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# Path Dependencies and Institutional Bricolage in Post-Soviet Water Governance

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**ABSTRACT:** Following their independence, the two Central Asian states of Kyrgyzstan and Tajikistan decided on similar water governance reforms: transfer of local irrigation management to water user associations, introduction of pricing mechanisms, and establishment of hydrographic management principles. In both states, however, proper implementation is lacking. This paper aims to explain this contradiction and focuses on agricultural water governance reforms at the local level as an interdependent part of a multilevel water governance structure.

Based on empirical findings, four variables through which the neopatrimonial context in both countries impacts water governance are identified: the decision-making process, the agricultural sector, the local governance institutions, and internal water-institutional linkages. A historical-institutionalist perspective shows how path dependencies limit reform effectiveness: institutionalised Soviet and pre-Soviet patterns of behaviour still shape actors' responses to new challenges. Consequently, rules and organisations established formally by the state or international donor organisations are undermined by informal institutions. Yet, informal institutions are not only an obstacle to reform, but can also support it. They are not static but dynamic. This is elucidated with the concept of 'institutional bricolage', which explains how local actors recombine elements of different institutional logics and thereby change their meaning.

**KEYWORDS:** Kyrgyzstan, Tajikistan, irrigation, water governance, new institutionalism

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## INTRODUCTION

Water is commonly referred to as a common pool resource, a nonexcludable public good but with rivalry in consumption. Hence, research has long focused on collective action problems in managing this common resource. In recent years, predominantly anthropological and sociological scholars have criticised these studies for neglecting the complexity of water, its embeddedness in a wider cultural and social context, and the role of power. Water is in some important aspects different from other natural resources: in its mobility, its variability, and its multiplicity. The first makes ownership claims difficult: water is moving, transcending state borders, rather than being fixed like other resources. The second refers to the fact that its availability varies temporarily, depending on weather conditions. Thirdly, water is used for different economic, technical, cultural, and social purposes simultaneously and has hence material as well as symbolic dimensions (Mehta, 2006; Linton, 2006). It is therefore obvious, albeit long neglected, that water management is not a merely technical issue that can be addressed by technocrats and engineers alone, but it is also a political process (Mollinga and Bolding, 2004; WWC, 2004). Therefore, the final policy output results from strategies, debates, conflicts, and coalitions between individual and organisational actors with different interests concerning the distribution and use of water resources.

Since the turn of the millennium, this insight has received enhanced consideration and resulted in what Tony Allan called the political-institutional water paradigm (Allan, 2003). It is centered on the term 'water governance'. On the one hand, and in its most popular usage, it points to the necessity of

'good governance' in the water sector. 'Good water governance' quickly became a popular buzzword in conferences and international donor discourse. On the other hand, it refers to the complex setting of water management in wider governance structures that have to be accounted for when analyzing water usage and its regulations.

This paper analyzes water institutional reforms in the two post-Soviet states of Kyrgyzstan and Tajikistan from a governance perspective. Hence, it looks at reforms that strive to establish good water governance and analyzes how they are influenced by the general governance structure. In both countries, reforms are intended to achieve a transformation from a state-managed, sectoral, and centralised system without usage fees and public participation towards a hydrographic, decentralised, intersectoral system with user participation and irrigation service fees (ISFs).<sup>1</sup> However, both countries can hardly be considered to be following general good governance principles. They can better be classified as neopatrimonial regimes, where certain formal democratic structures have been established but are supplemented and undermined by (informal) patrimonial structures such as clientelism, corruption, and personalistic rule, resulting in a hybrid or an authoritarian regime type. How can water governance reforms become effective and reach good water governance in such a setting?

### THE WATER GOVERNANCE PERSPECTIVE

When speaking of water governance, two meanings should be distinguished: a normative one and an analytical one. In the latter, governance refers to a distinct analytical perspective on regulation and coordination processes. Governance is not a theory, nor does it imply a certain theory, but it is an analytical approach used to describe and assess reality. The rise of the governance concept on the one hand shows the desire and need for a different perspective to analyze reality; on the other hand it is a reaction to a changed reality requiring new approaches in its analysis: it reflects a shift in power from national government alone to local levels, transnational organisations and civil society, and private actors (Pierre and Peters 2000). Consequently, politics is not seen as regulation and control by one authoritative actor (the state), but as an interaction between interdependent collective actors on different levels: local, regional, national, and international. These different levels are all included in the term 'multilevel governance' (Benz, 2004b, 2007).

Though there are "perhaps as many views about governance as there are scholars interested in the subject" (Pierre and Peters, 2000), they have in common that – besides questioning the role of government – they believe in the governability of society and the economy. One premise of the governance approach is that regulation between actors is possible, i.e. policy is not entirely determined by economic constraints or power interests. It assumes that politics is not only a power game of elites; hence it acknowledges that institutions have influence. The governance perspective can reveal the dynamic concurrence of structures and processes, institutions and actors, rules and the application of rules, e.g. when it explores the role of institutions in policy processes by scrutinising path dependencies or by analyzing which institutional logics actors adhere to in order to exercise power (Benz, 2004a; Pierre and Peters, 2000).

In the water governance discourse, this analytical governance approach is reflected in the insight that the former water management perspective was too narrow. The definition of water governance as formulated first by the Global Water Partnership and later adopted and modified by the UN is:

the governance of water in particular can be said to be made up of the range of political, social, economic and administrative systems that are in place, which directly or indirectly affect the use, development and management of water resources and the delivery of water services at different levels of society. Governance systems determine who gets what water, when and how and decide who has the right to water and related services and benefits (UNESCO, 2006).

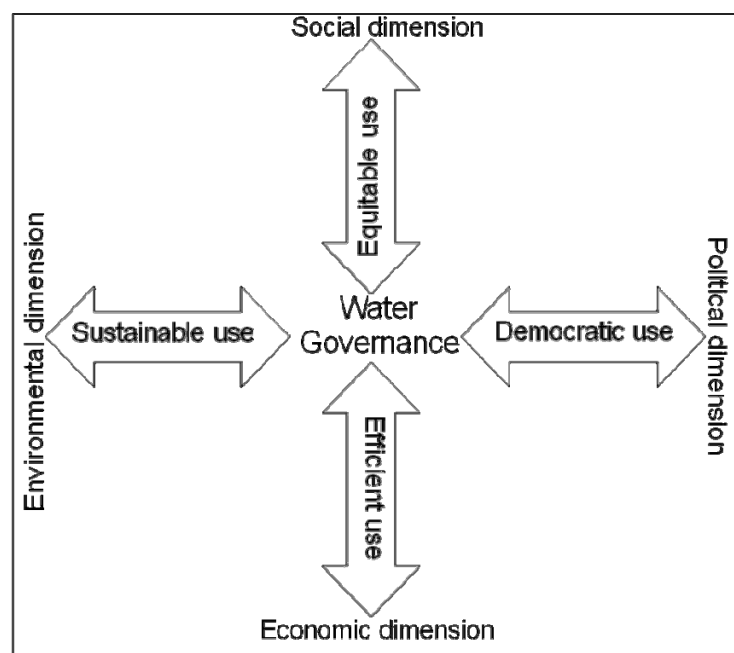
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<sup>1</sup> This paper focuses on rural water governance and agricultural water usage, where most reform efforts in the two countries occur. Questions of hydropower and industrial and domestic water consumption are excluded.

Water governance hence encompasses all social, political, and economic structures, formal as well as informal rules, and processes that influence water use and water management. It involves government, civil society, and the private sector. Water has multiple economic uses: irrigation, hydropower generation, sanitation and water supply, industrial water needs, fishery, navigation and transport, recreation and tourism, etc. Hence it affects different policy fields whose coordination is one of today's major challenges. Pure hierarchical state-centred management has obviously failed in the past. Moreover, complete privatisation – while welcomed by some – is not in line with the perception of water as a public good, let alone with access to water as a human right. Water governance hence provides a comprehensive perspective on water usage and regulation, one that allows taking into account the interests and stakes of different economic sectors and of actors at multiple administrative and political levels as well as including questions of democracy, power, corruption, etc. in analyses (UNESCO, 2006).

However, this analytical governance approach has played a minor role in the water governance discourse. Of much greater importance is the normative notion of good water governance. In the international discourse on good water governance, the classic good governance criteria of transparency, accountability, equity, coherency, and ethics are defined as objectives for water usage and regulations (UNESCO, 2003; Rogers and Hall, 2003). Tropp (2005) identifies four dimensions of good water governance (see Figure 1):

Figure 1. Dimensions of good water governance.



The social dimension aims at equitable distribution of water usage between the poor and the rich, between different economic sectors, between rural and urban needs. The environmental dimension aims at sustainable use taking into account ecological needs and water quality issues. The economic dimension aims at efficient use and thereby a contribution to improved water access and sustainability. Finally, the political dimension aims at democratic empowerment of the water users in order to achieve equitable and target-oriented water management. Following these conceptualisations, good water governance can be defined with a process and an output dimension: good water governance is a democratic and coherent coordination and a regulation process that leads to equitable, efficient, and sustainable water usage.

## **WATER INSTITUTIONAL REFORM: THEORETICAL FRAMEWORK**

Good water governance may be a buzzword at conferences and on the policy agendas of donor agencies and international organisations, but how can it be put into practice? Water governance reforms are reforms of water institutions, of the rules that regulate water usage. Water institutions have to be changed so that they enable good water governance, hence democratic, equitable, efficient, and sustainable usage of water resources. The institutional dimension is increasingly perceived as vital for reforms of the water sector (see e.g. Allan, 1999; Neubert et al., 2002; Saleth and Dinar, 2005). Can such water institutional reforms be effective (achieving good water governance) in a neopatrimonial institutional context such as that of Kyrgyzstan and Tajikistan, but also of many other countries that are not characterised by general good governance and democratic structures?

Before introducing the case studies, it seems necessary to briefly outline the understanding of institutions and institutional change that forms the basis of the analysis. Referring to the conceptualisation of institutions in sociological institutionalism (March and Olsen, 1989; Powell and DiMaggio, 1991), I define water institutions as those formal and informal rules, norms, and their underlying cognitive and symbolic systems as well as the organisations that set and enforce them that purposefully regulate the usage, distribution, and status of water resources in a society. Following Saleth and Dinar (1999, 2004), they can be broadly divided into water policy, water law, and water administration, all of which include formal as well as informal elements. Issues of water law refer to the legal status of water, water rights, conflict resolution mechanisms, possible contradictions between laws, legal pluralism, and the existence or nonexistence of administrative regulations for implementing the law. Water policy covers usage priorities, water tariffs, decentralisation or centralisation of competencies, participation, and coordination with other policies. Water administration is the organisational structure of water management, including funding, staff, capacities, and fee collection (Saleth and Dinar, 2004).

The analysis of water institutional reform is an analysis of institutional change. However, the puzzle to be explained is often the persistence of institutions, even under reform programs, changing conditions, and pressure from the political elite. This question is especially crucial when it comes to informal institutions: by definition they cannot be changed centrally by authoritative decision because they emerge from social dynamics and do not possess a regulating or coordinating centre (Lauth, 2000). The relationship between formal institutional change and informal institutions has so far received only limited attention, especially by scholars of syncretism and legal pluralism (Helmke and Levitsky, 2004). For an analytical framing of these processes of change and continuity, I wish to use two explanatory models. First, the concept of 'path dependency' developed by scholars of historical institutionalism can explain why institutions persist despite reform programs. Second, the concept of 'institutional bricolage', close to approaches of sociological institutionalism, can explain how change and persistence occur simultaneously and are interwoven.

### **Path dependency**

Path dependency explains the difficulties of institutional change: a 'path' is the way institutions "structure a nation's response to new challenges" (Hall and Taylor, 1996). Historical experiences and policy legacies frame present actions: behaviour or identities that once proved to be successful and that are established, will be used again to meet new challenges. Pierson (2000) explains path dependency based on economic theory with the concept of increasing returns: the benefits of staying on the path increase while the cost of alternative behaviour rises. Thelen (1999) argues that path dependency becomes effective by feedback mechanisms, which can consist of functional and distributional effects: the functional effects relate to the fact that "once a set of institutions is in place, actors adapt their strategies in ways that reflect but also reinforce the 'logic' of the system" (Thelen, 1999). Distributional effects refer to the power asymmetries that are reinforced by institutions. In this way, they marginalise other actors in the political processes who may have an interest in alternative institutional

arrangements. The reason for the genesis and persistence of institutions is hence not only that they perform a certain function, but also that they serve certain interests. Institutional continuity is not something static, but a dynamic process of reproduction and adaptation (Streeck and Thelen, 2005). These effects are reinforced as reform policies in general are eager to establish new institutions, while they rarely give attention to the deinstitutionalisation of old institutions so that they are not replaced but rather complemented by new ones (Lowndes, 2005).

### **Institutional bricolage**

An approach to institutional change that stresses the constraining as well as enabling aspects of institutions can be found in the concept of institutional bricolage. Claude Levi-Strauss (1968) used the verb *bricoler* "to emphasise a non-presaged movement"<sup>2</sup> (Levi-Strauss, 1968) where the choice is only limited by the elements available. There are two broad schools that use this concept: one in anthropology on local level resource management and one in economics on macrosocial transformation.

Frances Cleaver (2002) uses the term institutional bricolage to describe the unspecific character of the process in which institutions are put together by the *bricoleurs*, using elements they already have. She underscores the aspects of multiple identities of the bricoleurs, cross-cultural borrowing, and multipurpose institutions in order to understand institutional change. Bricoleurs patch together – partly unconsciously – the elements of different institutional logics available to them, leading to new institutional arrangements. For example, concerning water institutions, actors choose institutional elements not only of the water management institutional logic, but also of the community logic: in local water governance, both institutional logics intersect and the norms of social consensus may be as important as technical rationality (Cleaver, 2002). In this respect, "actors construct mechanisms of water governance both consciously and unconsciously; through the processes of management and through the practices of their daily lives" (Franks and Cleaver, 2007).

In his research on local adaptation of imposed political and economic institutions in Senegal, Galvan (2004) uses the term bricolage to describe a process of interweaving and thereby transforming informal and formal institutions resulting in 'institutional syncretism'. Syncretic institutions are "institutions that result from deliberate and coherent recombination of administrative forms, rules, habits, or norms from more than one socio-cultural origin" (Galvan, 2004). Syncretism is more than the mere combination of different elements but means the "ongoing, incremental, creative transformation of all elements" (Galvan, 2004). Syncretic institutions are qualitatively new elements. The mere combination of one modern component with one traditional component with both remaining unchanged would hence not meet the criteria of a syncretic institution (Galvan, 2004).

Cleaver and Galvan both apply the concept to local level institutional changes. Another version of the bricolage concept can be found in its application to macrosocial and economic transformation. Stark and Bruszt (1998) as well as Grabher and Stark (1997) criticise the explanatory value of common approaches to postsocialist transformation. They perceive the persistence of socialist and Soviet legacies not as obstacles to reform, as neo-liberal economists would do, but as potential resources for the future. While not providing a clear definition of bricolage, they use the term to stress two points. First, in rejecting the idea of transition, they understand transformation as "rearrangements, reconfigurations, and recombinations that yield new interweavings of the multiple social logics that are a modern society" (Stark and Bruszt, 1998). Second, they stress the agency factor in institutional change: "(...) it is precisely in reworking the institutional materials at hand that actors innovate. In our view, institutions do not simply constrain; they also enable. It is through a political and economic bricolage that new institutions and new practices emerge" (Stark and Bruszt, 1998). Campbell (1997) also stresses the constraining as well as enabling effects of institutions leading to actors that are simultaneously

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<sup>2</sup> "um eine nicht vorgezeichnete Bewegung zu betonen", my translation.

objects (of institutions that limit the range of solutions) and subjects (that can creatively recombine and extend institutional elements).

I will use the term institutional bricolage to describe a nonteleological, partly purposeful and partly unintentional process of the combination and transformation of institutional elements that results in a qualitatively new type of institution. However, this does not have to be a more appropriate one in a functionalist sense, but it can be the one that better serves the interests of certain actors, as bricolage is related to questions of power as well. On the other hand, it stresses the unconsciousness and messiness of institutional change, rejecting the idea of completely conscious and rational designing of institutions (Mehta et al., 1999; Cleaver and Franks, 2005). In this process, actors are constrained by institutions while being actively involved in their reassembling and reinterpretation. Institutional bricolage therefore offers an approach to institutional change that is situated between path dependency and the development of new, alternative paths, which are never completely new but a recombination of existing institutional elements and new concepts.

## RESEARCH DESIGN AND METHODOLOGY

The comparison is based on a most similar cases design (MSCD). This means that the respective case-study countries are selected based on a number of shared features (context variables) so that the differences (independent variable) that explain various political outcomes can be highlighted. This approach allows for restricted inferences and heuristic theory development and can detect case-specific details as it builds on in-depth case studies (Lijphart, 1971; Hague et al., 1998; Landman, 2000; George and Bennett, 2004).

Both cases are relatively small, landlocked mountain states with similar patterns of economic development and structure, water resources and water usage, historical institutions of water management, national policy priorities, as well as comparable states of financial, technical, and professional capacities. In the economic realm, both countries are developing countries with only a small industrial sector. Agriculture is of major importance, although in both countries less than 10% of the territory is arable land. Despite these geographical constraints and even though agricultural production has declined by approximately 50% since independence, agriculture accounts for 45% of the GDP, 40% of the work force, and 30% of the exports in Kyrgyzstan. In Tajikistan, cotton, which is particularly water-intensive, accounts for 43% of all planted crops and contributes 11% of all export gains. As for the workforce, 65-70% is engaged in agriculture. Subsistence agriculture has become increasingly important, especially for the population living in rural areas (ADB, 2000; Bucknall et al., 2003; UNDP, 2003; UNECE, 2004; Pulatov, 2004).

These economic conditions have a direct impact on water usage: water is a critical resource for agriculture because to a considerable degree cultivation of land is only possible with irrigation (75% of the land in Kyrgyzstan and 84% in Tajikistan). Hence, agriculture is the main water user in both countries. It accounts for 90% of water usage in Kyrgyzstan and 84% in Tajikistan (UNDP, 2003; MISI and FES, 2003; Bucknall et al., 2003). Both states are endowed with rich water resources and therefore in general do not suffer from natural water scarcity. However, water shortage due to inefficient management practices is a problem in certain regions.

Apart from policy documents, drafts, and donor reports, the most important source of information on the cases was field research using qualitative methods. The field research took 6 months, split into four research periods between 2003 and 2005. Several methods were triangulated: semi-structured expert interviews, open interviews, participant observation, informal conversations, and local case studies. Semi-structured and open expert interviews were conducted with representatives of different agencies of the state water administration and related state agencies, NGOs, donor agencies, academic institutions, and individual experts.

Additionally, in each country an in-depth case study of one water user association (WUA) was conducted, using participatory rural appraisal (PRA) tools such as semi-structured and open interviews,

informal conversations, participant observations, and group discussions. The case studies were conducted together with local field assistants in Kyrgyzstan in Sokuluk district, Chuy province, and in Tajikistan in Aini district, Khudjand province. The districts for the case studies were not selected on criteria of representativeness given that the objective was not to confirm or falsify certain hypotheses but rather to heuristically develop an understanding of the institutional dynamics at the local level. These local case studies were complemented by short-term field visits in other parts of the two countries to allow for better assessment.

## **WATER INSTITUTIONAL REFORMS IN KYRGYZSTAN AND TAJIKISTAN**

Historically, in both countries a similar water governance system evolved, especially through their shared past under Russian and then Soviet rule.<sup>3</sup> The end of the Soviet Union challenged the existing modes of water usage, management, and governance in various ways. For example, the unified Central Asian water-energy system collapsed. New national priorities replaced Soviet Union priorities and set new framework conditions requiring water policy to adapt. The economic crisis in both countries also resulted in a decline of financial allotments to the water sector to less than 15% of that of the late 1980s (Bucknall et al., 2003; UNDP, 2003). Experts emigrated, operation and maintenance of the infrastructure collapsed. This has severe consequences for the state of technical infrastructure, in Tajikistan further worsened by the civil war (1992-1997). Both states inherited a highly hierarchical and fragmented water governance structure from the Soviet Union, where a distinct Ministry of Water Management (*MinVodKhoz*) was the main organisation with centralised power and a hierarchical structure of its departments at the republic, province, and district levels. No noteworthy horizontal coordination between water-using sectors existed. These legacies still shape the current water governance structures. In Tajikistan, the organisational structure remained more or less unchanged. In Kyrgyzstan, the *MinVodKhoz* was dissolved and subordinated as *DepVodKhoz* (Department of Water Management) to the Agricultural Ministry, which reinforced coordinating problems rather than solving them. The coordination problems in both countries result in overlapping competencies on the one hand and responsibility gaps on the other hand. Especially in Kyrgyzstan, administrative fragmentation is considered a serious problem by many experts (SPECA, 2004; Sehring, 2009).

As post-Soviet states depending on international aid, the two countries face similar challenges for water governance: both countries have had to cope with a deteriorated infrastructure, decreasing financial means and professional capacities, the disintegration of the regional water governance system, a hierarchical governance system that is inadequate to meet the new challenges, and the need to develop their own policy strategy. Additionally, both states have been confronted with the same norms in the international discourse as to what good water governance should look like. The primary incentives for conducting reforms in the two states were a budget crisis and donor pressure, a situation similar to many developing countries (Meinzen-Dick et al., 1997). Consequently, they share many reform projects in response to international norms – basin management, decentralisation, user participation, irrigation service fee (ISF) – and to post-Soviet needs such as the ISF, new legal framework, transboundary management.

The reforms conducted during the period covered by this study (1991-2005) are listed in table 1. The table shows policy decisions on reforms and indicates the year of the respective law or decree for both countries. Decisions by law are indicated with dates in italics. The years in brackets indicate that these were not special laws, decrees, or policy directives, but part of the water code, law on water, or water policy strategy. The second row for each country presents an assessment of the effectiveness of the implementation process, which is the result of the policy analysis conducted by the author.

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<sup>3</sup> On pre-Soviet and Soviet water governance in Central Asia see Bichsel (2006), O'Hara (2000), Thurman (2002).

Table 1. Water institutional reforms in Kyrgyzstan and Tajikistan, 1991-2005.

Reform policy	Kyrgyzstan Policy decision	Kyrgyzstan Implementation	Tajikistan Policy decision	Tajikistan Implementation
Water policy strategy	Draft 2003	–	2001, 2006*	Partly
New legal framework (water code)	1994, 2005	–**	1993, 2000	Partly
Regulation on transboundary waters	2001	No	(2000)	-
Irrigation service fee (ISF)	(1994) 1995, 1999	Partly	1996	Partly
Basin management	1997	No	(2000, 2001)	No
Intersectoral coordination	2005	Not likely	-	-
Irrigation management transfer to WUAs	1996, 2002	Ongoing	1999, 2006*	Ongoing

\* Approved after the author's survey

\*\* Implementation efforts only started after research period

Source: author's compilation

In this article, I focus on those reforms that have been (at least partly) conducted in both countries and that are especially relevant for rural water governance: a new water policy strategy, a new legal framework, irrigation service fees, and water user associations.<sup>4</sup>

### Water policy strategy

After independence, both states felt the need to develop their own water policy strategy outlining the fundamentals and priorities. However, throughout the 1990s, neither country had such a strategy. In Tajikistan only in 2001 was a *Concept on rational use and protection of water resources in the Republic of Tajikistan* issued and later replaced by the 2006 *Water sector development strategy*. The latter was developed within only a few months with support from the United Nations Development Programme (UNDP). Both reflect the general good water governance principles. In Kyrgyzstan, a National Committee on Water Strategy was established in 1996. However, because of conflicting interests of the members it did not succeed in reaching consensus. Even after a draft version was published with support of the German Friedrich Ebert Foundation in 2003, it was never accepted by parliament and the government. During the entire research process, the country lacked a formulated water policy as a basis for coherent reform programs.

### New legal framework

The first water laws in both countries were more or less the old Soviet ones, which soon proved to be inadequate for the new situation and the beginning reforms. New legal frameworks had to be developed that involved regulations on issues such as water rights, the role of water user associations, contracts of water delivery with the new private farmers, etc.

Tajikistan renewed its 1993 Water Code in 2000. The main institutional changes were the introduction of fees for water usage (§ 31) and a new definition of the competencies of the different agencies, as well as of the government and its subordinate organs, and the local authorities (§§ 6, 7). The Parliament – the primary body for determining policy directions according to the old Water Code –

<sup>4</sup> For a detailed analysis of all reforms, see Sehring (2009).



is not mentioned in the entire document. The code strengthens the rights and obligations of water users and water suppliers (§ 45). Article 43 designates the right of farmers to organise themselves in water-user associations (WUAs) in order to operate and maintain tertiary irrigation systems, distribute water fairly between individual farms, collect the ISF, and settle disputes concerning the distribution of water. The Water Code also adumbrates a transition to basin management, as it states that water management should be based on a combination of basin and territorial principles (§ 9). However, until today many necessary by-laws and subnormative acts are missing. Violations of the Water Code are apparently not prosecuted stringently. Additionally, it still lacks many important implementation mechanisms and those decided are only partially applied. A former senior official of the *MinVodKhoz* assesses the problem as follows: "on the legislative level, there is no deficiency of laws, but we need further steps" (Former senior official of the *MinVodKhoz*, Dushanbe, 08/23/2004). One fundamental problem is that the Water Code and its concrete application rules are widely unknown, not only among the population (the water users), but also among the respective bureaucrats. The water users and agencies concerned do not have sufficient information on the law or their rights and obligations and therefore do not know how to apply it and how to make use of their rights.

In Kyrgyzstan, the development of a new water code also began in 2000, but it was only approved in 2005. Its main changes compared to the old law "On Water" are the administration according to basin principle (§5 and others); legal regulations for contracts on water delivery and the right to water for 15 years (§ 34 and others); establishment of a national water council (*Natsionalnyy Sovet po Vode*) to coordinate all activities in the water sector, develop a national water strategy as well as laws, policy recommendations, and implementation mechanisms (§9); establishment of a state water administration to be in charge of water management and irrigation and drainage activities (§ 11); and participation of stakeholders in basin councils (§ 10).

Development of a new water code faced problems like the development of the policy strategy (which was initially intended to be the basis for the water code) and took considerably longer than planned because of stiff resistance. The discussions between the ministries concerned during the process of drafting the water code were described as involving many intricate questions and contradictions, with conciliation between all interests difficult. The main point of concern seems to have been the new administrative regulations and definitions of competencies. Also, after the Parliament approved the code, it lacked ownership among experts (who claimed that basically international donors had written the law) and the first steps of implementation were rather unsuccessful.

### **Irrigation management transfer to WUAs**

The concept of the water user association (WUA) seems ideal to merge all the main normative objectives of the current water governance discourse: it is a democratic grassroots organisation of the water users themselves at a decentralised level, independent of state structures. It finances itself with member payments for the service of water delivery. Its main tasks are maintenance of the tertiary irrigation system; operation of this system, i.e. distribution of the water obtained by the district water agency to the member farms in an equitable manner; and collection of the ISF from its members. Since the democratically elected board is accountable to the members – the farmers – equitable water distribution should be guaranteed.

In both countries, WUAs have been established for the most part by international donor agencies within the framework of agricultural development projects mandated to rehabilitate tertiary irrigation systems that were previously managed by the state or collective farms. In Kyrgyzstan, development of WUAs started in the mid-1990s. The country-wide development of water-user associations has taken place within the framework of projects of the World Bank and the Asian Development Bank (ADB). In order to foster implementation, in 2000 a WUA support department was created at the Department of Water Management and at its regional and local branches. In 2002, the Law on Water-User Associations

was passed by Parliament. By April 2004, already 59% of the irrigated land in Kyrgyzstan was managed by 353 WUAs (Otdel podderzhki AVP, 2001; Hassan et al., 2004; Kozhoyev, 2004).

The first projects to establish WUAs in Tajikistan were started by the World Bank in 1999. The implementation agency is the especially established Center for Farm Privatisation Support (CFPS) at the Ministry of Agriculture. Besides the WUAs set up by these top-down programs, there are many local bottom-up projects. In those projects, WUA development is part of community development. These projects are implemented mainly by international NGOs. There are no exact and official data on how many WUAs exist in Tajikistan, as only the big projects (funded by World Bank, ADB, USAID) are coordinated by the Ministry of Irrigation and Water Management. Based on data provided by the CFPS, ACTED, Winrock, Aga Khan Foundation, Mercy Corps, and the German Agro Action on their WUA activities, it can be estimated that in 2005 roughly 100 WUAs existed, managing less than one-fifth of the total irrigated land (Sehring, 2006). Only at the end of 2005 was a law on WUAs approved.

In both countries, WUA reform is almost exclusively implemented by international NGOs and donors. Their projects were not designed to assist implementation of previously decided national reforms, but to create counterparts for rehabilitation projects in order to achieve physical, financial, and organisational sustainability, with the legal foundations only agreed on afterwards.

### **Irrigation service fees**

Irrigation service fees (ISFs) are fees raised to cover the cost of the service of irrigation water delivery, not on water as a resource as such. In Kyrgyzstan, such fees had already been formally introduced in 1995. However, because of the continued refusal of Parliament to approve a law on the ISF amount, a cost-recovering tariff could not be decided on and the final water tariffs for agriculture were established only in 1999. Simultaneously, the state reduced its apportionment of funds to 50% of the expenditures of the local water departments (*RaiVodKhozes*). The other 50% must now be covered with ISFs. However, this fee is rather symbolic. It covers approximately 20% of the actual operation and maintenance costs. The fees have not been increased since then because respective laws have been rejected by the Parliament (Dzhaylobaev, 2003). With the 2005 Water Code, the authority to determine the value of the ISF was transferred to the national government.

In Tajikistan, volumetric ISFs were introduced in 1996 by presidential decree on a low level. The objective was to create awareness first and then strive gradually to full cost-recovery. Consequently, the ISF amount was gradually raised. The current level covers about 30% of the actual costs (Kholmatov, 2003). Since 1996, local water agencies have been expected to cover part of their costs by ISFs.

Although the decision to establish ISFs was in both countries made more than 10 years ago, their implementation and the collection of the water fees from the farmers, is far from being fully achieved. In Kyrgyzstan, water user associations (WUAs) are now in charge of collecting the ISF from their members and transferring it to the *RaiVodKhozes*. Alymbaeva (2004) shows an average collection rate in WUAs of 53%. In areas without WUAs, the collection rate is even lower because the *RaiVodKhozes* do not have the staff capacities for collection from individual farmers. For Tajikistan, payment estimations by different officials for the years 2002 and 2003 range from 30% to 56%. The government's 2006 *Water sector development strategy* mentions a 60% collection rate (MIWM et al., 2006). Whether payment is better in those areas where WUAs have been established and are responsible for fee collection cannot be ascertained as no survey data exist and expert statements are contradictory.

This short analysis thus shows a discrepancy between policy decisions and policy implementation in both states: both countries have a number of formal policy decisions, but today both countries have still not successfully implemented a comprehensive reform. Some reforms require a long-term perspective and might achieve better performance in the future, notably the irrigation management transfer to WUAs. But even reforms such as the introduction of the ISFs, which were started approximately 10 years ago in both states, are still not fully implemented. Water codes have been approved without the necessary by-laws to make them work. How can this be explained?

## VARIABLES OF WATER INSTITUTIONAL REFORM

When water is considered a governance issue and its interdependency is acknowledged in a complex wider governance structure, it is obvious that this wider governance structure beyond the explicit water laws and organisations has an impact. This general institutional setting in both countries is characterised by a conflicting coexistence of formal democratic mechanisms on the one hand and authoritarian and personalistic leadership patterns, clientelism, and corruption on the other hand.

Based on qualitative field research in Kyrgyzstan and Tajikistan, four factors were identified that impact water governance and the reform processes. Three are external to the water institutions and part of the general political and socio-economic setting: the institutions of decision-making, the conditions of the agricultural sector, and the local governance institutions. The fourth factor is internal: the contradictions between the different water institutions.

### Decision-making institutions

The institutions of the decision-making process encompass all formal and informal rules that regulate which actors gain access to the decision-making processes and their interaction. Decision-making processes in neopatrimonial states are characterised by strong dominance of the president and his circle and by dominance of particularistic interests in contrast to common welfare interests. In both countries, the parliament is not a major actor in water policy. The authoritarian tendencies are reflected in both new water codes where the Parliament's competencies were further reduced (Kyrgyzstan) or completely withdrawn (Tajikistan). In Kyrgyzstan, however, parliament hindered the implementation of water fees, and it once became proactive in decision making with the Law on Transboundary Waters. Yet, this law is not applied and can be considered merely symbolic.

In Kyrgyzstan decision making is more open than in Tajikistan and more actors have the possibility and the capacity to participate in it, e.g. different actors from state agencies, civil society, and academia, as well as international donor organisations such as the World Bank. However, agenda setting and policy formulation are dominated by the president. Under these circumstances, other actors are limited to veto-playing: they have the power to oppose policies they regard as being against their interests, but they do not have the power to be agenda-setters. This is done by the government and by donors. Those reforms that are implemented (the ISF, WUAs, and at least on paper basin management) are based solely on Presidential decrees, while the issues where more actors were involved (water code, national water strategy) were already immobilised in the decision-making process. The organisational reforms are most contested, as they threaten the self-interest of those involved in decision making: "the fate of the ministries depends on state budget allocations. To get money from the state, the ministry needs functions and competencies. All ministries want money, hence they want more responsibilities. Therefore many ministries have many functions for water and nobody wants to give them away. (...) Concerning the new Water Code: everybody is only looking. Do I still have my function? No? Then I will be against it" (Independent water expert, Bishkek, 09/28/2004). In fear of further budget cuts, all agencies tend to resist reforms that would reduce their competencies and only agree to bills proposed where their interests are preserved. This explains the difficult process of developing a new framework of laws and strategies.

In contrast, in Tajikistan the decision-making process is more closed. NGOs are only active in the implementation process (as counterparts of international donors) while they as well as academics rarely participate in policy debates. Without any considerable participation and public debate, laws and policy strategies were developed and approved considerably faster than in Kyrgyzstan.

International donor organisations in both countries are influential actors in decision making and actively participated in or even dominated the drafting of the respective laws on WUAs, the Kyrgyz Water Code, and the Tajik Water Sector Development Strategy. But in addition to their active involvement, donors also exert indirect influence: first, through their financial support, as the following quotation from Kyrgyzstan illustrates: "the one who pays orders the music" (a senior official at the

*DepVodKhoz*, Bishkek, 09/11/2003), and second, through the objectives they formulate in their projects and with which all those who want to be included in projects must align. This influences problem perception and agenda setting.

### **Institutional conditions of the agricultural sector**

The agricultural sector is the direct economic and social context in which most water institutional reforms are conducted. The organisation of agriculture in Kyrgyzstan and Tajikistan is in a process of change. As in the case of the water sector, the implosion of the USSR presented a critical juncture to agriculture, which had been organised in huge collective and state farms (*kolkhozes* and *sovkhoses*). After independence, both states started to conduct a land reform. Kyrgyzstan conducted a relatively quick and radical land reform. Private ownership of land has been possible since 1998 and 75% of the land has been distributed to the rural population. However, the land plots are generally too small for cash crop cultivation and are mainly used for subsistence production. In Tajikistan, the reform process is slow and occurs for the most part only on paper with no practical impact. State production prescriptions on cotton and tobacco and old farm structures and dependencies are still in place. The new so-called collective *dekhkan*-farms<sup>5</sup> are often only quasi-privatised: they are managed in the same style as the former *sovkhos* or *kolkhoz* (FSK) and the changes can be considered merely cosmetic. In many cases, farmers themselves are unaware of the reorganisation.

The privatisation of state and collective farms did not only change the agricultural sector; in addition to the state budget crisis, it was also the main stimulus for irrigation reform. As thousands of small farms came into existence, the new situation was a challenge for water management in the irrigation sector. Whereas before the large-scale *sovkhoses* and *kolkhozes* had been responsible for water distribution in their areas and the maintenance of the on-farm canals, now the newly emerged small farms had to be supplied individually with water. Since nobody felt responsible for the operation and maintenance of the former on-farm channels and financial means were lacking, investments in infrastructure maintenance almost stopped, irrigation systems deteriorated, and water use was no longer monitored. The new situation demanded new forms of management.

On the other hand, the institutional constraints of the agricultural sector seriously limit the feasibility of water governance reforms. One must first mention the economic situation. Despite the different reform efforts, the actual living conditions of the farmers are similar in both countries: rural poverty is widespread and the sector is characterised by subsistence agriculture, decapitalisation, and a widespread barter economy (DFID and Mott MacDonald, 2003; AAH, 2003; Hassan et al., 2004). This impedes the introduction of monetary mechanisms such as the ISF. Many farmers are too poor to pay and many officials feel sympathy for them and do not sanction nonpayment. In addition, unauthorised water withdrawal has increased and is often tolerated, so that it can even be considered an informal institution in some places. The barter economy has expanded to water management: water fees are for a considerable part paid in kind, mainly in crops and other agricultural products, but also by maintenance work on channels. This raises transaction costs for the local water agencies.

Apart from this fundamental constraint, there are several other impacts. The current farmers are usually former specialised FSK workers without training in farming. They often simply do not know how much to irrigate and therefore use as much water as possible, leading to wasteful water usage. At the same time, the experts of the specialised academic institutes lack the means to train people at the local level. Inefficient water use is therefore at least partly rooted in the lack of access to knowledge on irrigation techniques and not only to the lack of awareness that could be overcome with fees. In addition, similar to most countries of the former Soviet Union, the privatisation process in agriculture was characterised by nontransparency, corruption, clientelism, and injustice in land allocation. Influential and wealthy persons could acquire better and larger land plots due to their networks and

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<sup>5</sup> *Dehkan* is the Tajik word for farmer.

their better knowledge of procedures and laws. These aspects also determine water access, more than ISF payment does: if a farmer has a plot located at the very end of a deteriorated channel, it will be difficult to access water even with payment, but a farmer upstream will receive it.

In Tajikistan the persistent dominance of the FSK structures hinders good water governance. Because of the state quotas for cotton, farmers cannot turn to less water-intensive crops even if they wanted to. Also, there is less of an incentive to invest in operation and management through ISF payment or WUA commitment when the channels and irrigated land are not perceived as one's own, but as belonging to the FSK. Therefore, the institutional environment in Kyrgyzstan is more suitable to enabling reforms that implicitly assume independent farmers as decision-makers on their crop choice and water use. The empowerment of water users, which is one of the major objectives of the creation of WUAs (and to a certain degree also of the ISF), cannot be successful without the empowerment of the same persons as farmers. Sound agricultural and land reform has therefore turned out to be a necessary precondition for water reform in that it addresses agricultural water usage.

### Institutions of local governance

Local governance regulates the common issues of citizens of a particular community to address their interests and needs, such as infrastructure, housing, communal water supply, schooling, cultural activities, and small-scale economic development. Local governance institutions regulate how decisions on these issues are taken and implemented. Local governance institutions affect water institutional reform because – like the agricultural sector – they represent the concrete institutional environment where policies have to be implemented. This factor therefore particularly influences the implementation of new rules that address the local level of water governance, such as user participation, fee collection, or local-level basin management. As these mainly concern rural areas, I will confine my analysis to local governance institutions in rural settlements.

In both countries, local governance needed to be reorganised after land reform: the FSK was not only an economic entity and work place, but also had administrative, social, and cultural functions. It was responsible for health care, education, social welfare, and recreation. Their formal dissolution therefore involved not only economic restructuring, but also (formally) abolished "the principal unit of social organisation" (AHH, 2003) in rural areas. Both governments introduced formal local self-government, the *aiyl okmotu* in Kyrgyzstan and the *jamoat* in Tajikistan. Yet, both have only limited competences. The *jamoat* does not even dispose of a real budget. In addition, informal political institutions at the local level are important and represent certain cultural norms. Consequently, the authority of elders in local decision making is represented by the *mahalla* committee in Tajikistan and the *sud aksakalov* (court of elders) in Kyrgyzstan. These informal institutions go back to pre-Soviet times, were tolerated in the USSR, and gained importance in the transformation phase; in Kyrgyzstan the court of elders was even formalised. Given the importance of the FSK and its succeeding organisation, it is not surprising that it also still shapes power relations in rural areas. The local arena is characterised by personalised leadership and patronage politics. Patronage networks of the FSK are still existent and often overlap with traditional institutions such as elders, with Soviet organisations often replacing traditional institutions only superficially. Although in Kyrgyzstan local mayors have been elected since 2001, they owe their position mostly to patronage networks. The unchallenged position of local patrons reflects a reliance on authorities as a main characteristic of the political culture. People expect the *rais* to take care of them and are not used to being proactive themselves (Giovarelli and Akmatova, 2002; GoK, n.d.; Freizer, 2004; Abdullaev, 2004; Beyer, 2006).

The local governance institutions influence those reforms that have to be implemented locally, especially establishing WUAs, which are externally and internally co-opted by local institutions in both countries. 'Externally' means that they are not perceived as and do not act as independent organisations, but rather as part of the *aiyl okmotu* (in Kyrgyzstan) or of the cooperative that replaced the FSK (in both countries) and are often also personally interwoven (with officials from the *aiyl okmotu*

or senior staff of the cooperative taking the position of the chair of the WUA). 'Internally' means that the positions of chairs and in the council are filled with the key actors of the village and reflect the existing power asymmetries. The WUA heads generally feel more accountable to the donors that give grants and training than to the members. The council is rather weak. Water users have little knowledge of the exact task of the WUA and awareness of the rights attached to membership. In Tajikistan, many of the farmers interviewed were not even aware that they are members of a WUA. Such observations were also made by the studies of Hassan et al. (2004) and Alymbaeva (2004). This reflects the general situation where the majority of the rural population is excluded from information and decision making in the villages. WUAs in some cases facilitate power accumulation by those who are already powerful, abuse of power in the allocation of water with preferential water distribution to their own network, and insecure water access by the marginalised part of the population. The manner in which projects are implemented by donors and NGOs typically strengthens existing power patterns since donors rely on the village elite to carry out their project within the given timeframe.

It is important to note that the close interrelation of WUAs with informal and formal village organisations may have positive aspects as well: when existing institutions are involved, it may contribute to the acceptance of the WUA and its principles by the population and enforcement by the village authorities. It can be assumed that when ISFs are paid and WUA decisions are accepted, it is mainly because these newly introduced institutions have been integrated into existing ones with an accepted authority to solve conflicts and the power to enforce rules. However, the character of the new institutions changes during this process.

As access to grants is often the main incentive to set up a WUA, donors get caught up in the patronage logic. Reforms are conducted on paper to obtain access to urgently needed financial resources and technical assistance. In Tajikistan, where the role of the local patron was more uncontested than in Kyrgyzstan, at least in the case study, the ambivalent role of donors is especially visible. They are drawn into the logic of patronage and rely on local development brokers. With the incorporation of WUAs into the patronage system, the danger exists that they will stop functioning as soon as the financial support by the patron, i.e. the donor agencies, ends. It is questionable under these circumstances whether these reforms will be sustainable.

### **Water-institutional linkages**

Besides these three factors, a last factor influencing water governance is the internal interdependencies between water institutions. As outlined above, water institutions are defined as water policy, water law, and water administration. These in turn consist of formal and informal institutions. Reform efforts address water institutions as a whole, but specific measures are directed at certain institutional elements. For example, irrigation management transfer to water user associations (WUAs) includes reform of water policy (such as decisions on decentralisation and participation), water law (such as legal regulations for WUAs, conflict resolution mechanisms, etc.), and water administration (such as change of organisational structure, a new role for staff, etc.). These respective institutional elements are closely interrelated. Saleth and Dinar (2004) conceptualise this interdependency of water institutions and termed it "endogenous linkages within water institutions (institutional linkages)" (Saleth and Dinar, 2004). These endogenous linkages are further differentiated: intrainstitutional linkages are those within one institution, e.g. between different legal regulations in water laws or between staff payment and capacities in water administration. Interinstitutional linkages are influences between different institutions, e.g. between legal regulations and administrative capacities.

In the two case studies, these linkages have a negative impact on reform processes when they lead to contradictions between water policy, law, and administration. One reason is the different time horizons for change: the legal process for establishing water rights requires more time than a presidential decree on a new policy. Informal rules within the water institutions cannot be changed by a single decision but require long-term strategies. A more important reason is that reform efforts focused

in both countries on water policy and water law, neglecting water administration. Therefore, in Kyrgyzstan as well as in Tajikistan the most serious endogenous obstacle comes from the water administration.

Both countries inherited the administrative structure of the Soviet Union and this legacy still shapes today's administrative culture. Like public administration in general, water administration also follows a hierarchical model with strong centralisation and lack of horizontal coordination, dominance of the presidential administration, weak position of local authorities, a top-down command style, resistance to new management methods, lack of self-initiative, lack of understanding of the new role of the state (e.g. in cooperation with NGOs) by officials, and a generally low level of transparency and accountability (GoK, n.d.; GoT, 2002; ISRI et al., 2004). This has an impact on the implementation of reforms. First, it contradicts principles of stakeholder participation and decentralisation of responsibilities outlined in the WUA reforms: officials generally perceive WUAs as subordinated and not as independent and equal partners. Second, it does not encourage compliance with ISF payment, because there is often no comprehensive information on the reasons for payments given to water users and no accountability exists with respect to guaranteed water delivery in case of payment. Third, it is a major obstacle to organisational reform towards more intersectoral coordination and basin management, because these are perceived to threaten the self-interest of the agencies concerned.

Despite the importance of water administration for overall reform (the central level of bureaucracy is involved in rule formulation, the meso-level in implementation), the importance of these interinstitutional linkages was not adequately considered in the reform programs. Reforms of water administration in the strict sense have only been conducted in Kyrgyzstan. However, the impact of these and other capacity-building programs is hindered by the existing patronage and hierarchical patterns and some reforms were instead counterproductive (such as donor pressure to dissolve the Water Ministry in Kyrgyzstan).

In Tajikistan, the water administration has widely been marginalised in reform activities. The WUA reform, which directly affects the local water departments, has so far been implemented mainly by international NGOs (e.g. German Agro Action, Winrock International, and ACTED), which tends to reduce cooperation with the state water agencies to a minimum and prefers to establish community-based organisations (CBOs) as counterparts. As the meso-level is neglected, it also lacks knowledge on its new role and responsibilities. However, it is precisely the provincial and district bureaucrats who must implement reforms or circulate information. This "messy middle" (Mehta et al., 1999) is where formal and informal structures meet, where the weaknesses of the administration are more visible and more effective than at the higher levels. It is the provincial prosecutor who does not know how to apply a law. It is the director of the local administration who does not accept the WUA as an independent organisation. This level is critical for every policy reform and its disregard hinders the overall reform processes.

Additionally, the water administration is affected by a brain-drain of its qualified staff to donor agencies. In the words of a local NGO director: "There are no experts (...). There, where experts should work are none – no water experts. All normal water experts have been taken by the international organisations" (NGO representative, Dushanbe, 08/25/2004). This seriously weakens the capacity of line agencies.

In sum, in both countries incoherence between the different water institutional dimensions is especially striking between the water administration on the one hand and the law and policy dimensions on the other. The administration actively resists reforms that threaten the status quo and hinders decision making and implementation (especially in Kyrgyzstan); it sometimes also 'unintentionally' does not implement reforms due to a lack of information and training in new processes, roles, etc. (especially in Tajikistan). This ultimately results in a lack of ownership of the reform processes with a reliance on donors and NGOs for implementation. The limited activity of the administration in implementing reforms and reforming itself, is – even if indirectly – induced by the activities of donors and international NGOs that partly take over its tasks.

## PATH DEPENDENCIES AND INSTITUTIONAL BRICOLAGE

The preceding sections showed how contextual factors and internal discrepancies influence water governance. Under these conditions, is it possible for water institutional reforms to be effective in achieving good water governance? At the beginning of the article, several assumptions on institutional change and persistence were formulated. Path dependence factors could lead to persistence of old water institution patterns and reform failure or old and new elements could be combined and reinterpreted in a process of institutional bricolage. Comparing the two countries, it is possible to raise two questions. Are the shared historical legacies in both countries so strong that they lead to path dependency, and hence, to similar reform results? Or is the stronger political and economic transformation in Kyrgyzstan, with more formal democratisation, decentralisation, and economic liberalisation, enabling more options for a path change, which may be not possible in Tajikistan?

Historical legacies are still shaping water institutions. In the first years, water laws perpetuated Soviet regulations. The water administration is still characterised by a predominantly hierarchical culture, strong fragmentation, and a lack of horizontal coordination, all legacies from the Soviet Union. The immediate context of reorganisation of administrative structures, constant curtailing of financial allocations, and donor pressure to reduce state expenses fosters the predominance of organisational self-interest in the preservation of the status quo. These aspects are similar in both countries. In Kyrgyzstan, these old administrative patterns are threatened more strongly by reforms, which consequently also lead to more resistance and the blockade of administrative reforms, as can be seen in the processes of the national water strategy and the water code. In addition, the way water management at the local level actually functions seems to be rather path-dependent, with new institutions (WUA, ISF) undermined by informal ones even if they exist on paper. The ISF is not implemented because the decapitalised agrarian sector does not provide the necessary economic and institutional preconditions. Additionally, it contradicts established water usage norms. Instead, informal practices such as patronage and unauthorised but tolerated water withdrawal ensure water access. The political goal to make WUAs an instrument of participation and equitable water distribution threatens existing patterns of political culture and societal norms. WUAs are introduced, but are incorporated in the patronage systems, as are donors. While it would be the task of the WUA to control water withdrawal, guarantee timely water delivery to those who paid, and punish violation of the rules, in practice this does hardly occur. On the other hand, when the WUA chairman is a local patron he can ensure compliance with water rules by the authority of his position.

Does this mean that formal changes have no meaning at all and are undermined in both states similarly by path-dependent, informal patrimonial practices? A detailed analysis shows differences between the two countries. To grasp these differences and developments, the concept of institutional bricolage is appropriate since it allows tracing back continuities as well as changes and the interaction between the two. Thus, the strategic options these interactions and coexistences offer for the actors can be assessed.

Actors involved in decision making as well as in implementation influence the outcome of reform through their selective adoption of certain rules which seem socially appropriate or economically instrumental (such as water fees or transfer of responsibilities), but do neglect others that do not seem compatible with the existing logics (such as democratic participation). Through bricolage, different logics are mixed: when fees are paid, it is often not because of the logic of the market economy, but because the patron or the *aksakals* with their informal authority demand it. A formal democratic WUA is established, but the way it distributes water is already predefined by the land plots allocated earlier to the village elite. However, informal institutions are not only a hindrance to new water institutions; they can also foster reform in certain respects: the case of ISF payment has already been mentioned above. Another example is that WUAs are most active when the heads of local patronage networks are committed to it. Consequently, reforms that are implemented are incorporated into the pre-existing institutional logic that is partly in conflict with the original objective. So those new institutions are



taking on a new meaning. Moreover, existing informal institutions are changing: the local patron is transforming into a development broker (Bierschenk et al., 2002). Traditional collective labor (*hashar*) is becoming a formalised participation mechanism in donor projects. Rather than providing two alternative systems, both are merged: reforms that introduce new institutions rely on old institutions.

The actual outcome of water institutional reforms includes different elements derived from pre-Soviet (clientelistic patronage as mode of resource distribution), Soviet (role of the collective farm, free access to basic resources), and post-Soviet ([pseudo-] participatory processes demanded by donors) institutions. In the process of bricolage, incentives (access to the financial and technical resources of donors, enhancement of the power position as a broker), as well as appropriateness (existing informal institutions) and path dependencies (administrative culture) all play a role in the decision for or against an option. Hence, even a context in transformation does not present a situation where institutions are completely in flux and easily changed, but where path-dependent continuities play a role, though there is some space for actors to modify them. The size of this space depends on the degree of democratisation in the country. Hence, while there are many similarities between both countries, it can be concluded that the institutional corridor (the range of options the institutional setting leaves for actors' choices) is broader in Kyrgyzstan than in Tajikistan. In close and overlapping institutional settings such as those of agriculture and local governance, reforms were passed that broaden the options and strategies for actors. In Tajikistan, land and decentralisation reforms remained merely cosmetic and many old structures went unchallenged; hence the number and diversity of tools that actors can use for bricolage are much more restricted.

## CONCLUSION

This paper has analyzed water governance in Kyrgyzstan and Tajikistan. It has shown the broad range of water institutions and actors: international donor organisations and NGOs entered the national policy arena and established their own rules through conditionality and project regulations. At the national level, primary policy directions are decided on by the government, experts, and to a very limited degree, the respective parliaments. At the provincial level, water agencies implement policies, but also have decision-making power in their area, e.g. on water distribution. At the local level, in addition to the water agencies, formal and informal local governance bodies interact with each other and set the framework at which water users orient themselves. Water User Associations (WUAs) have been established as new non-state actors whose roles were initially vaguely defined in both states and are still contested in practice.

Both countries are striving to overcome Soviet water governance modes and have initiated a number of reforms since independence. Their content is in line with the good water governance objective defined internationally, and they aim to establish water institutions that guarantee efficient, equitable, and sustainable use of water and democratic governance structures. However, it was shown that these objectives are difficult to reach in a neopatrimonial setting with limited democratic features. This paper has discussed four factors that shape water governance: the institutions of decision making, the conditions of the agricultural sector, the local governance institutions, and water-institutional linkages. In each, the formal and informal rules of the legal-rational as well as the patrimonial dimensions that constitute neopatrimonialism interact with each other and together define the institutional corridor. It was also shown that donor agencies and international organisations play a role in the policy processes in both countries, in policy formulation as well as in implementation.

In Kyrgyzstan, democratisation in decision making, privatisation in agriculture, and decentralisation in local governance was achieved to a greater extent than in Tajikistan, where these reforms were mainly superficial. Therefore, the institutional corridor in Kyrgyzstan is broader than in Tajikistan, allowing for more bricolage options. In this process, the newly introduced formal rules have been adapted to existing institutional arrangements, whereas traditional and Soviet roles and rules have been transformed to adjust to new conditions and incentives.

Undoubtedly, the task of implementing the norms of good water governance is tremendous. This article has identified factors influencing water reform processes that might also be of relevance beyond the two case studies considered. Therefore, these factors should be taken into account when planning reform strategies and defining objectives. Reforming complex water governance institutions is a process that has to be adapted to the concrete political, socio-economic, and cultural conditions of the respective countries. This analysis suggests that this cannot succeed without sound sequencing of reforms, participation of stakeholders, renunciation of rigid adherence to blueprint models, and a long-term and comprehensive approach.

## ACKNOWLEDGEMENTS

This research was supported by the Volkswagen Foundation as part of a research project titled "Water shortage, water management, and water conflicts in dry areas of Central Asia" and by the German Academic Exchange Programme (DAAD). The author would like to thank Andreas Neef and Frances Cleaver for their constructive comments.

## REFERENCES

- AAH (Action Against Hunger). 2003. Land reform in Tajikistan: From the capital to the cotton fields. Dushanbe: AAH.
- Abdullaev, K. 2004. Current local government policy situation in Tajikistan. In De Martino, L. (Ed), *Tajikistan at a crossroad: The politics of decentralization*, pp. 7-15. Geneva: Cibera.
- ADB (Asian Development Bank). 2000. Technical assistance to the Kyrgyz Republic for capacity building in the Ministry of Agriculture and Water Resources (Phase II). n.p.: Asian Development Bank.
- Allan, T. 1999. Productive efficiency and allocative efficiency: Why better water management may not solve the problem. *Agricultural Water Management* 40(1): 71-75.
- Allan, T. 2003. *IWRM/IWRAM: A new sanctioned discourse?* SOAS Occasional Paper No. 50. London: School of Oriental and African Studies.
- Alymbaeva, A. 2004. Institutional development of water user associations in Kyrgyzstan. MA thesis. University of Rochester, Rochester, New York, USA.
- Benz, A. 2004a. Einleitung: Governance – Modebegriff oder nützliches sozialwissenschaftliches Konzept? In Benz, A. (Ed), *Governance – Regieren in komplexen regelsystemen*, pp. 11-28. Wiesbaden: VS Verlag.
- Benz, A. 2004b. Multilevel Governance – Governance in Mehrebenensystemen. In Benz, A. (Ed), *Governance – Regieren in komplexen regelsystemen*, pp. 125-146. Wiesbaden: VS Verlag.
- Benz, A. 2007. Governance im Mehrebenensystem. In Benz, A.; Lütz, S.; Schimank, U. and Simonis, G. (Eds), *Handbuch Governance. Theoretische Grundlagen und empirische Anwendungsfelder*, pp. 339-352. Wiesbaden: VS Verlag.
- Beyer, J. 2006. Revitalisation, invention and continued existence of the Kyrgyz aksakal courts: Listening to pluralistic accounts of history. *Journal of Legal Pluralism* 53-54(2006): 141-176.
- Bichsel, C. 2006. Dangerous divisions. Irrigation disputes and conflict transformation in the Fergana Valley. PhD thesis. University of Berne, Berne, Switzerland.
- Bierschenk, T.; Chauveau, J.-P. and Olivier de Sardan, J.-P. 2002. *Local development brokers in Africa. The rise of a new social category*. IFAS Working Papers No. 13. Mainz, Germany: University of Mainz.
- Bucknell, J.; Klytchnikova, I.; Lampiotti, J.; Lundell, M.; Scatasta, M. and Thurman, M. 2003. *Irrigation in Central Asia. Social, economic and environmental considerations*. Washington, DC: World Bank.
- Campbell, J.L. 1997. Mechanisms of evolutionary change in economic governance: Interaction, interpretation and bricolage. In Magnusson, L. and Ottoson J. (Eds), *Evolutionary economics and path dependence*, pp. 10-32. Cheltenham, Brookfield: Elgar.
- Cleaver, F. 2002. Reinventing institutions: Bricolage and the social embeddedness of natural resource management. *The European Journal of Development Research* 14(2): 11-30.
- Cleaver, F. and Franks, T. 2005. *How institutions elude design: River basin management and sustainable livelihoods*. BCID Research Paper No. 12. Bradford, UK: University of Bradford.

- DFID, Mott MacDonald. 2003. *Privatisation/Transfer of irrigation management in Central Asia. Final Report*. CD-Rom.
- Dzhajlobaev, A.S. 2003. Zakonodatelstvo Kyrgyzskoy respubliki v oblasti ispolzovaniya vodnykh resursov. Zakony i podzakonnye akty kyrgyzskoy respubliki i problemy, svyazannye s vstupleniem v konvetsiyu po transgranitchnym vodam. In FES (Friedrich Ebert Stiftung) (Ed), *Meshgosudarstvennyye vodnye otnosheniya i ispolzovanie vodnykh resursov v tsentralnoy azii. Materialy meshdunarodnoy konferentsii 13-15 maya 2002*, 68-78. Bishkek, Kyrgyzstan: FES.
- Franks, T. and Cleaver, F. 2007. Water governance and poverty: A framework for analysis. *Progress in Development Studies* 7(4): 291-306.
- Freizer, S. 2004. Tajikistan local self-governance: A potential bridge between government and civil society? In De Martino, L. (Ed), *Tajikistan at a crossroad: The politics of decentralization*, pp 16-24. Geneva: Cibera.
- Galvan, D. 2004. *The state must be our Master of Fire. How peasants craft culturally sustainable development in Senegal*. Berkeley: University of California Press.
- George, A. and Bennett, A. 2004. *Case studies and theory development in the social sciences*. Cambridge, MA: MIT Press.
- Giovarelli, R. and Akmatova, C. 2002. *Local institutions that enforce customary law in the Kyrgyz Republic and their impact on women's rights*. Agriculture & Rural Development e-paper. Washington, DC: The World Bank.
- GoK (Government of Kyrgyzstan). n.d. National poverty reduction strategy, 2003-2005. Bishkek, Kyrgyzstan.
- GoT (Government of Tajikistan). 2002. Poverty reduction strategy paper. Dushanbe, Tajikistan.
- Grabher, G. and Stark, D. (Eds). 1997. *Restructuring networks in post-socialism. Legacies, linkages, and localities*. Oxford: Oxford University Press.
- Hague, R.; Harrop, M. and Shaun, B. 1998. *Comparative government and politics*. London: Macmillan.
- Hall, P.A. and Taylor, R.C.R. 1996. Political science and the three new institutionalisms. *Political Studies* 44(5): 936-957.
- Hassan, M.U.; Starkloff, R. and Nizamedinkhodjaeva, N. 2004. *Inadequacies in the water reforms in the Kyrgyz Republic. An institutional analysis*. Research Report 81. Colombo: International Water Management Institute.
- Helmke, G. and Levitsky, S. 2004. Informal institutions and comparative politics: A research agenda. *Perspective on Politics* 2(4): 725-740.
- ISRI (International Strategic Research Institute under the President of the Kyrgyz Republic); Socinformburo and FES (Friedrich Ebert Foundation) 2004. Water problems of Central Asia. Bishkek, Kyrgyzstan: ISRI, Socinformburo, FES.
- Kholmatov, A.P. 2003. Sozdanie pravovoy bazy dlya povysheniya effektivnosti ispolzovaniya vodnykh resursov v Tadzhikistane. In NITS-MKVK (Ed), *Materialy Tsentralnoaziatitskoy mezhdunarodnoy nauchno-prakticheskoy konferentsii "Ekologicheskaya ustoychivost i peredovye podkhody k upravlenyu vodnymi resursami v bassejne Aralskogo morya"*, pp. 152-155. Almaty, Kazakhstan, 5-8 May 2003.
- Kozhohov, E. 2004. *Problemy i perspektivy razvitiya assotsiatsij vodopolzovatelej v Kyrgyzkoj Respublike*. Bishkek, Kyrgyzstan (mimeo).
- Landmann, T. 2000. *Issues and methods in comparative politics. An introduction*. London: Routledge.
- Lauth, H.-J. 2000. Informal institutions and democracy. *Democratization* 7(4): 21-50.
- Levi-Strauss, C. 1968. *Das wilde denken*. Frankfurt: Suhrkamp.
- Lijphart, A. 1971. Comparative politics and the comparative method. *American Political Science Review* 65(3): 682-693.
- Linton, J. 2006. The social nature of natural resources – The case of water. *Reconstruction* 6(3). <http://reconstruction.eserver.org/063/linton.shtml> (accessed 24 August 2007)
- Lowndes, V. 2005. Something old, something new, something borrowed. How institutions change (and stay the same) in local governance. *Policy Studies* 26(3-4): 291-309.
- March, J. and Olsen, J. 1989: *Rediscovering institutions. The organizational basis of politics*. New York: Free Press.
- Mehta, L. 2006. *Water and human development: Capabilities, entitlement and power*. Background paper for the 2006 Human Development Report 'Beyond scarcity: Power, poverty and the global water crisis'. New York: United Nations Development Programme.
- Mehta, L.; Leach, M.; Newell, P.; Scoones, I.; Sivaramakrishnan, K. and Way, S.-A. 1999: *Exploring understandings of institutions and uncertainty: New directions in natural resource management*. Discussion Paper 372. Brighton: Institute of Development Studies.

- Meinzen-Dick, R.; Mendoza, M.; Sadoulet, L.; Abiad-Shields, G. and Subramanian A. 1997. Sustainable water user associations: Lessons from a literature review. In Subramania, A.; Jagannathan, N.V. and Meinzen-Dick, R. (Eds), *User organizations for sustainable water services*, pp. 11-93. Washington, DC: The World Bank.
- MISI (Mezhdunarodnyj institut strategicheskikh issledovanij) and FES (Friedrich Ebert Foundation). 2003. Proekt vodnoy strategii kyrgyzskoy respubliki. Bishkek, Kyrgyzstan: FES.
- MIWM (Ministry of Irrigation and Water Management), UNDP (United Nations Development Programme) and EC-IFAS (Executive Committee of the International Fund for Saving the Aral Sea). 2006. *Water sector development strategy in Tajikistan*. Dushanbe, Tajikistan.
- Mollinga, P. and Bolding, A. 2004. Introduction. In Mollinga, P. and Bolding, A. (Eds), *The politics of irrigation reform*, pp. 1-10. Aldershot: Ashgate.
- Neubert, S.; Scheumann, W. and van Edig, A. (Eds). 2002. *Reforming institutions for sustainable water management*. Bonn, Germany: Deutsches Institut für Entwicklungspolitik.
- O'Hara, S. 2000. Lessons from the past: Water management in Central Asia. *Water Policy* 2(4): 365-384.
- Otdel podderzhki AVP. 2001. *Proekt bjulletenja No. 1*, 16.10.2001. Bishkek.
- Pierre, J. and Peters, B.G. 2000. *Governance, politics and the state*. Basingstoke and London: Macmillan.
- Pierson, P. 2000. Increasing returns, path dependence, and the study of politics. *American Political Science Review* (94)1: 251-267.
- Powell, W. and DiMaggio, P. (Eds). 1991. *The New Institutionalism in organizational analysis*. Chicago: The University of Chicago Press.
- Pulatov, Y. 2004. Tajikistan. In Global Water Partnership (GWP) (Ed), *IWRM principles implementation in the countries of Central Asia and Caucasus*, pp. 81-93. Tashkent: Global Water Partnership.
- Rogers, P. and Hall, A. 2003. *Effective water governance*. TEC Background Papers No. 7. Stockholm: Global Water Partnership.
- Saleth, R.M. and Dinar, A. 1999. *Evaluating water institutions and water sector performance*. Technical Paper No. 447. Washington, DC: The World Bank.
- Saleth, R.M. and Dinar, A. 2004. *The institutional economics of water. A cross-country analysis of institutions and performance*. Cheltenham, UK: Elgar.
- Saleth, R.M. and Dinar, A. 2005. Water institutional reforms: Theory and practice. *Water Policy* 7(1): 1-19.
- Sehring, J. 2006. *The politics of irrigation reform in Tajikistan*. Discussion Paper No. 29. Giessen: Center for International Development and Environmental Research.
- Sehring, J. 2009. *The politics of water institutional reform in neopatrimonial states. A comparative analysis of Kyrgyzstan and Tajikistan*. Wiesbaden, Germany: VS Verlag.
- Special Program on the Economies of Central Asia (SPECA). 2004. Strengthening cooperation for rational and efficient use of water and energy resources in Central Asia. New York: United Nations.
- Stark, D. and Bruzst, L. 1998. *Postsocialist pathways. Transforming politics and property in East Central Europe*. Cambridge: Cambridge University Press.
- Streeck, W. and Thelen, K. 2005. Introduction: Institutional change in advanced political economies. In Streeck, W. and Thelen, K. (Eds), *Beyond continuity. Institutional change in advanced political economies*, pp. 1-39. Oxford: Oxford University Press.
- Thelen, K. 1999. Historical institutionalism in comparative politics. *Annual Review of Political Science* 2: 369-404.
- Thurman, M. 2002. Irrigation and poverty in Central Asia. A field assessment. [www.esd.worldbank.org/bnwpp/documents/7/IrrigandPovertyInCAvers2.pdf](http://www.esd.worldbank.org/bnwpp/documents/7/IrrigandPovertyInCAvers2.pdf) (accessed on 22 January 2007)
- Tropp, H. 2005. Water governance: Trends and needs for new capacity development. Paper presented to the International Symposium on Ecosystem Governance, Kwa Maritane, South Africa, 10-13 October 2005.
- Tursunaliyev, U. 2002. Ways of reforming the water legislation. *Water rights newsletter* No. 12. [www.landreform.kg/en/vestnik/vestnik.cgi?Action=water](http://www.landreform.kg/en/vestnik/vestnik.cgi?Action=water) (accessed 14 October 2004)
- UNDP (United Nations Development Programme). 2003. *Tapping the potential. Improving water management in Tajikistan*. National Human Development Report 2003. Dushanbe: UNDP.
- UNECE (United Nations Economic Commission for Europe). 2004. Environmental performance reviews. Tajikistan. New York and Geneva: UNECE.
- UNESCO (United Nations Educational, Scientific and Cultural Organization). 2003. *Water for people – Water for life*. The United Nations World Water Development Report. Paris: UNESCO.
- UNESCO (United Nations Educational, Scientific and Cultural Organization). 2006. *Water – A shared responsibility*. The United Nations World Water Development Report 2. Paris: UNESCO.

Wegerich, K. 2005. *Institutional change in water management at local and provincial level in Uzbekistan*. Bern, Switzerland: Peter Lang Verlag.

World Water Council (WWC) (Ed). 2004. *Proceedings of the Workshop on Water and Politics: Understanding the Role of Politics in Water Management*. Marseille, February 26-27, 2004.