

The politics of water institutional reform

A comparative analysis of Kyrgyzstan and Tajikistan

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Abstract

The aim of this paper is to challenge the widespread perception of water management as a technical system based on rational decision-making and implementation by experts, using a case study of Tajikistan and Kyrgyzstan, two transitional developing countries in Central Asia. Both countries are characterized by a highly unsustainable water use. An institutional reform of water management is conducted to make it sustainable (through efficiency), market-oriented (through cost-recovery, less state interference), and democratic (through decentralization, user participation). This affects especially the irrigation sector where Water User Associations (WUAs) are established and irrigation service fees (ISF) introduced. However, the mainly donor-driven reforms did not meet their objectives so far.

The research is based on expert interviews and a case study of one WUA in each country. The study builds on a neo-institutionalist approach by analyzing the role institutions (defined as formal as well as informal rules) play in shaping actors perceptions, choices and strategies. The paper argues that obstacles to reform are rooted in two main aspects:

1. The institutional environment in agriculture and in local governance does not provide the necessary incentives and conditions for the reform to become effective, hence newly established formal rules are not perceived as legitimate and are undermined by informal ones.
2. WUAs as new organizations are - in a process of "institutional bricolage" – incorporated in existing societal and political institutions.

1. Introduction

Since the end of the 1990ies there is a discursive shift from water management mainly seen as a technical issue, to water governance stressing the crucial role of institutional factors (Allan 2003; Gleick 2000; UNESCO 2003; GWP2003; Rogers/Hall 2003; UNDP/GWP/ICLEI 2002). With the significance attached to governance, water *institutional* reform as key to reforms of the water sector became a prominent issue in addressing the water crisis and to reach more effective, efficient and equitable water usage.

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It is the aim of this study to contribute to a better understanding of the problems and challenges of these institutional reform processes in developing and transition countries. The paper builds on field research in the two Central Asian countries Tajikistan and Kyrgyzstan. Both countries are characterized by a highly unsustainable water use, mainly resulting from still existing Soviet water management patterns and technical deterioration due to the financial crisis after independence. An institutional reform of water management is conducted in both countries. It affects especially the irrigation sector where Water User Associations (WUAs) and irrigation service fees (ISF) have been introduced, on which I will concentrate in this paper.

2. Water institutions and water institutional reform

The work of Saleth and Dinar (1999, 2004) on the institutional economics of water reform is constitutive for the scientific discourse on water institutions so far and provides the commonly referred to definition of water institutions: Water law, water policy, and water administration.

Water law refers to the legal status of water, water rights, conflict solution mechanisms, possible contradictions between laws, legal pluralism, administrative regulations, implementation mechanisms. Water policy covers usage priorities, water tariffs, decentralization or centralization of competencies, participation, and coordination with other policies. Water administration is the organizational structure of water management, including funding, staff, capacities, and fee collection (Saleth, Dinar 1999:4-5).

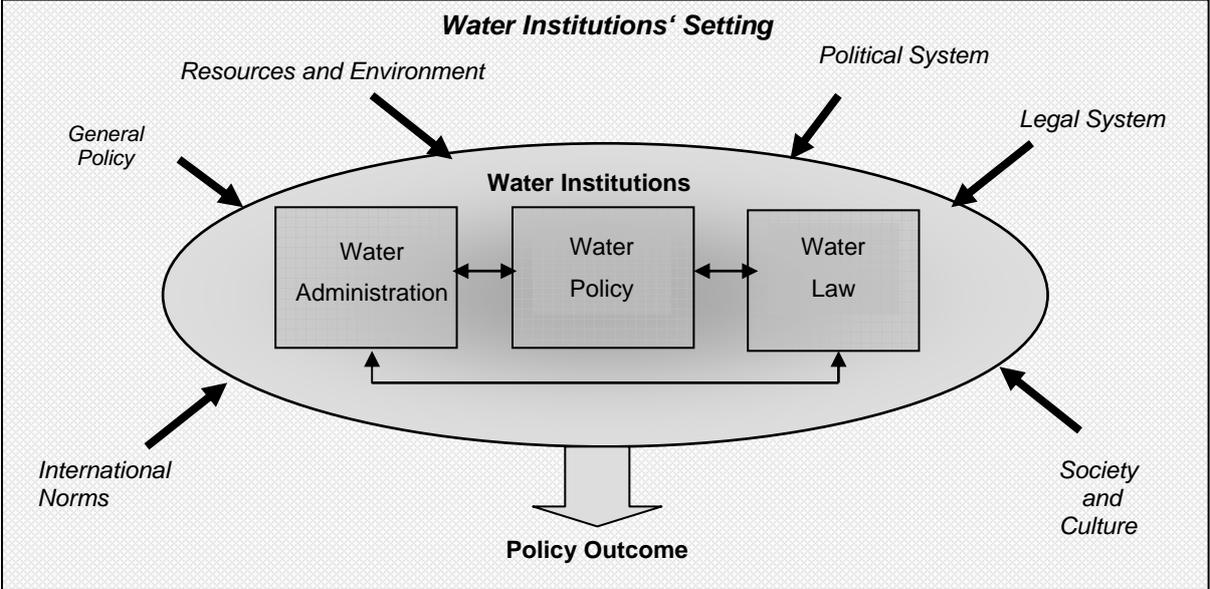
Most of the research on water institutions until today is conducted in Institutional Economics based on Rational Choice models.² Albeit these studies provide useful insights and conceptions, economic approaches fall short in grasping the whole spectrum of water governance. Therefore I will use neo-institutionalist approaches of the Social Sciences with a broader definition of and a different perspective on institutions.

It is important to stress that water institutions are not only formal institutions. They are also informal rules as well norms, tradition and symbolic meanings associated with water. Informal rules are not codified, legitimized and enforced by formal structures (e.g. the state), but are results of the self organizing dynamics of social interaction, possess however a minimum of legitimacy and continuity and are observable as structures (Lauth 2000; Helmke, Levitsky 2004). Water law, water administration, and water policy, all consist of formal as well as informal rules. Especially in local water management, informal rules are often more powerful than formal ones. Water rights can be effective without being written down in a law but referring to other sources of legitimacy. Often, water has spiritual or religious values that define usage rules. In many cases, the use of water is determined more by awareness patterns of the population than by sanctions imposed. Therefore it is necessary to include such informal rules, arrangements, and traditions systematically into analysis.

² See for example the 01/2005 issue of *Water Policy*.

According to these considerations, water institutions are defined as those formal and informal rules and norms - as well as the organizational structures that set and enforce them³ - that regulate control of and access to water resources, hence their usage, distribution, and status. Water institutional reform addresses all types of water institutions: The water administration is restructured, competencies are reassigned, informal practices such as corruption are combated, laws are changed, and policies priorities are reformulated, etc. Reforms may also be targeted at changing the perception of water as an endless and free resource that does not have to be economized; hence challenge informal institutions like norms of water consumption, religious values assigned to water, and the taken-for-granted usage mode of water. For this study it is useful to distinguish between water institutions in the strict sense, and the institutions' setting. Factors such as (political) culture, religion, the general legal framework, traditional and local institutions have (purposefully as well as unintentionally) an impact on water governance and water institutions. Also strategies and priorities in other policy fields like agriculture, economy, ecology, or — in countries with transboundary water resources — foreign relations shape conditions for the performance of water institutions.

Figure 1:



Main objectives of water institutional reforms as currently conducted in many countries are to make water institutions more market-oriented and democratic in order to reach more efficiency and equity. Main tools are the introduction of water fees or irrigation service fees (ISF)⁴, decentralization, introduction of hydrographic management principles, and enhancement of user participation.

But how will those reforms be implemented when they threaten existing power structures and norms of behaviour? A basic assumption of Sociological Institutionalism is that new institutions have to be perceived as appropriate to get accepted by those expected to comply with them. Additionally, as water

³ Organizations are on the one hand actors constrained by institutions. On the other hand, they are institutions themselves, like the internal rule system of hierarchy etc.

⁴ The term 'irrigation service fee' means that the fee is not for water as a resource as such but for the service of water delivery, i.e. for maintenance and operation of the channels, etc.

institutions define access to and control of water, which is a critical resource in many countries, reform addresses questions of power and interests and are therefore a contested political issue. Water reform is hence one field of transformation that is as contested as any other field where new rules and roles of distribution have to be formulated and put into practice. The prevailing discourse has not only neglected these aspects, it is even assumed that it “exerts a strong depoliticising affect by focusing on neutral concepts, which avoid controversies being developed and properly addressed” (World Water Council 2004:ii).

3. Analytical framework

3.1 Theoretical approach

If one would like to state contrasting hypotheses on the outcome of the reform efforts, there might be three possible results: no institutional change (reform failure), complete institutional change (reform success) or a mixture of persisting elements and changes.

Referring to the concept of path dependency of Historical Institutionalism (Hall, Taylor 1996; Thelen 1999) we would expect the first option and argue that historical experiences and policy legacies frame present actions: established patterns of behavior that already once proved to be successful will be used again to meet new challenges: “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: 392). In our two case studies, we can expect policy legacies of the Soviet system still being vital: As well as society in general, also political institutions in the narrow sense are still transmitting the norms, values, capacities and routines they acquired in Soviet times. Since the Soviet institutional change incorporated pre-existing institutions, pre-Soviet legacies are likely to play a role as well.

However, we also could argue that the breakdown of the Soviet Union and the radical (formal) regime change provided - if not a tabula rasa as Rational Choice-institutionalists would expect - a critical juncture with the option for switching the path, for fundamental institutional change. Critical junctures are moments when several incidents (e.g. political processes in different policy fields, economic crisis, military conflict) come together to make substantial change possible (Thelen 1999: 390, 392; Hall, Taylor 1996: 942). In the cases of Kyrgyzstan and Tajikistan, both countries experienced a juncture; old institutions have been (formally) abandoned and new institutions designed. The break-up of the Soviet Union and the (rather involuntarily) independence of the Central Asian states presented a crisis of politics and a fundamental re-definition of formal institutions. It also was an external shock to the water management as it was a centralized, state managed sector. Existing formal organization and rules of water management stopped functioning. There was a need to define new organizational structures and usage rules of water management. The ecological consequences of Soviet water management made obvious the need to change the norms and values attached to water use.

A third option would be that it is neither complete path dependency nor complete institutional change, but a rather complex re-arrangement of old and new institutional elements that I will frame with the concept of *institutional bricolage* (Campbell 1997; Stark, Bruszt 1998; Cleaver 2002; Galvan 2002, 2004). This

term refers to Levi-Strauss who used *bricolage* to describe an intellectual activity in which pre-existing materials which are ready-to-hand are appropriated. The French verb *bricoler* is used to emphasize a non-predetermined direction albeit the choice is limited by the elements available (Levi-Strauss 1968: 29-36).

In the process of designing institutions, the bricoleurs can patch together elements of different institutional logics available to them. As the institutions of a society as a whole may be contradictory, they provide multiple logics to actors who then can choose the one appropriate for the present decision (Friedland, Alford 1991: 232). It also means that in the process of institutional bricolage, the logic of another institution may influence the process. This means, when designing water institutions, actors may choose institutional elements not of the water management institutional logic but of the community logic, as in its realm both institutional logics intersect and norms of social consensus may be equal important. Due to the constraining as well as enabling effects of institutions, actors are simultaneously objects (of institutions that limit the range of solutions) and subjects (that can creatively recombine and extend institutional elements) (Campbell 1997: 23ff).

Bricolage offers therefore an approach of institutional change that is situated between path dependency and the development of new, alternative paths, that are never completely “new” but a re-combination of existing institutional elements and new concepts (that then are going to be institutionalized). The question of interest is, for whom beneficial elements persist; and which actors can influence which elements of institutions are to persist and which to replace. Hence, the politics of the reform defines for a considerable part the outcome of the bricolage process.

3.2 The two case studies: Kyrgyzstan and Tajikistan

For the case studies, two countries have been chosen according to the Most Similar Systems Design (MSSD): They share a lot of common features so that many influencing factors can be controlled.

Kyrgyzstan and Tajikistan are small, landlocked mountain states and the poorest countries of former Soviet Central Asia. One of the main pillars of economy is agriculture – concerning its contribution to GDP as well as its share in workforce. Due to the dry and continental climate, agriculture is in most parts of the countries only possible with irrigation.

Figure 2: Map of Central Asia



The countries are the origin of the two main rivers in the Aral Sea Basin: Amu Darya and Syr Darya. The water resources of both rivers are used mainly in the downstream countries Turkmenistan, Uzbekistan, and Kazakhstan for irrigation before they reach the Aral Sea.

Water use patterns in both countries are very similar: The water resources are mainly used for irrigation agriculture: 90% in Kyrgyzstan and 84% in Tajikistan respectively. During Soviet time, especially in the 1960s and 70s, a number of reservoirs was built to use water more effectively for irrigation. Most of these reservoirs have a hydroelectric power plant affiliated. The usage of water resources for hydropower generation is becoming more and more important.

For the rivers Amu Darya and Syr Darya, which are crossing national (formerly republican) boundaries, in the 1970s a system of water withdrawal quotas for each republic was set up by the Soviet Union, which still exists today. These quotas are as follows:

Table 1: Water quotas in Central Asia

	Uzbekistan	Turkmenistan	Kazakhstan	Kyrgyzstan	Tajikistan
Amu Darya	48,2%	35,8%	-	0,6%	15,6%
Syr Darya	50,5%	-	42,0%	0,5%	7,0%

Source: SPECA 2002: 26, 28.

This shows the paradox that those states with most of the water resources originating have only the right to use a small amount of them. The quotas are very much favored towards the downstream states of Kazakhstan, Uzbekistan and Turkmenistan, where most cotton production of the Soviet Union took place. After independence, the new states agreed to maintain these quotas until they would have developed a new system. However, until today this interim solution persists because the downstream states have no interest in changing the quotas. The political options now are two-fold: to try to extend the water quota, which is seeing the political weakness of both states and the already much too high general water consumption in the region, unrealistic, or to use the now allotted water resources more efficiently. While government officials of both countries favor the first option, international donors favor the second one and are financing projects to foster these.

3.3 Methods

The empirical data have been gathered during four field research periods between autumn 2003 and autumn 2005, totalling six months. The research is based on two main methods: Semi-structured expert interviews have been conducted with representatives of different agencies of the state water administration and related state agencies, NGOs, donor agencies, academic institutions, and individual experts. As far as possible, all interviews have been recorded, transcribed, and analyzed using MAXqda software. The following table summarizes the institutional affiliation of the experts:

Table 2: Interviews according to institutional affiliation

	state administration central level	state administration meso level	academic	international project/donor	local NGO	other	total
Kyrgyzstan	6	4	7	9	3	1	30
Tajikistan	10	7	4	9	3		33

Additionally, in each country an in-depth case study of one WUA was conducted, using tools of Participatory Rural Appraisal (PRA) such as semi-structured and open interviews, informal conversations, 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 as the objective is not to confirm or falsify certain hypotheses but rather to heuristically develop an understanding of the institutional dynamics on local level. These case studies were accomplished with short-term field visits at other WUAs in other parts of the countries to allow for better assessment.

4. Water institutional reforms in Kyrgyzstan and Tajikistan

In Kyrgyzstan as well as in Tajikistan several water institutional reforms have been conducted. Both countries developed a new Water Code, which was approved in 2000 in Tajikistan and in 2005 in Kyrgyzstan. Administrative reorganization and reallocation of competencies was conducted to a higher degree in Kyrgyzstan than in Tajikistan. The latter in 1996 and Kyrgyzstan in 1995 decided to introduce

irrigation service fees, though due to resistance by the Parliament these are in Kyrgyzstan only realized since 1999. International donors engaged in agricultural infrastructure rehabilitation (including irrigation channels) made the establishment of local-level Water User Associations (WUA) a conditionality for access to grants. Hence, since the end of the 1990ies these are established in both countries.

4.1 Introducing market mechanisms to reach more efficiency in water usage

The Introduction of market-economic mechanisms is often seen as the main tool to reach more efficiency in water usage. Also in Kyrgyzstan and Tajikistan ISF have been established, although they are at a merely symbolic level. These fees should not only lead to more efficient water use, but they are also necessary to continue operation and maintenance activities, as with the introduction of ISF both governments reduced budget allocations to the district water agencies by 50%.

Concerning Kyrgyzstan, the following table presents the collection rates in 2003:

Table 3: Collection of ISF in WUAs, 2003

Oblast	Average collection rate in WUAs
Jalal-Abad	57%
Batken	62%
Osh	43%
Issyk-Kul	42%
Naryn	45%
Talas	61%
Chuy	62%
total	53%

Source: Alymbaeva 2004: 11.

This table presents only figures for those areas, where WUAs have been already established and are responsible for fee collection. In areas without WUAs, the collection rate is even less. For Tajikistan no exact data on payment rates are available, estimations from the Ministry of Irrigation and Water Management range from 56% to only 10%. For both countries it can be stated that the reform is not effectively implemented as non-payment is widespread.

Three reasons for non-payment can be distinguished:

First, a so-called ‘Soviet mentality’ is blamed. This refers to awareness patterns evolved during Soviet time, when water hadn’t to be paid on a quantitative basis. Together with a general ideology of human command on nature, a very wasteful consumption attitude developed together with the expectation that water should be for free. This reason is mostly mentioned by officials to explain reluctance to pay by the farmers.

The second reason is often referred to by the water users themselves: they mention religious motives. In Islam water is considered a gift of god. This contradicts its definition as a resource you have to pay for. As in both cases there is no fee on water as a resource but on the service of water delivery, this obstacle could be overcome by sound information policies. The farmers often do not know, what exactly is going to

happen, why they have to pay for something they did not have to pay before, which costs have to be covered, how they benefit from it. The unwillingness to pay therefore is not only connected to traditional values or 'Soviet mentality' but also to a simple lack of information, why and for what farmers have to pay resulting in non-acceptance.

While these motivations explain the unwillingness to pay, a third factor refers to the inability to pay: Widespread rural poverty due to the institutional conditions of the agricultural sector. Both countries conducted a land reform in the 1990s, with very different results, though: While agriculture in Kyrgyzstan is completely privatized, in Tajikistan still state production plans are in force. The consequences in both cases are however similar: general poverty and wide-spread subsistence production.⁵ In both countries farmer possess neither the necessary means nor the necessary knowledge for lucrative agriculture. Due to this the agricultural economy is mainly a barter economy with little cash transfer. It is assumed that considerable shares of economic transactions are barter deals, even if exact details are unavailable. The agrarian sector is virtually "de-capitalized" (DFID 2003: 10-9). Those conditions make it difficult to introduce monetary mechanisms like water tariffs.

One consequence of this barter economy is that it is expanded to the water management: water tariffs are for a considerable part also paid in kind, mainly in crops and other agricultural products, but also by maintenance work on channels. In acknowledgement of the situation, farmers in Kyrgyzstan have also officially been allowed to pay 30% of the ISF in kind. In fact, however, it is between 50% and 80%, which are actually paid in kind. The situation in Tajikistan can be assessed as similar or even more. It results not only in limited cash-flow to the water agencies, but also increases transaction costs and creates additional costs (storage, transportation, etc). Repair and cleaning of channels in exchange for water by farmers lacks proficiency needed to make it sustainable.

Water tariffs are obviously not perceived as legitimate rules even by those that should enforce them. This can be seen in the fact that non-payment is hardly followed by any sanctions. Also farmers who do not pay will receive water (and often for those farmers who pay, the water delivery is also not guaranteed due to the deteriorated infrastructure). While different mechanisms are in place to enforce payment (like partly payment in advance) they are not generally implemented in practice.

The lack of perceived legitimacy of ISF can also be seen in the tolerance of the risen un-allowed water withdrawal, so-called water theft. Water theft occurs by breaking sluices to divert water on certain fields, or by diverting water from drinking water pumps. In theory, there are mechanisms to punish water theft. However, there are no cases known when they have been applied. The reasons are the understanding on side of the officials for the situation of the farmers, the resistance of village authorities to implement fines, the lacking knowledge on side of local courts, and conflict avoidance of marginalized farmers with powerful ones. Water theft is so common, that it can be described as an informal institution itself as it

⁵ For a detailed assessment of land reform and its consequences in both countries see Sehring 2005 and Sehring 2006.

presents a widely non-confronted rule of behavior, which possesses a certain degree of perceived legitimacy.

Economic mechanisms are far from leading “automatically” to more efficiency. Under the current conditions in both countries, they do not present incentives to economize water. They even can turn into the opposite: Less efficiency due to raising uncontrolled water withdrawal and due to the decrease of funds at the state agencies for infrastructure maintenance. When the institutional and economic necessary conditions are not on place, water fees are not an adequate tool for more efficient water usage.

4.2 Introducing democratic mechanisms to reach more equity in water usage

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 grass-roots organization of the Water Users themselves at decentralized level, independent from state structures. It finances itself with members’ payments for the service of water delivery. Its main tasks are the maintenance of the tertiary irrigation system; the operation of this system, i.e. the distribution of the water obtained by the district water agency to the member farms in an equitable manner; and the collection of ISF from its members. Due to the accountability of the democratically elected board towards the members – the farmers – equitable water distribution should be guaranteed.

In both countries WUAs have been mainly established by international donor agencies in the framework of agricultural development projects in order to be responsible for the rehabilitated tertiary irrigation systems. In Kyrgyzstan, development of WUAs started in the mid-nineties with first WUAs established by Kyrgyz government. The country-wide development of water user associations takes place in the framework of World Bank and ADB projects. In order to help implementation, in 2000 a WUA support department has been created at Ministry of Agriculture, Water Management and Processing Industries and at its branches in the seven provinces, as well as in many of the republic's 42 districts. The first legal foundations of WUA have been the 1995 government decree “Regulations on WUAs in Rural Areas“ and 1997's “Statute of WUAs in Rural Areas“. Based on these in 2002 the “Law on Water User Associations” was passed by parliament. By April 2004, already 59% of the irrigated land area in Kyrgyzstan has been managed by 353 WUAs (Otdel podderzhki AVP 2001; Hassan et al 2004; Kozhiev 2004).

The first projects to establish Water User Associations (WUAs) in Tajikistan were started by the World Bank in 1999. The implementation agency is the especially established Center for Farm Privatization Support (CFPS) at the Ministry of Agriculture. Beside the WUAs set up by these top-down oriented programs, there are many bottom-up projects at local level. In those projects, WUA development is part of community development. These projects are implemented mainly by international NGOs, although the UNDP and USAID have such programs as well.

There are no exact and official data on how many WUAs exist in Tajikistan as only the big projects (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 German

Agro Action on their WUA activities, it can be estimated that about 100 WUAs exist, managing less than one fifth of the total irrigated land (Sehring 2006). In 2000, the old water code was replaced by a new one, in which § 43 codifies the right of the farmers to establish water user associations (WUAs). At the end of 2005, a law on WUAs was approved.

Looking on the formal rules established and official data on WUAs created, the reforms in both countries seem to proceed successfully.

However, a closer look at the WUAs existing shows that they are performing different than expected. They are in general not established independently from local governance structures, but dominated by them. These governance structures are the formal local government, but, as this is in both countries a newly introduced institution, the former sovkhoz/kolkhoz in its various follow-up organizations is still a major player. Additionally, informal local governance structures outlived Soviet era and gained importance during the unstable transition period. These are the court of elders (*sud aksakalov*)⁶ in Kyrgyzstan, in Tajikistan the *mahalla* committee⁷ and the village assembly.

The positions in WUAs are usually filled with the main actors in a village who are also dominating the other mentioned organizations. In all villages of the case studies, the respective director of the agricultural cooperative that succeeded the kolkhoz or sovkhoz is the chairman of the WUA. At the Kyrgyz WUA “Zhany Pakhta”, the WUA chairman is director of the agricultural cooperative, chairman of the municipal council, deputy to the district council and a close friend of the head of the local government. The WUA director and two WUA council members are as well deputies to the municipal council and one WUA council member is the chair of the court of elders. The chair of the WUA “Zargar” in Tajikistan was brigadier of the kolkhoz and is now the director of the cooperative farm, head of the village development committee⁸, and a member of the mahalla committee, while the Chair of the mahalla committee is a member in the WUA council. An internal World Bank project evaluation showed that in about one third of all WUAs in Kyrgyzstan either the head of local government or his deputies are members of the council.

⁶ The field of activity of the court of elders lies particularly in the range of the traditional and customary law and the solution of smaller conflicts: land disputes, affairs of family, cattle theft and also water disputes. However, its role and range of activity varies considerably in each village. It achieves its goals by means of persuading and social pressure. The members are respected members of the community, held (or hold) often important positions, are however not necessarily old. Nevertheless therein the general authority of the older ones is reflected, which represents a powerful norm in the traditional law. It gained relevance after independence, when the old Soviet system of control eroded. In 1995 it received a (temporary) formal legal basis (Ibraimova 2004: 7f; Giovarelli, Akmatova 2002: 6f, 12, 17).

⁷ The mahalla committee, consisting of local elders and other respected members of the community, is the lowest level of local self-organization. It is an institution that organizes collective religious and social events (like births, weddings and funerals), solves conflicts and provides social services. It defines and perpetuates local values and norms of behavior. The mahalla committee also has the authority to organize *hasbari*, voluntary joint community action. After the Soviet authorities' attempts to supersede it failed, it was tolerated but never got a formal legal base. Now there are attempts to formalize and transform it into an official state structure for local governance. However, the nature and performance of mahalla vary considerably in the different regions and from village to village (Ilov, Khudoiyev 2001; Grundmann 2004:8f).

⁸ Village development committees are established by many donors to channel micro-credits and other humanitarian assistance.

The close interrelation with informal and formal village organizations may have positive aspects: if informal institutions are involved, it may contribute to the acceptance of WUA and its principles by the population and enforcement by the village authorities. If someone has the authority to solve conflicts or enforce rules like payment, then it is the elders, but not a hardly known, new organization like the WUA. Even if the director or chair is an expert, people have more respect of elders than of professionals. However, the court of elders and the *maballa* committee are embedded in local power structures and there are many reports when the elders in their decisions protect distinguished members of the community, avoid open conflict, and neglect claims of less powerful villagers. So WUAs in some cases to power accumulation by those already powerful and a misuse of this position, that means favored water distribution to the own network and insecure water access by the marginalized part of the population.

Consequently, the next question will be if water users acknowledge the work of the WUA and use its participation mechanisms. However, there is low awareness and participation among water users. While in the Kyrgyz case study, the farmers at least knew about WUA, in Tajikistan many farmers were not even aware that they are members of a WUA with participation rights. Farmers in general do not perceive the WUA as an independent organization. Often they think it is a special department of the local government, the cooperative farm, or the donors. Even members of local governance institutions and of the WUA council itself sometimes lacked this awareness. This is a consequence of the way the WUAs are established: The implementing agencies, due to project time constraints, do not inform the farmers themselves but address the local government and other village authorities and expects them to spread the information further to the farmers. There are hardly any long-term community awareness raising programs in advance.

So, while in theory WUAs are meant to be established independently from the official administrative village structure and to involve all water users, in practice they mirror the existing power structures as a result of the political culture. This political culture is characterized by a lack of proactiveness and an orientation towards the village leaders along with a personalization of organizations. Patronage is the central mode of politics. Historically, networks have been mainly built along kinship ties. The sovkhoses and kolkhozes replaced the former kinship-based organization only superficially. Independence and privatization did not change it either. Again names have been changed and formal organizations replaced, but personal affiliation, networks and patronage as the fundamental mode of distribution of resources remained. Little knowledge and awareness of WUA reflects the general situation where a majority of the village population is marginalized in local decision making processes. The establishment of WUAs did not change the institutional logic, it rather was incorporated in it. Farmers rely on good relations to the WUA leadership in order to receive timely and enough water. In the perception of the people little changed. One could say that the role of the patron transforms to that of a broker. Bierschenk et al (2002) introduced the category of the “local development broker” in development sociology to describe the role of intermediaries between the local population (the target group) and development agencies. The center for resource distribution - the patron of the local patron - is now not longer the party committee in Dushanbe

or Bishkek or Moscow but international donor organizations. With the incorporation of WUAs into the patronage system, there is the danger that they will stop functioning as soon as the financial support by the “patron”, the donor agencies, ends. As WUAs often exist only on paper in order to get access to grants, sustainability of the reform is highly questionable.

7. Conclusion

As we could see, institutional reform in water management is rather a complex process of institutional bricolage than the simple displacement of one institutional arrangement by another like it would seem if we look only at the formal aspects. On a formal level, new institutions have been established: laws have been approved, WUAs have been registered, and fees have been introduced. On an informal level, these institutions are transformed according to the existing institutional logics. The economic aspect to introduce monetary valuation in irrigation management is not implemented because the de-capitalized agrarian sector does not provide the necessary institutional conditions and because it contradicts established norms of usage. ISF are undermined by informal practices that are partly institutionalized.

The political aspect 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 – and the donors as well. 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, they are not fulfilling this.

The actual outcome of water institutional reforms therefore differs from the intended one: 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 as rules demanded by donors) institutions are put together. In the course of the bricolage, incentives (access to financial and technical resources of donors, enhancing of power position as broker) as well as appropriateness (existing informal institutions) play a role. Hence even a transitional context does not present a tabula rasa where institutions are in flux and easily changed but where path-dependent continuities play a role, though there is some space for actors to modify them.

A reform focus on formal institutional change is doomed to fail from the beginning on. Water management is nested into certain cultural norms of behavior that limit the compliance to rules when they are not perceived as legitimately. But informal institutions change different than formal ones, they change slower as they cannot be changed by a centralized process but only bottom-up. If an institutional reform in water management acknowledges the fact that informal institutions play a role, it has to develop adequate strategies to change them. Change can not be induced by short-term incentives alone but only with long-term efforts to change perception patterns and normative attitudes.

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