能夠即時搭配，造成大量建設和浪費問題。據電監會 2012 年《重點區域風電消納監管報告》，2011 年甘肅地區風電的棄風比例高達 27.44%，居各區域的首位。2013 年，甘肅省棄風電量 31.02 億千瓦時，占全國棄風電量的 19.11%,占西北地區棄風電量的 85.86%；棄風率 20.65%，較大陸平均 10.74%的棄風率高出近一倍。光電方面，根據對各發電企業棄光統計數據的彙總，2013 年甘肅省棄光電量為 3.30 億千瓦時，棄光率為 13.78%。

以上這些資料顯示，甘肅省是非常值得研究光/風電的省分，因此因此也是我們移地研究的首選。而我們的初步收集資料和訪談（見移地研究報告），可以提供我們了解中國大陸開發新能源的作法和限制，也可作為未來持續研究和比較的基礎。