How Do Central Control Mechanisms Impact Local Water Governance in China? The Case of Yunnan Province

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Abstract

Despite being known as "Asia's water tower," Yunnan frequently experiences severe droughts which put pressure on local communities and state actors alike. This article examines the institutional arrangements that guide water governance strategies employed by local cadres in Yunnan province, showing how central control mechanisms in the Chinese administrative system undermine effective water governance at the local level. Findings obtained from field research in two counties in Yunnan with different levels of economic development and water resource access show that current institutional arrangements – including those regulating local cadre performance and the procedures to apply for project funding from higher-level governments – hinder the efficient use of infrastructure investment. Instead, provincial and prefectural water bureau officials use their authority to channel funding to those regions with an already positive track record of project applications.

Keywords: central–local relations; policy implementation; project mechanism; water governance; Yunnan province

Local governments play a decisive role in China's social and economic development. While doing so, however, they are influenced by constraints and incentives set by the central government. This article looks at the ways in which local governments in China manage natural resources and investigates how central control mechanisms influence water resource governance. Most scholars acknowledge that local governments in China are allowed sufficient flexibility to act strategically in developing their jurisdictions, regardless of whether such actions are of a predatory or benign nature.[1] Only a few scholars acknowledge that local

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1 For discussions regarding the patchy policy implementation of environmental and other policies at the local level, see, e.g., Heberer and Senz 2011; Li, Beresford and Song 2012; Zhong and Mol 2010. For studies that attribute uneven policy implementation to the high degree of decentralization prevalent in China's political system, see, e.g., Cai 2003; Hillman 2010; Le Mons Walker 2006. For more optimistic accounts of local policy implementation, see, e.g., Ahlers and Schubert 2014.

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discretion at county level and below is in fact limited, and that local state behaviour is, to a large degree, guided by upper-level governments at prefectural and provincial levels.[2]

This study follows this line of reasoning. It does so by scrutinizing the project mechanism (*xiangmu zhi* 项目制), which was established to allocate central government investments in public goods provision in a more effective manner. This mechanism, which was first introduced in the 1990s, provides a way for local governments to apply to their superiors, who decide where the money goes, for earmarked funds (*zhuanxiang zhuanyi zhifu* 专项转移支付).[3] Since these funds make up 40 per cent of all transfer payments from the central government, the project mechanism is one of the most important funding channels for local governments.

By scrutinizing the role of the project mechanism in local water governance and the impact it has on the incentives embedded in the cadre management system, this article solves the puzzle of why some regions receive disproportionately more central government funding than others. First, the article shows that the project mechanism can be regarded as another form of "soft centralization" that concentrates power at the provincial level. The mechanism does so by creating new economic and political incentives that guide local state behaviour but which are not necessarily in line with the principle of "adapting measures to suit local circumstances" (*yindi zhiyi* 因地制宜).[4] Instead, the heavy reliance on project-based financing further helps to explain why local cadres prefer to pursue short-term results and put much effort in the application process, but then focus little on the monitoring and verification of these projects' results.[5]

Second, the article shows that the mechanism strengthens vertical (*tiao* 条) relations at the expense of horizontal (*kuai* 块) ties causing both the ineffective and inefficient use of central funds. This is because the mechanism transfers decision-making control to prefectural and provincial governments who, owing to their embeddedness in China's political command structure, which focuses on quantifiable policy targets, prefer to channel investment funds to regions that do not necessarily need such funds but which have the greatest prospects of achieving their targets quickly. This proves to be inefficient on the one hand because funds might not reach those regions that need them most, and ineffective on the other hand in that it fails to achieve the central government's aim of equitable water resource provision.[6]

2 Habich 2016; Rosenberg 2015; Smith 2010.

3 Liu, Mingxing, et al. 2009; Chen 2013; Qu 2012. In addition to earmarked funds, the central government also distributes general transfer payments (*yiban xing zhuanyi zhifu*), which, according to the Ministry of Finance, are channelled to poor regions to provide public services. See Ministry of Finance 2011.

4 Mertha 2005.

5 Eaton and Kostka (2014) have shown that cadre rotation is another reason behind such short-term thinking.

6 This aim has been re-emphasized in the 2016 "Shuili gaige fazhan 'shisan wu' guihua" (13th Five-Year Plan for Water Resources Reform Development), which was published jointly by the National Development and Reform Commission, the Ministry of Water Resources and the Ministry of Housing and Urban–Rural Development.

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The article draws on empirical findings collected during several rounds of field research carried out between 2011 and 2014. During this period, I conducted 65 interviews and amassed a series of government documents on water resource development. The majority of the interviews drawn upon in the paper were conducted in August 2014 in two counties in Yunnan province. Interviewees included industry representatives, academics, NGO activists, and government representatives at central, provincial, county and township levels.[7] Secondary data were gathered from the websites and publications of government departments as well as statistical yearbooks, newspaper reports, academic literature and the publications of international organizations.

The two counties chosen as study sites both have similar water resource endowments, although one county faces greater infrastructural water scarcity than the other.[8] Previous studies have shown that economic development is the main factor determining project implementation.[9] Thus, the study sites chosen differ in economic development and economic structure in that one has a large agricultural sector and the other is more urban with a larger secondary and tertiary sector.

While the presented data do not allow for generalizations about water governance in Yunnan or China more generally, the central control mechanisms analysed in this article do have nationwide application. The study therefore provides knowledge about the impact of hierarchical control on water infrastructure development and resource governance in regions other than the two counties under scrutiny here. While past studies have chosen water as a case study because it is a resource that crosses territorial and functional boundaries, the present study additionally highlights its growing importance in recent years, which is reflected in the annual increases in government expenditure on water resource development.[10]

The next section introduces the project mechanism and describes how it interacts with other central control mechanisms that influence local cadre behaviour in China, laying the ground for the subsequent introduction of vertical control mechanisms in the field of water resource governance. The third section describes how central-level water policies are implemented at the provincial level in Yunnan. The paper then goes on to present evidence of how central control mechanisms guide local cadre behaviour in two counties of Yunnan. It demonstrates how water politics and government institutions at the provincial and central levels are responsible for disparities in water governance in those two counties. Finally, the article concludes by highlighting this study's implications

7 In order to protect the anonymity of interviewees, the names of the resettlement villages and migrants have been changed and other personal names omitted.

8 Infrastructural water scarcity (*gongchengxing queshui*), also called economic water scarcity, is present when "political preferences and unequal distribution of wealth and technological resources […] prevent the delivery of water even when its physical presence is confirmed" (UNESCO 2009, 167).

9 Rosenberg 2015; Ye and Li 2014; Zhe and Chen 2011.

10 Lampton 1992; Moore 2014.

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for central–local relations and local policy implementation in China more generally.

Soft Centralization of Local Policy Implementation

The decentralization of decision making since 1978 has caused regional variations in policy implementation and local protectionism.[11] In order to exercise greater control over local cadre behaviour and standardize policy implementation, China's leaders have over the years centralized several key bureaucracies. Environmental protection is the latest bureaucracy to be "managed vertically" (*chuizhi guanli* 垂直管理).[12]

Andrew Mertha refers to this kind of centralized management as "soft centralization," because relations are centralized only from the county and township level to the province while relations between the centre and the province remain decentralized. In theory, *tiao* or line relations are supposed to ensure uniform policy implementation, whereas *kuai* or piece relations are to provide local governments with a limited degree of autonomy from higher levels, allowing them to implement policies according to local circumstances.[13] In reality, it has been found that *kuai* relations can lead to local protectionism and conflict between sub-national jurisdictions,[14] and strengthened *tiao* relations can produce power imbalances between centralized and non-centralized bureaucracies and therefore cause a lack of local coordination as well as uneven and ineffective policy implementation.[15] This study shows that even in policy fields that do not underlie centralized management (i.e. where leadership relations are still with the local government at the same administrative level), the project mechanism concentrates decision-making authority at government levels above the county and township levels where hard policy targets (i.e. GDP growth, number of project beneficiaries, number of acquired investment funds) trump soft policy targets (i.e. environmental sustainability, equitable infrastructure development).

The project mechanism governs the allocation of financial resources from central to local government levels. It was introduced following tax reforms in the 1990s which had centralized financial resources but had left the duty of public goods provision with local governments. As a result, the central government had to devise a policy that would enable local governments to acquire the needed funding. The project mechanism allocates financial resources to run specialized

11 Local protectionism, as defined by Mertha (2005, 793), "represents a barrier to the creation of an efficient, integrated national economy from a mosaic of balkanized local markets that establish unfair barriers to entry, engage in illegal production and sales, or both." For in-depth studies on the phases of decentralization and recentralization in China since 1978, see Landry 2008; Yang, Dali 1996.

12 "Sheng yixia huanbao bumen jiang chuizhi guanli" (Environmental bureaus below the provincial level will be managed vertically), *Beijing News*, 23 September 2016, http://www.bjnews.com.cn/feature/2016/09/23/417819.html. Accessed 15 November 2016. See Moore 2014 for an analysis of vertical control mechanisms in hydropolitics.

13 Mertha 2005, 797.

14 See, e.g., Moore 2014.

15 Mertha 2005; Rosenberg 2015; Habich 2016.

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projects, for which local governments have to apply to their superiors.[16] Thus, instead of being commanded by the central government, projects pass through top-down tendering processes and bottom-up competition.[17]

In recent years, scholars have undertaken a number of studies on the project mechanism which have mainly focused on the roles that different government levels perform within the mechanism and how each level attempts to fulfil developmental goals within its jurisdiction.[18] It has been shown that such projects influence the conventional (hierarchical) relations between government organs, thereby engendering new forms of strategic behaviour.[19]

The project mechanism changes the game in two respects. First, by channelling financial resources to a certain functional bureaucracy, bureaus within that bureaucracy are strengthened for the period of project acquisition and implementation, and potentially also for longer periods of time. Second, it strengthens *tiao* relations by making local officials dependent on their functional superiors who transfer money and pass on information about calls for project proposals from central to local levels. On the one hand, since the financial resources that local state agents depend on are concentrated at higher government levels, the lower levels tend to follow upper-level policy directives. On the other hand, increasing shares of local state funds derive from specialized project applications which require local actors to conform to prescribed rules on spending, and this limits the flexibility of local state agents when dealing with problems or reacting to crises.[20] Thus, the project mechanism, in addition to being a central government instrument to steer local state behaviour, also fosters initiative on the part of local cadres at all levels as they mobilize their subordinates to apply for projects and then in turn promote these projects to their superiors.[21]

This study goes beyond previous work on the project mechanism by highlighting how the dominance of earmarked funds interacts with other incentive mechanisms embedded in Chinese cadre management. It shows that not all local governments are equally mobilized by their superiors, which results in a discriminatory funding structure. To fulfil their policy mandates and receive positive performance evaluations, local cadres choose to mobilize and support only those units with the highest chance of succeeding in acquiring project funding. This constitutes a kind of pre-selection mechanism that leads to resources being concentrated on projects and localities that have the potential to attract the attention and praise of higher-level cadres.

16 Liu, Mingxing, et al. 2009; Wong 2009; Chen 2013; Qu 2012.
17 Zhe and Chen 2011.
18 Ibid.; Zhou 2015. For an in-depth study of how local officials undertake policy and interest bundling to balance national targets with local priorities, see Kostka and Hobbs 2012. For an overview of public investment in China, see Wong 2014.
19 Shi 2015.
20 Zhou 2015.
21 Chen 2013.

For most projects, local governments at each level must provide matching funds in order to gain central government support. Thus, a frequent criticism of the project mechanism is that it exacerbates existing cleavages by enabling the rich to become richer and leaving the poor to become poorer, increasing inequalities between villages and townships and between government organs within the same jurisdiction.[22] In order to reduce the competition between local governments and to safeguard transfer payments to less developed regions, the central government devised a policy to increase general transfer payments and reduce earmarked funds.[23] However, implementation of this reform has been woefully slow as both official statistics and my interviews with local government officials show. In 2015, earmarked funds still made up almost 40 per cent of transfer payments from the centre to local governments.[24] In the case study, localities' earmarked funds actually increased by 50 per cent between 2012 and 2014. Although these same funds have subsequently been reduced by one-third, they continue to make up the majority of central transfer payments. As a result, each administrative level continues to try to attract as much funding as possible by applying for project funding in line with central-level policy stipulations.

Although the project mechanism has enhanced bureaucratic coordination as well as financial monitoring at the local level, it has also led to increased informal negotiations over project acquisition between the county government and upper levels.[25] Informal institutions are increasingly important for obtaining state funds, which are distributed through patron–client relations between higher and lower-level government officials who exchange information on which projects can and should be applied for. Further on in the process, patron–client networks play a role in the approval and monitoring of projects, the channelling of financial resources towards certain projects, and ensuring that unwelcome investigations do not reveal any shortcomings in project implementation.[26]

Competition for these resources is fierce, not only between various county governments but also between the townships within counties. This is not only because special purpose grants can be used to fill public coffers but also because the successful acquisition of a project can also improve an official's chances of promotion by providing opportunities to impress a patron and to network with higher-level officials during project implementation.[27] Local-level cadres' work performances are evaluated according to how well they implement central government decisions.[28] Since

22 See, e.g., Zhou 2015; Ye and Li 2014; Zhe and Chen 2011.
23 "The decision on major issues concerning comprehensively deepening reforms in brief," *China Daily*, 16 November 2013, http://www.china.org.cn/china/third_plenary_session/2013-11/16/content_30620736_4.htm.
24 Apart from earmarked funds, transfer payments from the central government to local governments also include general transfer payments and tax remittances, which in 2015 made up 50% and 10% respectively. See Ministry of Finance 2016.
25 Ahlers and Schubert 2014, 10–13.
26 Hillman 2014, Ch. 5.
27 Ibid.
28 Edin 2003; Chien 2010; Chan 2004; Heberer and Trappel 2013.

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these performance evaluations are conducted by higher government levels, local cadres tend to respond to their superiors' demands rather than those of the local communities. At the same time, owing to the system of regular cadre rotation, local leaders tend to implement projects that are highly visible, achieve quick results, and are not necessarily of a high quality.[29] The project mechanism thus exacerbates the negative externalities of other Chinese central control mechanisms.

The next section of this paper illustrates how these mechanisms and institutions play out within the Chinese water resources bureaucracy.

Soft Centralization of China's Hydropolitics

While past studies have highlighted the ways in which local cadres pursue diverse and often contradictory policy goals,[30] few analyses have examined how mechanisms aimed at improving the effectiveness of public goods provision and natural resource governance achieve the exact opposite as they interact with other incentives embedded in cadre management. This is particularly the case for water governance. Although increased attention has been paid to China's water situation in recent years, academic output on the topic remains limited, especially in regard to the ways in which structural factors in the Chinese administrative system undermine effective water governance at the local level.[31]

Scott Moore's analysis finds that vertical control mechanisms are unable to prevent local competition and conflict and thus present a serious challenge to resource-efficient water governance in China. Rather than "challeng[ing] a hierarchical view of central–local relations by examining the pursuit of divergent preferences through horizontal local–local conflict and competition," this article analyses the ways in which vertical control mechanisms disproportionately give some localities an advantage over others.[32] This section first briefly introduces recent central efforts at water governance and then continues with an analysis of the specific local reactions to these efforts.

The central government has published a number of policy documents aimed at improving water provision and conservation in China. In policy circles and at the implementation level, the "Decision on the acceleration of water resource reform and development," which was the "No. 1 document" (*yi hao wenjian* 一号文件) published by the Central Committee of the Chinese Communist Party in 2011, is still held as a watershed in Chinese water policies. This document marks the

29 Eaton and Kostka 2014.

30 For example, Wang, Jenn-Hwan, Tseng and Zheng 2015; Kostka and Hobbs 2012.

31 Exceptions in this respect are Lampton 1992 and Moore 2014, as well as analyses of the emergence of water user associations in China, which have been researched from various angles (see Huang et al. 2009; Huang et al. 2010; Tong 2013; Wang, Jinxia, et al. 2010; Wang, Yahua 2013; Zhang et al. 2013). The studies of institutional reforms in the water sector focus, for the most part, either on one particular water policy reform and its outcomes (e.g. Huang et al. 2009; Huang et al. 2010; Li, Beresford and Song 2012), or on providing a very broad overview of certain features of the Chinese political system and their effects on water management (e.g. Nickum 2010). Darrin Magee (2013) provides a useful overview of the English language literature on water policies in rural China.

32 Moore 2014, 763.

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culmination of several policy efforts regarding water governance in China, including the amendment of the Water Law in 2002 as well as the focus on water resource management in previous five-year-plans. The "No. 1 document" further increased central government investment in water projects, from 238 billion yuan in 2010 to 390 billion yuan in 2014.[33]

Tax reforms during the past 15 years have left local governments at the county level with dwindling financial resources, so the huge investment funds on offer provide a clear incentive for local cadres to make water resource development a pillar of local politics. The ways local governments implement these central-level policy stipulations are influenced by the cadre and the project mechanisms described above. With regard to the cadre management mechanism, water resources bureaus (*shuili ting*/*shuiwu ju* 水利厅 / 水务局, hereafter WRB) at each level sign annual target responsibility agreements (*mubiao zeren shu* 目标责任书) with WRBs at the next level down. At the end of each year, the bureaus undergo performance evaluations based upon the achievement points that are allocated to each leading cadre. As in other policy fields, the best performing cadres are awarded financial bonuses. These specific evaluations have only been introduced in Yunnan in recent years and are separate from the comprehensive goal assessments (*zonghe kaohe* 综合考核) that apply to the entire local government and take broader economic and political developments into consideration.[34]

Most central and provincial investments in water resource development are distributed via the project mechanism. In 2011, more than 80 per cent of investments were earmarked funds that local governments had to apply for.[35] In each province, the provincial WRB steers the applications for water projects.[36] Each county-level WRB application for central government project funding must first gain the provincial WRB's approval. Before a project is submitted to the provincial WRB, the local WRB compiles a preliminary outline of the construction project. This must include details of the construction project itself as well as its aim and potential beneficiaries. After the provincial WRB has examined and approved the project proposal, the proposal is then submitted to the central government for further review and approval. After the central government has approved the project, project funding is passed down to the provincial WRB, which in turn forwards these funds to the government level responsible for implementing the project. Before the project mechanism was introduced, local governments below provincial level were responsible for water resource projects, and neither the central nor the provincial governments provided financial resources. However, since the introduction of the project mechanism, according to my

33 Ministry of Water Resources 2010–2014.
34 Interview with researcher from provincial water research bureau, Kunming, August 2014.
35 Liu and Chen 2015.
36 Other actors permitted to apply for water resources projects include the Agricultural Bureau, the Development and Reform Commission, and the Forestry Bureau. However, the size and number of projects applied for by these bureaus are generally lower than those of the WRBs.

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interviews, even small water resource projects such as wells and small canals have to a large extent been supported by central and provincial governments, although local governments have to provide matching funds.[37]

Regions that are unable to provide matching funds may sometimes receive additional financial help from higher levels of government, but often these regions lose out on projects. While this does not mean that the poorer regions are unable to undertake any water projects, they nevertheless receive far fewer projects than other regions. Matching funds act as an indicator of buy-in: by requiring local governments to provide funds, the central government aims to ensure that local governments that receive central government funding are committed to project implementation.[38] However, although the project mechanism is able to steer local government behaviour, it is unable to exert complete control over the full implementation of projects.[39] In fact, as this study shows, through "state-signalling" and the provision of huge investments, the central government encourages some local governments to do too much while it inhibits the efforts of others to improve their water provision.[40]

Water Governance at and below Provincial Level in Yunnan

China's water resources are unevenly distributed across the country. The north of China is arid, but in the south-west of China, where Yunnan is situated, water resources are relatively abundant. Nevertheless, both floods and droughts regularly affect the various regions in Yunnan. The 2009–2010 drought, the worst for more than a century, caused drinking-water shortages for 8.1 million people and led to calls for the provincial government to improve water governance and environmental management.[41] The director of the provincial WRB blamed the severe impact of the drought on Yunnan's underdeveloped infrastructure and called for massive investment in reservoirs and water diversion projects.[42] Other officials frequently cite the drought as a reason for constructing and repairing small and medium-sized reservoirs.

In fact, the scarcity of infrastructural water is cited by officials at all administrative levels as a major challenge for Yunnan. In all my interviews with government officials from WRBs at and below provincial level, interviewees lamented this fact and stressed the need for water projects to be implemented on a wide scale. The utilization ratio of water resources in Yunnan is just 6 per cent, a figure

37 Interview, researcher from provincial water research bureau.
38 Ibid.
39 Hillman 2014.
40 Harrison and Kostka 2014.
41 Qiu 2010.
42 "Zhuanfang Yunnan sheng shuili ting tingzhang Chen Jian: gongcheng xing queshui shi zaocheng Yunnan liannian ganhan zhongyao yuanyin" (Interview with director of Yunnan Provincial Water Resources Bureau Chen Jian: underdeveloped infrastructure is important reason for continuous droughts in Yunnan), *Renmin wang*, 4 December 2013, http://www.envir.gov.cn/info/2013/4/412502.htm. Accessed 5 March 2015.

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far below the national average of 16 per cent.[43] This low utilization ratio is partly down to the province's geographical features, such as high mountains and inaccessible river valleys, as well as its status as an economically less developed and less populous province. It is argued that, if used wisely, investment in water supply infrastructure can lead to greater social and economic development.[44]

In 2012, the central government issued a call to "implement the strictest water resource management" (*shixing zui yange shui ziyuan guanli* 实行最严格水资源管理) that foresaw, among other things, the introduction of quotas for water usage. However, regions such as Yunnan prefer to undertake larger infrastructure projects as they have the potential to direct larger amounts of resources into the province.[45] The next section shows how funding is channelled to regions in Yunnan that have already attracted large amounts of water infrastructure investment, while poorer regions with less adequate water infrastructure are left behind, creating water shortages that could be ameliorated by sufficient resource allocation.

Water Resource Governance in West Mountain and Wild Grass Counties

West Mountain Autonomous County and Wild Grass District are both under the jurisdiction of the same prefecture in Yunnan. In 2015, Wild Grass, the administrative centre of the prefecture, had a non-agricultural population of 40 per cent, while West Mountain's non-agricultural population was a mere 20 per cent of the total. More than 95 per cent of West Mountain's landmass is mountainous, and its county seat is about a five-hour drive from the prefectural administrative centre. Wild Grass's ethnic minority population accounts for 35 per cent of its total population, while in West Mountain every second resident is of ethnic minority origin. In 2015, per capita local government revenue and per capita GDP in Wild Grass were twice the per capita revenue in West Mountain.[46]

Water resources in both jurisdictions are abundant. Wild Grass and West Mountain are both traversed by the Lancang River, which, in addition to generating hydropower, provides the region with plenty of water through its tributaries.[47] Yet, the infrastructure for water provision in the prefecture is less developed than the provincial average, with a water utilization ratio that reaches only 3.4 per cent.

43 "Yunnan hanqu shuili shixiu diaocha: jiceng xinxiu shuili mianlin zijin yali" (Investigation into the disrepair of the Yunnan drought region's water resource infrastructure: water resources at grassroots level facing financial pressure), *China News*, 10 April 2010, http://www.chinanews.com/gn/news/2010/04-10/2217932.shtml. Accessed 2 February 2016. The utilization ratio is calculated as follows: utilization ratio = (used water resources/usable water resources) x 100. See Wang, Genxu, Cheng and Du 2003.

44 Yang, Rongxin 2006.

45 Interview, researcher from provincial water research bureau.

46 Taken from the 2016 XXX prefecture *Statistical Yearbook*.

47 Hydropower development along the Lancang River has been the focus of a great number of studies, including Bakker 1999; Biba 2012; Magee 2006; Mertha 2008.

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Too many projects, too few implementers in Wild Grass

Director Zhang of the water resources bureau in Wild Grass has been dealing with water resource governance for more than 20 years and has headed the bureau since 2006. He reported that during most of his time in the bureau, the scarcity of infrastructural water has been his greatest problem: there are too few reservoirs and too few canals to divert water from one of the many rivers traversing Wild Grass, and the facilities to provide drinking water and irrigation are too old to ensure safe and effective usage. These themes were repeated by most of my interviewees in Wild Grass.

With the central government now pouring huge amounts into water resource infrastructure, especially since the publication of the "No. 1 document" in 2011, investment has increased considerably, especially for projects that reduce water usage, increase irrigation and provide a water supply to as many households as possible.[48] Within nine months of the document being published, the prefecture obtained 824 million yuan in water infrastructure grants, a 45 per cent increase from 2010. Upper government levels shouldered the main share of the investment (542 million yuan), most of which had to be applied for through specific project applications regulated by the project mechanism.[49] In 2013, 70 per cent of all earmarked funds received by Wild Grass went into water supply infrastructure development.[50]

Director Zhang described this new era of increased investment:

> We are now fighting for high investments in the area of water resource governance … In order to know which kinds of projects can be competed for successfully, you have to study the policy documents issued by the central level carefully to find out which kinds of projects will receive support. I know the directors in the provincial water resources bureau personally, which helps to get projects approved. We have a lot of meetings with them. Once they receive information on which programmes are going to be initiated by the central government, they inform me right away. Then I can start preparing my applications. My project proposals to the central government are usually successful.[51]

Both Director Zhang and his team were used to socializing with water resources representatives from higher levels of government and experienced at researching and writing funding applications, and so the bureau found it relatively easy to make successful applications. Since each level of government aims to attract as much funding and earn as much praise as possible from higher levels of government, the local Party and government leadership in Wild Grass encouraged Director Zhang to apply for as many projects as possible. The same applies to the provincial level when it comes to obtaining central-level funding. Knowing that Director Zhang and his team were capable of achieving successful project

48 "2011 nian zhongyang yi hao wenjian" (2011 central document No. 1), *Renmin wang*, 2011, http://finance.people.com.cn/nc/GB/61937/213761/. Accessed 2 February 2016.
49 According to the XXX *Prefecture News*, 2011.
50 Wild Grass water resources bureau website.
51 Interview with officials of Wild Grass WRB, Wild Grass, August 2014.

applications, the bureaucracy was happy to pass all the necessary information to him first, which increased his chances of success:

> We have got a lot more projects to do now than we had before. Every year, I have to implement projects worth at least 160 million yuan … This year alone, I have to undertake projects worth 230 million yuan. This job isn't easy, I'm telling you. In fact, this is a high-risk job. There is too much money involved … Of course, our power has grown, too, since we are receiving so much money from the upper levels. Right now, it is like springtime in water resource development (*shuili shiye fazhan de chuntian* 水利事业发展的春天) in China.[52]

The prefecture as a whole invests about 800 million yuan in water resource projects annually. About a quarter of this money is transmitted to Wild Grass, with the remaining three-quarters being shared between as many as nine other counties in the prefecture.

Director Zhang's comments show quite clearly that the pressure on the local WRB had increased since the publication of the "No. 1 document." On the one hand, the rise in central and provincial-level funding was a blessing, since it had the potential to increase economic development by improving the water resource infrastructure. On the other hand, Wild Grass was acquiring numerous projects but lacked the human and technological resources to see them through:

> A problem is the number of projects that I have to implement now. They give us all this money for the projects, but there aren't enough experts in the water resources bureau to do all these projects. It's as if you are supposed to join a war, and they give you a huge pile of weapons to fight, but nobody knows how to use them. It's good they give us all this money, but I feel like I have a tractor on a high-speed highway. I can only go as fast as the tractor allows. I can only go 30 km/h with a tractor, but they want me to go 200 km/h … They provide us with all this money, but don't provide us with technology and expertise. Since the water resources bureau was set up in Wild Grass 30 years ago, the number of staff has not increased much, whereas the projects that we have to do now have multiplied … When I first began working as a deputy director, I built one reservoir within two years. Now, I have to manage 16 times the amount of money, and have to build several reservoirs within one year. The province, the prefecture, the county, they all want us to do as many projects as possible so as to attract as much money as possible. But they don't think about whether this is realizable at all.[53]

Bureau directors and other leading cadres are usually assessed according to the sums of money invested in projects and the extent to which these projects contribute to fulfilling policy targets.[54] However, few of these projects are checked and evaluated. This allows local officials to list acquired projects as achievements whether or not the projects are completed. Thus, in Wild Grass, only some of the numerous projects successfully applied for were eventually implemented. Director Zhang even reported that when applying for projects, the most important aspect was how the project looked on paper rather than how it functioned in reality.

A decade ago, the central government began the effort to divert this focus on the acquisition of money towards more adequate and responsible

52 Ibid.
53 Ibid.
54 Interview, researcher from provincial water research bureau.

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implementation.[55] In Yunnan, according to my informants, this shift has yet to occur. Moreover, despite the intention to reduce earmarked funds and instead increase general transfer payments from higher-level governments, information provided on the websites of the WRBs in Wild Grass and West Mountain revealed that although in West Mountain earmarked funds for water resources in 2015 had in fact declined by 60 per cent from the previous year, in Wild Grass earmarked funds had increased by about 5 per cent over the same period.

Too few beneficiaries, too few projects in West Mountain

Echoing the concerns of the Wild Grass officials, Director Xu of the West Mountain WRB also reported that one of the bureau's major concerns is infrastructural water scarcity. The difference, however, lies in the fact that since 2011, when investment in water infrastructure increased rapidly, in Wild Grass this concern has given way to concerns about to how to turn these large amounts of investments into water infrastructure. In West Mountain, 2011 was not regarded as a year that brought great change to the local water resources bureau. In fact, owing to poor water management, some mountain streams had dried out in recent years. Officials from the West Mountain WRB maintained that water resources would not pose a problem if the county had sufficient funding to create the infrastructure that would allow for the exploitation of the county's natural water resources. Director Xu explained the problem:

> You have to put a lot of work into these project proposals. When applications were invited to become a "special county for small-scale agricultural water resources" (*xiaoxing nongtian shuili zhongdian xian* 小型农田水利重点县), an official from the county government encouraged us to apply. This is why our design office started the planning work. Sometimes, when you hear about a government programme at very short notice, you have to call everyone together and focus on the project application. It all depends on when you hear about the project. If you hear about it early on, then you can prepare a better proposal. Sometimes, the prefecture knows about these projects early on, but they simply don't inform us … The problem is that you need a certain amount of funding first in order to be able to mount the application process. And, if the project is approved at the provincial level, you have to pay experts to attend the approval meeting (*pingshen hui* 评审会). No matter if the project is approved or not, you have to pay them first. Each of the five to six attendees receives about 1,000 yuan to attend the meeting for about one hour. This is a huge waste of financial resources, because usually here in West Mountain, out of ten project applications, a mere two are successful.[56]

Those WRBs with good personal relations with higher levels tended to hear about new application opportunities first, whereas other WRBs might only read about them once they had been published online and so already lagged behind in the time-consuming preparatory work, which requires a significant amount of expertise. Xu outlined a further hurdle:

> In order to gain approval for the project, you have to provide the required amount of matching funds. If you don't have the funds, then you cannot win any projects. This is a big problem here in West Mountain. The money that the province can provide as matching funds is limited.

55 Ministry of Water Resources 2006.
56 Interview, officials of West Mountain WRB, West Mountain, August 2014.

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Another aspect that influences the approval process is your relationship with the provincial level. If you have good personal relations, then it is easier to have the project approved, and the whole process is faster.[57]

Director Xu, along with officials from other bureaus eligible for project applications related to water governance (such as agriculture and environmental protection), lamented the fact that relations with their functional superiors at prefectural and provincial levels were not sufficient to convince these superiors to support their project applications. While they acknowledged the fact that their written proposals and the ability to provide matching funds played an important role in whether their projects were approved or not, they consistently argued that one major reason for their difficulties in attracting projects was that they were not given early warning of calls for proposals, unlike some localities which were informed about these calls by provincial and prefectural officials. These other localities therefore had more time to prepare their applications, and so they could potentially submit better project proposals. Director Xu also believed that other localities' good personal relations with superiors at prefecture and provincial level gave them an advantage during project approval stages.

Finally, regions with a lower number of project beneficiaries find it more difficult to attract higher level funding. This is problematic for a region like West Mountain, which, compared to Wild Grass, has a larger land area and a lower population density:

Another aspect is the number of people who benefit from the project you are applying for. Here in West Mountain, the fact that people are living dispersed among the mountains inhibits successful project applications. They tend to approve a project that has a higher number of beneficiaries that they can report on to their superiors. The thing is, we have so little funding here at the county level that if they don't approve the projects, we cannot do anything. We cannot pay the bills on our own.[58]

Conclusion

The scrutiny of local water politics in two counties in Yunnan illustrates how the project mechanism, when combined with other central control mechanisms, channels infrastructure investments to regions which already have sufficient financial and infrastructural resources while neglecting poorer and more remote localities. In fact, local water resource bureaus can easily find themselves trapped in a vicious cycle of either too much or too little success when trying to attract funding. This situation changes the project mechanism, which was originally designed to increase the efficiency of any investment, into an instrument that reinforces existing social and economic disparities at the grassroots level, and simultaneously undermines effective water provision. Previous studies on the project mechanism have stated that the mechanism causes "the poor to become poorer and the rich to become richer." A more nuanced picture of that phrase is necessary: while the poor do not inevitably become even poorer, they do, however, lose

57 Ibid.
58 Ibid.

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out on infrastructure projects and therefore will achieve worse results in performance evaluations.

In addition, the mechanism encourages local officials to focus on short-term results and neglect the monitoring and evaluation of completed projects. Ultimately, it is those project proposals that look good on paper and have the potential to attract large investments that succeed, regardless of whether they are necessary to improve the local water situation. For local officials, a successful project is one that has been applied for successfully and has drawn in the desired earmarked funds. Owing to the lack of monitoring, projects do not necessarily have to be implemented as planned, or even implemented at all, as has been shown in the case of Wild Grass.

The project mechanism might on the surface give the central state control over how its resources are used at the local level. This control, however, only reaches down to the provincial level. At this level and below, contrary to the central government's aim, the mechanism interacts with other central control mechanisms that entice provincial officials to channel funding according to their own professional needs rather than more equitable considerations of resource use. Although the project mechanism is meant to be based on competition and market mechanisms, when combined with other central control mechanisms, it does not necessarily encourage the efficient use of financial or water resources. In fact, increased competition among localities can easily lead to conflict between them, and thus prevent the cooperative efforts that are necessary to effectively govern resources that cross administrative boundaries (i.e. water).[59]

These findings are significant not just because of the increasing level of funding the central state has been pouring into water governance, both to improve water provision and to tackle increasingly polluted water resources. They also have the potential to explain uneven local development in other policy fields, in particular those characterized by large-scale central level investments which are channelled through a bureaucracy governed by the same vertical control mechanisms that have caused local agents at provincial and prefectural levels in this study to turn a blind eye to local inequalities.

The research findings particularly apply to financially weaker provinces, where the need to acquire central-level funding is more important than the actual fulfilment of policy targets.[60] Although further research is necessary, it can be assumed that in equally poor arid regions where water savings are prioritized, project acquisition follows similar paths. That is to say, money for water-saving projects is channelled to localities that, on paper, are able to achieve set targets even though not all projects are fully implemented, as is the case in Wild Grass. The situation is, however, likely to be different in richer coastal provinces that are less dependent on central-level funding and therefore do not need to acquire project funding at any price. In sum, whereas in the north priorities might be different and water resource

59 Moore 2014.
60 See also Kostka and Hobbs 2012.

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projects are of a different kind, local governments there are subject to the same constraints as those in the south-west: namely, a lack of financial resources, and central control mechanisms that require quick and visible results.

One potential remedy for this situation is to reform the mechanism that transfers central funding to the local levels. The central government hopes to increase general transfer payments and reduce earmarked funds, and while this change is slowly taking effect, currently the project mechanism still plays an important role in the transfer of funding throughout all administrative levels. Moreover, in late 2016, the Yunnan Leadership Group for Agricultural Reforms introduced new rules on how funding of public projects is decided. The new regulation moves away from a pure form of distributing money based on the number of beneficiaries towards including aspects like poverty, among others.[61] This is a welcome response to current problems. It remains to be seen how this reform will interact with other central control mechanisms and whether it has the potential to eventually put an end to the fierce competition for project funds.

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摘要: 虽然被认为是“亚洲的水塔”，但云南经常面临严重干旱，这给当地社区以及国家行为者带来了压力。本文探讨了指导云南省当地干部使用水治理策略的制度安排，显示了中国行政体制中中央控制机制如何阻碍了水治理在地方一级的有效实施。在云南省两个经济发展水平程度和水资源获取情况不同的县进行的实地调查结果显示，现行的制度安排—包括规范地方干部绩效以及向高一级政府申请项目资金的程序—阻碍了基建投资的有效利用。相反，省级以下　的水利局官员利用其权利向已经拥有良好项目申请记录的地区拨款。

关键词: 中央地方关系; 政策执行; 项目制; 水资源管理; 云南省

61 See Yunnan Rural Reforms Office 2016.

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