

Jenniver Sehring

The Politics of Water Institutional Reform in Neopatrimonial States

A Comparative Analysis
of Kyrgyzstan and Tajikistan

BUNDESTAG GRUNDGESETZ POLITISCHES SYSTEM EUROPÄISCHE UNION WAHLEN VERFASSUNG INTERNATIONALE BEZIEHUNGEN POLITISCHE THEORIE PARTEIEN INSTITUTIONEN POLITISCHE KULTUR POLITISCHE ELITEN PARLAMENTARISMUS DEMOKRATIE MACHT REGIERUNG VERWALTUNG FÖDERALISMUS POLITISCHE SOZIOLOGIE GLOBALISIERUNG POLITISCHE KOMMUNIKATION PARTEIENSYSTEM RECHTSSTAAT GERECHTIGKEIT STAAT POLITISCHE ÖKONOMIE POLITIK BUNDESTAG GRUNDGESETZ POLITISCHES SYSTEM EUROPÄISCHE UNION WAHLEN VERFASSUNG INTERNATIONALE BEZIEHUNGEN POLITISCHE THEORIE PARTEIEN INSTITUTIONEN POLITISCHE KULTUR POLITISCHE ELITEN PARLAMENTARISMUS DEMOKRATIE MACHT REGIERUNG VERWALTUNG FÖDERALISMUS POLITISCHE SOZIOLOGIE GLOBALISIERUNG POLITISCHE KOMMUNIKATION PARTEIENSYSTEM RECHTSSTAAT GERECHTIGKEIT STAAT POLITISCHE ÖKONOMIE POLITIK BUNDESTAG GRUNDGESETZ POLITISCHES SYSTEM EUROPÄISCHE UNION WAH

POLITIK IN AFRIKA, ASIEN UND LATEINAMERIKA



VS VERLAG FÜR SOZIALWISSENSCHAFTEN

Jenniver Sehring

The Politics of Water Institutional Reform
in Neopatrimonial States

Politik in Afrika, Asien und Lateinamerika

Politikwissenschaftliche Analysen zur Entwicklungs- und Schwellenländerforschung

Herausgegeben von

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In der Reihe sind bisher erschienen:

Aurel Croissant, Von der Transition zur defekten Demokratie.
Demokratische Entwicklung in den Philippinen, Südkorea und Thailand
ISBN 978-3-531-13796-4

Wolfgang Muno, Reformpolitik in jungen Demokratien.
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ISBN 978-3-531-14395-8

Veit Straßner, Die offenen Wunden Lateinamerikas
Vergangenheitspolitik im postautoritären Argentinien, Uruguay und Chile
ISBN 978-3-531-15599-9

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Bibliographic information published by the Deutsche Nationalbibliothek
The Deutsche Nationalbibliothek lists this publication in the Deutsche Nationalbibliografie;
detailed bibliographic data are available in the Internet at <http://dnb.d-nb.de>.

Zugl. Dissertation an der Fakultät für Kultur- und Sozialwissenschaften der FernUniversität in Hagen,
2007

Promotionsfach: Politikwissenschaft

Betreuer: Prof. Dr. Hans-Joachim Lauth und
Prof. Dr. Ernst Giese

1st Edition 2009

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Editorial Office: Katrin Emmerich / Sabine Schöller

VS Verlag für Sozialwissenschaften

is part of the specialist publishing group Springer Science+Business Media.

www.vs-verlag.de



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Cover design: KünkelLopka Medienentwicklung, Heidelberg

Printing and binding: Krips b.v., Meppel

Printed on acid-free paper

Printed in the Netherlands

ISBN 978-3-531-16508-0

Acknowledgements

This study would not have been possible without the willingness of the people involved in water governance in Kyrgyzstan and Tajikistan to cooperate and share their experiences and thoughts. During the course of my research, I met too many people who I remember with gratitude to mention them all here, including my interview partners whom I cannot thank by name due to the anonymization of the interviews. Nevertheless, I would like to express my gratitude to the following people.

Prof. Dyushen M. Mamatkanov, director of the Institute of Water Problems and Hydro power of the Kyrgyz Academy of Sciences, provided invaluable support with his knowledge, contacts, and the infrastructure of the institute. Thanks to the team of the institute, it was always a friendly place to return to and to receive assistance in many respects. In particular, I would like to thank Olga Erdman, Gulnara Shalpykova, Dr. Vladimir Romanovski, and Dr. Elmurat Obdunov. Thorsten Harder and his team at the Bishkek office of the NABU were very helpful in organizational matters. In Tajikistan, I am very grateful to Dr. Anatoliy P. Kholmatov, technical director of the Executive Committee of the International Fund for Saving the Aral Sea and former head of department at the Ministry of Irrigation and Water Management, and Prof. Yarash E. Pulatov, director of the Tajik Research Institute of Hydraulic Engineering and Land Reclamation, for their support. Winfried Berndt and Aljona Nasmieva of the DAAD office in Dushanbe as well as Anja Ikbendanz and her colleagues of the GAA helped with first contacts and arrangements. The local case studies would not have been possible without the cooperation of the WUA support department in Sokuluk/Kyrgyzstan and the GAA project office in Aini/Tajikistan. Therefore, I am indebted to Damira Abdyldaevna of the Sokuluk WUA support department and Bakyt Askaraliev of the Agrarian University, Bishkek. In Tajikistan, I am grateful to Anja Ikbendanz and Donyor Ibodov of GAA Aini office as well as Frank Paepke and Sofia Azizova of GAA Khudjand office. Not only did they support my research logistically and allowed me to look into their work, they also enriched my considerations with their critical reflections on their work. For the practical field work, I was assisted by several highly motivated field assistants. I hope that they enjoyed and profited from our joint work as much as I did: Aisada Kerimbaeva, Nazira Sultanova, and Ermek Djumataev in Kyrgyzstan; Parvin Ergesheva and Antonina Abdurazakova in Tajikistan. My host families were invaluable in providing me with a temporary home in Central Asia: in Bishkek Ainura Moldokmatova and her family in my beloved 11th *mikroraiion*, in Sokuluk Tyotyia Maria with her husband, in Farkhor the Samievs, in Dushanbe Nafaszhoh (*Muallim*) Shosedov with his family. My second home in Dushanbe was with Nodira Aminova and her family Azim Aminov as well as Rano, Nigora, and Khilola Bukharizade (and Belle and Tony). They really became family to me. The field research would not have been possible without two research grants by the German Academic Exchange Service (DAAD); I want to thank the DAAD especially for the flexibility when I had to rearrange research stays.

In Germany, I first and most sincerely would like to thank my two supervisors. Prof. Hans Joachim Lauth supervised the thesis despite its exotic topic. Before he gave me the opportunity to join his team at the distance learning university of Hagen, I already learned to value his distance supervision. His strong methodological and theoretical background and

inputs gave me much to think about between our meetings, and the elaboration of my research design highly improved thanks to his comments. Prof. Ernst Giese supervised me although I am not a geographer and allowed me to benefit from his rich regional and thematic expertise. His confidence in my work convinced me to trust it myself.

The framework within which my research question evolved and within which the research was embedded, was an interdisciplinary project at the Center for International Development and Environmental Research (ZEU) at the University of Giessen. It focused on water shortage, water conflicts, and water management in Central Asia and was funded by the Volkswagen Foundation. I hope the results of my research will be a useful contribution to the project. The years at the ZEU gave me inspiring insights into interdisciplinary research that also made me aware of the strengths of my own discipline. Finally, I highly benefited from the regular meetings of the section 'Methods of Empirical Social Research' of the Gießener Graduiertenzentrum Kulturwissenschaften (GGK), which provided a pleasant and constructive environment for methodological discussions.

For their comments on previous pieces and draft chapters I am grateful to Julia Boger, Maria Brockhaus, Christine Charon, Tobias Dörfler, Cliff Henkel, Anja Ikbendanz, Emma Lindberg, Ira Pawlovski, and Gulnara Shalpykova. Nodira Aminova did the Russian proof reading. Last but not least, I would like to thank all of my friends and my family who supported and encouraged me, listened to my sometimes enthusiastic sometimes desperate stories about my research with continuous interest, and shared this period of my life with me.

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Glossary

<i>Adat</i>	Kyrgyz	Customary law
<i>Aiyl</i>	Kyrgyz	Village. Originally: camp of a nomadic group
<i>Aiyl okmotu (a/o)</i>	Kyrgyz	Local government, municipality in Kyrgyzstan
<i>Akim</i>	Kyrgyz	Administrative head (local or regional)
<i>Aksakal</i>	Kyrgyz	Literally: white beard. Respected (mostly male) elder person in a community
<i>Aksakal sotu</i>	Kyrgyz	Court of elders, organization on village levels to solve local conflicts
<i>Aryk</i>	Kyrgyz/Tajik	Small irrigation channel, usually non lined
<i>Dekkban</i>	Tajik	Private farmer
<i>Dirbam</i>	Tajik	100 <i>dirbam</i> = 1 <i>somoni</i>
<i>Hasbar/ asbar</i>	Kyrgyz/Tajik	Collective, voluntary community work
<i>Jamoat</i>	Tajik	Municipality, local government in Tajikistan
<i>Kenesb</i>	Kyrgyz	Council, legislative body. Local <i>kenesb</i> : village council; <i>Zbogorku Kenesb</i> : National Parliament
<i>Kishlak</i>	Tajik	Village
<i>Kolkhoz</i>	Russian	Collective farm
<i>Khukumat</i>	Tajik	District and regional administration
<i>Mahalla</i>	Tajik/Uzbek	Neighborhood, community
<i>Mahalla committee</i>	Tajik/Uzbek	Neighbourhood committee
<i>Majlisi Oli</i>	Tajik	Parliament
<i>Mirab/ mirob</i>	Kyrgyz/Tajik	Literally “water master”. Persons who is in charge for distributing water on local level, today also used for professional hydro technicians
<i>Oblast</i>	Russian	Province
<i>Ogorod</i>	Russian	Small garden plot for subsistence agriculture (in USSR allotted to every household)
<i>Rais</i>	Tajik	Person in leading position (e.g. director, chair of kolkhoz, municipality, mahalla, company, etc.)
<i>Raion</i>	Russian	Distric
<i>Sharia</i>		Islamic law
<i>Som</i>	Kyrgyz	Currency of Kyrgyzstan (1 <i>som</i> = 0.03 USD = 0.02 euro)
<i>Somoni</i>	Tajik	Currency of Tajikistan (1 <i>somoni</i> = 0.31 USD = 0.22 euro)
<i>Sotka</i>	Russian	Russian square measure (1 <i>sotka</i> = 0.01 ha)

<i>Sovkhoz</i>	Russian	State farm
<i>Subbotnik</i>	Russian	Collective ‘voluntary’ work on Saturdays (<i>subbota</i>) in Soviet times
<i>Sud aksakalov</i>	Russian	See <i>aksakal sotu</i>
<i>Tyn</i>	Kyrgyz	100 <i>tyn</i> 1 <i>som</i>
<i>Zhogorku Kenesh</i>	Kyrgyz	Parliament

NB: For the convenience of the reader, I use the English plural form for all Russian, Kyrgyz, and Tajik terms.

List of Abbreviations

a/o	Aiyl okmotu
AAH	Action Against Hunger
ACTED	Agence d'Aide à la Coopération Technique et au Développement
ADB	Asian Development Bank
AKF	Aga Khan Foundation
ASDP “NAU”	Agency Support Development Process “Nau”
BTI	Bertelsmann Transformation Index
CBO	Community Based Organization
CD	Community development
CFPS	Center for Farm Privatization Support
CSO	Civil Society Organization
<i>DepVodKboz</i>	Department of Water Management
DF	<i>Dehkan</i> farm
DFID	Department for International Development (UK)
EC IFAS	Executive Committee of the International Fund for Saving the Aral Sea
EU	European Union
FES	Friedrich Ebert Stiftung
FSK	Former <i>sovkhos</i> or <i>kollehos</i>
FSU	Former Soviet Union
GAA	German Agro Action (Deutsche Welthungerhilfe)
GBAO	Gorno Badakhshan Autonomous Oblast
GDP	Gross Domestic Product
GoK	Government of Kyrgyzstan
GoT	Government of Tajikistan
GTZ	Gesellschaft für technische Zusammenarbeit
HPP	Hydropower Plant
ICWC	See MKVK
IDB	Islamic Development Bank
IFAS	See MFSA
IFI	International Financial Institution
IOM	International Organization for Migration
IPP	Institute of Public Policy
IR	International relations
ISF	Irrigation Service Fee
IWMI CA	International Water Management Institute, Regional Office Central Asia
IWP&HP	Institute of Water Problems and Hydro Power of the Kyrgyz Academy of Sciences
IWPR	Institute of War and Peace Reporting
IWRM	Integrated Water Resources Management
JSC	Joint stock company
MDG	Millennium Development Goals

MFSA	<i>Mezhdunarodnyi Fond Spaseni Arala</i> (International Fund for Saving the Aral Sea, IFAS)
<i>MinVodKoz</i>	Ministry of Irrigation and Water Management (<i>Ministerstvo Irrigatsii i Vodnogo Khozajstva</i>)
MISI	International Institute of Strategic Studies under the President of the Kyrgyz Republic
MIWM	Ministry of Irrigation and Water Management
MKVK	<i>Mezhhgosudarstvennaya koordinatsionnaya vodokhozjaystvennaya komissiya</i> (Inter state Commission for Water Coordination, ICWC)
MSDSP	AKF Mountain Societies Development Support Program
NGO	Non Governmental Organization
NITS MKVK	Scientific Information Center of the Interstate Commission for Water Coordination (<i>Nauchno Informatsionnyj Tsentr MKVK</i>)
NWG	National Working Group on Elaboration of a Water Sector Strategy
O&M	Operation and maintenance
<i>ObVodKhoz</i>	Province water management department (<i>Oblastnoe upravlenie vodnogo khozajstva</i>)
PRA	Participatory Rural Appraisal
PRSP	Poverty Reduction Strategy Paper
<i>RaiVodKhoz</i>	District water management department (<i>Raionnoe upravlenie vodnogo khozajstva</i>)
RRS	Regions of Republican Subordination
s/k	<i>Sovkhoz/kolkhoz</i>
SDC	Swiss Agency for Development Cooperation
SPECA	UN Special Programme for the Economies of Central Asia
SSR	Socialist Soviet Republic
TajikNIIGiM	Scientific Institute for Hydrotechnology and Melioration (<i>Tajik nauchno issledovaniy institut gidrotekhniki i melioratsii</i>)
UNDP	United Nations Development Program
UNECE	United Nations Economic Commission for Europe
USAID	United States Agency for International Development
USD	US Dollar
VDC	Village Development Committee
WB	World Bank
WIR	Water institutional reform
WSDS	Water Sector Development Strategy
WSSD	UN World Summit on Sustainable Development
WUA	Water User Association

1 Introduction

“There is more than enough water in the world
for domestic purposes, for agriculture and for industry. (...)
In short, scarcity is manufactured through political processes and institutions (...).”
(United Nations Human Development Report 2006: 3)

Water scarcity, water crisis, water wars – since the beginning of the 1990s these terms have appeared again and again in scientific debates, political strategies, and media reports. Water is perceived as a scarce resource that needs efficient management in order to satisfy all needs and to prevent violent conflicts over its distribution. Considerable research has been devoted to this topic. In this research, water is commonly referred to as a common pool resource: a non-excludable public good with rivalry in terms of consumption. Hence, research has long focused on collective action problems in managing this common pool resource (e.g. Ostrom 1990, 1992).

In recent years, anthropological and sociological scholars in particular have criticized that in these studies the complexity of water, its embeddedness in a wider cultural and social context, and the role of power have been neglected. Water is different from other natural resources in some important aspects: its mobility, its variability, and its multiplicity (Mehta 2006: 2f; Linton 2006: [10]). Mobility makes ownership claims difficult: Water moves, transcending state borders, not fixed like other resources. Variability refers to the fact that its availability varies temporarily, depending on weather conditions. Multiplicity evolves as water is used for numerous economic, technical, cultural, and social purposes simultaneously and thus has material as well as symbolic dimensions. It is obvious, albeit long neglected, that water management is not merely a technical issue that can be decided by technocrats and engineers, but involves decisions that affect the sometimes conflicting interests of various actors and spheres of society. Therefore, the final policy output is the result of strategies, debates, conflicts, and coalitions between individual and organizational actors with differing interests concerning the distribution and use of water resources.

Since the turn of the millennium, this aspect has received enhanced consideration and resulted in what Tony Allan called the “political institutional water paradigm” (Allan 2003). International organizations stress the importance of “good water governance” for reaching sustainable, equitable, efficient, and democratic usage of water resources. In this view, scarcity is not necessarily a product of physical shortage but rather of societal and political processes and decisions. In 2006, the United Nations Human Development Report cited above confirmed this conceptual shift when it highlighted the role of power and inequality in the global water crisis and rejected the idea of physical scarcity as its primary cause. Lack of water is considered the result of public policies and of institutional regulations favoring rich and powerful people and excluding other – notably poor – people from equal access to water: “The scarcity at the heart of the global water crisis is rooted in power, poverty and inequality, not in physical availability” (UNDP 2006: 2).

This new discourse is centered on the term *water governance*. On the one hand, it refers to the complex setting of water management in wider governance structures that have to be ac

counted for when assessing water usage. On the other hand, it points to the necessity of good governance—rule of law, stakeholder participation, transparency, accountability, etc.—in the water sector. “Good water governance” quickly became a popular buzzword at conferences and in the discourse of international donor agencies.

The evolving strategy to address the water crisis is no longer to build more dams (i.e. enhance supply) or to make water more expensive (i.e. reduce demand). Instead, it calls for a reform of the institutions—the rules and structures that regulate water distribution and usage. This view is apparent in the following quotation that was cited in a report of the Asian Development Bank (ADB): “Do not fix the pipes, fix the institutions that fix the pipes” (WSP 2004: 32). At first sight, this appears to be an illustrative example that institutions are considered relevant to the issue of water governance. By closer inspection, however, it reveals the still existing technocratic approach: it indicates that one can ‘fix’ institutions just as one can fix a pipe. However, institutional reform is always a political process with conflicting interests at stake. Additionally, informal institutions cannot be changed ‘fixed’ by government decision. Hence, if one presumes they have an input on water governance, it requires the rethinking of reform policies and adequate strategies.

Good water governance may be a catchphrase at conferences and on the policy agendas of donor organizations. But how can it be put into practice, especially in states that are not characterized by good governance and democratic structures in general? Many of the developing countries that implement water institutional reforms can be subsumed under the category of neopatrimonial regimes: while democratic institutions exist formally, they co exist with patrimonial informal institutions such as clientelism, corruption, and personalistic leadership. These have the potential to undermine the formal democratic ones. Can water institutional reforms (WIR) be effective (i.e., can they achieve good water governance) in such a neopatrimonial institutional context?

In order to answer this question, it is necessary to scrutinize the political process, i.e. the politics of these reforms. This process can be analytically divided into policy formulation and policy implementation. The first involves the question of whose ideas and values are represented in policy decisions. The second refers to who is in charge of the implementation of these decisions and in which way he or she influences it. Who are the relevant actors that force or prevent decisions for reform? Who is responsible for implementing these policy decisions? Who actually implements and who prevents them? And how are the actors and their behavior influenced by the institutional context, i.e. the neopatrimonial regime? By identifying the factors through which this context has an impact on the politics of WIR, explanations for the success and failure of reforms can be found and lessons can be drawn for the design of effective reform strategies.

As the concept of good water governance and the focus on WIR only emerged in the first few years of the 21st century, it is obvious that research on the feasibility of these approaches is still at the outset. There is a need for detailed case studies in order to understand the complexity of water governance, as well as for systematic comparisons in order to draw inferences and bounded generalizations that can inform theory building as well as future policy programs. Although many case studies on certain aspects of WIR have been conducted, such as on water user associations (WUAs), on irrigation reform, on participatory management, and on water pricing, seldom does anyone provide a systematic and comprehensive comparative perspective (with the exception of the works of Saleth and Dinar). This study aims to make a contribution to the emerging scholarship on water governance and water institutional reform as well as enrich it with an explicit political science perspective. It intends to show the complexity of

water and its governance as well as the role of the institutional context for politics and policy outcome. Specifically, this study has two main objectives.

The first objective is to use two comparative in depth case studies for the identification of factors that influence water reform politics that are of wider interest for the general debate on good water governance and water institutional reform. Water governance and WIR are new normative terms as well as analytical perspectives which have not yet been covered by much research in political science. With a stringent comparative research design, this thesis contributes to theory development and provides policy oriented conclusions for WIR in neopatrimonial states. The purpose of this thesis is therefore not to discuss the normative dimensions of good water governance as the objective of institutional reforms. Whether or not management approaches oriented at hydrographic boundaries, decentralization, user participation, or economic mechanisms are to be endorsed is not the topic at hand. I take these for granted as objectives and policy goals identified in the international discourse. Instead, the interest is in to what extend they are applicable and how they are put into practice. This certainly involves reflections on the general sense of certain paradigms and theories. Based on empirical observation, inferences on these norms are made directly or indirectly. But it is not the main objective of this study to analyze the goals and measures as such, but rather to analyze their politics and feasibility.

The second objective is to provide a sound analysis of the current state of water governance in Kyrgyzstan and Tajikistan. This addresses an obvious research gap. While water as such has received a great deal of attention in research on Central Asia, previous studies have mainly focused on either the interstate level, i.e. regional water relations, or the local level.¹ This can be attributed to a conflict bias, driven by fears about the potential for violent conflicts to arise over water allocation. These were expected either at the regional level, where the newly sovereign states had to negotiate about the prevalence or abolishment of the Soviet modes of water governance, or at the local level, where frequent violent incidents involving disputes over water are reported in certain water scarce areas. The national level, which sets the frame for foreign policy positions as well as local conditions, has remained largely unexplored. At the same time, national policy decisions in Kyrgyzstan and Tajikistan are of utmost importance to the whole region: Approximately 70% of all water resources in the Aral Sea basin originate from these two states, as they are situated at the headwaters of the major rivers. Hence, their decisions on water usage and management affect the downstream states and regional stability.

Nonetheless, no comprehensive studies are available on water policy and governance in both countries. There is some grey literature, mainly donor reports or articles written by national experts for donors. These are, however, primarily hydrological studies or ones written from a pure technical water management perspective. For Kyrgyzstan, parallel to this research, two studies addressing certain aspects of WIR were published.² For Tajikistan, the UNDP devoted its National Human Development Report 2003 to the issue of water management. Political Science research on this topic has not yet been conducted, however. Therefore, the two case studies are mainly based on policy documents, drafts and donor reports. The most important source of information was field research using qualitative methods.

¹ See Micklin 2000; Weinthal 1998; Giese et al. 2004; Bichsel 2006; Horsman 2001; Sarsembekov 2004; FES 2003; Dukhovny, Sokolov 2003; Boisson de Chazournes 1998; Shalpykova 2002, among others.

² These are a study by the International Water Management Institute (IWMI) titled "Inadequacies in the Water Reforms in the Kyrgyz Republic. An Institutional Analysis" (Hassan et al. 2004) and a study by the German Development Institute on IWRM (Herrfahrdt et al. 2006); despite its title – "Water Governance in the Kyrgyz Agricultural Sector" – this study neither takes an analytical governance perspective nor does it refer to the good water governance concept).

This thesis will focus on water as a productive resource; hence, it excludes the water and sanitation sector.³ The research in both case studies will focus on the agricultural sector. This is for two main reasons: (1) Institutional reform programs in both countries concentrate on irrigation management reform; (2) Agriculture worldwide consumes more water than any other sector. Also in both case studies, agriculture counts in Kyrgyzstan for 90% and in Tajikistan for 84% of total water consumption. Achieving more efficient water use in agriculture and coordinating it with competing demands is one of the most pressing tasks.

Following this introduction, chapter 2 provides an overview of the discourse on water governance and a definition of what is understood by the term 'water institutional reform'. It is followed by the theoretical approach to institutions and institutional change that provides the basic assumptions on water institutional reforms (chapter 3). Based on these considerations, the problem statement is formulated and substantiated. Building on that, chapter 4 presents the analytical and methodological framework. It begins with an exploration of the concept of neo-patrimonialism, which guides the analysis. The study combines three analytical approaches: policy analysis, implementation research, and political anthropology. Each of these has certain merits in addressing the research questions, and certain assumptions about factors influencing the politics of water institutional reform arise from each. These assumptions are presented at the end of the chapter. Chapter 5 presents the comparative research design. It introduces the two case studies by describing first the context variables for water institutional reform and then the independent and interfering variables. The chapter also describes and discusses the methods employed in empirical research and analysis. The subsequent chapters focus on the case studies of Kyrgyzstan (chapter 6) and Tajikistan (chapter 7). For both countries, the contents, actors, and processes of water institutional reform are described and then analyzed. The following chapter 8 compares the results of the two case studies. It is divided into several sections: First, it summarizes the insights of an analytical water governance approach. Second, the water institutional reforms in both countries are compared under different aspects (monetarization, reorganization, democratization). Third, these results are fed back into the theoretical framework in order to assess which general conclusions for institutional change can be drawn from the comparative analysis. In the final part of the chapter, conclusions are drawn on what can be learnt from the findings of this study for the practice of WIR in general. The last chapter summarizes the findings and gives an outlook on further research issues. The annex provides additional information on the empirical research and data analysis. It includes a list of all persons interviewed, the interview guidelines for semi structured expert interviews, the interview guidelines for the local case studies, and the code system of the qualitative data analysis.

³ The debate on institutional change in the water and sanitation sector refers to different discourses and concepts such as privatization of the drinking water supply and access to water as a human right.

2 Water Governance and Water Institutional Reform

Since the beginning of the new millennium, ‘water governance’ has become the new catch phrase in the international discourse on water and water crisis. This chapter provides an overview of the concept and discourse of water governance. It gives background information for the research question and the problem statement of this study. The chapter 2.1 describes the development of the water governance concept and its implications for research and practice. A means to achieve good water governance is water institutional reform – the dependent variable of this thesis, explained in chapter 2.2.

2.1 From Water Management to Water Governance

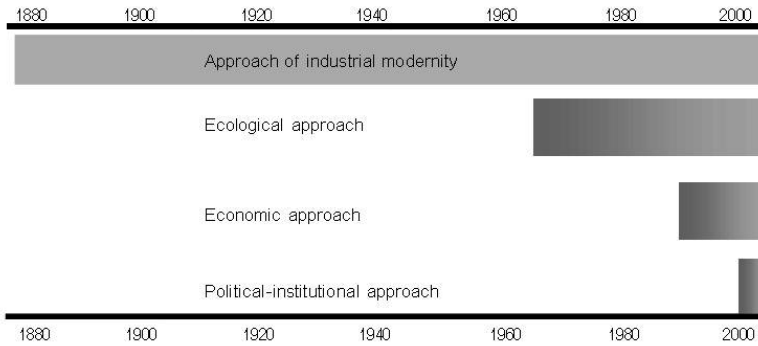
The declaration of the UN Year of Freshwater in 2003 and subsequently the UN International Decade for Action “Water for Life” 2005–2015 are the highlights of an evolution that accredits water vital importance for sustainable development. Yet in the 1992 Rio Declaration on Sustainable Development water was not one of the priorities. Only in 1998, the role of water as a key resource for (sustainable) development was acknowledged and set on the agenda of international development organizations (UNESCO 2003: 18, 370; ADB 2004). This change in emphasis coincided with a change in approach towards water management: Shortcomings of old concepts led to a shift stressing the influence of political and institutional factors in water management. At the Bonn Freshwater Conference in 2001 the term ‘water governance’ as a new catch phrase entered the international stage. This sub chapter will give an overview on this development and then introduce the water governance concept.

2.1.1 *The International Discourse on Water Management*

Tony Allan (2003) identified four paradigms as shaping modern thinking about water management:⁴

- 1) The paradigm of industrial modernity (starting at the end of the 19th century);
- 2) The ecological paradigm (starting in the 1960s);
- 3) The economic paradigm (starting in the beginning of the 1990s);
- 4) The political institutional paradigm (starting around the year 2000).

⁴ Allan actually distinguishes five paradigms, starting with the “pre-modern paradigm”. Given the problematic connotation of the term “pre-modern” and the fact that Allan neither defines it sufficiently nor would this be the place to discuss it, I will only refer to the four ‘modern’ paradigms.

Figure 1: International discourse on water management

Source: own compilation based on Allan 2003.

As shown in Figure 1, the paradigms do not supersede each other but exist in parallel. The three last paradigms (2–4) complement each other and are summarized by Allan as sub types of the paradigm of “reflexive modernity”. It is therefore questionable whether ‘paradigm’ is the right term for these approaches. In a Kuhnian understanding, different paradigms cannot exist simultaneously in one scientific community (Kuhn 1976). I will therefore use the terms schools or approaches.

Probably the best known approach is that of industrial modernity – the so called „hydraulic mission“ (Allan 2003: 10). For a long time, it dominated in Western and Communist societies as well as in states of the so called Third World. It evolved with the development of measurement methodologies and hydrology as scientific discipline and came along with the perception of water as a resource. Water demand was expected to increase due to population growth and economic development. Solutions for future water demand were seen solely in technical terms and on the supply side. Huge infrastructure projects like dams, reservoirs and irrigation systems relying on the belief in the technical possibility of completely controlling nature are the hallmarks of this approach (Allan 2003; Gleick 2000; Linton 2006).

With rising environmental awareness in the 1960s, the request arose to include ecological needs in water management policies. Environmental and social consequences of huge dams were criticized, such as population replacements and the loss of bio diversity. At the same time, technical progress in industrialized countries led to new water saving technologies and revealed that economic progress and demographic growth does not necessarily lead to more water consumption (as was the assumption of the “hydraulic mission”). However, it was only in the 1980s when these insights resulted in changes of policies and usage patterns (Allan 2001; Allan 2003; Gleick 2000).

In the beginning of the 1990s, the criticism was complemented by the notion of water as an economic good, a position especially promoted by international financial and developmental organizations. It was acknowledged on international level in the Dublin Principles.⁵ The underlying idea in short is that water has an economic value and therefore should have a price. While the technocratic strategies are primarily supply driven, this approach is demand oriented. Lack

⁵ The Dublin Principles were developed in 1992 at one of the preparing conferences to the 1992 Earth Summit in Rio de Janeiro. Principle 4 states that “water has an economic value in all its competing uses and should be recognized as an economic good”.

of or inadequate pricing mechanisms are perceived as the main causes for inefficient and wasteful water use. It advocates to delegate authority over water management away from government and state agencies to technical commissions at decentralized levels that are supposed to act rationally and efficiently. (Allan 2001; Mehta 2000).

These three schools, as different as they are, have two aspects in common: First, as far as applied, they failed in ensuring water supply and overcoming the water crisis providing people with potable water, preventing water related diseases and deaths, reaching sustainable water use in agriculture. Still more than one billion of people lack access to safe drinking water. The experiences of the last decades show that neither large scale projects nor new technologies, neither a centralized state system nor the free market forces can alone guarantee an efficient and equitable management of water resources (UNESCO 2003: 374; Rogers, Hall 2003). Second, no school reflected the complexity of water. All three paradigms resulted in sectoral instead of comprehensive policies. Depending on usage (agriculture, industry, sanitation, ecology, communal water supply, etc), different agencies are responsible for water management. As these agencies mainly act without much coordination, the consequences are duplication and ambiguities of competencies, fragmented policies, and inconsistent strategies. This structure is mirrored in development projects (Gleick 2000; Black, Hall 2003).

The criticism led to a new, political institutional approach. Experts involved in reform projects experienced the significance of the political framework, of unequal access, and of political will for effective water management. Not only is there a lack of physical resources or financial and technical means, but the societal capacities to handle and distribute the available water resources effectively and equitably are scarce as well. Water scarcity is hence not necessarily a phenomenon of physical water shortage (first order scarcity). It may be also a second order scarcity: a socio economic scarcity grounded in a lack of mechanisms to increase efficiency, or a third order scarcity grounded in a lack of adaptive social and cultural capabilities in a society. A fourth order scarcity is seen when it arises as a construct of discursive and political processes and entitlement failures. In such a view, an adequate solution strategy demands not only financial and technical means or economic incentives. Supportive institutions, such as a sound water policy and law, civil society, state capacities, or deliberative decision making are also required (Ohlson, Turnton 2000; Mehta 2006). The main message of this approach is best summed up in a sentence of one of its foremost promoters, the Global Water Partnership⁶: “The current water crisis is mainly a crisis of water governance“ (UNDP, GWP, ICLEI 2002: 2). This statement suggests that failings in water supply are not necessarily rooted in actual water shortage or lack of technical possibilities but rather in unsound water governance.

This role of governance has long been neglected, the UNESCO even speaks of a “political taboo in North South development cooperation dialogue” (UNESCO 2006: 50). In the Rio declaration of 1992 governance was not even mentioned as a factor for sustainable development. However, subsequently it was highlighted at several conferences. At the 2nd World Water Forum in The Hague in 2000, Good Governance was acknowledged as one of the main challenges to reach water security. At the 2001 Bonn Freshwater Conference, Water Governance was ranked among the three areas of priority action (besides mobilizing financial resources as well as capacity building and knowledge sharing). Therefore, it can be named the birthplace of this concept as it was this conference where it got international attention and was accepted by the international community (UNESCO 2003: 24 28; ADB 2004). The next chapter will provide a closer inspection of this approach.

⁶ The Global Water Partnership was established in 1996 by the World Bank, UNDP, and SIDA, and encompasses international donor organizations, government agencies, public as well as private institutes engaged in the water field.

2.1.2 *Water Governance*

A general definition of water governance does not exist. This is partly because the concept is still in the phase of development, but also because it is questionable whether a general definition is possible and desirable at all (UNESCO 2003: 371). As the term is being developed and used mainly by international actors that connect it with their own goals, it is not surprising that normative and analytic notations are often interchanged. The same problem can be noticed with the usage of the concepts of global governance and good governance, which are being used in many nuances as well. In the following, an analytical and a normative notion of water governance are distinguished. The first sub chapter describes water governance as an analytical approach and the second sets out the normative conception of good water governance.

2.1.2.1 The Analytical Perspective

In Political Science, governance refers to a distinct analytical perspective on regulation and coordination processes. It has to be stressed that governance is neither a theory nor does it imply a certain theory, rather it is an analytical tool to describe and assess reality using a certain perspective. However, there are very different meanings of the term governance (for an overview see Kooiman 2002: 72f). Pierre and Peters (2000: 7) therefore conclude that “[t]he concept of governance is notoriously slippery”.

The rise of the governance concept on the one hand shows the desire or need for a different perspective to analyze reality; on the other hand it is a reaction to a changed reality so that new approaches in its analysis are necessary: It reflects a shift of power from government alone to local levels, transnational organizations, civil society and private actors. The state and its government are questioned as a sole actor (Pierre, Peters 2000: 75-93). Consequently, politics is not seen as regulation and control by one authoritative actor (the state), but as interaction between interdependent collective actors on different levels – local, regional, national, international. These different levels are especially considered with the term “multi level governance” (Benz 2004a, 2007). There can be distinguished broader and narrower understandings of governance. The broader view sees governance as coordination and regulation of interdependent actions of societal actors. The narrower view understands governance to be in opposition to government as modes of regulation between state and society. Its focus is on the effectiveness of processes in terms of problem solving (Benz 2004: 17f).

Although there are “perhaps as many views about governance as there are scholars interested in the subject” (Pierre, Peters 2000: 28), they have one thing in common: Besides questioning the role of government, they assume the governability of society and economy. One premise of the governance approach is that regulation between actors is possible; hence that policy is not entirely determined by economic constraints, institutions, or power interests.⁷ Governance evolved as a useful concept to grasp the interrelationship of polity, politics, and policy. As it assumes that politics is not only a power game of elites, it acknowledges that institutions do have influence. So, while in general governance analyses are more interested in output than in institutional forms, they are not incompatible with a neo institutionalist perspective as taken in this study. The governance perspective can reveal the dynamic concurrence of structures and processes, institutions and actors, rules and rules application, e.g. when it

⁷ However, the neglect of power as aim and not only as tool of political actions, and of central questions of authority and legitimacy, is also one frequent point of criticism (see e.g. Mayntz 2001).

explores the role of institutions on the governance process by scrutinizing path dependencies or by analyzing the institutional logics utilized in order to exert governance (Benz 2004: 21; Pierre, Peters 2000: 43).

In the water governance discourse, this analytical governance perspective is adopted by the understanding that the former water management perspective was too narrow. The definition of water governance as first expressed 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: 47).

According to this definition, water governance encompasses all social, political, and economic structures, formal as well as informal rules, and processes that influence water use and water management. It involves the government, the civil society, and the private sector. The usefulness of the emphasis on coordination by governance is obvious: Water has multiple economic usages: irrigation, hydropower generation, sanitation and communal water supply, industrial water needs, fishery, navigation and transport, recreation and tourism etc. Hence it affects different policy fields. Their coordination is one of the big challenges. Pure hierarchical state centred management has obviously failed in the past. A complete privatization while welcomed by some is not in line with the perception of water as a public good, even less 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 political levels: “Governance addresses the relationship between organizations and social groups involved in water decision making, both horizontally, across sectors and between urban and rural areas, and vertically, from local to international levels” (UNESCO 2006: 48). The governance perspective hence provides for new insights and also new solution strategies in addressing what is labeled the ‘water crisis’: “The framing of water challenges in terms of governance has allowed a broadening of the water agenda to include the scrutiny of democratization processes, corruption, power imbalances between rich and poor countries and between rich and poor people” (UNESCO 2006: 50). However, this analytical governance approach has played a minor role in the water governance discourse. The normative notion of good water governance is of much greater importance.

2.1.2.2 The Normative Perspective

As noted above, analytical and normative aspects of the water governance concept are often interchanged. The latter ones are often not explicitly stated or sometimes also termed “effective water governance” (e.g. UNESCO 2006: 49). In order to achieve more clarity, I will use the term *water governance* for the analytical usage and the term *good water governance* for the normative one.

The declaration of the 2nd World Water Forum in The Hague in 2000 used a relatively narrow definition of Good Water Governance as water resource management involving public interest and stakeholder participation. At the 2001 Bonn Freshwater Conference this definition

was broadened to include institutional reform, Integrated Water Resources Management (IWRM), legal framework and equitable access, a definition that was confirmed by the Johannesburg summit in 2003.

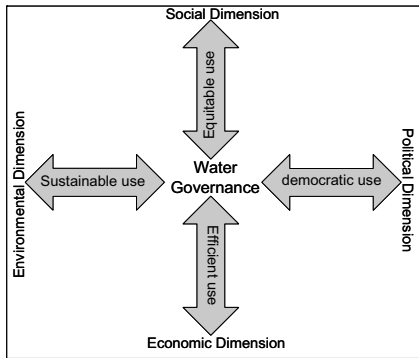
IWRM is by far the most popular conception concerning reform of water management itself. Basic principles of IWRM are water management according to basin boundaries (instead of administrative ones), decentralization, subsidiarity, participation of all stakeholders, demand orientation, and gender equality. IWRM can therefore be defined as “a process which promotes the coordinated development and management of water, land and related resources, in order to maximize the resultant economic and social welfare in an equitable manner without comprising the sustainability of vital ecosystems.” (Black, Hall 2003: 5). Though IWRM is dealt as a tool for good water governance and endorsed by almost all concerned international organizations, the concept is rather vague and therefore criticized as being an “aggregation of trendy words” (Biswas 2004:4) with no clear operational directives for implementation.

The UNESCO listed the following components as parts of good water governance. They are more or less identical with the general features of good governance.

- Transparency: processes and decisions should be transparent for the public and it should be possible to obtain information;
- Participation and Responsiveness: water users should have a voice in the decision making process, and institutions should react to their demands and preferences;
- Accountability: governments, civil society organizations, as well as the private sector should be accountable to the public;
- Equity: all members and groups in society should have the same opportunity to improve their well being;
- Coherency: the complexity of water resources issues should to be taken into account and integrated, coherent policies should be developed;
- Ethics: water governance should be based on the ethical principles of a society, e.g. respecting traditional water rights (UNESCO 2003: 373; Rogers, Hall 2003).

The challenge of good water governance is hence not to decide on the exact water use or water distribution but to set up an overarching institutional and administrative framework that allows different actors with different objectives to articulate their interests and participate in the political processes of decision making and implementation. As water governance shall be in line with the specific context of a country, it is clear that there cannot be a globally fitting blueprint concept. The measures to be taken depend on the economic, social, cultural, and political conditions of each country.

In summary, good water governance has four dimensions (see Figure 2): a social, an environmental, an economic and a political dimension. The social dimension aims at equitable distribution of water usage between poor and rich people, 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, thereby contributing to improved water access and sustainability. Finally, the political dimension aims at democratic empowerment of the water users in order to achieve an equitable and target oriented water management.

Figure 2: Dimensions of good water governance

Source: Tropp 2005: 13

Following these conceptualizations, good water governance in my definition has a process dimension as well as an output dimension: Good water governance is a democratic and coherent coordination and regulation process that leads to equitable, efficient, and sustainable water usage. This is the aim of water institutional reforms and these are the factors with which success and failure can be measured.

2.2 Water Institutional Reform

With the significance attached to governance, water institutions have gained relevance. Institutions are no longer seen as one aspect influencing water sector performance, but as a subject to be addressed by reform efforts: Water institutions need to be changed so they allow for good water governance, hence democratic, equitable, efficient and sustainable usage of water resources. Water institutional reform (WIR) is now perceived as key for reforms of the water sector (see e.g. Allan 1999; Neubert, Scheumann, van Edig 2002). The subsequent chapter will provide the theoretical approach to institutions and institutional change (reform), but first I would like to elaborate on WIR as the dependent variable of this study.

In the following chapter 3.2, water institutions will be defined in detail. Anticipating the definition, which will be elaborated below, water institutions are formal and informal rules, norms and their underlying cognitive and symbolic systems, as well as the organizations that set and enforce them, that purposefully regulate usage, distribution, and status of water resources in a society. Following Saleth and Dinar (1999, 2004), they can be divided into water policy, water law, and water administration. Water institutional reform can address all types of water institutions: The water administration is restructured, formal rules like laws are changed, and policies are reformulated. Efforts can also be targeted at changing the perception of water as an endless and free resource that does not have to be economized; hence it challenges informal institutions such as norms of water consumption and religious values assigned to water, and the notion of infinitely being able to take water for granted. Water institutional reform is thus a political reform program aiming at changing existing water institutions.

Certain water institutions are seen as adequate means to ensure good water governance. For example, inter sectoral coordination of the concerned agencies and non state actors is regarded essential to ensuring equitable use between sectors. In the economic dimension, the introduction of pricing is seen as a tool to achieve more efficient use. This is often also considered to be adequate for reaching more sustainable usage. In the political dimension, but also to reach equity between all users, democratic processes involving participation mechanisms and decentralization are highlighted. From literature review as well as from field research in both countries, four main issues in institutional water reform have evolved which will be covered by this study:

- Enhancement of inter sectoral coordination;
- Transition to management along hydrographic boundaries;
- Introduction of water pricing mechanisms;
- Enhancement of stakeholder participation by transfer of local irrigation management to independent user groups.

These different processes are closely interconnected. Some aspects of WIR have already been introduced for decades: Reforms of participatory irrigation management (PIM) and the introduction of water charges or irrigation service fees (ISF) are to mention here. Participatory Irrigation Management means the transfer of operation and maintenance (O&M) responsibilities at local level to the users. These reforms mostly include the establishment of self managed user organizations, WUAs (water user association). While their success is often questionable (Rap 2006; Mott MacDonald, DFID 2005: S 1; Narain 2004; Meinzen Dick et al 1997), they are implemented in many countries world wide. Also the introduction of water fees is not a success story. Hardly anywhere have ISF reforms been successfully implemented (Azevedo, Baltar 2005; Meinzen Dick et al. 1997: 13; Hellegers, Perry 2006). The scrutinization of how and why these reform processes succeed or fail to reach their objectives, and whether and how they have an impact on each other, therefore still presents a challenge for research.

The aim of water institutional reform is institutional change. It is about a re organization of modes of usage, rules for access, and stakes to influence decision and control. Such a change can always be expected to be met by resistance as there are people who benefit from the status quo. As Lowndes (2005: 294) has explained,

“institutions are inherently political, because rules create patterns of distributional advantage. (...) Institutional change can be traumatic for individuals because values and identities are at stake – not just incentives and interests. Institutional change is never a purely technical matter, because any challenge to existing institutional settlements is likely to be met by resistance.”

When institutional change is a political process, politics has to be included into the analysis. However, the role of the politics for water institutions and water reforms has long been neglected by practitioners as well as by academics. It was an “anathema in most water policy circles” (Mollinga 2008: 8). In their seminal book on the politics of irrigation reform Mollinga and Bolding state that “the word ‘politics’ is virtually absent in formal policy discourse on irrigation reform” (Mollinga, Bolding 2004: 4). The political importance of water is obvious, though: Water is essential for the well being of the population. Water is a resource affecting sectors such as agriculture, energy, health, ecology, industry, tourism, etc. According to region and sector, it might be even a key resource. Lack of access to water can result in societal conflict and economic crisis. The position to make decisions about water management is hence a position to allocate and distribute access to resources. Water reform is thus a policy field that is as contested as any other field where new rules and roles of distribution have to be formulated and put into practice.

The disregard of politics can be ascribed to the perception that water management would be a merely technical system based on rational decision making and implementation by experts (engineers and ‘hydrocrats’) a view that dominated all approaches to water management before the political institutional one (see above ch. 2.1.1). Jamie Linton (2006) has shown convincingly how the general perception of water as a resource evolving in the beginning of the 20th century removed water from the political to the technical sphere: “A resource, then, turns out to be a way of avoiding politics by translating questions of access and use into a language of calculation and techniques” (Linton 2006: [34]). Even in the water governance discourse, politics was at least initially not a central topic. Rogers and Hall (2003: 23f), two authors associated with the Global Water Partnership, one of the main promoters of the water governance concept, regard politics primarily as something external to water institutions: “The politics of water governance are typically the sociological and economic factors (structures, institutions, etc) that lie *outside* the provision of water and reflect the more general political make up of the country, the water institution’s setting“ (emphasis added). Also in the first UNESCO World Water Development Report of 2003, there was no explicit reference to politics in the water governance chapter. Only in the 2nd report of 2006, the role of politics for water governance was acknowledged: “The representation of various interests in water decision making and the role of politics are important components in addressing governance dynamics” (UNESCO 2006: 47).

The prevailing discourse has not only neglected these aspects, it is even assumed that it “exerts a strong depoliticising effect by focusing on neutral concepts, which avoid controversies being developed and properly addressed” (WWC 2004: ii). Therefore, it is the aim of this study to make a contribution to the emerging discussion about the inherent political nature of water institutional reform and to contribute to a better understanding of the problems and challenges of these reform processes in Central Asia and beyond. In this respect, I define water politics in relation to Kerkvliet’s (1990: 11) definition of politics concerning natural resources use as a process in which numerous actors with differing values and beliefs compete and cooperate in order to define, decide, and implement policies on the establishment respectively the change of rules regulating control, allocation, and usage of water resources, with their scope of action being constrained and enabled by the institutional setting. In this sense, politics refers to the arena of policy making whose ideas and values are represented in policy decisions as well as the arena of policy implementation who decides about what and who influences or battles implementation of decisions in which way.⁸ Water institutional reform hence encompasses the formulation as well as the implementation of new rules. Both of these aspects form together the dependent variable.

⁸ I use the term arena to clarify that it involves the process as well the actors. While the political field is water governance in general, the arena can be defined as “an area within the field in which the researcher wants to concentrate at a particular moment” (Lewellen 2003: 88). It is hence an analytical construct while in reality both levels frequently overlap.

3 Theoretical Framework: New Institutionalism

As a basis for the analysis of water institutional reforms, it is important to define and theoretically substantiate institutions as well their reform – the change of institutions. Therefore, this chapter outlines the theoretical framework of this study. After an overview of approaches of new institutionalism in political science (chapter 3.1), a detailed definition and theoretical substantiation of institutions and water institutions is given (chapter 3.2) and concepts of institutional change and continuity are presented (chapter 3.3). The final section, chapter 3.4, outlines the problem statement that evolves from this background.

A focus on institutions and institutional reform in water management is not entirely new. In this respect, the seminal works of R. Maria Saleth and Ariel Dinar (1999; 2004) on water sector reform and of Elinor Ostrom (1990, 1992) on irrigation reform need to be highlighted. In addition, efforts to establish water user associations and participatory irrigation management were scrutinized by numerous case studies. Systematic comparative studies are rare, however. In 2005, the *Journal Water Policy* has dedicated a whole issue on the topic of water institutional reform. Concerning Central Asia, Wegerich (2005) studied institutional change in provincial and local water management in Uzbekistan; and Herrfahrtdt et al. (2006) inquired the state of and prospects for IWRM in Kyrgyzstan. Most of this research is conducted either in institutional economics based on rational choice models or with collective action approaches analyzing the management of water as a common pool resource. An original input from political science or sociology is marginal. Although the aforementioned research provides useful insights and conceptions, economic approaches fall short of understanding the whole spectrum of water governance. Therefore, this study will refer to neo-institutionalist approaches of political science with a broader definition of and a different perspective on institutions.

3.1 Approaches of New Institutionalism in Political Science

Peters (2001) distinguishes six schools of new institutionalism in political science. All of them stress the importance of institutions for social, economic and political outcomes. They mainly differ in their definition of institutions, their assessment of the relationship between institutions and actors/behavior, and their explanation of genesis and change of institutions. However, a clear distinction between them is difficult to draw. Quite a few authors combine features of different strains.⁹ Also, the respective internal differentiation is enormous.

The three main approaches are sociological, historical, and rational choice institutionalism. Rational choice institutionalism (RCI) in political science is closest to new institutional economics, from which it has adopted the concept of the *homo oeconomicus*. In this view, institutions exist because they reduce insecurities, enhance the possibility to anticipate the behavior of other actors, and hence allow for strategic interaction. This way, institutions reduce control,

⁹ E.g., Fritz W. Scharpf and Renate Mayntz broaden in their analytical framework of actor-centered institutionalism the view of classic RCI. Pauline Jones Luong (2002), in her analysis on institutional change in Central Asia, combines rational choice and historical institutionalism.

enforcement, and transaction costs which would otherwise arise because of insufficient information. Based on self interest, actors act within the institutional framework according to the principle of utility maximization with predefined and unambiguous preferences. Institutions play a role by providing a framework that directs expectations, limits the range of choices an actor can make, and offers sanctions and incentives. The orientation at institutional norms is the result of an individual rational cost benefit equation as it is perceived as cost reducing (Hall and Taylor 1996: 942-946; Peters 1999: 43-62). Most of water research in Institutional Economics is based on such assumptions. While this approach is useful to grasp strategic behavior, it neglects the social construction of preferences and cannot explain the persistence of dysfunctional institutions.

Sociological institutionalism (SI) argues that it is not possible to explain the existence and persistence of institutions with effectiveness or rationality, and rejects models of rational actors and behavioralism. Rather, it seeks to understand how institutions influence orientations (preferences and perceptions), anticipations, interests, and objectives of actors and therefore the ways solutions to problems are sought, *before* concrete incentives become effective. Sociological institutionalism became especially powerful in organizational theory (Powell, DiMaggio 1991).

While sociological institutionalism aims at “bringing society back in” (Friedland, Alford 1991: 232), the objective of historical institutionalism (HI) is “bringing the state back in” (Evans et al. 1985). As its basic interest is the interaction of politics (the political institutions) and political processes (the political processes) to explain policies (outcomes), it is often used in policy analysis. The state is conceptualized as a complex set of institutions that interacts with other societal and political institutions such as labor organizations or interest groups. Historical institutionalism is based on the assumption that development is path dependent; meaning that institutional designs, once established, are in effect for a long time as they constrain the possibilities and options for change. Hence, even specific efforts to shape institutions are limited by these path dependencies. Political ambitions to change institutions are often not feasible as it is impossible to change the path. In this manner, powerful actors that benefit from certain institutions and hence have an interest in their persistence or change also play a role (Hall, Taylor 1996: 937f; Thelen and Steinmo 1992; Thelen 2002). Historical institutionalism combines actor specific and institutional factors. While actors are not as much constrained by institutions as in the sociological variant, their strategies, objectives, and norms still are shaped by the institutional setting. Institutions are only one set of factors influencing policy outcomes beside others like economic development or the spreading of political ideas.

Although these three schools refer to distinct meta theoretical approaches and their distinction is important, they also share basic assumptions and can be regarded as supplementary rather than exclusionary. Therefore, they can be combined. In this study, we will mainly combine elements of sociological and historical institutionalism in the basic understanding of institutions and institutional change. This does not mean the assumptions of RCI are rejected in total. They are partly integrated in historical institutionalism, also including power (and hence strategic behavior) as a factor in institutional change. Therefore, elements of RCI are used in order to understand and explain strategic and power seeking behavior of actors, albeit with their preferences not being fixed but shaped by the institutional context.

After this brief note on neo institutional approaches in general, the following sections discuss the basic definition of institution and present the conceptualization of institutional change and continuity that will guide our research and argument.

3.2 Institutions

The most basic and most referred definition of institutions was given by North (1990) as the „rules of the game“. It represents the least common denominator of what institutions are: They regulate social life by postulating rules and sanctioning violation. Sanctioning can work by formal mechanisms – sanctions in a narrow sense – or by informal ones such as social disapproval or the loss of reputation. The specific definitions disperse, mainly in how these rules are codified, how they become effective, and how much space for choice they leave. In the general understanding of institutions this study follows the broad definition used by most scholars of sociological institutionalism.

In this view, an institution is a social relation or behavior that “come[s] to be taken for granted” (DiMaggio, Powell 1991: 9), i.e. which can be anticipated. It involves not only rules and norms, but also the symbolic and cognitive systems underlying those norms and rules. The cognitive system is important to include as it creates a ‘perceptual frame’ which “determines how the member of the institutions interprets data from the environment” (Peters 2001: 103). Shared cognitions define which choice will make sense and which behavior is perceived as possible, which options are ‘seen’ by the actors: “Institutions influence behavior not simply by specifying what one should do but also by specifying what one can imagine oneself doing in a given context” (Hall, Taylor 1996: 948). When actors face choices, they orient at experiences in comparable situations, at standards of behavior transmitted by culture and history. They will look for an appropriate behavior, and “what is appropriate for a particular person in a particular situation is defined by political and social institutions and transmitted through socialization” (March, Olsen 1989: 23). Sociological institutionalists are therefore interested in “the ways in which institutions complicate and constitute the paths by which solutions are sought” (DiMaggio, Powell 1991: 11).

SI does not negate that actors can behave in a rational, strategic, and utility maximizing way. However, what is perceived as rational and as beneficial is a result of institutions and not stable and universal (as RCI assumes). Rather, the preferences, interests, and objectives of individuals are socially and culturally constituted. An institution simply defined as rule or norm can be violated in principle if one is ready to bear the costs (be they material or ideal by loss of reputation). The SI definition leaves fewer choices to the actors: Institutions become effective before the question of what is socially acceptable behavior emerges. The actor does not perceive other potential options. However, it has to be stressed that institutions are not determinant but still leave a certain range of choices – be it by a certain institutional corridor or by the option to look for appropriate strategies from other institutional logics available.

Historical institutionalism in principle also defines institutions rather broadly as “formal or informal procedures, routines, norms and conventions embedded in the organizational structure of the polity” (Hall, Taylor 1996: 938), as those “that shape how political actors define their interests and that structure their relations of power to other groups” (Thelen, Steinmo 1992: 2). In practice, however, scholars of this direction tend to narrow it down to organizations and rules and customs proclaimed by formal organizations. HI never refers to institutions in mono causalism but sees them accompanied by other factors in explanation. Factors such as the spreading of ideas, the economic situation, and aspects outside the domestic realm also play a role for policy outcomes. The concept of the *institutional corridor* illustrates the understanding of institutions as putting a bias on perceptions and objectives and excluding certain options, but still leaving space for choices made by actors.

In this sense, Scharpf (2000a: 770ff) stated that there are certainly also decisions of political actors that are reactions and strategies to certain incentives rather than directly determined by institutions. However, these decisions then are rational with respect to the institutional setting, as the actors' intentions and objectives are partly a result of institutions that impact the actors' perceptions and priorities.

3.2.1 *Formal and Informal Institutions*

In the previous chapters, the distinction between formal and informal institutions has already been referred to. Although this is a widespread distinction, some clarification is necessary, since a stringent theoretic conceptualization of informal institutions in comparative politics is still only in its beginning. Informal institutions are defined as "socially shared rules, usually unwritten, that are created, communicated, and enforced outside of officially sanctioned channels" (Helmke and Levitsky 2004: 727). Despite their non codification it is possible to identify and describe informal institutions on an analytical level as they possess distinct functional logics and identities as well as mechanisms of incentives and sanctions.

Helmke and Levitsky (2002: 5-7) classify three approaches of distinguishing formal and informal institutions in the current debate:

- (1) Formal institutions are state institutions or rules enforced by the state while informal institutions are established by society.
- (2) Formal rules are those enforced by a third party (in most cases by the state), while informal institutions are self enforcing.
- (3) Formal rules are written down and codified while informal rules are unwritten.

All those differentiations are problematic, however. The clear demarcation between formal and informal is essential for analytical purposes but in practice it is quite ambiguous. For example, formal rules can be interpreted and applied in different ways by administrative units so that they transform into differing informal rules. In the political system, formal institutions are codified by constitution and laws, while informal institutions are not fixed in formal documents but gain their relevance through the actual impact on structures and functions of the political process. Not all social interactions are informal institutions, however. They have to serve the basic elements of the definition of institution, which means they have to possess a certain minimal legitimacy and continuity and be distinguishable as structures (Lauth, Liebert 1999; Lauth 2000; Merkel, Croissant 2001; Helmke, Levitsky 2004). It is important to mention that the dividing line between formal and informal institutions is not one of 'traditional' and 'modern'. So called traditional institutions can be written down or codified in law. And modern rules, like the funding criteria of development agencies, can get the status of informal institutions.

In social anthropology, informal institutions have been a major research object. Francis Cleaver (2002) studied the role of local institutions in natural resource management. She suggests using the terms "bureaucratic institution" and "socially embedded institution" instead of formal and informal institution:

"Bureaucratic institutions are those formalised arrangements based on explicit organisational structures, contracts and legal rights, often introduced by governments or development agencies. Socially embedded institutions are those based on culture, social organisation and daily practice, commonly but erroneously referred to as 'informal'. (...) 'bureaucratic' institutions may be 'socially embedded', but are not inevitably so, while processes of bricolage may result in the bureaucratisation of 'traditional' cultural or social arrangements" (Cleaver 2002: 13f).

This definition does not add clarity to the entire issue, though. It adds a positive connotation to socially embedded institutions, although Cleaver does not conceal that they can be exclusionary as well. She herself admits that the basic difficulty – formal and informal institutions often not being easily distinguishable – remains. We will therefore continue to use the terms formal and informal institutions, while being aware of their overlap and integration in concrete arrangements.

In contrast to sociological and anthropological research, comparative politics for a long time neglected informal institutions and was occupied with formal institutions alone. Only recently it was recognized that a better knowledge on the role of informal institutions and their relation to the formal framework is crucial for an understanding of political realities (Lauth 1999; Lauth 2000; Helmke and Levitsky 2004; Köllner 2005). Informal institutions have a considerable impact on politics. Often they are perceived with a negative connotation as undermining formal democratic structures. This is however not the case. New institutionalism, in contrast to the ‘old’ institutionalism, no longer perceives informal institutions as deviancies of formal ones in a negative way but sees them as inherent to formal structures. All societies and all political systems know formal as well as informal rules. Ideally, they are complementary. Many defect democracies, however, are characterized by informal institutions undermining the formal ones. Therefore, the question of interest is not, whether informal institutions exist, but which specific type of informal institution, and how it impacts politics (Lauth 1999). The analysis of the relationship between formal and informal institutions and their dynamics is therefore important for an understanding of politics.

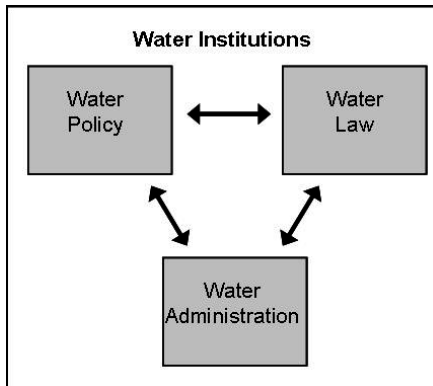
3.2.2 *Water Institutions and Institutional Environment*

After outlining the general conceptions of formal and informal institutions, the question of how exactly water institutions can be defined will be discussed next. For this study it is useful to distinguish between water institutions in a strict sense, and other political, societal, or cultural institutions that shape politics, economy and society and are therefore also relevant for water governance – the institutional environment.

The work of Saleth and Dinar (1999, 2004) on the institutional economics of water reform has been constitutive for the scientific discourse on water institutions so far and provides the commonly referred to definition of water institutions: They distinguish between water law, water policy, and water administration, which are however closely interdependent (see Figure 3). Water law refers to the legal status of water, water rights, conflict solution mechanisms, possible contradictions between laws, legal pluralism, and the existence or non-existence of administrative regulations for implementing the law. 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 and Dinar 2004: 101ff). It is necessary to make a short note on organizations to avoid a common confusion: We define organizations as a distinct subtype of institutions as they present an institution to other actors, but they may also emerge as (corporate) actor bound by external and internal institutional rules. On the one hand, organizations are actors constrained by institutions. On the other hand, they are institutions themselves, like the internal rule system of hierarchy etc. and the rules they present to other actors. A water agency, a water user association (WUA) – they can be analyzed as an actor. On the other hand, they are institutions as they represent, set and

enforce rules and values for water management. Another example is the Central Asian *mirab*, the local water master; though an individual actor it can be framed as an institution when abstracted from the concrete person that fulfills this role (see chapter 5.3 below).

Figure 3 : Water institutions



Source: Saleth, Dinar 1999: 9.

Although Saleth and Dinar acknowledge the significance of informal water institutions, they do not systematically include them into the analysis – also because of the inadequacy of economic approaches for the scrutinization of informal institutions (Saleth, Dinar 2004: 72). This can be considered a serious shortcoming, as informal institutions play an important role in water management. Since ancient times, water has been more than a mere resource in all cultures. In many cultures and religions, water has a spiritual status that defines certain rules for its usage. Frequently, the use of water is determined more by awareness patterns of the population rather than by sanctions imposed by formal rules. Especially in local water management, informal rules are often more powerful than formal ones. Water rights can be effective without being a written law but instead referring to other sources of legitimacy. Therefore, it is necessary to include such informal rules, arrangements, and traditions into the analysis in order to understand the change and continuity in water institutions. This does not mean that we cannot draw on the distinctions of Saleth and Dinar. Informal institutions can be grouped into these three blocks as well; they are an integral rather than a discrete part. Water law, water administration, and water policy, all consist of formal as well as informal rules.

Based on the conceptualization of institutions given above, water institutions are defined as formal and informal rules and norms – including their underlying cognitive systems as well as the organizational structures that set and enforce them – that regulate control of and access to water resources, hence their usage, distribution, and status. Consequently, reforming water institutions not only means changing formal rules or structures or informal arrangements. It also affects values, traditions, attitudes and symbolic meanings associated with water.

Concerning the water institutions' environment, a holistic view on society as a whole is indispensable: factors such as (political) culture, religion, the general legal framework, traditional and local institutions, intended or unintended, have an impact on water governance and water institutions. In its second World Water Development Report, the UNESCO point out that the institutional environment can even have more of an impact on water usage than water policy itself (UNESCO 2006: 49; see also Saleth, Dinar 1999: 11). Those factors can for exam

ple be gender relations: On the domestic level it is generally the girls and women walking many kilometers to fetch water from wells; at the same time they may be underrepresented or excluded from decision making bodies. Endemic corruption as a feature of informal politics influences decisions concerning water allocation or infrastructure projects in irrigation agriculture. Global market conditions lead to certain crop patterns affecting water use in agriculture. Also non institutional factors shape conditions for the performance of water institutions. For example, these can be strategies and priorities in other policy fields like agriculture, economy, ecology, or in countries with transboundary water resources foreign policy. It is necessary to include context factors into the analysis as they are part of water governance, though they might have an unintentional impact.

3.3 Institutional Change and Continuity

The analysis of water institutional reform is an analysis of institutional change. A central question therefore is whether and how institutions can be changed by political programs and actors. All approaches of new institutionalism have in common that more tools are provided to analyze and explain resistance to change than change itself. This has often been criticized. However, the basic problem reform policies commonly face is that they are often implemented, that change is impeded. The persistence of institutions, even under changing conditions and pressure from the political elite, is the puzzle to be explained. It is also important to note that formal institutions change differently from informal ones: Formal institutions can be designed and changed by entitled actors. In contrast, informal institutions emerge by social dynamics and do not possess a regulating or coordinating center (Lauth 2000: 24f). The relationship between formal institutional change and its impact on informal institutions has so far only received limited attention, and if so mostly by scholars of syncretism and legal pluralism (Helmke, Levitsky 2002: 28f).

For an analytical framing of these processes of change and continuity, this study refers to two explanatory models: First, the concept of *path dependency* developed by scholars of HI, which can explain why institutions persist. Second, the concept of *institutional bricolage*, which is close to SI approaches. It can explain how change and persistence occur together and are interwoven. The latter concept especially frames the interrelatedness of formal and informal institutions.

3.3.1.1 Path Dependency and Critical Junctures

As the name suggests, historical institutionalists stress the importance of the historical background in understanding the institutional setting that shapes the strategies and objectives of political actors. Historical institutionalism discusses the interrelation of past and future with the concepts of *critical junctures* and *path dependency*.

Path dependency explains the continuity of institutions and the persistence to change: A 'path' is the way institutions "structure a nation's response to new challenges" (Hall, Taylor 1996: 941). Historical experiences and policy legacies frame present actions: behavior or identities that have once proven to be successful and, have thus been established, will be used again to meet new challenges. The concepts of *policy legacies* and *state capacities* are most popular in framing these historical constraints. Legacies are, following Millar and Wolchik (1994: 1 2,

cited in Beissinger, Young 2002a: 21) understood as “an enduring intergenerational transfer from the past to the present”. Institutions still transmit the norms, values, capacities and routines they acquired in former times. Legacies are hence long term social phenomena and not only transitional features that might be overcome soon.

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 behavior rises. Changing the path becomes a less attractive option. Thelen (1999: 392-396) argues that path dependency becomes effective by feedback mechanisms, which can be 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: 392). Distributional effects refer to the power asymmetries that are reinforced by institutions. In this way, they marginalize other actors with respect to political processes that would have an interest in alternative institutional arrangements.

Hence, even with the political will of the elite, certain policy changes may not succeed due to path dependency and feedback effects:

“Specific organizations come and go, but emergent institutional forms will be ‘isomorphic’ with (i.e. compatible with, resembling, and similar in logic to) existing ones because political actors extract causal designations from the world around them and these cause-and-effect understandings inform their approaches to new problems (...). This means that even when policy makers set out to redesign institutions, they are constrained in what they can conceive of these embedded, cultural constraints” (Thelen 1999: 386).

These effects get reinforced, as reform policies in general are eager to establish new institutions while rarely giving attention to the deinstitutionalization of old institutions. The latter thus are not replaced but rather complemented by new ones (Lowndes 2005: 294).

Even more than those of the other two institutionalist schools in political science, concepts of HI concentrate on power relations and power asymmetries in order to analyze persistence or change of institutional patterns. Their genesis could also be described as the result of conflicts about the distribution of benefits in a wide sense between actors. The reason for the genesis of institutions is hence not only that they would perform a certain function but also that they serve certain interests. This has important implications for analyzing institutions and for questions on how to change them: The question is not only whether institutions are functional or beneficial in general, but also who benefits from them (Jones Luong 2002: 26). The attitude of actors whose benefits are constricted or abolished by the new system and the interplay of societal and political power groups have decisive effects on institutional change and might foster or prevent path changes. Likewise, Thelen points to the fact that the persistence of certain institutions despite changing institutional environments can be explained with political interests in their stability: “[t]he language of ‘lock in’ [in path dependency arguments] frequently obscures the fact that, because institutions are embedded in a context that is constantly changing, stability far from being automatic may be sustained politically” (Thelen 1999: 396). Hence, it must be stressed that institutional continuity is not something static, but a dynamic process of reproduction and adaptation (Streeck, Thelen 2005). This is a very important aspect as the context of transformation (which we face in the two case studies of this study) provides the potential of a critical juncture enabling a path change (see below) if it is not used, one needs to ask who might have an interest in keeping the status quo.

The just mentioned critical juncture is seen as an option for switching the path, for fundamental institutional change. Critical junctures are moments or periods when substantial change can take place, mostly when several incidents (political processes in different policy fields, economic crisis, military conflict) come together to make change possible. This point is rather weakly

theorized. Definitions usually refer to a situation with relaxed structural influences that leads first to more options for actors and second to a higher impact of their decisions (Capoccia, Kelemen 2006: 3-7; Thelen 1999: 390-392; Hall, Taylor 1996: 942). Capoccia and Kelemen (2006: 7) define critical junctures as “relatively short periods of time during which there is a substantially heightened probability that agents’ choices will affect the outcome of interest”. However, it is impossible to create a general hypothesis of why and how a juncture turns out to be a critical one, i.e. how a change in behavior becomes institutionalized. The question that needs to be addressed is then in our case: Do the new rules and organizations formally designed for new modes of water governance get institutionalized (hence effective) or are they undermined by informal institutions and by powerful actors interested in the persistence of old institutional arrangements?

3.3.1.2 Institutional Bricolage

While critical junctures are conceptualized as a temporary, external challenge for the institution in question, others argue that change can also come from within. Friedland and Alford for example conceptualize society as a “potentially contradictory interinstitutional system” (Friedland, Alford 1991: 240), in which institutions are interdependent but also contradictory, and which is hence “constituted through multiple institutional logics” (Friedland, Alford 1991: 243). These different logics can come into conflict: Some logics are appreciated for a certain institutions, but despised when added to another (e.g. unconditional loyalty is perceived as good in family, but bad in the political sphere). Hence, individual or collective actors can choose between different logics. Change occurs when one certain institutional logic is applied to another institution and transforms it. Streeck and Thelen (2005) describe such a gradual institutional transformation with their concept of *displacement*: different incoherent logics of institutions enable deviant behavior, as other institutional logics can be rediscovered and reactivated to legitimize it.

Institutions are therefore subject to constant manipulation by social actors who do not follow all norms and rules blindly but, according to the specific situation and circumstances, weigh them against each other (Lewellen 2003: 98). The constant dynamic of society and institutions hence provides options for actors to choose and change institutions. Tensions between institutions can culminate in a crisis which indicates a turning point in a certain political field and results in a new balance of power between the respective components (Lewellen 2003: 99f). This may be the case when a certain institutional logic possesses more legitimacy than another and is applied to other fields as well. Concerning the subject of water, those contradictions can occur within the water institutional structure as well as between water institutional structure and institutional environment (Saleth, Dinar 2005: 3f).

An approach to institutional change that stresses these constraining as well as enabling aspects of institutions and the gradual change from within is the concept of *institutional bricolage*. Claude Levi Strauss introduced the term *bricolage* to describe an intellectual activity characteristic for the “savage mind” in which pre-existing materials which are ready to hand are appropriated.¹⁰ The French verb *bricoler* is used “to emphasize a non presaged movement”¹¹ (Levi Strauss 1968: 29), although the choice is limited by the elements available. The individual ele

¹⁰ Mary Douglas (1987: 66f) made the point that bricolage as a way of institutional thinking can be found in every culture and stage of development and hence is not restricted to the so-called ‘primitive thought’.

¹¹ “um eine nicht vorgezeichnete Bewegung zu betonen” translation JS.

ments are not purely purposive but applicable for different purposes (Levi Strauss 1968: 29–36). Far from being a coherent body of literature, the idea has been conceptualized by several scholars of institutional change without explicit reference to each other.

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, puttering and using elements they already have. She underscores the aspects of multiple identities of the bricoleurs, of cross cultural borrowing, and of multi purpose institutions in institutional change. Bricoleurs patch partly unconsciously together elements of different institutional logics available to them leading to new institutional arrangements. As the institutions of a society may be contradictory, as explained above, they provide multiple logics to actors who can then choose the one appropriate for the present decision (Friedland, Alford 1991: 232). E.g., concerning 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 of equal importance (Cleaver 2002: 17).

Galvan (2004), in his research on local adaptation of imposed political and economic institutions in Senegal, 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: 2). Syncretism is more than the mere combination of different elements but instead the “ongoing, incremental, creative transformation of all elements” (Galvan 2004: 28). Syncretic institutions are qualitatively new elements. The mere combination of one modern component with one ‘traditional’ component while both remain unchanged would hence not meet the criteria of a syncretic institution. Galvan calls this “pseudo syncretic grafting” and sees it manifested in the policies of many authoritarian rulers that combine modern administrative principles with idealized versions of traditional informal rules and values in order to gain legitimacy (Galvan 2004: 28).

Cleaver and Galvan have in common that they both apply the concept to institutional changes at the local level and in societies that Levi Strauss probably would have attested a “savage mind”. Both hold a normative view on bricolage that, in their view, leads to positive results: socially embedded institutions (Cleaver) or cultural sustainable institutions (Galvan), respectively. In Cleaver’s understanding, bricolage is the opposite of decisions that form bureaucratic (formal) institutions; Galvan contrasts it to “pseudo syncretic grafting”.

Another version of the bricolage concept can be found in its application to macro social and economic transformation. Stark and Bruszt (1998) as well as Grabher and Stark (1997) criticized in their work the explanatory value of common approaches to post socialist transformation. They do not perceive the persistence of socialist and Soviet legacies as obstacles to reform, as neo liberal economists would, but as potential resources for the future. While not providing a clear definition of bricolage, they use the term in order 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, Bruszt 1998: 7). 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” (ibid.). Campbell (1997: 23ff) distinguishes technical and symbolic elements of institutions and hence between technical, symbolic and hybrid bricolage with the latter one combining the two first

ones. While technical bricolage follows the logic of instrumentality, symbolic bricolage follows the logic of appropriateness by framing new institutions with old symbols. Both types of bricolage and accordingly both logics are often combined. He also stresses the constraining as well as enabling effects of institutions leading to actors that are simultaneously objects (of institutions that limit the range of solutions) and subjects (that can creatively recombine and extend institutional elements).

I will use bricolage to describe a non teleological, partly purposeful and partly undesigned process of re combination and re interpretation of institutional elements from different logics that results in a qualitative new type of institution. However, the result does not have to be a more appropriate institution in a functionalist sense. Rather, it can be an institution that better serves the interests of certain actors. In this process, actors are constrained by institutions while they are at the same time actively involved in their reassembling and reinterpretation. Institutional bricolage offers an approach to 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 (which are then going to be institutionalized). It is not an alternative to the concept of critical junctures, but is rather complementary. After the challenge of an external juncture, the question of interest remains for whom beneficial elements persist and which elements change. Which actors can influence the persistence or substitution of institutional elements and why? Bricolage is hence also related to questions of power as stated by historical institutionalists. But it also stresses the ‘messiness’ of institutional change, rejecting the idea of completely conscious and rational ‘design’ of institutions.

3.4 Problem Statement

In chapter 2, an overview on the discourses and concepts of water and its governance was given. For research purposes, the water governance approach requires a broad analytical perspective on water. For practical purposes, the realization of good water governance requires water institutional reforms (WIR). The previous chapter outlined fundamental assumptions on institutions and institutional change that will guide the following analysis of WIR under a water governance perspective. Based on these considerations, this section will formulate the problem statement and general assumptions on institutional change.

A fundamental premise of the water governance discourse is that water scarcity is not considered only as a consequence of limited water availability but for a great extent as one of “bad” water governance. This will be taken into account by analyzing two countries rich in water resources that nevertheless face scarcity and distribution problems. It can therefore be excluded that problems arise due to physical shortage; the research can concentrate on institutional aspects.

Good water governance (GWG) is considered to be essential to addressing the global water crisis. It is seen as a precondition of sustainable and efficient water management that is responsive to the needs of different user groups and hence necessary to prevent conflicts.¹² Water institutional reforms aim to change the mode of regulation and introduce principles of

¹² It should be stressed that the good water governance norms as such are not the topic of this thesis. These principles are surely worth discussing and need a critical scrutinization. However, the focus of this study is on the political processes not on the policy goals. But the analysis of institutional reforms and efforts to achieve good water governance can also contribute to a reflection of the norms as such.

good water governance. They are the dependent variable to be explained. Thereby it is in the interest of this study to scrutinize how such reforms proceed in states that are not characterized by general good governance and democratic structures. Many developing countries that implement water institutional reforms can be gathered under the label of neopatrimonial regimes: while democratic institutions formally exist, they co exist with patrimonial informal institutions such as clientelism, corruption, and personalistic leadership.¹³ These might undermine the formal democratic ones. Can water institutional reforms (WIR) be effective (that means achieve good water governance) in such a neopatrimonial institutional context?

Before turning to this specific question (see later ch. 4.5), several general assumptions on institutional change that guide the analysis shall be presented here. Based on the presented considerations on institutions and institutional change, there might be three possible results: no institutional change (reform failure), complete institutional change (reform success), or a mixture of persisting elements and changes:

- When we expect path dependent factors to dominate and shape the strategies to meet new challenges in water governance, they lead to persistence of old water institutional patterns and hence to reform failure in both countries regardless of the current differences.
- When we expect that, following the break down of the Soviet Union, political, economic, and societal change has provided a critical juncture, then this would lead to a path change in water governance in Kyrgyzstan, which conducted economic and political reforms in the first years of independence, but not in Tajikistan, where these reforms are missing.
- When we expect that institutional change is a process of institutional bricolage, this would lead to the emergence of a water governance structure involving old and new institutional elements where variation between countries would be gradual. In Kyrgyzstan this would result in more new elements as there should be a broader range of options than in Tajikistan.

Referring to the concept of path dependency of historical institutionalism we would expect the first option as a result, arguing that historical experiences and policy legacies frame present actions: established patterns of behavior that have already proven to be successful once will be used again to meet new challenges. Powerful actors that benefit from old institutional arrangements prevent change. In our two case studies, we could expect policy legacies of the Soviet system to still be vital: As well as society in general, also water institutions in a narrower sense still transmit the norms, values, capacities, and routines acquired in Soviet times. Since the Soviet institutional change incorporated pre existing institutions, pre Soviet legacies are likely to play a role as well. Jones Luong (2002: 27f) analyses the transitional context of high uncertainty where some regulating institutions have lost their power while new patterns of behavior have not yet been institutionalized in combining RCI with HI. She distinguishes between the structural historical and the immediate strategic context. The latter is characterized by high uncertainty during the transition period: While Soviet institutional patterns still exist; they are not stable and cannot be anticipated by actors as mutual. New rules are established but challenged constantly. Roles are redefined. In this context, actors are likely to orient their strategies towards short term (and possibly sub optimal) gains than towards long term. However, these strategies are still shaped by the old institutions. While formal institutions may be not effective anymore, the cognitive systems that shape the way the actors perceive the new

¹³ For a detailed definition see chapter 4.1 below.

situation as well as informal institutions even gain importance due to the discontinuation of the formal ones.

However, we also could argue that the breakdown of the Soviet Union and the radical (formal) regime change have provided a critical juncture with the option for switching the path, for fundamental institutional change. In the cases of Kyrgyzstan and Tajikistan, both countries have experienced a radical change: the breakdown of the Soviet Union, accompanied by independence and economic as well as political transformation. Old political institutions have been (formally) abandoned and new institutions designed. As transformation affected the political, societal, and economic system of the countries in general, it was also an external shock to the water management as a centralized, state managed sector. Some formal organization and rules of water management stopped functioning. There was a need to redefine organizational structures and rules of water management. The disaster of the Aral Sea and the wider ecological consequences of Soviet water management made obvious the need to change the norms and values attached to water use. Both countries reacted with new water policies, new rules and organizations, as well as with awareness raising measures addressing the cognitive layer of water usage in order to address this challenge.

A third option would be that the outcome of reforms is neither a result of complete path dependency nor complete institutional change, but a rather complex re arrangement of old and new institutional elements that can be framed with the concept of institutional bricolage. As water is a resource with multiple usages and identities, it affects different institutional logics, such as that of religion, of community, of economy. Additionally, in the transformation phase still existing Soviet as well as newly introduced post Soviet rules can be expected to be available. In the process of designing new water institutions, the bricoleurs can patch together elements of different institutional logics available to them. It then depends on which and how many options are available to determine whether more old or more new elements are chosen.

To understand institutional change, the politics of water institutional reform must be scrutinized: How does neopatrimonialism exactly influence the political processes of policy formulation and implementation? This point is related to the already mentioned research gap existing on these political questions. Based on the assumption that policy outcomes are partly, but not only, the result of the institutional context and are also influenced by actors' interests and strategies, then politics can be expected to have an impact. The question of interest is for whom beneficial elements persist; which actors can influence which elements of institutions should persist and which should be replaced; and which other institutions in which way constrain or create options of actors. To grasp these processes and interrelations, different analytical perspectives are combined. These are presented in the next chapter.

4 Analytical framework

The last chapter provided the broad background and the problem statement of this study. This chapter elaborates the analytical framework developed to address the research questions. Friedland and Alford (1991: 250f) formulate a precise prerequisite for social theory: “An adequate social theory must work at three levels of analysis – individuals competing and negotiating, organizations in conflict and coordination, and institutions in contradiction and interdependency.” To meet this objective, I combine several analytical approaches as well as empirical methods to ensure that all three levels are covered by the analysis. Chapters 4.2–4.4 introduce into the three approaches used to analyze politics: policy analysis, implementation research, and political anthropology. Following, guiding assumptions that evolve from these analytical approaches are presented (ch. 4.5). But before turning to these approaches, the first section of this chapter will deal with the basic analytical category for analysis: neopatrimonialism.

4.1 Neopatrimonialism

The term neopatrimonialism is a conceptual enhancement of the Weberian ideal type of patrimonialism. He defines patrimonialism as a category of traditional authority (in opposition to rational legal authority) where rule is solely based on personal accountability to the sovereign without a clear demarcation of public and private and a considerable range of arbitrariness. In contrast to gerontocracy and patriarchalism – the two other ideal types of traditional authority – the patrimonial leader has personal administrative (and military) staff at his disposal (Weber 1976: 130–140). It is important to note that for Weber the concept of ‘authority’ not only refers to the legitimacy of power but also the way governance and mechanisms of bureaucracy are carried out (Médard 1982: 178). Neopatrimonialism is a further development of this concept, initially used to frame the African postcolonial states. It refers to political regimes where modern bureaucracy, formal democratic institutions and separation of powers coexist with patrimonial practices (Médard 1982; Erdmann 2001; Wimmer 2000; Erdmann, Engel 2006). Like patrimonialism, neopatrimonialism refers to an ideal type. However, no uncontested definition has evolved until today. Erdmann and Engel (2006) even criticize that it has developed into a catchall concept. Most scholars refer to clientelism, patron-client relations, personal rule, and corruption on the one hand and a legal-rational bureaucratic dimension on the other hand. There is however disagreement with regard to the weighting of these individual features. In addition, while some conceptualize neopatrimonial states as a hybrid regime type (e.g. Erdmann 2001), others categorize it as a special type of authoritarian rule (e.g. Ishiyama 2002). Following Wimmer (2000: 126), I define neopatrimonial regimes as characterized by formal democratic structures in combination with personalistic and autocratic leadership, clientelistic politics, and endemic corruption. The explicit inclusion of the formal democratic structures allows us to assess how these two dimensions (the rational-legal and the patrimonial) relate to

each other. Thereby, the relative significance of these different features for politics within neopatrimonialism can be evaluated.¹⁴

Personalistic and autocratic leadership is characterized by the right to rule ascribed to a person instead of to an office. The leader rests on the loyalty of a personal network as his power base rather than on an ideology. It leads to the undermining of formal political institutions by the interests of the President and his network. Ishiyama (2002: 43f) identifies personalism as the core value of contemporary neopatrimonial regimes.¹⁵

Clientelism or Patronage is defined as a long term system of perpetual and voluntary transactions (of material goods, services or political support) between unequal persons that serve their mutual benefit and are based on asymmetric power relations between a patron and a client.¹⁶ It is motivated by the respective social actors' unequal control over and access to material and immaterial resources and based on a personal relationship between them. Often the patron himself is a client of another patron, hence part of an extended patron client network, a patronage network. Clientelistic networks may refer to kinship or other forms of long established relations or construct them in order to increase legitimacy; it might however also exist without kin relations and should not be misinterpreted as a purely traditional phenomenon (Clapham 1982; Gellner 1977; Spittler 1977; Lauth 1999: 66-72). Political Patronage or Clientelism refer to a system where the connection between leaders and supporters is not based on shared ideology, objectives or interests, but on a long term personal relationship based on mutually beneficial transactions. Hence, political competition does not occur between groups with different economic or political ideologies but between clientelistic networks without significant differences with regard to their interests, ideologies or way of organization (Spittler 1977; Medard 1982; Lemarchand, Legg 1972). The consequences affect state bureaucracies (e.g. general precariousness of positions, oversized agencies, low level of commitment to formal rules) but also the general decision making which targets particularistic interests instead of general welfare (Wimmer 2000: 133-137).

Unlike clientelism, corruption does not provide certain networks with mutually beneficial exchanges but only provides individual benefits. In contrast to petty corruption (small scale corruption in administrations), grand corruption aims to influence policy decisions. Endemic corruption is defined as institutionalized corruption, i.e. corruption that is not sporadic and considered illegitimate but rather represents an in certain respects socially accepted form of transactions that show consolidated patterns (Lauth 1999: 73ff; Wimmer 2000: 137-146).

Though both Tajikistan and Kyrgyzstan are in a process of political and economic transformation, this study approaches and classifies them not primarily as transition states (and thus refrains from using transition theory for the analysis) but as neopatrimonial regimes. For several reasons, the transition approaches does not seem to be the adequate perspective to analyze the two countries. First, the teleological and normative orientation inherent in transition theory: Transition is conceptualized as a process from autocracy to democracy (and for the post socialist states also from state economy to market economy) (see e.g. O'Donnel/Schmitter 1986, Linz/Stepan 1996, Merkel 1999). In addition to epistemological

¹⁴ As neopatrimonialism is defined precisely by the combination of these features, they are interrelated. Therefore, in the analysis they are not measured individually. Instead, with regard to certain variables, their combined effect is taken into account. See ch. 5.5

¹⁵ It should be noted that Ishiyama categorizes neopatrimonial regimes as a sub-type of authoritarian regimes and not as a hybrid regime type that transcends the democracy-autocracy categorization as this study does.

¹⁶ Strictly speaking, patronage refers to a dyadic patron-client relationship and clientelism refers to a network. However, as the former is almost always part of a system, patronage and clientelism are difficult to separate in practice. In addition, in the literature, both terms are usually used synonymously. Therefore, I also use them interchangeably.

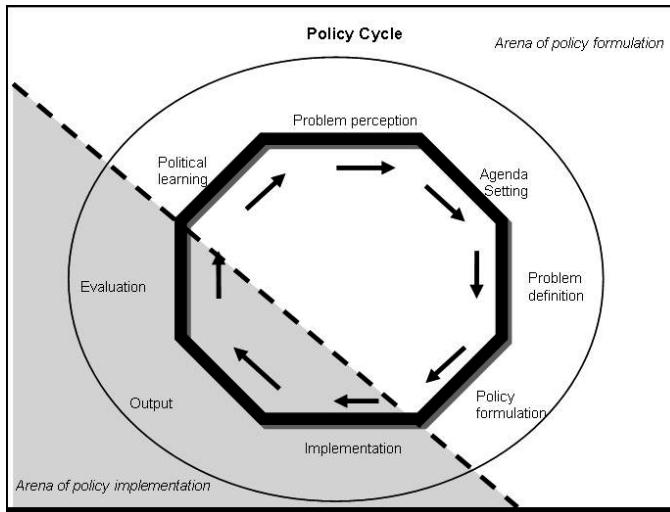
concerns, this contradicts the actual development in Kyrgyzstan and Tajikistan (and other Central Asian states). The phases of transformation – liberalization, democratization, consolidation – fall short of explaining the political development in Kyrgyzstan and Tajikistan (as well as in Central Asia in general), as both countries became more and more authoritarian after some steps towards liberalization and democratization in the early 1990s (see Table 8 and Table 9 below). Second, the methodological approaches of transition studies often focus on political elites – and by doing so provide very useful insights – while this study assumes that the meso level is equal or even more decisive and therefore focusses on this level of analysis. Finally, it is assumed that all of Central Asia as part of the Soviet ‘periphery’ has more in common with the post colonial states of Africa with regard to certain structural features than with transformation countries in Eastern Europe some of which are already members of the EU.¹⁷ Hence, it seems hence more reasonable comparisons and generalizations of the findings to draw with regard to other neopatrimonial, developing states and not for transformation states in a narrow sense.

Additionally, the chosen approach does not classify certain social and political phenomena merely as authoritarian relicts of the Soviet Union, nor of pre Soviet forms of governance, nor as a re-invention of those factors that temporarily prevent the transformation to democracy, but as structural characteristics of a distinct regime type. It is useful to grasp the historical dimension of the societal and political reality in the Central Asian successor states of the Soviet Union where the Soviet modernization policies have often only had rather superficial effects. Schlichte (2002, cited in Hensell 2004) even distinguishes “patrimonial socialism” as a distinctive type of state in the socialist peripheries where ‘traditional’ and ‘modern’ elements of power were combined to a hybrid regime type. As will become apparent in the following elaboration of the concept, neopatrimonialism in Kyrgyzstan and Tajikistan is composed of path dependent structural historical legacies as well as of new phenomena of the immediate context of transformation. Neopatrimonialism hence allows for a categorization of these regimes not only as post something (totalitarian, communist, socialist) but in their historical embeddedness, without neglecting the current circumstances and ongoing transformations.

4.2 Policy Analysis

Policy analysis in general aims to reveal why and how certain contents of policy are developed and how they are put into practice, how certain polities and politics influence policy. The main interest of policy analysis is to gain a differentiated understanding of the causes, dynamics and characteristics of a policy process and to acknowledge its complexity rather than to seek to reduce it. A basic model of policy analysis is the policy cycle (see Figure 4).

¹⁷ This is not to say that the Central Asian Soviet Republics can be regarded as colonies. But it appears fruitful to point out certain structural features such as their status as low industrialized resource provider with strong economic dependencies, a “combination of autocratic state practice with the ideologies of high modernism that animated both Soviet communism and European colonial projects in Africa” (Beissinger, Young 2002a: 20), and a postcolonial/post-Soviet period characterized by increasing poverty, deterioration of physical and economic infrastructure, informalization of the economy (increase of subsistence and barter trade), dysfunctional institutions, limited state capacities, informal regulative system (Beissinger, Young 2002: 4f). For a critique on the transitology approach to Central Asia or post-communist countries in general see Berg 2004: 49; Kubicek 2000: 300-302; Hensell 2004: 12; Geiss 2006: 23-25.

Figure 4: The policy cycle

Source: adopted and slightly adapted from Faust, Lauth 2001: 305 and Jann, Wegrich 2003: 82.

The policy cycle has been criticized for representing a rationalist and technocratic view of the policy process as ‘policy making’. However, it can serve as a heuristic framework of analysis when keeping in mind that reality is more complex (Schubert 1991). I divided the policy cycle into the arena of policy formulation, i.e. political decision making, and the arena of policy implementation. These two arenas overlap in practice, especially as implementation often also involves decision making (see subsequent chapter). However, for analytical clarity it is useful to make this distinction. Based on the critique of the technocratic, instrumentalist character and positivist fundament of early policy analysis, approaches of post positivist policy analysis acknowledge the interrelation between (political) power and (scientific) knowledge and therefore also critically reflect upon the role policy analysis itself plays in a democracy. This was connected with the rejection of the assumption that only one right solution (truth) suitable for solving an identified societal problem existed and could be discovered with scientific expertise. Rather, increasingly wicked problems with many possible or no solution to satisfy all parties involved have to be addressed. Policy analysis therefore has to include questions of power and participation that start with defining problems. If there is no single truth that can be discovered with scientific research and then disclosed to politicians, truth rather represents a consensus in a discourse. The task of policy analysis then is to reveal who dominates this discourse and succeeds in getting his truth accepted (Heritier 1993a; de Leon 1993; Fischer 1993).

Traditionally, policy analysis focuses on domestic politics, while foreign policy is considered to be the subject of international relations (IR). Early policy analysis tended to search for independent variables only in the internal logic of a political system. Several IR approaches have questioned this dichotomy for a long time.¹⁸ In policy analysis, the impact of international

¹⁸ See e.g. Putnam 1988. This argument was also made by scholars in the field of international water relations, who found that they could not analyze foreign water policy without linking it to domestic politics. See Kalpackian 2003, Jägerskog 2002, Weinthal 1998.

influence was discussed as well (*Galton's problem*) (Przeworski, Teune 1970: 47-47; Jahn 2003). International factors have played a role in explaining certain policy decisions and/or outcomes not only due to globalization. This is especially the case in countries that rely on foreign assistance, as both cases studies in this research do. Additionally, water is a transboundary resource in the case studies chosen as well as in many other places in the world. All main rivers in both of the countries under research are transboundary. As both countries are located in the upper reaches, their decisions and actions in the water sector naturally affect the downstream countries. While domestic politics will therefore always affect the international relations of these countries, foreign policy priorities also influence domestic policies in the water sector. Therefore, the impacts of international actors and also of regional water politics have to be included in the analysis.

According to the premises of new institutionalism, institutionalist policy analysis acts on the assumption that orientations and actions of political actors are shaped by institutions, be they formal or informal. It regards purposive rational behavior only as one orientation of actors in addition to others such as routines, values, and ideas (Heritier 1993a; Scharpf 2000: 73ff). Its interest is especially

“of how much relevance the different forms of participation and design of the decision making process, which are shaped by institutions and other influencing factors, are for the decision making and which conditions are influencing its implementation and effects in which way.” (Faust, Lauth 2001: 300-301, translation JS)

Scharpf (2000: 32-34; 2000a: 762-764) distinguishes four dimensions of institutionalist policy analysis. This distinction is visualized in the following matrix:

Figure 5: Institutional perspective and policy perspective

Intersections of institutional and policy perspectives			
	Institutional Perspective		
	genetic	consequential	
Policy Perspective	problem oriented	1	2
	interaction oriented	3	4

Source: Scharpf 2000a: 763.

From a policy perspective, research can be mainly interested in the analysis of the specific problem (problem oriented) or of the interaction between the actors (interaction oriented). From an institutional perspective, the research can aim to analyze the emergence and transformation of institutions (genetic) or their implications and consequences for actors (consequential). This study can be classified as type three; it focuses on the analysis of institutional change (or persistence). However, it also takes on the perspective of type four, as the question to what extent the interactions of political actors are results of institutional constraints is taken into account as well (Scharpf 2000: 84-94; 2000a: 765f).

The policy cycle as a heuristic model is not incompatible with neo institutionalist approaches. The analytical starting point of a political process is the problem perception (see Figure 4). The usage of the term problem perception instead of simply problem points to the subjective character of a political problem: It is a social construct. A problem is not an objective fact; it is the perceived difference between a norm or ideal and an empirically observed situation. Both, the ideal as well as the observation are social constructs influenced by the values and perspectives of the actors that are a consequence of institutions (Fischer 1993: 457f).

In addition, agenda setting does not arise from an 'objective' urgency of a perceived problem. Rather, policy studies have shown that it follows from other factors like an applicable problem definition, interests and capacities of actors, political majorities, trends, or windows of opportunity. As a multitude of actors participates in the development of policies, their respective motivations, interests, and stakes influence the outcome. Agenda setting refers to the ability of actors to call attention to problems and their possible solutions. This in turn influences the direction of the future policy process (Kingdon 1984). In order to become a relevant topic the constructed problem has to convince influential actors or has to be constructed by them themselves. There are two principal modes of agenda setting: inside initiation and outside initiation. While the latter refers to the fact that the political administrative system is approached with perceived problems from the outside (e.g. mass media, experts, population), inside initiation refers to interest groups setting their problems on the agenda without public attention (see Jann, Wegrich 2003: 84f).

As should have become apparent by now, problem perception and agenda setting are not only the starting point of a political process, they are already political processes themselves which in turn are affected by the preferences, values, and capacities of the relevant actors (Jann, Wegrich 2003: 84f, 89). Therefore, one objective of this study is to uncover the latent reasons why a certain problem perception evolves and why a placement on the political agenda succeeds.

But in order to analyze problem perceptions it is necessary to look at the whole policy process: Is the problem perception of the main actors contested by others? How does it find its expression in policy formulation and implementation? Implementation means the adoption of measures and rules that should facilitate conformist behavior. It "encompasses those actions by public or private individuals (or groups) that are directed at the achievements of objectives set forth in prior policy decisions" (Van Meter, Van Horn 1975: 447f, cited in Najam 1995: 7). The arena of policy implementation also comprises compliance: Compliance refers to the actual behavior of conforming to a prescription¹⁹. For instance, the farmer has to pay the water fees, hence has to comply, while the water administration has to collect the fee and has to employ sanctions in case of non payment, hence, it has to implement the policies. Therefore, compliance can be considered to be the result of effective implementation. In order to study the implementation process, a specific sub school of policy analysis developed. A detailed discussion of the implementation research approach will follow in the subsequent chapter.

At the end of this section, a limitation to the applicability of policy analysis has to be mentioned: Policy analysis is conceptualized as an analysis in a democratic context. In particular, analysis is only possible when the processes of decision making are transparent, at least to a certain degree. It is applied mainly to Western liberal democracies. When analyzing policy in authoritarian regimes or defective democracies, policy analysis reaches its limits. These limita

¹⁹ The fundamental definition given by Oran Young (1979) is: "Compliance can be said to occur when the actual behavior of a given subject conforms to prescribed behavior, and non-compliance or violation occurs when actual behavior departs significantly from prescribed behavior" (cited in Simmons 1998: 77).

tions were overcome by complementing policy analysis with other analytical approaches described in the following chapters.

4.3 Implementation Research

Implementation research is devoted to the analysis of how political programs are implemented, guided by the basic interest “Why did it happen?” (Dolbeare 1974, cited in Najam 1995: 7). Implementation research, however, is not only a tool to analyze the arena of policy implementation. It significantly influenced policy analysis in general. As mentioned above, policy analysis was occupied with models of the political process as ‘policy making’ that follows clear and rational steps for a long time. Primarily the inputs from the analytical and theoretical approaches in implementation research led to a reconceptualization of the initially technocratic models (Mayntz 1980, 1980a; Heritier 1993).

The main objective of implementation research is to gain a differentiated understanding of the specific features and dynamics of political processes rather than to find an explanation in the sense of causal relations between selected parameters. This was a consequence of the observed discrepancy between formal policy rules and actual behavior. The insights of implementation research broke with the ideal of a rational and apolitical bureaucracy as a neutral agency devoted solely to the exact implementation of political decisions. Rather it stressed that it is “far more than a mechanical translation of goals into routine procedures; it involves fundamental questions about conflict, decision making, and ‘who gets what’ in a society” (Grindle 1980: 3). Implementation is hence no longer understood as a technocratic management process in which a Weberian ideal type of bureaucracy implements political decisions, but as a political process in itself that is characterized by interests, power relations, incentives and dependencies of the actors involved. The implementation arena can be important for those who want to impede reforms but did not have access to the decision making process. Hence, implementation research provides the opportunity to analyze policy not only top down but also bottom up. From a top down perspective, implementation differing from the policy decision will be regarded as problem. From a bottom up perspective it might be analyzed as an adaptation to local needs or constraints or even as policy making from below when the top level does not respond to the problems perceived by the target group. The actors in the implementation process are therefore not only implementers but also policy makers: Their views, opinions, and values determine the ultimate output of a policy, therefore “micro level understanding of policy implementation could narrow the gap between policy as theoretical text and policy as practice” (Smit 2003 [2]). Bowe et al. (1992: 22, cited in Smit 2003 [16]) also stress this important point:

„Practitioners do not confront policy texts as naive readers; they come from histories, with experience, with values and purposes of their own, they have vested interests in the meaning of policy. Policies will be interpreted differently as the histories, experiences, values, purposes and interests which make up the arena differ.”

This is even more often the case in non or partly democratic and developing countries, as their implementation processes are usually much more contested than the decision making processes due to the latter’s inaccessibility for most parts of the population. Hence, a considerable part of participation occurs at the local level (Grindle 1980:15 18). Therefore, Grindle (1980: 5 6) defines implementation as “an ongoing process of decision making by a variety of actors, the ultimate outcome of which is determined by the content of the program being

pursued and by the interaction of the decision makers within a given politico administrative context”.

The distinction between policy formulation and implementation is hence difficult to maintain in practice and is mainly used for analytical purposes. Planning, decision, and implementation of political programs are embedded in the political, administrative and societal context of the respective country: “Only the exact knowledge of the institutional landscape and the linked policies allows saying, whether, in the light of the given structures and policy assets, a new measure will have a chance for success.” (Heritier 1993a: 13, translation JS)

The insights are significant not only for the analysis of implementation, but also for decision making. Politics as a whole cannot be detached from its societal context. While this seems obvious, these factors have long been neglected by policy analysis.

There is no coherent theory of implementation despite efforts to develop theoretical and analytical approaches. Najam (1995) distinguishes five variables that are considered relevant for the failure or success of reforms in most of the literature, albeit the importance assigned to the respective variables varies. These variables also influence each other. He calls them the “5 C Protocol”:

- *Content*: the objectives of a policy, the causal theory attached to the problem and the methods of its solution;
- *Context*: the institutional corridor for the implementation of the reform, the main actors, interests, power relations, institutional setting;
- *Commitment*: will and motivation of the involved actors on all levels;
- *Capacity*: mostly understood in a narrow sense as administrative resources;
- *Clients and Coalitions*: the target groups as well as interest groups and their characteristics.

In both case studies, *content* and *capacities* are similar. Content factors involve the extent of change aimed for, the type of benefits (collective divisible; short term long term), the number of goals and actors targeted at, the sites and actors of implementation (Grindle 1980: 8 11; Cleaves 1980: 286 288). It is obvious that policies aiming at a marginal change with a clear short term benefit are easier to reach than those which include multi goal objectives, involve various target groups, comprehensive changes, and only long term benefits. The content factors of good water governance belong to the latter categories for the most part and are not easy to reach (even in highly developed, democratic regimes). The capacities in both countries are weak. The clients are also the same but we have to determine whether they form similar coalitions and whether they have other characteristics in common or not. Hence, for this analysis, the focus will be on *context*, *commitment* as well as *clients and coalitions*. Recurring back to the ideas of neo institutional policy analysis, we consider that *commitment* and the characteristics of *clients and coalitions* can be explained by institutional *context*.²⁰ It shapes the preferences and options of actors to a considerable degree. Hence, the *context* evolves as the key variable in the analysis of the implementation process. Context is not a catchall phrase for all societal phenomena but is restricted to those institutional arrangements that influence the implementation in the field under consideration, the *institutional corridor* the implementation process has to go through.

As with policy analysis, implementation research was developed primarily in Western countries. Research carried out in developing countries did not receive much attention in the

²⁰ In addition, content is dependent on context, as it is ultimately the context against which a policy has to be implemented and this is what determines whether content is critical or not.

Western discourse. Still, there have been efforts to adapt the concepts to developing countries' contexts. The respective approaches stress the significance of institutional factors and the so called *meso level* (Mehta et al. 1999; Wimmer, de Soysa, Wagner 2003; Najam 1995; Grindle 1980a). The meso level is the level of the lower administration that is responsible for the implementation of policy decisions; it is the intermediate institution between the political elite and the target group. The social actors at the meso level, the so called "street level bureaucrats" (Lipsky) or "administrators as implementers" (Grindle) are considered to be as important for the policy process as the top level: "The institutional set up responsible for implementation may thus be equally important for successful reform as the more visible power politics" (Wimmer, de Soysa, Wagner 2003: 9). Its neglect by policy reform activities is considered responsible for their failure. This is also acknowledged in research on water reform: „Among the different levels of an administrative system, the so called *meso level* is of special importance in ensuring the implementation of formal regulations, for it is at this level that formal and informal institutions meet“ (van Edig, Engel, Laube 2002: 31).

This contradicts the findings of Saleth and Dinar (1999:31f) that policies are more important for water institution performance than the status of the water law and water administration. However, according to the insights of Implementation Research, we can expect the meso level of the water administration to be of crucial importance.

4.4 Political Anthropology

As noted, policy analysis as well as implementation research were originally developed in and for Western societies. A topic of continuous scientific debate in comparative policy analysis has been the applicability of its concepts to developing or transformation countries, and in general to differing cultural contexts. Prominent discussions and approaches have been carried out regarding the question of the application of existing definitions to new cases ('travelling problem') and of adding ambiguous cases to a certain category resulting in fuzziness ('conceptual stretching') (Sartori 1970).

From its inception, political anthropology as a sub discipline of social anthropology was devoted to the study of non Western societies and therefore offers a perspective that can prevent a biased analysis of policy. Political anthropology is neither a coherent theory nor a distinct analytical approach like policy analysis or implementation research. Rather, it is a different perspective on politics and it is therefore included in this analytic framework. Many issues that became prominent in political science later have already long been objects of research in political anthropology, especially the role of culture, kinship, clientelism, and the co existence of modern bureaucracies with traditional systems of power. One of the basic allegations against political anthropology – its lack of distinction between the political and other societal subsystems – is actually a strong virtue: It challenges the construct of politics as an autonomous field. The deficiency of this construct is especially relevant in societies like the ones studied in this thesis, but also in Western societies. Political anthropology does not separate politics from other societal systems but rather analyzes how power and authority is also represented and manifested in other institutions like kinship or religion. Politics is therefore not only shaped by the political 'rules of the game' but also by other – possibly conflicting – commitments and institutional logics (Gledhill 2000: 12, 20f, 135; Lewellen 2003: xi). Those institutions can even be more powerful manifestations of politics than formal political institutions. Political anthropology therefore reflects the simultaneous existence of different political spheres and provides

a wider definition of power. Similar to implementation theory, which does not regard deviant implementations as a form of non compliance to reforms but as a bottom up policy making process, political anthropology re conceptualizes power and also detects it in niches of autonomy, disobedience and informal co option of formal institutions by the local population (Lewellen 2003: 105, 127).

Development of political anthropology roughly reflects the general trends in social sciences. After structural functionalistic approaches, process theory and action theory evolved as main schools of thought. While process theory focuses on the processes in generals and on the historical context of societies in particular, action theory focuses on the strategies and behavior of actors interested in power under the condition of a certain political setting (Lewellen 2003: 85). When analyzing historical and institutional change, political anthropology also followed different argumentative methods, some more functionalist, some game theorist, reflecting the different paradigms in the social sciences. Already in the 1960s, Victor Turner analyzed historical change by individual “social dramas” that disclosed how individual political actors manipulate existing norms in accordance with their strategies. While paying considerable attention to institutions, this approach also showed that norms are “neither consistent nor fully coherent” (Gledhill 2000: 132) and therefore allow for different behavioral options. The seminal definition of politics by anthropological action theory was given by Swartz, Turner and Tuden (1966): The study of politics “is the study of the processes involved in determining and implementing public goals and in the differential achievement and use of power by members of the group concerned with these goals.” (cited after Lewellen 2003: 85)

Such an understanding is conducive for this study as it reflects a comprehensive view of the political process of water reforms in the two countries under research. As these are characterized by a strong role of informal institutions and a neopatrimonial political system, it is useful to include the perspective of political anthropology in the analytical framework. But this is not the only reason for including political anthropology in this research. Its methods are a major contribution: ethnographic fieldwork, participant observation, and ‘thick description’ enable the researcher “to elicit insider perspectives and meanings” (Schatz 2007: 2). The usage of these and other methods in this study is described below in chapter 5.2.

4.5 Research Questions and Guiding Assumptions

Many of the countries that face water crises and problems with access to freshwater are developing countries. In these countries, water institutional reforms in order to achieve good water governance are often implemented and demanded by donor organizations. More often than not, these are countries that fall short of meeting general good governance norms. Many of them can rather be labeled neopatrimonial regimes: Besides formal bureaucracy and democratic institutions, patrimonial informal institutions (clientelism, corruption, personalistic leadership) exist and exert an influence. But can water institutional reforms be effective (i.e. achieve the norms of good water governance) in such a neopatrimonial institutional context? Can they build on or perhaps even strengthen the existing democratic structures or are they undermined by patrimonial informal institutions? In order to address this question, the study compares two states categorized as neopatrimonial. Of these, Kyrgyzstan has more democratic elements while Tajikistan has more authoritarian and fragile ones. Do these different characteristics make a difference or is the shared patrimonial context decisive?

In order to address this problem, this chapter outlined three analytical approaches that are combined in order to reach a comprehensive understanding. These approaches indicate pre assumptions on what influences politics, which I will explicate in this last subchapter.

Institutionalist policy analysis, and especially the interaction oriented approach by Scharpf, stresses the role institutions play in structuring the preferences and strategies of actors in decision making. While the political process is characterized by the strategic behavior of actors, their intentions are shaped by institutions. Hence, the assumption is that the behavior of actors and thus the policy outcomes are shaped by the institutions of decision making.

Policy analysis also points to the internal discrepancies that might have negative impacts on the overall policy process. Therefore, the coherence between water law, policy, and administration in the reforms is considered to be important in order to avoid negative impacts of endogenous linkages between the water institutions themselves. As implementation research stresses the importance of the meso level of administration, it has particularly taken the water administration and its inter linkage with the overall water institutional performance into account.

In addition to this aspect, implementation research also stresses the importance of the context. Agriculture sets the concrete socio economic context of water institutional reforms. Irrigated agriculture consumes most of the water resources world wide and hence it is the sector that is mostly affected by WIR. Consequently, it is assumed that the institutional conditions of the agricultural sector are important for the feasibility of WIR.

Finally, the participatory and bottom up perspective of political anthropology regards politics not as a special sub system of society, but as manifoldly interwoven with culture, kinship, informal social institutions, traditional mechanisms of power, etc. Especially concerning the local level, the evolving assumption is that water governance is narrowly interwoven with other local institutions and can only be grasped when their complex interrelationship is analyzed.

From these assumptions, four concrete variables have to be analyzed: the institutions of decision making, the institutional conditions of the agricultural sector, the institutions of local governance, and the water institutional linkages. The characteristics of these variables with regard to the two case studies will be described in the following chapter.

5 Comparative Research Design

Before explaining the research design and describing the context and explanatory variables, it is necessary to explain why these two countries – Kyrgyzstan and Tajikistan – were chosen for research. The countries’ importance for water supply in Central Asia was one criterion for their selection: All major transboundary rivers of the region have their origin in these two mountain states: Amu Darya (with its main tributaries Pjandzh, Vaksh, Kafirnigan) and Zeravshan in Tajikistan; Syr Darya (with its main tributary Naryn), Chuy, Talas, and Sary Dzhas in Kyrgyzstan (see Figure 6). More than 70% of all water resources in the Aral Sea Basin, which covers most of Central Asia,²¹ are formed in these two states (SPECA 2004: 27).

Figure 6: Transboundary Rivers in Central Asia



Source: Institute of Geography, University of Giessen, Germany

Therefore, political decisions affecting water usage patterns there have an impact on the downstream states, and thus on the stability of the whole region. However, this importance is however not reflected in the current state of research on water in Central Asia, which tends to focus on either interstate or local water management issues. This research gap on national water policies in Central Asia shall be addressed in this thesis. A basic aim of this study is to gain a well founded understanding of water governance in Kyrgyzstan and Tajikistan.

The second objective is to gain insights into the politics of water institutional reform and its prospects for achieving good water governance which may be applied to other cases. As was outlined earlier, the basic research question is which constraints and chances water institu

²¹ When speaking of Central Asia, I refer to the five former Soviet Republics of Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan. In hydrological and cultural respect, also Northern Afghanistan and the Autonomous Region of Xinjiang (People’s Republic of China) can be included (see Figure 6).

tional reforms face in neopatrimonial settings. Therefore, a comparative research design was chosen while the two countries serve as case studies. A small n comparison of two countries does not possess explanatory character for general, grand theories. But a structured, focused comparison allows for bounded generalizations and the heuristic development of “rich, differentiated, (...) policy relevant theory” (George 1979: 59) that may then be tested with other cases. The following chapters explain the comparative research design and the case selection (5.1) and the methods of empirical research (5.2). Then, chapter 5.3 will give an overview on the historical development of water governance in Central Asia as background of the dependent variable. Subsequently, the controlled variables (5.4), and the explanatory variables (5.5) are described.

5.1 Method of Comparison and Case Selection

In the chapter on the water discourse it was mentioned that it is important to take on a hydrographic perspective instead of a purely administrative one when addressing water problems. Current approaches of Integrated Water Resources Management (IWRM) and Participatory Irrigation Management (PIM) also highlight this hydrographic principle. In their implementation, the actor ‘nation state’ is supplemented or even replaced by private, non governmental, inter and transnational actors. Consequently, it could be argued that research on water governance should also orient at hydrological basins as units of analysis. However, choosing two nation states for a comparative study on water governance is meaningful for the following reasons:

First, ideas and concepts like IWRM or PIM are ideal types, and their applicability might be questioned (see e.g. Biswas 2004). They enjoy high popularity at international conferences. But ultimately the national governments decide whether to coordinate their water policy basin wide, whether to decentralize decision making power, etc. The state as such or at least those states that do not belong to the powerful ones may not be a major political player in agenda setting in international water discourse, but they may act as veto players when it comes to the realization of international norms and academic concepts on the national and local level. Second, the Water Governance concept points out the importance of the general political framework (see chapter 2.1.2). This still is provided by the nation state, by the specific interplay of formal and informal institutions that constrain and enable reform policies in a given country.

This study employs one of the classical methods in comparative policy analysis, a focused comparison using the Most Similar Cases Design (MSCD), based on J.S. Mill’s method of difference (Mill [1888] 2001, which is presented in Table 1.

Table 1: Most Similar Cases Design (MSCD)

	Country 1	Country 2	Country 3
Common Features (context variables)	A B C	A B C	A B C
Key explanatory factor(s) (independent variable)	X	X	not X
Outcome to be explained (dependent variable)	Y	Y	not Y

Source: Landman (2000): 28, own amendments.

With this method of small n comparisons, the respective countries are selected based on a number of features they have in common so that the differences that explain various political outcomes can be highlighted. In the example presented in Table 1, A C are variables that both countries have in common. Therefore, the effect of these variables can be considered to be controlled. It is obvious that e.g. factor B cannot be responsible for outcome Y, as it also exists in country 3 that does not have outcome Y. The value of the independent variable X varies in the cases so that its absence or existence explains the outcome. In practice, X may not be completely absent in one case, rather its degree may vary.

The advantage of a small n approach is that it allows for restricted inferences and heuristic theory development through a focused and structured comparison while at the same time allowing the researcher to detect case specific details and to include historical explanation and process tracing as it builds on in depth, idiosyncratic case studies. By using the MSCD approach, the central weakness of small n comparisons, namely many variables and few cases, can be minimized as many variables are controlled for (*ceteris paribus* condition). This means that they are constant in both countries. However, cases in reality are never entirely similar. Therefore, process tracing is used as a way of within case comparison in order to identify causal relations. In contrast to comparisons of many countries that use quantitative analysis, studies with a small number of cases are related to field research and qualitative methods of analysis. The aim is to gain a deeper understanding of processes instead of relating variables to one another (Lijphart 1971; Hague et al. 1998: 272 287; Landman 2000: 27 32; George, Bennett 2004: 151 179, 205 232).

Such a research design can be achieved when choosing to compare countries located in a single geographic region (area approach): As it can be assumed that they share similar historic and cultural legacies, geographic framework conditions and developments, it is possible to control numerous factors that may potentially influence the dependent variable. This approach is chosen with the comparison of Kyrgyzstan and Tajikistan. As the two countries are located in one area, they share a cultural historical background with specific features of water management practices and political legacies as well as the recent past as part of the Soviet Union that transformed (or tried to transform) society, introduced new, crucial institutions, and shaped the attitudes and behavior of the actors. Concerning geographic conditions, there are many similarities. Most importantly, both cases are upstream countries with abundant water resources. This excludes first order scarcity. Instead, they are examples of the other types of water scarcity mentioned above (see chapter 2.1.1). This distinguishes them from their neighbors Uzbekistan, Kazakhstan, and Turkmenistan. While a comparison with these countries would also fulfill the conditions of an area approach as they share many cultural, historical and political features and water management institutions, there are three important differences: First, these three countries are downstream and face physical water shortages; second, they rely on outside water sources; and third, they have considerable amounts of other resources at their disposal, especially oil and gas. As these factors can be assumed to have an impact on water politics, it was decided to restrict the research to Kyrgyzstan and Tajikistan.

The two countries were selected with regards to the independent variable – the different peculiarities of the neopatrimonial regime. A selection based on the dependent variable is first not advisable as it may cause a selection bias (King, Keohane, Verba 1994: 128 139). Second the prevalence of the dependent variable – formulation and implementation of water institutional reform – was not clear at the outset of the research as no comprehensive evaluation of water governance and institutional reform in both countries existed so far. It was expected that the outcome would be different due to the differing degree of the independent variable.

The dependent variable – water institutional reform – was already outlined in general in chapter 2.2. Its peculiarities in the two case studies will be described in detail in the respective case study chapters (6.3 and 7.3). This chapter will concentrate on the controlled context variables and the independent variables. The independent variable – the neopatrimonial regime – is not entirely absent in one case and present in the other but there are complex gradual variations in the parameter value. Therefore, not only do we have to explain the differences between the countries under research but also the similarities shared by the two countries. The independent variable set consists of four variables. In addition, an interfering variable was identified. These variables will be described in detail after the following chapter on the methodology of empirical research and analysis.

5.2 Methodology of Empirical Research and Analysis

This study applies hypotheses deduced from theory as well as from an inductive approach by interpreting empirical material. The research design is roughly based on, albeit not strictly following, the cyclic research process of Grounded Theory (Strauss, Corbin 1996). Phases of theory development and those of empirical research interchanged, which allowed a feedback and an adaptation of the heuristic models. The assumptions and the theoretical approach therefore could be redefined to match the empirical results. This allowed openness for the specific new characteristics without going into the field too unstructured. The field research was split in four stays of several weeks with periods between four months and one year in between. During the time between the field periods, a preliminary analysis of the material and a refinement of the research perspective were carried out. This cyclic research process also allowed to apply of the gained knowledge in the subsequent interviews which resulted in a process of theoretical sampling. Total field research time was six months: two months in autumn 2003, six weeks in autumn 2004, one month in spring 2005, and six weeks in autumn 2005 (see Table 2).

Table 2: Field research periods

Research period	Sept-Oct 2003	Aug-Oct 2004	May 2005	Sept-Oct 2005
Research places	Kyrgyzstan: Bishkek, Osh Tajikistan: Dushanbe	Kyrgyzstan: Bishkek, Osh, Issyk-Kul Tajikistan: Dushanbe, Aini, Khudjand	Kyrgyzstan: Bishkek, Sokuluk, Alamedin	Tajikistan: Dushanbe, Aini, Farkhor, Kudjand
Research objectives	Initial institutional mapping; Expert interviews	Expert interviews; local field visits	Local case study; local field visits	Local case study and local field visits; expert interviews

Source: own compilation.

The underlying premise of this thesis is that water scarcity is not only a physical or naturally given situation and problem, but in many cases it is socially constructed. Hence, the research does not focus on the natural factors of the water regime, but its institutional setting which has an impact on the perception of reality. It is aimed at understanding (*Verstehen*) rather than explaining (*Erklären*) the cognitions, perceptions, and interpretations of social reality of those

people whose constructions of realities and definitions of problems have an impact on policies, solution strategies, and their implementation. Consequently, qualitative methods comprise adequate approaches for empirical research and data analysis. They are the best suitable means to uncover the subjective *Weltanschauung* of the actors – their beliefs, views, values – and its embedding in the specific context (Lamnek 2002; Mayring 1992: 11f; Mayer 2002: 21–26). In addition, I consider qualitative methods to be more feasible in the context of developing, non-democratic and transitional states rather than quantitative ones. It goes without saying that researchers striving to apply qualitative methods properly also face difficulties, but these can be controlled better by the researcher as qualitative methods are more context sensitive (Lentz 1992; Kandiyoti 1999). Hann, Humphrey, and Verdery (2002: 20) also stress that ethnological research is best suited to capture macro social phenomena in post-socialist countries as its technique of in-depth field research can contribute to an enhanced understanding of these societies especially in times of institutional instability.

Concerning the qualitative methods applied in this thesis, several methods were triangulated: semi-structured expert interviews, open interviews, participant observation, informal conversations, group discussions, and transect walks. Triangulation in the original sense of the term as used by land surveying refers to the measurement of one point from two different perspectives (Flick 2004: 309f). Its popularity in Social Sciences has grown in recent years and has led to a confusing and blurry usage of the term. While some use it exclusively to describe the equal combination of qualitative and quantitative methods, others also use it to refer to the combination of different qualitative methods or even merely for different perspectives within one method, e.g. for different types of questions asked in one interview. Despite these uncertainties there is a basic argument which justifies the use of the term ‘triangulation’ and instead of simply speaking of a combination of methods: Triangulation allots an equal status to all methods used. Simple combination, in contrast, can also mean that one method has to complement another method (e.g. a qualitative pre-test for a quantitative survey). With triangulation, no method has priority over others. It is not the aim of triangulation to reach more validation or objectivity, but to reach a more differentiated understanding of complexity (Lamnek 1995: 245–257; Flick 2004).²² I use this term to express that I do not consider the half-standardized method of the expert interview as superior to the non-standardized methods, or the latter ones as pure enrichment of the first, but that they are equal. The methods used will now be briefly introduced.

Expert Interviews

One main instrument of data gathering was the expert interview (Gläser, Laudel 2004; Pickel, Pickel 2003; Meuser, Nagel 2002; Bogner, Menz 2002; Mayer 2002). As expert interviews are often used, but hardly theoretically reflected method in comparative politics as well as in political science in general (Meuser, Nagel 2002; Pickel, Pickel 2003), it seems useful to pay some attention to the advantages and disadvantages of this method.

The semi-structured expert interview aims to discover the problem perceptions and social constructions of reality of those that define policy problems and their solution. In contrast to other forms of qualitative interviews, the interviewed person is not of interest as a person, but as an expert for a specific issue. Meuser and Nagel in their seminal article on expert interviews state that if one aims to analyze relevant rules beyond written prescriptions, tacit knowledge, and unwritten laws, then there is no alternative to this type of interview (Meuser, Nagel 2002:

²² For a critical assessment of the limitations of combining methods, especially ethnographic methods with other approaches, see Schatz 2007.

78). They (2002: 73) define an expert as someone who is somehow in charge of the development, implementation or control of addressing a problem or who has privileged knowledge about actors or decision making processes. Bogner and Menz (2002: 46f) emphasize that defining someone as an 'expert' is a methodological question as the relevance of the respective person's knowledge has to be evaluated in relation to the research interest. In their definition of the term 'expert', they include both functional aspects (knowledge in his/her field of professional activity) as well as the aspect of relevance of the expert: the expert's knowledge and interpretations of problems should be of potential influence, the expert should have the possibility to implement his priorities (at least in part) and to structure the conditions for other actors in his field of activity. Expert knowledge manifests itself in technical knowledge (rules, applications), process knowledge (routines, structures) gained through practical experience, and interpretative knowledge (*Deutungswissen*) (subjective assessments, perceptions, informal rules, etc.). In this research people were considered to be experts who are involved with water governance or related issues such as agriculture or land reform on a professional. The group of experts consists first and foremost of hydrologists and hydro engineers who work in government agencies (especially the water management departments) or academic institutes.²³ It also includes lawyers, officials working in land reform agencies, academics working on sustainable development, or NGOs involved in environmental projects or in community development, as far as their work affects water issues.

The expert interviews were designed to be semi structured. This means that a manual was developed which served as a basic structure for the interview, but which did not have to be followed step by step. The interview manual contained open ended questions aiming to grasp the expert's knowledge concerning processes, contents, and his/her assessment of current water governance and policy as well as future perspectives. Still the interviews were conducted in such an open style that the interviewee decided what to emphasize.²⁴ Due to the semi structured character of the interviews, all interviews addressed the same topics, which warrants comparability. The manual is attached in the appendix.

The selection of the experts to be interviewed is very important as it has a major impact on the research outcome. Therefore the process has to be deliberated carefully: "While quantitative social research aims to represent a certain target group through the selection of a sample, qualitative research aims to represent a problem through the selection of the interviewed persons" (Witt 2001: [19], translation JS). The research question, the given knowledge, and theoretical considerations determine the selection criteria for the experts to be interviewed. Basically, there are two modes of sample formation in qualitative research: the fixed definition of the sample prior to research, or the iterative enlargement of the sample in the course of the research in the framework of theoretical sampling (Mayer 2002: 38; Witt 2001: [15 20]). The above mentioned definition of an expert influences the selection of interview partners: The researcher is usually not acquainted with the relevant experts in the field prior to the research, so the selection can be only an iterative process (Bogner, Menz 2002: 46f).

The practical selection hence occurred according to the principles of snowball sampling. All interviewed persons were asked to recommend further interview partners. Such a technique also allows the researcher to receive insights into networks and cleavages in the water expert community of the respective country. However, to avoid a biased expert selection, prior to the first field research a list of organizations was drawn taking previously acquired information and

²³ In both countries, there are hardly any social scientists working on water issues as a technocratic perception of water problems prevails.

²⁴ In two cases the interviewee insisted on seeing the interview guideline and answered the questions one by one.

theoretical considerations into account. The actual interviews were compared with the initial list to reveal gaps which have to be explained. ‘Missing’ experts were then approached intentionally. The final sample of interviewed experts contains representatives from different agencies of the state water administration and related state agencies, academic institutions, NGOs, international donor organizations, as well as independent and foreign experts.²⁵ The following table gives an overview of all semi structured and open expert interviews. The numbers indicate the quantity of interviews conducted. In total, 15 semi structured expert interviews were conducted in each country (see Table 3). For a detailed list of all interviews see the annex. All interviews were afterwards anonymized.

Table 3: Interviewees sorted by institutional affiliation

Organization	Kyrgyzstan		Tajikistan	
	Semi-structured interviews	Open interviews	Semi-structured interviews	Open interviews
Water administration central level	3	2	5	3
Water administration meso level	3	2	3	3
Other administration	2	1	4	-
Academic institutes	3	3	1	2
Independent experts	1	-	-	-
Donor organizations	1	5	-	7
NGOs	2	2	2	1
Foreign experts	-	2	-	2
Total	15	17	15	18

Source: own compilation.

Beside semi structured interviews, open interviews and informal conversations with experts were conducted. The persons with whom open interviews were carried out are also included in Table 3. Open interviews were held with experts whose expertise was too specific to be grasped by the questions included in the manual but with whom only certain aspects were discussed. These were among others political scientists, land reform experts, and project officers of donor organizations. In addition, follow up interviews on specific questions or recent developments were conducted with some of the experts. Finally, informal conversations formed an important source of information. These were not only held with national experts,

²⁵ Foreign experts were classified separately in order not to intermingle their perceptions with those of national actors. Foreign experts are consultants or people working for donor organizations or international NGOs. Hence, the category “international donor organization” includes only the local staff of donors.

e.g. at conferences or on other occasions, but also with foreign experts such as consultants, other researchers, etc. They enriched the preliminary research findings with their own experiences and assessments.

Most of the expert interviews and informal conversations were conducted in Russian, some in English and German. Quotations from the interviews in the text are translated into English. However, when quoting recorded interviews conducted in Russian, the original Russian phrase is indicated in a footnote.

Participant Observation

Participant observation is a research method frequently used in social anthropology and sociology; it is often considered to be the ethnographic method per se (Spittler 2001; Schatz 2007: 4f; Kohl 1993: 109–114; Cicourel 1974: 63–109; Girtler 1998). The basic aim of participant observation is “to develop *verstehen* (Weber 1949) based on direct observations gleaned from partaking in subjects’ everyday realities” (Schatz 2007: 4f, emphasis in original). In this way, it is an adequate method for my research aim to try to comprehend politics of water reform beyond formal rules and processes: “With its help, subjective perceptions, procedures of social processes or cultural and social rules that shape these processes, can be understood” (Schöne 2003: [11], translation JS).

In political science, in Germany more so than internationally, observation is seldom used and consequently also seldom considered in methodological discussions (Schöne 2003: [2]). One of the pioneers of observation in political science, Richard F. Fenno (1986: 4–6) mentions several insights that can not be gained by interviews but by participant observation:²⁶ (1) to approximate the perspective of the actors, (2) to gain not only intellectual knowledge of the subject of research but also to sensitize the researcher to it, and (3) to gain a better comprehension of the relevance of the context as a relevant variable. Schöne (2003: [55]) further notes that observations can compensate a major disadvantage of interviews: the problem of social desirability. Especially political actors tend to answer interview questions according to conventions about how things should be rather than how they are factually. Participant observation, in contrast, allows insights into the de facto behavior and situations, and hence facilitates comparisons between the ideal and the real situation, or de jure and de facto realities. An additional aspect is what Malinowski (1984: 43) called the “imponderables of real life” that cannot be determined in interviews or document analysis. Observation allows collecting data that people do not provide in interviews because they are not aware of it, the so called ‘tacit knowledge’ (Spittler 2001: 8–10). Much important information, especially in the case studies, could only be gathered by observation. For example, this was the case with relations between individuals and between different organizations or institutions. Questions concerning the latter point were often not answered as people did not perceive of an organization as an “organization” but only associate its responsibilities with single person.

For an observation to become a scientific method, it has to be planned methodologically and analyzed systematically. Participant observation is typically open (the observed persons know about it), natural (carried out in the regular setting rather than under specially constructed conditions), and more or less systematic (structured by preconceived schemes). The “participant” observer does not necessarily have to be actively involved in the situation but can also be rather passive, taking part as a participating listener in a meeting, for example. The process of observation typically runs through three phases: (1) descriptive observation: unspecific and comprehensive observation in order to gain an overview of the field and to identify

²⁶ He calls it “interactive observation”.

interesting aspects; (2) focused observation: observation that narrowed down the perspective to problems, processes and persons considered relevant for the research question; (3) selective observation: search for further evidence of identified types of processes and behavior (Schöne 2003: [8 10]; Flick 1995: 157f).

I used participant observation mainly in the local case studies (see below). Short term observations could be carried out without any problems and also without having to announce them explicitly as sitting in offices and waiting for something or somebody was common and did not evoke special attention. The fact that many observations were conducted together with the field assistants and could be discussed afterwards increased their reliability. In Kyrgyzstan, it was possible to attend two workshops and use them for participant observation of the interaction and different perceptions of water users, academics, and bureaucrats: In September 2003, the Project Implementation Unit (PIU) of the World Bank for the reform of irrigation systems organized a scientific practical conference on “Principles and Approaches of the activities of Water User Association in the Kyrgyz Republic” in Bishkek. The conference was attended by academics, experts from the water administration and the World Bank PIU as well as representatives of WUAs. In October 2004, the PIU organized a training seminar for representatives of WUAs in Osh. Mainly WUA staff participated in this workshop, but also people from the provincial water management department and from donor agencies.

Observation proved also to be very significant as a tool complementing interviews. The actual interview situation often differed considerably from the ideals described in textbooks on scientific methods. In addition, cultural differences in *habitus* and hierarchies had to be integrated in order to properly interpret the spoken words. Therefore, observation and protocols of the interview situation were crucial for the analysis of the interviews afterwards. In many interviews, especially during the first field research, I was supported by a local field assistant that served as a “cultural translator” to evaluate interaction processes in difficult interviews or to assist in sensitive situations especially in the WUA case studies. In many cases, I was able to use situations that could be classified as methodical errors to gain additional insights thanks to systematic observation used. To give an example: Often during the interviews other persons were present or entered the room, and listened or gave comments. This certainly affected the interviewee’s answers, which could be considered a problem. However, the observation of the interaction of these people gave useful insights into hierarchies, power relations, and different problem perceptions.²⁷

Local Case Studies

In each country one in depth local case study was conducted in one *raion* (district) where water institutional reforms are implemented. The case studies were conducted in Kyrgyzstan in the Sokuluk district, Chuy province, and in Tajikistan in the Aini district, Sughd (Leninabad) province.²⁸ The districts for the case studies were not selected based on criteria of representativity as the objective was not to confirm or falsify certain hypotheses but rather to develop an un

²⁷ This is also relevant when reflecting on one’s own position as researcher. In the hierarchical and patriarchic environment of state water agencies and academic institutes, interview interaction was often according to what Bogner, Menz (2002: 62f) described as “interviewer as layperson”: the situation was characterized by asymmetric interaction with monologues of the interviewee, demonstrative benevolence and paternalism. This dominating mode of interaction was often intensified by gender aspects – an aspect, whose constructive usage in interviews was explored by Abels and Behrens (1998: 85f). A resulting disadvantage is the low possibility to structure the interview along the manual. On the other hand, this type of interview is very useful for theory-generating research and questions focusing on interpretative patterns.

²⁸ Sughd province used to be called Leninabad province before.

derstanding of the institutional dynamics at the local level heuristically. The only selection criterion was that the local studies should not be carried out in water scarce areas in order to exclude extreme physical factors as potential variables but to be able to concentrate on institutional aspects in rather favorable conditions.

The local case studies were complemented by short term field visits in other parts of the countries: in Kyrgyzstan in the districts Aravan (Osh province), Alamedin (Chuy province) and Tyup (Issyk Kul province); in Tajikistan in the districts Kanibadan, Mastcha and Ganchi (Sughd province), Shakhriston (RRS), and Farkhor (Khatlon province).²⁹ These field visits were carried out before and after the in depth case study. The field visits before the in depth case study served to identify basic characteristics of local water governance as well as to select the case study. During the field visits after the case study, I focused on the key issues identified in the case study to assess whether there were similar patterns in other places or whether they were a particularity of the case study.

In field research, the identification of the right “entry point” is an important but often underestimated issue (Schatzmann, Strauss 1979; Wax 1979; Girtler 1988: 54 101; Schöne 2003: [26 39]). Finding an entry point for the local case studies proved to be very difficult. When contacting local officials or water managers directly, there was a strong expectation on their side that my research would result in a project involving financial aid.³⁰ When trying to find a suited place through donor agencies, there was a tendency to present positive examples only. In addition, the topic and interest of my study were difficult to communicate due to the technocratic perception of water management which is still prominent. Hence, finding a place where I would meet constructive research conditions evolved as the main selection criteria.

In both case studies I cooperated with a donor organization that implements water institutional reforms at the local level. In Tajikistan, Aini *raion* was chosen due to the willingness and interest of the regional project office of the German NGO German Agro Action (GAA) to support such a study. In Kyrgyzstan, Sokuluk *raion* was chosen where I collaborated with the WUA support office of the World Bank on farm irrigation project. The *raion* is also the research area of a joint research project of the Agrarian University in Bishkek and the Swiss NCCR South North. In both areas, other previous or simultaneously conducted studies were available that I used to prepare for my own research and assess the validity of my results (Askaraliev 2004; Lindberg 2007; Grundmann 20004; ASDP “NAU” 2003).

The responsible leaders of the projects supported my studies without interfering in the research and provided information, contacts, and helped with logistics. The concrete research villages were selected together with the project managers. The selection criterion was that their WUA activity performance should be average. The concrete research village in Tajikistan, Iskodar, was selected together with GAA staff. In 2004, this village was also in a sample of four villages under research in a GAA study on local decision making processes (Grundmann 2004). This study not only provided basic data on the village but also allowed me to compare (and confirm) the research findings. In Sokuluk, two villages were chosen: Zhany Pakhta and Studencheskoe.

A drawback of this cooperation with donor organizations was that the representatives of local water user associations perceived me as a kind of “controller” from the donor agency

²⁹ The duration of these field visits ranged from several hours (interviews with two or three key persons) to several days (in Aravan, Kyrgyzstan and Farkhor, Tajikistan).

³⁰ This is understandable as most rural places are very poor and people often meet foreigners who are representatives of donor organizations. This not only led to certain expectations (of me to finance a project), but also involved the danger of biased answers (like underscoring technical needs).

they are accountable to, despite the fact that I repeatedly explained my intentions. In part, the reaction was open hindrance of my research. This was not the case with other local officials and the farmers, to whom we usually introduced ourselves without reference to the donor organization.³¹

For the case studies, participatory tools as developed in development research and social anthropology were used. They are most appropriate with regard to the research interest of this study:

“Ethnographic research methods remain essential for investigating the dynamics of political processes at the local level, particularly where we are dealing with (...) informal aspects of power relations in which the way people understand the situations they face and the options open to them must be central to the analysis” (Gledhill 2000: 7f).

As the time constraints of the field research periods (see above Table 2) did not allow for extensive ethnographic fieldwork, elements of approaches developed in development cooperation were employed. They allow the application of qualitative methods in a narrow time frame. Such approaches are the Rapid Rural Appraisal (RRA), the Participatory Rural Appraisal (PRA), or the Participatory Learning and Action (PLA). They include semi structured and open interviews, informal conversations, observations, and group discussions. They are typically conducted in an interdisciplinary team and involve the local population. However, RRA and PRA approaches have been criticized by social anthropologists for falling short of reaching their own objectives. Typical allegations are that their time frames are too tight; that despite their claimed openness they are implicitly based on Western models of thinking and participation; that they cannot guarantee the inclusion of marginalized groups; that the socio cultural setting is not considered enough; and that the people conducting the research are not trained well enough (Krummacher 2004; Schönhuth et al. 1998). On the one hand, this critique is warranted in many respects. On the other hand, these approaches allow for the limited use of ethnographic methods under time constraints, which is a virtue of these approaches. As the research question was guided by the above mentioned assumptions (chapter 4.5) and was thus not entirely undefined (which allowed me to focus my research from the beginning on), this course of action seemed to be justified. As PRA and related approaches are not explicitly developed for doing research on local institutions, but rather on local conditions, I also took the guidelines for the analysis of local institutions and livelihoods developed by the Rural Development Division of FAO into account (Messer, Townsley 2003).

The following methodological tools were used in the case studies: Participant observations, semi structured as well as open interviews, informal conversations, group discussions, and transect walks. The four former methods were already described above. Group discussions and transect walks will now be described briefly. There are very different conceptions of group discussions. I refer to the idea that in group discussions underlying assumptions are articulated that might not be expressed in individual interviews but that appear during discussion with others (Bohnsack 1999: 123-128; Dreher, Dreher 1991). Transect walk is a method of interviewing a person or a group informally while observing the person/group during a walk along an identified transect across the research area (mostly a settlement). It is particularly used to address issues that have a spatial or physical dimension, e.g. poverty in a village or land management. During the transect walk, all of the aspects of interest for the research are observed in order to get an overall idea of the problem and its context. In addition, it is expected that

³¹ In general, before every interview, both at the local as well as at the national level, I had to take the particular situation into account to decide whether it would be more beneficial to introduce myself as a PhD student, a member of an international research project, or with reference to a national academic institute or a donor organization.

the interviewees provide more information when confronted with the concrete situation compared to when the interview is conducted in a room (Messer, Townsley 2003: 30f; De Negri et al 1998: 57 60).

Interviews were conducted with representatives of the WUA and other local organizations as well as with villagers who were selected randomly. Several interview manuals were developed for different target groups. These interviews in the respective village were endorsed by interviews with representatives of responsible district agencies and the donor project offices. All manuals as well as the lists of interviews can be found in the appendix. Group discussions were conducted with members of the WUA council and randomly selected groups of villagers. However, they were difficult to organize and only one group discussion with WUA council members was conducted in each case study. Group discussions with the villagers they occurred rather spontaneously. Transect walks (sometimes car rides) were conducted along the channels with the respective water managers. While local officials are usually able to speak Russian fairly well, the population is not necessarily able to do so, especially the women. Therefore, the local case studies were conducted together with one or two local field assistants who translated when interviewees preferred to talk in Kyrgyz, Uzbek, or Tajik rather than Russian.

Qualitative Data Analysis

For the analysis of the data, qualitative content analysis was employed. Qualitative content analysis aims at identifying the main contents of the material with a step by step reduction and dissection of the textual material. It has to be conducted systematically in order to ensure that it is intersubjectively comprehensible (Mayring 1991, 1992: 22 41; Lamnek 1995: 207 218).

As far as possible, all expert interviews were recorded and afterwards transcribed, the Russian ones by a Russian native speaker. However, interviewees sometimes reacted reluctantly to the wish of recording the interview, especially in the lower levels of the administration. In these cases, recording had to be refrained from in order to get any information at all. Open interviews were sometimes recorded, depending on the concrete situation. Interviews at the local level were usually not recorded for the above mentioned reasons. Since these were mostly conducted together with a local field assistant, it was possible to draw up detailed protocols as the functions could be shared between an interviewer and a minute taker.

The obtained data were analyzed with MAXqda software. Beside the interview transcripts, also protocols of informal conversations and observations were typed into MAXqda. The process of qualitative content analysis was based on the model developed by Mayring (1991; 1992). The first step of data analysis was the coding all of the texts (Kuckartz 1999: 75 100). This allows the systematization, decomposition, comparison of the data. The code system was developed deductively based on the interview manual, followed by two inductive revisions. Then, the relevant codes were paraphrased. The codes that referred to purely technical or procedural knowledge (like data on water use, laws, structures) had not to be further reduced. Codes referring to interpretation patterns and assessments (such as characteristics of the political process or the administration) were individually reduced further, explicated and structured. The code system is attached in the appendix.

5.3 Historical Institutions of Water Governance in Kyrgyzstan and Tajikistan

The dependent variable, thus the variable to be explained, is water institutional reform in Kyrgyzstan and Tajikistan. These processes will be described in detail and analyzed in the two case study chapters. But in order to be able to understand which reforms were carried out and why they occurred, the situation of the water institutions prior to reform will be outlined in this chapter. This is the starting point of institutional change that both countries have in common. This chapter will therefore give an overview of the historical development of water governance in Central Asia.

The history of irrigation agriculture in Central Asia is long; it started several thousand years ago. The prospering period of the Arab control in the 7th century witnessed the construction of extensive irrigation systems in the sedentary areas. Over the course of the centuries, complex and sophisticated systems of water management evolved, which are recorded in description by Arabic historians and geographers. In the 19th century, the Tsarist regime fostered the massive expansion of irrigation systems. However, many of the ambitious plans of this period were never realized. This changed with the Soviet Union that financed and constructed large scale irrigation networks in order to expand cotton production in Central Asia (O'Hara 2000: 369-373). This chapter describes the institutions of governance that evolved to manage these irrigation systems and regulate water usage.

In Islam, water has as a gift of Allah the status of a community resource. Therefore, it is forbidden to buy or sell it. However, if infrastructure, knowledge or other investments have been made for its withdrawal, it becomes a private property and fees may be levied (Faruqui 2001: 11f). Before the Tsarist expansion to Central Asia, control over water in the sedentary regions used to be centralized and hierarchically organized while local level officials were responsible for the management. In the Kokand Khanate, which also covered today Kyrgyz and Tajik parts of the Fergana valley, farmers received usage rights from local authorities that in turn were controlled by upper instances. The Khan acted as a kind of trustee of water in the name of Allah. Farmers had to pay taxes for water usage and were obligated to participate in necessary maintenance works. On all levels of the hierarchy, there were *mirabs* – water masters. This was a very prestigious position. The highest position was the *mirab bashi* who was part of the government and responsible for water allocation. He was elected by the water user groups and received a payment in kind from the users depending on how satisfied they were with his work. On local levels, there were also *mirabs* responsible for secondary channels and *aryk aksakals* (literally: channel elders) for small channels (O'Hara 2000: 372).

In most cases, this system was maintained during Russian colonization. The positions of *mirab* and *aryk aksakal* were formalized, incorporated into the colonial administration, and transformed into paid positions. This meant, however, that they were no longer accountable to the water users and had little incentives to control the system effectively. In addition, new irrigation officials without local knowledge were incorporated and competition for water intensified with the implementation of agricultural policies of cotton expansion. As a consequence, traditional institutions of water management were weakened while no effective new control mechanisms were introduced; corruption and unapproved water withdrawal became part of the system (O'Hara 2000: 374f; Bichsel 2006: 111ff).

Besides the *mirab*, another informal water governance institution still in use today has been the *basbar* or *asbar*.³² *Hasbar* refers to collective voluntary work by community members, traditionally organized by the *maballa* committee or the *court of elders*.³³ It is part of a broad system of reciprocity at the village and neighborhood level. There are two types of *basbar* that can be distinguished: First, *basbars* are organized to help other community members in need, e.g. in case of sickness, repairs, or construction work. Second, *basbars* are organized as unpaid labor for joint community interests, such as construction and repair of schools, roads, irrigation channels. The latter form of *basbar* has been an important institution in local water management, used for construction, rehabilitation and maintenance of small scale channels, so called *aryks*. People who did not participate in it were fined or excluded from water allocation. *Hasbar* was also used during the Tsarist period, especially for irrigation management. During that time, however, it was more of a duty in kind service or even corvee with pseudo traditional legitimization. In the Soviet Union, *basbars* were transformed into “*Subbotnik*”, the Soviet form of collective voluntary work on Saturdays, and organized by the leadership of the *sovkhob* or *kolkhoz*. It was however again abused for actual corvee, such as the building of the Great Fergana Channel under Stalin, which was officially done by *basbar* while it was in practice forced labor of prisoners (Thurman 2002: 6; Bichsel 2006: 113f; O’Hara 2000: 373ff).

In the official water governance structure of the Soviet Union, all water resources were controlled centrally in Moscow by the Ministry of Melioration and Water Management (*Min VodKhoz*). In Central Asia, a regional agency (*SredAzVodKhoz*) was responsible for the whole Aral Sea basin that also received orders from Moscow. This is often mentioned as a positive aspect as it led to a basin wide approach with integrated water and energy management. The Republican *MinVodKhoz*es merely implemented the decisions of the central Ministry in Moscow. They were responsible for the distribution of financial resources and were accountable to higher ranking officials. Water allocation was standardized with fixed schedules for republics, provinces (*oblasts*) and districts (*raions*).

The administration of Soviet water management itself was fragmented into many agencies subordinate to the *MinVodKhoz* with competencies not clearly allotted. Overlapping functions and competencies resulted in inconsistencies and ineffective implementations. Soviet authorities did not actively attempt to improve the situation, which caused some scholars to speculate that the internal rivalries between the agencies were not considered disadvantageous by the highest political level as this situation allowed them to lead a relatively calm office life. Furthermore, the USSR *MinVodKhoz* was responsible for planning, supplying, receiving, and controlling, i.e. all of the relevant functions were combined in one agency with minimal external oversight and control. Consequentially, the Ministry on the one hand focused on reclamation and construction projects rather than on operation and maintenance (O&M), and on the other hand the work was of poor quality in order to meet production plans (ISRI, Socinformburo, FES 2004: 26, 48, 53ff; Thurman 2002: 5f).

Also the local water management level was restructured under Soviet rule. During collectivization, all of the small land plots were combined into huge collective and state farms (*kolkhoz*es and *sovkhob*es, s/k). Communal water administration was centralized. All customary institutions and regulations were officially abolished. Informally, their influence persisted. The administration of the s/k was responsible for O&M of the on farm systems. It also regularly used *basbar* for maintenance work. Formally, the respective labor each individual had to contri

³² *Asbar* in Kyrgyz and *basbar* in Tajik language. For convenience reasons, I will in the following always use the spelling *basbar*.

³³ On *maballa* committee and court of elders see below chapter 5.5.4.

bute was calculated according to the size and location of land. Informally, it was often the relation to the local elite (farm director, local officials) that was decisive. But the actual decision regarding water allocation differed from formal rules: In theory, the general meeting of the members decided on water allocation among the brigades. Informally, the decisions were made according to the production targets decided upon by the s/k management together with the local party committee and the local water administration (*RaiVodKhoz*) (Thurman 2002: 4 7).

All of the water bodies were considered to be state owned. Apart from a relatively low usage fee, water use did not have to be paid for on a quantitative basis. The Soviet ideology of total human command over nature led to a belief in the ability to exploit of natural resources, including water resources, indefinitely. This fact, along with the unclear and competing distribution of competencies among different state agencies, led to an erosion of the local sense of responsibility and a usage without regard for others' interest. The old norms and rules that ensured a relatively high yield with low water consumption eroded and water consumption increased drastically. Only in the light of the Aral Sea disaster and growing environmental awareness in the late 1980s, in 1988 more competencies were delegated to agencies at the republican level. Decision making power regarding water usage and distribution in Central Asia however remained with the central planning unit in Moscow (Klötzli 1997: 178ff, Grabish 1999: 38ff; O'Hara 2000: 375f).

However, the pre Soviet time should not be idealized: "Rent seeking in water allocation is a tradition in Central Asia that predates the Soviet Union by centuries." (Thurman 2002: 7). Wegerich (2005: 240) also sees certain continuity: "Even though these [Soviet] policies either indirectly influenced or directly altered the institutions responsible for local water management, these institutions kept a certain pattern. This pattern was the system of patronage". It was not only the system of patronage that persisted during the Soviet Union, but also the authority of informal institutions such as *aksakals* and *mirabs* that maintained their influence. However, the context of patronage changed in the Soviet Union and allowed self interested resource exploitation on a much bigger scale.

Concerning water management at the inter republican level, in the 1980s a system of water quotas for the rivers Amu Darya and Syr Darya was established (see Table 4).

Table 4: Water quotas for transboundary rivers 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 2004: 36.

Compared to the data on water formation (see chap. 5.4.2), the quotas show that paradoxically those republics where the most water resources originated – Kyrgyzstan and Tajikistan – had the right to use a small amount. The downstream SSRs of Kazakhstan, Uzbekistan and Turkmenistan were entitled to use most of the water resources as most of the cotton production of the Soviet Union took place in those republics.

A second important inter republican governance mechanism was the establishment of a water energy exchange system between the republics. As described earlier (see chapter 5.4.2), huge reservoirs were constructed in the two upstream SSRs in order to store the water until it was needed in the downstream countries for irrigation. In order to compensate the Kyrgyz and Tajik SSRs for their losses in arable land and the costs of operation and maintenance of the

facilities, a unified water energy system was established: In exchange for water withdrawal in the summer, the downstream states delivered energy (esp. coal and gas) in winter. Hence, there was an integrated basin wide water and energy management approach in which each republic fulfilled a particular function.

To sum up, water governance prior to independence in general was hierarchically and centrally organized and based on a Union wide approach. It was a purely state managed system without any economic mechanisms or stakeholder participation and inefficient and wasteful usage patterns. The two independent states of Kyrgyzstan and Tajikistan inherited these water institutions that constitute the common starting point of the reforms. In how far these institutions have changed is the topic of this study.

5.4 The Shared Context of Water Governance in Kyrgyzstan and Tajikistan

Controlled context variables are those variables that can be expected to have an impact on the outcome (dependent variable) but are not the focus of the analysis. They are controlled for in the research design by holding them constant in both cases. Regarding the politics of water institutional reform, several factors were identified that were considered to be influential and which the two countries have in common: Economic development and structure, water resources and water usage, historical institutions of water management, national policy priorities, and the state of financial, technical and professional capacities. Although the analysis does not focus on these aspects, they are crucial for understanding the context of WIR in both countries.

5.4.1 Economic Development and Structure

The following table presents a number of basic data on the economic and social development of both states.

Table 5: Basic development data on Kyrgyzstan and Tajikistan

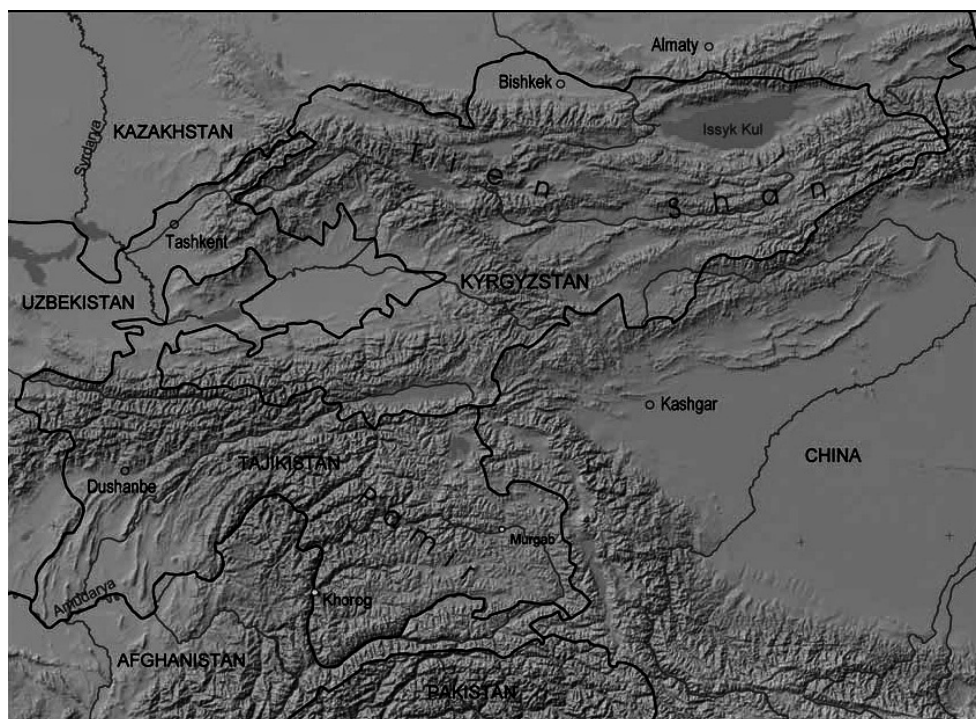
Indicator	Kyrgyzstan	Tajikistan
Territory (km ²)	198,500	143,100
Territory above 1000m/3000m (%)	94/40	93/more than 50
Population (Mio)	4.5	6.02
Rural population (%)	61	68
GNP per capita 2000	280	180
GNP per capita 2005	450	330
People below USD 2 a day, %, 2006	21.40	42.8
GDP per capita in USD 2000	1,474	790
GDP per capita in USD 2006	1,935	1,202
HDI 1995	n.a.	0.631
HDI 2000	n.a.	0.627
HDI 2004	0.705	0.652

Sources: Sarsembekov et al. 2004: 87f, 91f; World Bank: World Development Indicators (<http://devdata.worldbank.org/data-query/>); UNDP: Human Development Report 2006 (<http://hdr.undp.org/hdr2006/statistics/>); UNECE Statistical Database (<http://w3.uncece.org/pxweb/Dialog>), accessed 06/09/2007.

The state of economic development not only determines the financial means available for maintenance of water facilities, funding of research, or payment of qualified experts. It also determines structural conditions such as the significance of agriculture, the main water user world wide. In less developed countries, agriculture is of more importance than in developed countries with a significant industrial sector. Kyrgyzstan and Tajikistan face economic conditions and constraints similar to many other developing countries. Concerning economic indicators, reliable data for the 1990s are not available from the IFIs or UN organizations; therefore the table refers only to more recent data.

Both countries are relatively small, landlocked states (see Figure 7). As mountainous states, the geographic conditions impede economic activity. The population density varies in both countries between less populated mountain areas (down to 3.6 persons/km²) and densely populated valleys (up to 70.77 persons/km²). More than half of the population lives in rural areas.

Figure 7: Map of Kyrgyzstan and Tajikistan



Source: Breu 2006: 3.

Kyrgyzstan and Tajikistan are the poorest countries of the former Soviet Union (FSU). Even when they were part of the Soviet Union, they belonged to the least developed periphery. At the end of the 1980s, the Tajik SSR received almost 50% of its budget from Moscow and was dependent on material and energy imports from other republics (Jones Luong 2003: 27). Today both countries are ranked as low income countries according to World Bank criteria. Concern

ing the Human Development Index (HDI) by the UNDP, out of the 177 countries ranked in 2006, Kyrgyzstan is on the 110th and Tajikistan on the 122nd rank. Their status is much better than when purely measured in GDP per capita: then Kyrgyzstan takes on the 138th and Tajikistan the 152nd place. The high school enrollment and adult literacy rates – a legacy of Soviet education policies and a major difference to many other developing countries – accounts for the score on the HDI which is slightly better in comparison to the ranking based on the GDP.³⁴

However, not only the development of the economy is of importance, but also its sectoral structure. Like in many other developing countries, the industrial sector is rather weak and agriculture plays a highly significant role. Compared to their neighboring states which are rich in oil and gas resources, both countries do not possess abundant natural resources. The only sectors worth mentioning are the aluminum production in Tajikistan, which accounts for 61% of the exports, and gold mining in Kyrgyzstan, which accounts for 10% of GDP (Jones Luong 2003: 39). During Soviet rule, Central Asia was mainly considered to be a deliverer of unprocessed goods (especially cotton) and today's economic structure and infrastructure is still marked by this past.

Therefore, a shared feature of both countries is the significance of agriculture for the national economy. This might be surprising as both countries are mountainous countries; less than 10% of the territory is arable land. The area of agricultural land in Tajikistan – excluding pastures – is indicated as ranging from 739,000 ha to 860,000 ha. In Kyrgyzstan, it is about 1.435 Mio ha. Despite these geographical constraints and also despite the fact that agricultural production declined about 50% since independence, it is an important sector: In Kyrgyzstan, agriculture counts for 45% of the GDP, 40 % of the work force, and 30 % of the exports. In Tajikistan, agriculture is also of vital economic importance: Cotton, whose production is especially water intense, constitutes 43% of all planted crops and yields 11% of all export gains.³⁵ As for the workforce, 65 to 70% is engaged in agriculture (about one third more than in 1991). Subsistence agriculture has become increasingly important, especially for the population which lives in rural areas (ADB 2000a; Bucknall et al. 2003: 4; UNDP 2003: 33f, 38; UNECE 2004: 137; Pulatov 2004: 83).

These economic conditions have a direct impact on water usage: Water is a critical resource for agriculture as a considerable degree of the land can only be cultivated with irrigation. Hence, agriculture is responsible for the highest amount of water use. The patterns of water usage will be described in detail in the following chapter.

5.4.2 *Water Resources and Water Usage*

Kyrgyzstan and Tajikistan have many hydrological and geographic conditions in common. Both are water rich countries at the headstream of transboundary rivers. Therefore physical water scarcity may be excluded as a reason for conflicts and difficulties, which is necessary to substantiate the premise that water crisis is a governance problem. This makes them “crucial cases” (Eckstein 1975), as the problems they are faced with are most probably even stronger in countries which suffer from water scarcity and therefore harder tensions or even conflicts over water distribution. The implementation of reforms is analyzed in the ‘best favorable circumstances’ concerning water availability aspects.

³⁴ See <http://hdr.undp.org/hdr2006/statistics/> (accessed 06/09/2007).

³⁵ Hence it is the third most important export commodity besides aluminum (61%) and electricity (12%).

This chapter will present data on water resources and water usage. One has to bear in mind that there is hardly any exact data available due to the deterioration of measurement infrastructure after the breakdown of the Soviet Union and the rise of water users, but also the underestimation of actual water use by users and the political sensibility of the water quotas (see below). In addition, water formation and discharge vary considerably between the years due to complex climatic factors, so that water availability in a given year may deviate considerably from the average values. Hence, all figures mentioned rather represent benchmarks.³⁶

Kyrgyzstan and Tajikistan are the states with the greatest water resources in Central Asia. Freshwater resources per capita are 10,049 cubic meter in Kyrgyzstan and 13,017 cubic meter in Tajikistan (in comparison: Germany: 2,169 cubic meter, the global average is 8,354 cubic meter). The total amount of water resources (surface and groundwater) on the territory of the Kyrgyz Republic is about 2,460 km³, 71% of which (1,745 km³) are stored in lakes. The biggest one is the slightly salty Lake Issyk-Kul at 1,606 m in the Tian Shan Mountains. About 650 km³ water supplies are frozen in glaciers that occupy 8170 km² (4.2% of the territory). Annual average river runoff is between 44 and 50 km³. Groundwater supplies are assessed to measure about 11 km³ per year (MISI, FES 2003: 6; World Bank 2001: 290f; Sarsembekov et al. 2004: 88f). In Tajikistan, there are more than 25,000 rivers in the country measuring a length of 90,000 km in total. Each year 51 to 64 km³ of water are produced.³⁷ 1,300 lakes store 44.46 km³ of water. The water supply of glaciers (which cover about 5,000 km²) is indicated according to different sources with 460 to 845 km³. They cover 8% of the state territory. 90 percent of them lie in the Amu Darya basin. Groundwater supplies are estimated to range from 6.65 to 18.2 km³. However, some regions also face water shortage³⁸ (UNDP 2003: 20f; Pulatov 2004: 82; Valamat Zadeh 2001: 151; Mukhabbatov 1998; Sarsembekov et al. 2004: 91f). As already mentioned, both countries are mountainous, landlocked regions with arid, continental climate. The similar geographic conditions and economic parameters resulted in similar water use patterns in both countries. Although the agricultural area is limited in the two mountain states, agriculture is by far the most important water consumer as shown in Table 6.

Table 6: Water use by sector

Country	Agriculture	Industry	Communal water supply	Other*
Tajikistan	84%	4,5%	8,5%	3%
Kyrgyzstan	90%	6%	3%	1%

* E.g. energy production, fishery, forestry

Sources: UNDP 2003: 21; MISI, FES 2003: 7.

In addition to being used for irrigation purposes, water is of growing economic importance as a resource to produce hydropower. This is a mainly non-consumptive use of water, though. In the following section, first the irrigation sectors and then the hydropower branches in both countries will be briefly described in brief.

75 percent (1.07 Mio ha) of arable land in Kyrgyzstan is irrigated land. The main cultivated crops are wheat and vegetables, in the south cotton and rice are also grown. By 1990, 631 irrigation systems existed. The economic decline after the collapse of the Soviet Union led

³⁶ For the Kyrgyz Republic, Djayloobaev (2004:70) estimates that actual water consumption is at least 10-20% higher than according to official statistical data.

³⁷ The different assessments can be explained by (1) annually differing flows and (2) different data from different sources.

³⁸ These are Istravshan and Gissar in RRS and Kyzyl-Su-Yah-Su in Kulyab (MIWM, UNDP, EC-IFAS 2006: 34).

to a dysfunction of parts of the large irrigation systems. This as well as a change in cropping patterns contributed to a decrease in surface water withdrawal from 13.93 km³ annually in 1988 to 8 km³ in 2001, at least according to official statistics (MISI, FES 2003: 7; Djailoobaev 2004: 70).

In Tajikistan, 84% (719,000ha) of the arable area is irrigated land. About 90% of the agricultural output is produced thanks to irrigation. The overwhelming parts of the irrigated land (83%) lie in the Sughd and Khatlon oblasts where cotton is grown. In Tajikistan, irrigation agriculture was also affected by the general economic decline following the dissolution of the Soviet Union and the subsequent civil war. About 20 to 30% of the area is not used due to deteriorated infrastructure, inputs unaffordable for the farmers, and for other reasons. Agricultural production has declined by 50% since Tajikistan's independence. Water usage in Tajikistan decreased from 13.7 km³ in 1990 to 12.6 km³ in 2004, a representative of the IFAS Executive Committee³⁹ mentioned that it has decreased to only 9 km³ (Bucknall et al 2003: 3f; UN ECE 2004:137; UNDP 2003: 20, 23, 32; MIWM, UNDP, EC IFAS 2006: 18).⁴⁰

In contrast to Kyrgyzstan, Tajikistan is heavily dependent on pumping irrigation due to its geographic and topographic features: According to different sources, between 272,000 and 350,000 ha are solely served by pumping stations; this is almost half of the total irrigation land. In total, more than 60% of the land plots depend on pumping irrigation at least in part (Kyrgyzstan: 10%). There are 444 or 445 pumping stations with 1,833 or 1,845 pumps. Because of the electricity costs for the pumping stations, irrigation is more expensive than in other Central Asian countries (USAID 2002: 1; Bucknall et al. 2003: 27, UNDP 2003: 35f; Nazyrov, Pulatov 2003).

In both countries, water use for irrigation purposes is extremely high. Central Asia has the lowest water use efficiency worldwide (UNDP 2006a: 8). According to World Bank data, in Tajikistan water consumption for cotton cultivation is about 70% higher than in Pakistan (UNDP 2003: 26). The reasons are, on the one hand, deteriorated infrastructure and outdated irrigation techniques. Instead of directing the water through closed pipes, water evaporates in open channels or trickles in earthen channels that are not lined. In addition to these technical reasons, institutional factors also caused high water use: during Soviet times, water consumption did not have to be paid on a quantitative basis. Instead, only a small general fee was levied. Thus there were no economic incentives to limit consumption. This behavior was aggravated by the Soviet ideology of the human control over nature according to which nature is a mere means for human development and may thus be fully exploited.

Another main mode of water use is hydropower generation. Due to the mountainous relief, the hydropower potential of the water resources is very high. After Russia, Tajikistan is the second largest producer of hydropower in the CIS, with regard to per capita production it is the biggest producer worldwide (UNDP 2003: 43). In both countries, hydropower covers an essential part of the domestic energy needs. It is produced by hydropower plants located at many of the reservoir dams. In Kyrgyzstan, there are 15 hydropower plants (HPP) that produce a total of 2,948 MW. There are only two thermal power plants, one in Bishkek (588 MW) and one in Osh (50 MW) that produce less than 10% of the power. The biggest reservoir is the Toktogul reservoir with a storage capacity of 19.5 km³. It is part of the Naryn Syr Darya cascade—a system of reservoirs and dams at the Naryn (Toktogul, Kurpsai, Tashkumyr, Shamal

³⁹ The International Aral Sea Fund (IFAS) is the regional umbrella organization that regulates water distribution between the states and coordinates all activities and programs concerning the Aral Sea Basin. The Executive Committee consists of two members from every state. See Sehring 2002: 11-13.

⁴⁰ Author's interview with a representative of the EC-IFAS, Dushanbe, 10/21/2003.

dysai, Uch Kurgan) that permits a multi year regulation of the Naryn River runoff and has a storage capacity of 26.3 km³ in total. 97 percent of hydropower is produced by the five biggest plants that are all located at the Naryn cascade. As the Naryn is the main tributary of the Syr Darya, this cascade is of regional importance for the regulation of irrigation water. Other dams and reservoirs are the Kirov reservoir at the Talas River, the Orto Say at Chuy River, and many smaller reservoirs (Antipova et al. 2002: 506; Mamatkanov 2002).

Tajikistan has nine operating reservoirs with a total storage capacity of 29 km³. The two biggest ones, Nurek (10.5 km³) at Vaksh River and Kairakum (4.16 km³) at the Syr Darya, are of international significance as they also regulate irrigation water and produce hydropower for the purpose of neighboring countries (FAO, Kondell 2006).⁴¹ The Nurek dam is the highest dam in the world (300 m). The attached HPP alone produces about 25% of all of the energy produced in Tajikistan (Niyazi 2003).

The dams built in Soviet times were set up mainly for better water regulation for irrigation purposes. The original aim of the attached hydropower plants was only to provide energy in peak times while the regular needs were covered by the unified energy system. Since independence, the power generating function of these dams outweigh their irrigation function (see later, ch. 0). Hydropower production is a non consumptive water usage, the regulation in this case does not have to address water withdrawal but instead has to determine the amount and time of water release from the dams. This is a contented task as there is a trade off between water needs for irrigation and for hydropower production: Water is needed for irrigation purposes during the vegetation period, while energy needs are highest in winter (more in ch. 5.4.3).

The situation in the regions of the local case studies selected in each country (see chapter 3.4) presents itself as follows. The Sokuluk district (*raion*) is located in Chuy province in northern Kyrgyzstan in the western vicinity of the capital Bishkek. Most of its 19 municipalities (*ajyl okmotu*) cover the area of one or several former *sovkhos* or *kolkhos* (FSK). The Chuy province (*oblast*) is the most densely populated area in Kyrgyzstan; one third of the population of the country lives in this province. Concerning both hydrogeography as well as land use patterns, Sokuluk *raion* is representative of the Chuy valley. The *raion* extends along the rivers Sokuluk and Jylamish. Sokuluk River rises in the glaciers of the Kyrgyz Range from 3500 to 4000 m and flows into the Chuy River at the border to Kazakhstan. Like all other rivers of the Kyrgyz Range, it is fed mainly by glaciers and melting snow so that the maximum discharge takes place in the summer. At the middle reaches of the river there are several technical facilities and reservoirs. The Great Chuy Canal (*Bolshey Chuyskiy Kanal, BChK*) crosses the district from East to West (Askaraliev 2004). The main crops cultivated are sugar beets, cereals, lucerne, melons, beans, and grapes. Despite the relative proximity of the capital, many villages do not have good market access as roads are bad and transportation costs are high.

For the Tajik case study the Aini *raion* was selected. Aini is a mountainous district in the Zeravshan valley between the Turkestan and Fan mountain ranges. Although it is located only 150 km away from the capital Dushanbe and 175 km from the northern center Khudjand, it is quite isolated due to the fact that the two passes (Anzob pass 3,372 m to the south and Shakhriston pass 3,378 m to the north) are partially closed during winter time (October to May). Due to the bad transportation situation resulting from its location, the valley's population's access to market is difficult. There are 2,984 ha pastures and only 2,500 ha of arable irrigated farmland. Land resources are scarce and the soil is of low quality. Virtually all inhabitants of the Raion (about 72,000) are involved in agriculture and livestock breeding. The main

⁴¹ For more details on the dams, the reservoirs' capacities, and energy production see Valamat-Zadeh 2001; Petrov 2003; Giese, Troughine 2006; Wegerich et al. 2007.

agricultural products are tobacco and apricots. Besides this, families grow wheat, potatoes, and vegetables for subsistence (Grundmann 2005: 8).⁴²

To sum up, Kyrgyzstan and Tajikistan are water rich states that are not confronted with first order water scarcity. Water usage occurs mainly in agriculture, which is highly important to the economy of both states. Another, non consumptive, mode of water usage is hydropower production as both countries dispose over a range of reservoirs and dams.

5.4.3 *The Post Soviet Challenge to Water Governance*

The end of the Soviet Union challenged the existing modes of water usage, management, and governance in various ways: The unified Central Asian water energy system collapsed. New national priorities replaced the Union's priorities and set new framework conditions based on which water policy is drafted. The financing of the water sector declined, experts emigrated, O&M of the infrastructure collapsed. This chapter will provide a brief summary of these developments. The new context of water governance in the post Soviet period will be described by identifying two fundamental challenges: first, the fact that water usage is subordinate to a new regional situation with new national interests; second, the decline in finances and capacities the water sector has to cope with.

After independence, the successor states were confronted with the task of developing their own sovereign water policy and at the same time they were required to cooperate regarding the management of the transboundary waters. In 1992, the Central Asian states decided that the Soviet water quota system (see above) should remain in force until a new regional water strategy had been developed. However, until today this interim solution persists albeit Kyrgyzstan's and Tajikistan's interest in expanding their respective quotas. This is because the downstream states have no interest in renegotiating the quotas while Kyrgyzstan and Tajikistan are politically and economically too weak to push through a change in the regional agreements (Sehring 2007). Hence, the Soviet water quotas still set the parameters for today's water development plans of the respective states.

Currently, neither Kyrgyzstan nor Tajikistan fully explores their quota because water withdrawal has decreased (see above ch. 5.4.2). In the long term, however, both countries are interested in an expansion of their quota due to a projected increase in water demands (SPECA 2004: 38). According to future water forecasts, Kyrgyzstan will exceed its water quota by 2010 (Djailoobaev 2004: 71). In Tajikistan, the 2002 concept on water resources estimates that 20 22 km³ will be required to meet all of the predicted social and economic needs (Pulatov 2004: 84). Others argue that 18 19 km³ will be sufficient if water saving technologies are introduced.⁴³ Both numbers are clearly above the current limit of 14 km³. This increase in water demand is connected with plans to develop agriculture in order to achieve more food security. There are long term plans not only to improve productivity of existing lands but also to expand the effectively used area through new land reclamation projects. In Tajikistan, there are 880,000 ha that are suitable for agriculture in addition to the 720,000 ha irrigation land already used. There are plans to fully use this potential and expand the irrigation area to 1.6 Mio ha by 2025

⁴² Author's interview with representative of the state land committee, Aini, 10/01/2005.

⁴³ At the moment, approximately 37-38% of irrigation water is lost due to evaporation and filtration. Author's interview with representative of EC-IFAS, Dushanbe, 10/21/2003; with senior official of CFPS, Dushanbe, 10/13/2003; with director of the TajikNIIGiM, Dushanbe, 09/07/2004.

(Rakhmonov 2003).⁴⁴ The objective of more land reclamation in order to meet food security for a growing population was also affirmed in the 2006 Water Sector Development Strategy (MIWM, UNDP, EC IFAS 2006: 9). In Kyrgyzstan, there are also plans to expand irrigation land in order to achieve food security. There are approximately 1 Mio ha land suitable for irrigation. Yet both countries lack the financial resources to realize these plans.⁴⁵

While the quota system remained intact, the integrated water energy system of Central Asia broke down with the end of the Soviet Union.⁴⁶ As described above, Kyrgyzstan as well as Tajikistan has dams and hydropower plants built in Soviet times at their disposal. The original objective then was not power production but enhancement of water storage capacities for a better regulation of irrigation water. With the stored smelt water from the glaciers and its precise discharge, the reclamation of tens of thousands hectares of additional agricultural land was possible, which was especially used for cotton cultivation in the downstream Soviet republics of Kazakhstan, Uzbekistan, and Turkmenistan. Hence, most water was discharged in summer when the power it produced was not needed. In winter, the energy needs of the Kyrgyz and Tajik SSR were in turn covered by fuel imports from the Uzbek, Kazakh and Turkmen SSRs. Due to this system of energy compensations, hydropower production was not a concern for the two republics: “In the past, we did not think about electrical energy” (Vice minister of the *MinVodKhoz*, Dushanbe, 10/09/2003). Since independence, the downstream states have begun to demand world market prices for their energy fuels, which the impoverished upstream states have been unable to pay.⁴⁷ Since then, Kyrgyzstan and Tajikistan have been confronted with energy shortages especially in winter. To become less dependent on energy imports, both countries have decided to use their hydropower potential more.

Kyrgyzstan changed the working regime of the Toktogul reservoir according to its own energy needs: Most of the water is discharged in winter and not in summer (see Table 7 below). While during Soviet times 69% of the water was discharged in summer, in the 1990s it declined to 34%.⁴⁸

Table 7: Water discharge from the Toktogul reservoir

	Average per year	1985-1991		1992-1994	
		Winter	Summer	Winter	Summer
Discharge, km ³	11.46	3.52	7.93	7.59	5.73

Source: Mamatkanov 2002: 25.

In addition, there are plans to build new dams like the two Kambaratin HPPs (*Kambaratinskij GES*) upstream the Toktogul reservoir at the Naryn River. However, due to lack of finance, the plans were not realized during the research period. The plans are not only to cover the energy needs of the country. Kyrgyzstan already exports power to Kazakhstan, Uzbekistan, Tajikistan, the Russian Federation and China and strives to further expand power exports (Giese, Sehring 2007).

⁴⁴ Author's interview with representative of the EC-IFAS, Dushanbe, 10/21/2003.

⁴⁵ Author's interview with water expert at the MISI, Bishkek, 09/16/2003.

⁴⁶ There are only informal yearly barter agreements on water for energy exchanges. An agreement on the Syr Darya of 1998 is not effectively implemented. See Sehring 2007.

⁴⁷ For details see Giese et al. 2004.

⁴⁸ For details and consequences see Giese et al. 2004: 9f.

The new significance of hydropower is even more noticeable in Tajikistan. Hydropower is clearly defined as “priority no. 1” for the development of the country.⁴⁹ Currently, despite the rich hydro energy potential, Tajikistan is a net importer of energy as (1) the storage capacities are not sufficient to produce enough energy in winter; and (2) the northern part of the country is not connected to the power system of the south. The northern Sughd province receives 85% of its power from Uzbekistan. Tajikistan delivers the same amount of energy to the Uzbek province Surkhandarya in the south (Petrov 2003). In winter, power has to be imported from Uzbekistan (90%), Turkmenistan (7.5%) and Kyrgyzstan (2.5%). Import value exceeds export value by 10% (UNDP 2003: 45f). Thus, Tajikistan is dependent on energy imports from Uzbekistan. Since dissolution of the water energy system, this situation has provided a constant problem due to lack of financial means for payment resulting in power cuts on a regular basis. The energy produced in summer has to be sold at a low price (due to low demand) and water is sometimes even discharged without using it to generate power. Next to seeking energy independence, Tajikistan also strives to enter the export market for hydropower.⁵⁰ The hydropower development strategy foresees the construction of 14 dams at the Vaksh and Amu Darya plus about 60 small hydropower stations (MIWM, UNDP, EC IFAS 2006: 51; Giese, Trouchine 2006). In 2005, the construction of three new dams located at the Vakhsh, the most important tributary to the Amu Darya, began: the Rogun and the two Sangtuda dams.⁵¹ As international financial institutions like the World Bank and the IMF were reluctant to finance the projects, Tajikistan turned to other sources. Sangtuda 1 HPP is financed by Russia (250 Mio USD) on the basis of a government agreement between the two countries. Sangtuda 2 HPP is financed by Iran (180 Mio USD), which will also import part of the energy produced. Concerning the Rogun HPP, an initial agreement with the Russian investor RusAl (550 Mio USD) in October 2004 failed due to a dissent regarding the height, type, and costs of the dam.⁵² In early 2007, the government of Tajikistan announced that it would finance the dam completely on its own (ICG 2002; Giese et al. 2004; MIWM, UNDP, EC IFAS 2006: 46; Fergana.ru 2007).⁵³

The economic crisis in both countries also resulted in a decline of finances allotted to the water sector. This had severe consequences for the state of the technical infrastructure. Mean while, most pumping and dam facilities are between 20-30 years old but have neither been modernized nor renovated in the last 15 years. Necessary repairs are only possible with grants and loans from the international development banks. The number of hydrometric stations and posts decreased dramatically. They are essential for the exact measurements of water flows, water withdrawal, and forecasts. In 2004, only 139 of the former 545 gauging stations and posts of the whole Syr Darya basin were still in operation, in the Amu Darya basin 147 of 332

⁴⁹ Author's interview with the chair of EC-IFAS, Dushanbe, 10/08/2003; with a representative of the EC-IFAS, Dushanbe, 10/21/2003.

⁵⁰ Declarations of intended cooperation have already been signed with Afghanistan, India, China, and Turkey (MIWM, UNDP, EC-IFAS 2006: 46).

⁵¹ The construction of the Rogun dam began already in 1976, but was delayed in the 1980ies. At the end of the 1980ies, with the beginning *perestrojka*, security concerns (the dam is situated in a seismic active area) and protests of local population against their displacement and the flooding of holy sites grew and were openly discussed. It was agreed to minimize the dam so that less people had to resettle. After independence, however, the old plans were reanimated, despite the fact that a flood destroyed the dam built so far in 1993 (Niyazi 2003).

⁵² This is the official statement. Unofficially, it is speculated that the closer relations of Russia with Uzbekistan were the reason (IWPR 2007b; Eurasianet 2007).

⁵³ Despite high expectations, the energy potential is often overestimated. Due to the seismic activity in the region, many water resources cannot be fully made available or the costs are too high to make it a sensible investment. Various estimates state that only between 30-50% of the water resources are suitable for economically reasonable exploitation (Niyazi 2003; Petrov 2003). Ecological considerations also have to be taken into account: The salinity in the Nurek and Kairakum reservoirs is already so high today that it has negative impacts on the crop yields (Niyazi 2003).

were functioning (Pulatov 2004: 81). In Kyrgyzstan, the number of water gauging stations has been reduced by two thirds.⁵⁴

In Tajikistan, water infrastructure was not only affected by the general economic decline after the dissolution of the Soviet Union but also by the subsequent civil war. Though exact data are unavailable, according to estimates by the *MinVodKhoz* in Tajikistan about 50% of the irrigation systems and 65% of the pumping systems are in poor condition or are not functioning at all. Calculations assess the costs for renovation at about 130 Mio Dollar, including 22 Mio Dollar annual maintenance costs (UNDP 2003: 55-57; USAID 2002: 1; Bucknall et al. 2003: 27). This has an impact on water usage: Water gauges are out of operation so that farmers cannot calculate exact amounts and use more water than necessary. This leads to salinization and a rise of groundwater levels (UNDP 2003: 26f).⁵⁵ In general it is estimated, that in Central Asia about 30% of the water allotted for irrigation is lost between the source and the farm intake due to evaporation in open channels, filtration, etc (Thurman 2002: 13). For Tajikistan, these numbers are even higher. UNDP even estimates that about 60% of the water does not reach the fields (UNDP 2003: 35).

To sum up, in the light of the uneasy relations between the Central Asian states, the lack of will to cooperate, and the break down of Soviet regional regulations, both countries strive for self sufficiency in the energy sector by increasing hydropower generation and aim for food security by expanding irrigation agriculture. However, both are inhibited in their ambitions to make use of the potential of their water resources due to existing regional agreements and financial limitations. Therefore, on the one hand water is an economically important resource for both countries. On the other hand, due to the above mentioned constraints there is a need to use it efficiently and to cope with the deterioration of the technical infrastructure.

5.5 Kyrgyzstan and Tajikistan as Neopatrimonial Regimes

The last sections described the context variables of water institutional reform. These factors are similar in both countries, as well as in many other developing countries which likewise face the task to develop reforms for good water governance. This chapter will now describe the independent variable. Reconsidering our premise that water scarcity is a not a first order scarcity and that the societal rules of water governance are crucial in addressing the water crisis, it is this regime type that defines the institutional context of water institutional reform. The explanatory variable hence is the neopatrimonial political regime whose characteristics both states are assumed to fulfill. It sets the parameters for politics; it shapes the conditions of the processes through which actors establish and implement rules. It defines the 'corridor' that constrains as well as enables actors' behavior by shaping their perceptions, interests, and strategies.

⁵⁴ Author's interview with a senior official at the *DepVodKhoz*, Bishkek, 09/11/2003.

⁵⁵ The hydro power sector is also affected by the transformation crisis. During Soviet rule, the Tajik energy sector produced 150 Mio USD annually. Subtracting the costs for O&M of 60 Mio USD this was a net gain of 90 Mio USD. Since independence, the revenues declined to 40 Mio USD per year, which are entirely used to cover the costs of operation. Due to the lacking 20 Mio per year, capital renovation was not possible during the last 15 years, resulting in the breakdown of turbines and transformers, leakage of dams. Therefore Tajikistan now needs to discharge about 30% more water to produce the average amount of energy of 15 billions kW than under normal conditions (UNDP 2003: 25, 46f).

In order to measure the impact of neopatrimonialism on water institutional reform (WIR), it became evident during the research process that it is difficult to measure the effect of the distinct features of neopatrimonialism directly. Rather, neopatrimonialism as a characteristic of distinct institutional settings relevant to water governance influences WIR indirectly via these institutional determinants. Thus, four variables were defined which grasp the characteristics of neopatrimonialism and influence water institutional reform. These variables were identified by combining an inductive proceeding with theoretical considerations (see above). They are presented in Table 10. Two of the variables address the political process in a strict sense: first, the institutions of decision making, hence the institutional conditions that define which actors take part in the process and which issues are placed on the political agenda and will result in political decisions; second, the endogenous variable of inter- and intra-institutional linkages of water institutions. The other two variables address the institutional environment of water governance: the conditions of the agricultural sector and of local governance. They define the context of implementation of the WIR.

The shared categorization of both countries allows restricted generalizations on the prospects of institutional reforms in other neopatrimonial states. The category of the developing, neopatrimonial state includes many of today's countries where water reforms occur. The study hence provides insights that might be of relevance for all countries of this type. Both cases vary within this type so that their comparison enables us to make inferences about the impact and significance of certain aspects. Kyrgyzstan adopted formal changes to democracy and market economy. In Tajikistan, in contrast, such changes were decided on to a much lesser extent and state power remained weak. Do these formal changes matter in the face of informal patrimonial features and do they provide a strong opportunity for path change in Kyrgyzstan or do the shared informal patterns dominate so that both countries show the same path dependent policy outcomes?

The concept of neopatrimonialism in general was described in chapter 4.1. A neopatrimonial regime was defined as combining formal democratic structures with patrimonial features of autocratic and personalistic leadership, political clientelism, and endemic corruption. In this section, first the peculiarities of neopatrimonialism in Kyrgyzstan and Tajikistan will be described. In the chapters thereafter (5.5.2-5.5.5), the three variables measuring the impact of neopatrimonialism on water institutional reform as well as the role of donors as an interfering variable will be explained.

5.5.1 General Features of Neopatrimonialism in Kyrgyzstan and Tajikistan

This chapter shows how the above defined characteristics of the ideal type of neopatrimonialism manifest themselves in Kyrgyzstan and Tajikistan and hence justify a classification of both countries as hybrid neopatrimonial regimes.

Formal Democratic Institutions

The newly independent Central Asian states inherited the formal bureaucracy of the Soviet republics and adopted formally democratic constitutions. Kyrgyzstan is formally a state with a democratic constitution (adopted in 1993) guaranteeing separation of powers, rule of law, free elections, and basic rights. The first years after independence were characterized by a process of political and economic liberalization. Askar Akaev was the only Central Asian president who had not been part of the Soviet communist party cadres before. Kyrgyzstan is the only Central

Asian state to become member of the WTO (in 1998). For the first half of the 1990s, Kyrgyzstan was regarded as an “island of democracy” (Anderson 1999): a model country of the successful transition to democracy and market economy. The initially semi presidential system with a two chamber Parliament (*Zhogorku Kenesh*) changed into a strong presidential system during the 1990s. Several changes of the constitution restricted the role of the Parliament and reduced it to one chamber in 2003. The President is head of state and appoints the Prime Minister, regional governors, prosecutor general as well as other public prosecutors and judges. He defines the principles of domestic and foreign policy. The Prime Minister is head of government and appoints the *akims* (heads) of district (and until 2001 of local) administration (Von Gumpfenberg 2004; Huskey 2002). The party system in Kyrgyzstan consists of many parties, but it is weak and fragmented. Parties are generally not based on a common ideology. Instead party identity relies on (often regionally based) solidarity and patronage networks. Most deputies are not party members at all but are individuals that serve their network directly or via local intermediaries. In this respect, Pétric (2005: 324) even goes so far as to say that democratization aggravated clientelistic practices. According to him, despite the relative unimportance of the Parliament in political decisions, interest in a seat in Parliament is also aroused due to a growing lack of sufficient posts in the higher bureaucracy (donors demand reduction) and due to an interest of business men in getting immunity and receiving access to the political stage. Due to many programs aiming at fostering democracy by building civil society and establishing NGOs, a vivid civil society evolved. The number and activity of Kyrgyz NGOs is highest in Central Asia. There are about 3 7,000 registered NGOs. It is estimated, however, that only about 800 of them are active and work effectively (Von Gumpfenberg 2004: 159; Lewis 2006: 3, 35; Pétric 2005: 319).

The first years of independence of Tajikistan were characterized by civil war. The civil war is too complex to be presented here in detail, so I will limit my account to the most important benchmarks.⁵⁶ It started in 1992. Though often perceived as a conflict between communists and Islamists, it actually was a conflict between different regional networks that did not succeed in coming to an agreement after independence: the old communist elite in Leninabad, the internal opposition based in Kulyob,⁵⁷ and the United Tajik Opposition (UTO), which was headed by the IRP (Islamic Revival Party) that had its main base in the Gharms valley and in the Pamir.⁵⁸ In 1994, after a ceasefire the peace negotiations started assisted by UN mediation. In 1997, a peace accord was signed. The UTO was guaranteed a 30% share of the offices in the central and lower government (Schwarz, Rakhmonova Schwarz 2004; Atkin 2002).⁵⁹

According to constitution adopted in 1994, Tajikistan is a democratic, secular, unitary state with separation of powers and a presidential system. Head of State and Head of Government is the President. He appoints the Prime Minister and the cabinet, who are then approved

⁵⁶ For an overview see Bischoff 1998; BTI 2003: 2-6; Herbers 2006: 47-69.

⁵⁷ In 1996, the governing faction of the Communist Party from Kulyob set up its own party (People's Democratic Party) to become independent from the Communist Party and its patronage network. Consequently, the Communist Party lost influence.

⁵⁸ The Pamiri, who speak several Pamir languages, belong to the Ismaelites, a Shiite faction known for a liberal and progressive interpretation of Islam (but also not recognized by many other Moslems). They are adherents of Prince Aga Khan IV as their spiritual leader. This is more important for their identity than the Tajik citizenship. A hunger catastrophe in the Pamirs during civil war was only prevented by the engagement of the Aga Khan Foundation. Also thereafter, it fulfilled basic state tasks such as social security.

⁵⁹ While Tajikistan is now the only Central Asian state with a legal Islamic party (and the only one with an Islamic party in government), this should not be misinterpreted: The IRP lacks a clear Islamic concept and its main interest was to influence resource distribution. Here, it used Islamic paroles in order to get support and to confront the communist faction.

by the Parliament. The Parliament (*Majlisi Oli*) consists of two chambers: The lower chamber (*Majlisi Namoyandagon*) consists of 63 delegates who are elected directly for a five year term (65% on majority vote in the districts and 35% on party lists). The upper chamber (*Majlisi Milli*) has 33 members, 25 of whom are elected delegates of local assemblies and eight are appointed by the President. They also serve a five year term. *Majlisi* with elected representatives also exist at the regional level in the *oblasts* (provinces) Sughd (former Leninabad) and Khatlon (unified former Kulyob and Kurgan Tebbe *oblasts*), the Gorno Badakhshan Autonomous Oblast (GBAO)⁶⁰, the Regions of Republican Subordination (RRS)⁶¹, and the city of Dushanbe. Since 2000, opposition parties (banned in 1993) have been allowed again. Similar to Kyrgyzstan, they all lack a mass basis and sound infrastructure, and are generally not involved in the political process. Until now, all elections have failed to meet OSCE standards. Despite the fact that the conflicts have been settled, Tajikistan remains a fragile and fragmented state with only limited assertiveness of state structures (Schwarz, Rakhmonova Schwarz 2004: 265f; Abdullaev 2004: 11).

The main aim after the peace agreement in 1997 was to reach stability by including the opposition groups in the government and by reasserting state control over all parts of the country. This was mainly achieved through a high centralization and monopolization of power by the President and his apparatus, legitimized by the need to overcome subnational disintegration. Consequently, “no deep political reform or change of the functioning political system has taken place. (...), the current regime and its political personnel have operated according to the established political models and cultures which were in place in the Soviet Union” (De Martino 2004: 152). These were even reinforced by a system combining strong authoritarianism of the President with the backing of his regional elite.

As in other parts of the Soviet Union, the *glasnost* period at the end of the 1980s led to the establishment of NGOs in the urban areas in the Tajik SSR as well. These NGOs were mainly concerned with environmental issues, women, or Tajik culture. However, during the war and post war period, most of them concentrated on social and humanitarian tasks. Although the number of NGOs increased after the end of the civil war (in 2002 there are estimated to be more than 1,200 NGOs), there are hardly any advocacy oriented ones (Freizer 2005: 226f). NGOs do not play any role in the decision making process. They lack effective umbrella organizations and have weak connections to the Parliament and are not organized well enough to draw attention to their policy proposals, if they have any (IWPR 2007a).

Both countries cannot be classified as democracies or even as transition countries as they have consolidated below the threshold to democracy. To illustrate the difference in both regimes, it is useful to have a look at some governance and democracy measurement indices developed by various organizations and academic institutes. The following two tables 8 and 9 show the indices of Freedom House and the World Bank. These were chosen as their data sets in contrast to others reach back until the beginning of the transformation period (Freedom House) resp. the middle of the 1990s (World Bank); hence they show the different ways of transformation in both countries.

The Freedom House data show the period of political liberalization in the beginning of the 1990s in Kyrgyzstan as opposed to the civil war Tajikistan. Although the World Bank data

⁶⁰ The GBAO covers the Eastern part of Tajikistan, in total 44,5% of its territory. However, this consists mostly of high mountains. Only three percent of the population lives in this area. The inhabitants are mainly Pamiri Ismailites with a distinct religious and cultural identity and their own languages (Abdullaev 2004: 9).

⁶¹ The RRS encompass 13 districts and four cities (including the capital Dushanbe) in the central part of Tajikistan that are directly subordinate to the national government.

start later, both data sets show how both countries turned into similar hybrid regimes after different initial transformation periods. Tajikistan received better rates from the end of the 1990s on and Kyrgyzstan worse, so both countries realigned. Nevertheless, formal democratic institutions are stronger and more stable in Kyrgyzstan than in Tajikistan. In both countries, however, their effectiveness is limited by informal practices, which will be outlined in the next sections.

Table 8: Freedom House Ratings for Kyrgyzstan and Tajikistan

Freedom House															
Indicator	State	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Political rights	KG	4	5	4	4	4	4	5	5	6	6	6	6	6	5
	TJ	6	7	7	7	7	6	6	6	6	6	6	6	6	6
Civil liberties	KG	2	3	3	4	4	4	5	5	6	6	5	5	5	5
	TJ	6	7	7	7	7	6	6	6	5	5	5	5	5	4

1.0-2.5: free; 3.00-5.00: partly free; 5.50-7.00: not free

Source: <http://www.freedomhouse.org/uploads/fiw/FIWAllScores.xls> (accessed 12/07/2007)

Table 9: World Bank Governance Indicators for Kyrgyzstan and Tajikistan

World Bank Governance Indicators										
Indicator	State	1996	1998	2000	2002	2003	2004	2005	2006	
Voice and accountability	KG	-0,71	-0,71	-1,18	-1	-1,08	-0,96	-0,8	-0,7	
	TJ	-1,63	-1,66	-1,38	-1,32	-1,28	-1,3	-1,17	-1,27	
Political stability	KG	0,57	0,01	-0,48	-1,18	-1,25	-1,16	-1,14	-1,2	
	TJ	-2,59	-2,26	-1,86	-1,42	-1,41	-1,41	-1,33	-1,3	
Government effectiveness	KG	-0,49	-0,28	-0,49	-0,64	-0,65	-0,72	-0,89	-0,86	
	TJ	-1,61	-1,49	-1,24	-1,13	-1,11	-1,12	-1,1	-1,06	
Regulatory quality	KG	-0,46	-0,49	-0,33	-0,19	-0,25	-1,16	-0,66	-0,57	
	TJ	-2,26	-1,99	-1,28	-1,29	-1,12	-1,06	-1,02	-0,98	
Rule of law	KG	-0,64	-0,72	-0,88	-0,77	-0,82	-0,82	-1,07	-1,18	
	TJ	-1,55	-1,74	-1,52	-1,3	-1,09	-1,14	-1	-1,06	
Control of corruption	KG	-0,85	-0,7	-0,89	-0,85	-0,85	-0,98	-1,06	-1,09	
	TJ	-1,74	-1,33	-1,2	-1,03	-1,02	-1,16	-1,07	-0,91	

Rating: -2.50 (very poor governance record) to +2.50 (very good governance record)

Note: There are no data for 1997, 1999, 2001 and prior to 1996.

Source: http://info.worldbank.org/governance/wgi2007/sc_country.asp (accessed 12/07/2007)

Autocratic and personalistic leadership

Both countries have authoritarian features (Tajikistan more so than Kyrgyzstan) and deficiencies regarding basic democratic principles such as civil rights, free elections and separation of power. Despite the establishment of quasi democratic rules, these are often not effectively put into practice. The presidential systems in Kyrgyzstan and Tajikistan soon showed autocratic

and personalistic regime characteristics, coinciding with a centralization of competencies and a lack of power control. In Kyrgyzstan, which had a more Parliamentary system in the beginning, the President initiated several national referenda in 1996, 1998, 1999, and 2003 with which Parliamentary powers were gradually reduced and those of the President were enhanced.⁶² A dubious interpretation of the constitution allowed a third presidential term for Askar Akaev (BTI 2003 1 2; Von Gumpfenberg 2004: 157). Similarly, in Tajikistan two referenda in 1999 and in 2003 secured the presidential stay in power (Schwarz, Rakhmonova Schwarz 2004: 265). Both presidents, Askar Akaev in Kyrgyzstan⁶³ and Emomali Rakhmon⁶⁴ in Tajikistan, prevented a change of power through elections, changed the law in order to prolong their term in office, and relied on personal networks to secure their power.⁶⁵ The Parliaments in both countries effectively do not have any control function as the President can circumvent its legislative function by ruling with referenda and decrees. Also the judiciary is factually subordinate to the President (BTI 2003, 2003a, 2006, 2006a). Elections do not meet OSCE standards.

In contrast to formal separation of power, in both countries the executive is the most powerful state institution. The President and his personal apparatus dominate politics while the Parliament plays only a marginal role. In Kyrgyzstan the Prime Minister is formally head of the government, but he actually “serves as a figure shielding the president from policy failures and criticism” (Lewis 2006: 21). The leading figures of the Presidential administration have more power than the Prime minister. Lewis (2006: 22) describes the relation between the often duplicating bureaucracies of the President and the Prime Minister as follows: “the presidential administration has extensive powers but lacks accountability whereas the prime ministerial administration accounts for all policy decisions but has few powers”. Consequently, while the first president Akaev stayed in power 14 years, the average term in office of the Prime Ministers was only about 18 months (Lewis 2006: 21). In addition, Akaev’s family was (and still is in part) very active in politics, especially his wife Mairam Akaeva, his son Aidar, and his daughter Bermet.

In Tajikistan, there is an enormous concentration of power with the President. The post of Prime Minister is even described as “rather nominal” (Abdullaev 2004: 11). The President appoints all of the ministers, governors, judges, and mayors. The policy development is mainly in the hands of the presidential apparatus. The agreement of the peace accord to assign 30% of all government positions to UTO is hardly implemented and if so, then only on lower levels of the administration. In order to exclude UTO, executive powers were increasingly transferred to the Presidential apparatus, which turned into a “super government” (Abdullaev 2004: 12), partly duplicating the responsibilities of ministries and without effective control by the Parliament. On the other hand, several experts mention that Rakhmon might not be as strong as he appears but rather may be dependent on several powerful persons that act as “*éminence grise*” behind him. Key actors from Kulyob fill major power positions such as important ministries, general prosecutor, chairman of *Majlisi Milli*, or are members of the Committee on Radio and TV (Abdullaev 2004: 11f).

⁶² The Parliament (*Zhogurka Kenesh*) with 105 seats was replaced by a system of two chambers. Later it was again reduced to one chamber, which comprised only 75 deputies. Proportional representation was replaced by majority vote.

⁶³ The period after the end of the Akaev regime in March 2005 is considered only marginally in this study.

⁶⁴ In early 2007, the President changed his surname from the russified version of Rakhmonov into Rakhmon.

⁶⁵ In Kyrgyzstan, therefore the term *keminism* evolved, referring to the Kemin district, where Akaev and most part of his political network come from (Lewis 2006: 16).

Hence, in both countries the presidential administration is a powerful bureaucratic apparatus solely accountable to the President.⁶⁶ De facto also the governors and the local agencies are subordinated to the president and not to the prime minister, albeit de jure they are controlled by the latter. The members of the high courts are also nominated and dismissed by the president. The judiciary is actually subordinate to the President and lacks the capacity and power to act independently. The courts are not trusted by the population as they are considered to be corrupt and government dependent (Dukenbaev, Hansen 2003: 34f; Lewis 2006: 24f; GoT 2002: 18f; BTI 2003, 2003a, 2006, 2006a).

Due to the high personalization of power, policy outcomes depend highly on the personal motivation, capacities, and abilities of the respective person in power and his patronage network. This is not a new phenomenon after independence, but builds on patriarchic and hierarchical societal traditions and was already visible during Soviet times: The term in office of the Central Asian party leaders was on average 22 years; due to highly personalistic power structures, ultimately, the Soviet state stayed subordinate to the logics of personal relations (Hensell 2004: 18). Today, quasi democratic rules co exist with personal and regional forms of political loyalty.

Political Clientelism

Many scholars of Central Asian politics agree that clientelism and patronage is a dominant feature of politics in the entire region (Geiss 2006; Cummings 2002; Ishiyama 2002; Collins 2002). In Central Asia, political clientelism is closely connected to powerful regional networks. For centuries, Central Asia was ruled by different hordes in the nomadic parts and Emirs in the Khanates of the oasis regions. Clans, kin groups defined by a (constructed) shared ancestor, have been the primary units to which collective identities referred. In Tajikistan, the basic unit is the *avlod*, the extended family, that often includes loyalty to clan or regional based groupings (Abdullaev 2004: 7, BTI 2003: 7). The USSR organized people into *kollektivnye* and *sovetskije* brigades (the sub units of the collective and state farms). But it failed to entirely replace the existing institutions. The new structures often replaced old ones only by name while actually *kollektivnye* were often structured according to clans or other kin groups and then formed a new solidarity group in which the chief of the farm inherited the role of the elder (and often this position was indeed inherited by his son). Members of the s/k belonged to it qua birth in the *kollektiv*, even when grown ups eventually left the *kollektiv* to go to another working place. Roy (2000) hence classifies *kollektivnye* as “neo tribal”.

Soviet policies tried to abolish existing, “traditional” social institutions and to strive to replace them with Soviet, ‘modern’ ones. However, in many cases existing institutions were only superficially superseded, transformed or even strengthened by Soviet institutions: For example, *bashars*⁶⁷ were transformed into “*subbotniki*”, the Soviet form of collective voluntary work; *sovetskije* and *kollektivnye* were organized along kin ties, brigades were often set up parallel to *maballa* structures (Roy 2000: 85 100; Grundmann 2004: 10). It would be wrong to account for these phenomena by blaming a “patrimonial Socialism” in peripheral regions as opposed to a rational and “modern” Soviet bureaucracy and power apparatus in the center. The Soviet Union as a whole was deeply penetrated by patronage and corruption as crucial informal rules.

⁶⁶ Scholars of post-Soviet countries explained the overall establishment of presidential systems in the FSU states (apart from Latvia and Estonia) with the preservation of long-standing patterns of relations to state authorities which often took on the role of the former Communist Party institutions and often even exceed them in size (Beissinger, Young 2002a: 45).

⁶⁷ For an explanation see chapter 5.3.

In Soviet times, patronage networks were critical for gaining access to resources. These networks were also decisive regarding cadre politics and the allocation of positions. The Soviet Union had an extended informal economy and bribing officials was a general norm in order to get public benefits. Horizontal networks for redistribution as well as clientelistic patronage networks (vertical) were very important (Hensell 2004; Geiss 2006).⁶⁸

Therefore, in Kyrgyzstan and Tajikistan clientelistic structures existed at the time of independence. To these structures, independence was less of a revolution than a restoration (Starr 2006: 9). During the transformation period, patronage systems provided stability and security that state structures were no longer able to guarantee, neither on the state nor on the local level. Nowadays, clientelism shapes politics at the highest level – the selection of the president as well as on the local level. The presidents, and other people in power positions, are responsible to the regional patronage network that brought them into power. In contrast to the formal rules outlined in the constitution, the realities and practices of politics build on personal, regional and clientelistic coalitions, thereby enforcing regional identities and personal loyalties (Dukenbaev, Hansen 2003: 6; Abdullaev 2004: 7f; Collins 2002: 142; BTI 2006: 15, 2003a: 13).

The Tajik civil war was also driven by the competition for power between the leaders of different regionally based patronage networks. Collins (2002) classifies Kyrgyzstan as well as Tajikistan as “clan hegemonies” with weak institutionalized, strongly personalistic informal regimes where the meso level is the most important political level as this is where resource distribution along kin networks takes place. She argues that superficially, Kyrgyzstan appears to have certain democratic features, however, they are hardly enforced and reforms are only carried out in order to fulfill the conditions of the IFIs. She distinguishes Kyrgyzstan from Tajikistan by categorizing the former as consensual clan hegemony and the latter as a confrontative clan hegemony. Other scholars mention that the role of clans might be exaggerated as Western scholars pay unnecessary attention to this issue due its exoticness, and Central Asian officials exaggerate the threat of regional disparities to raise more international aid. Therefore, these scholars question the stability and impact of clan networks in practice (see Bichsel 2006: 79; Lewis 2006: 2). Consequently, Jones Luong (2002) as well as Dukenbaev and Hansen (2003) use the term *regionalism* instead of clan politics. While this is somewhat confusing due to the fact that different meanings of the term already exist, it evolved as a keyword often referred to in discourses on Central Asia. It can be defined as follows. Clan affiliations often correlate with regional identities and are connected a certain region. By emphasizing regions instead of clans, the construction of those identities becomes apparent. Regionalism then can be understood as a power struggle between different elite groups with their respective patronage networks that are based on geographic and ethnic attributes as the basis of their legitimacy. Such an approach does not frame regional identities as pre Soviet forms of collective identity that are still effective nor as newly re emerging identity patterns. Rather, it perceives today’s identity based networks to be a result of Soviet politics which affected former identities. Regionalism in both countries is a complex phenomenon but can only be briefly described here: Kyrgyzstan is characterized by a ‘north south conflict’ between the northern provinces that are better off economically, politically more powerful, and ‘russified’ and the southern provinces that are

⁶⁸ The expansion of Soviet power to peripheral regions such as that of Central Asia was not a result of party politics and establishment of strong state structure, but rather resulted from the expansion of the clientelistic networks of Stalin. Elite recruitment occurred mainly through patronage networks. A main characteristic of the development of the strong Soviet state in the two decades after the October revolution was exactly the above-mentioned combination of formal bureaucratic institutions and informal networks. Soviet nationality and cadre policies reinforced patrimonial structures instead of serving to abolish them (Geiß 2004: 26f; Dukenbaev, Hansen 2003: 18).

poorer, have a large Uzbek population, and more 'traditional'. The 'North' mostly refers to the provinces of Chuy and Talas, but also to Naryn and Issyk Kul although Naryn is very poor (and partly more southern than Jalal Abad) and the two latter do not dominate the political scene. The 'South' comprises the provinces Jalal Abad, Osh and Batken. Until the so called 'tulip revolution' in 2005, most of the political elite came from the north. This raised discontent among the public as well as among excluded regional networks that culminated in the political upheaval in March 2005. The revolution itself as well as the developments in the aftermath vividly demonstrated the clientelistic nature of policy making in Kyrgyzstan with the need for balancing the interests of powerful networks and satisfying the interests of different regions (see e.g. Marat 2007; Sehring 2005). Clientelistic networks are also a decisive factor in staff recruitment. About 25% of all state employees during the Akaev era were said to come from Talas, the home region of the president's wife, who also played a strong role in influencing appointments (Anderson 1999: 42).

In Tajikistan, regional identities are reflected by the Tajik proverb: "Leninabad governs, Kulyab guards, Kurgan Tyubbe plows, and the Pamir dances". During Soviet rule, from 1946 1991 all republic leaders of the communist party in the Tajik SSR came from the same Leninabad regional network. The new government of President Rakhmon comes from the southern region Kulyob. One reason for the Tajik civil war is widely seen in the conflict of regional networks and the failure of informal alliances between competing groups like in other Central Asian states (see Collins 2002; Geiss 2006, Herbers 2006: 47-69). As already mentioned, according to the peace accord 30% of all government post should be given to UTO nominees. However, this was never realized. Important positions are filled with people from the President's network from the region of Kulyob. Hence, people speak of a 'kulyobization of administration'. The result is that many positions are filled by unqualified persons.

Corruption

The Corruption Perception Index (CPI) by Transparency International (TI) has rated Kyrgyzstan and Tajikistan since 2003 and shows high levels of corruption in both countries. Both countries are among the 30 states perceived to be the most corrupt in the world. On a scale ranging from 10 (highly clean) to 0 (highly corrupt), in Kyrgyzstan corruption is perceived to be slightly lower (2.1 to 2.3) than in Tajikistan (1.8 to 2.2).⁶⁹

Petty corruption was a common feature in the Soviet Union, but in Central Asia it was even more widespread than in other Soviet republics. However, it was outweighed by the importance of personal relations (Hensell 2004: 19; Dethier 2003: 6; Grodeland et al. 1998). After independence, corruption increased dramatically and even became a type of informal tax law. This is explained by the increased need for money as opposed to relations, the weakness or complete absence of control structures, the redistribution of state assets, and the need to create new institutions. Foreign investments and development aid provided additional opportunities for sidelining money (Freitag Wirminghaus 2004: 170f; Dethier 2003: 7). Especially in Kyrgyzstan, which maintained a relatively strict privatization policy, assets and resources that could be distributed became scarcer, and it quickly became common to use the possibilities granted by an office in short time. Hence, corruption, office buying, and bribe practices increased (Geiss 2006: 35). In Kyrgyzstan grand corruption is considered to be a "key determinant of institutional and policy outcomes" (Dethier 2003:13).⁷⁰ Despite the low salary, leading positions in

⁶⁹ See http://www.transparency.org/index.php/policy_research/surveys_indices/cpi (accessed 03/08/2007).

⁷⁰ It is even argued that the HIPC initiative was rejected by the government due to its threat to corruption in the public administration and energy sector (Marat 2007a).

state agencies are sought after because they provide an additional source of income through bribes. If they are given to a network companion they are usually 'bought' (just like well paying jobs in the private economy). According to media reports after the fall of the Akaev regime, fees for government positions range from 30,000 USD to 200,000 USD, others estimate even up to 500,000 USD (Marat 2006: 126f; Lewis 2006: 29; Dethier 2003: 25). Dukenbaev and Hansen (2003: 9) state for Kyrgyzstan: „Nearly everyone who has ever held any public position whatsoever, beginning with the lowliest policeman, is vulnerable to such charges [of corruption] as the entire system is so riddled with corruption that there is virtually no one who has not engaged in it“. In Tajikistan, the high level of corruption is supported by the weak legal framework and limited access to information that allows arbitrary fees to be levied by officials. Much of the corruption is also part of the extensive drug and weapon trade that is estimated to be linked to 30-50% of the economy (Jones Luong 2003: 28).

After this introduction to the general characteristics of neopatrimonialism in the two case studies, the following sub chapters will describe how the identified independent variables are penetrated by the neopatrimonial characteristics and by a complex interaction of formal and informal institutions.

5.5.2 Institutions of Decision Making

As was outlined in the chapter 4.2, institutionalist policy analysis assumes that orientations and actions of political actors are shaped by institutions, be they formal or informal. In line with this approach, the first identified variable is the institutional design of the decision making process. This encompasses all formal and informal rules that regulate which actors gain access to the decision making processes and their interaction. The analysis also includes the identification of key actors and their interests and strategies. Many features of this variable were already mentioned in the previous chapter on general features of neopatrimonialism. The institutions of decision making are directly dependent on the degree of democracy and patronage. Decision making processes in neopatrimonial states are characterized by a strong dominance of the president and his circle and by the dominance of particularistic interests in contrast to common welfare interests. The value of this variable differs with regard to the degree of openness and inclusiveness of the process according to the authoritarian character of the regime. Is it a small group of key actors that defines policy priorities or can the public and the concerned public bodies participate? In both case studies, decision making follows mainly internal agenda setting and rule formulation without public participation.

Kyrgyzstan

In the previous chapter, the dominance of the President and his apparatus was already described. This apparatus dominates decision making, while the ministries have less influence and the Parliament is widely marginalized. While factual decision making does not necessarily follow formal procedures, there are at least regulations regarding the consultation in law development processes which are applied. However, they may not be effective as informal decision making is outweighing the formal procedures. As was said before, parties do not form ideological blocs, but often present certain social or regional networks rather than ideological movements. They do not exert meaningful influence in the agenda setting process or during the formulation of policies. NGOs were targets of numerous capacity building programs that

enabled them to participate in political discussions. Although they have only restricted access to decision making, they take part in political discourse. The presidential administration is still the main actor of decision making. Survey data provided by the Asiabarameter show that this is also widely perceived by the population: 62.2% of the respondents in Kyrgyzstan agreed that people do not have the power to influence political decisions. Consequently, people widely counterbalance this deficit by relying on personal networks and using connections (Dadabaev 2006).

Tajikistan

In Tajikistan, the regime is more restricted and authoritarian than in Kyrgyzstan. The role of the President and his apparatus is, as was described before, even more exclusive. In addition, due to the civil war, a considerable part of the *intelligentsiya* emigrated, which weakened the capacities to participate in the political discourse of state agencies as well as in the academic and non governmental sector. The authoritarian rule provided no opportunities to strengthen these or to establish forums to formulate positions, unlike in Kyrgyzstan. Much more so than in Kyrgyzstan, the discussion of decision making in Tajikistan is restricted to the Presidential decisions without public debate.

Despite general similarities, the values of this variable vary in both countries: In Kyrgyzstan the formal and informal institutional design of the decision making processes allows more thematic openness and actors than in Tajikistan. However, in both countries the President and his followers have the final say.

5.5.3 *Institutional Conditions of the Agricultural Sector*

Agriculture is worldwide and in the two studied cases the main water user. Hence many water institutional reforms address water usage in agriculture. The agricultural sector shapes the conditions based on which water institutional reforms have to be enforced.

The organization 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 the agricultural sector which had been organized in huge collective and state farms (*kollektives* and *sovkhoses*).⁷¹ After independence, both states started to conduct a land reform. The privatization of state and collective farms did not only change the agricultural sector; it was also besides the state budget crisis the main stimulus for an irrigation reform: As thousands of small farms came into existence, the new situation was a challenge for water management in the irrigation sector. While before the large scale *sovkhoses* and *kollektives* had been responsible for water distribution inside their areas and the maintenance of the on farm canals, now the newly emerged small farms had to be supplied with water individually. As nobody felt responsible for the operation and maintenance (O&M) of the on farm channels and due to the lack of financial means, investments in infrastructure maintenance almost stopped, irrigation systems deteriorated and water use was not controlled anymore. The new situation demanded new forms of management and hence influenced problem awareness and policy formulation.

⁷¹ While a *sovkhos* was directly managed by the government, a *kollektiv* was managed by an elected administration, which however had to be approved by the local party committee and also had to follow state instructions. The difference between both were however rather marginal since the 1960s. Both encompassed typically more than 1,000 ha (Herbers 2006: 100ff).

On the other hand, these reforms directly affect implementation of water institutional reforms as they present the context in which they have to function. The agricultural sector is also characterized by neopatrimonial features. It was even the sector wherefrom some of the classical studies on patronage and clientelism derived their insights (e.g. Spittler 1977; Gellner, Waterbury 1977). Neopatrimonialism manifests itself in certain institutional conditions that have strong implications for the performance of water institutional reforms.

Kyrgyzstan

In 1991, 465 *kolkebozes* and *sovkebozes*, two experimental farms and 37 interfarm organizations with their own irrigation systems existed (Johnson III, Stoutjesdijk, Djailobayev 2002: 3). In the 1990s, the Kyrgyz government conducted a nation wide land reform in several steps. Since 1998 full private ownership of land has been permitted. 75% land area of the former *sovkebozes* or *kolkebozes* (FSK) was distributed among the local population while 25% remained with the state. These 25% are managed by the local government (*aiyl okmuto*, a/o), and are occasionally leased to private farmers. Each FSK member of working age had the right to land with an average size of 0.35 ha.⁷² In addition, families kept their assigned garden plots (*ogorod*)⁷³ as private property. During the land distribution in the course of the privatization influential members of the FSK (directors, brigadiers, etc.) and local officials were often favored by being allotted better plots at the upper runs of the irrigation systems while the majority of FSK members suffered from lack of transparency and information on the procedures and their rights. Many FSKs have been transformed into joint stock companies or different kinds of cooperatives. Today there are about 1,700 new cooperative or enterprise farms, over 280,000 small private farms and some hundred thousand *ogorod* of less than 1ha. These home gardens constitute nearly 50% of the agricultural gross domestic product;⁷⁴ the agricultural sector hence is dominated by subsistence production (Giovarelli, Akamatova 2002: 1; Zitzmann, Trouchine 2005: 33 36; Mamaraimov 2007; Hassan et al. 2004: 7f; Thurman 2002: 3).

A lot of experts meanwhile tend to critically question the radical and quick privatization in the agrarian sector. It brought forth thousands of petty farmers with neither the necessary knowledge nor the necessary means for lucrative agriculture. In general, the assigned plots are too small for efficient agriculture and to make any benefits from cash cropping. Only those who rent additional fields can make a profit. Sometimes the plots are even too small for subsistence farming. In addition, farmers usually do not possess the technical equipment they need. They have to hire it from the FSK or from private persons, which is cost intensive. Further input factors have to be bought, e.g. seed and fertilizers. Taxes, water fees and (in case of market production) transport costs have to be paid. Finally, lacking markets and lacking market access due to transportation costs or closed borders is limiting the economic opportunities. These are the reasons why most farmers do not make any profits. Even the cotton sector, hit by the low world market prizes, does not provide enough income to feed a family. Since there are rarely any other sources of cash income, working migration to the cities or abroad seems to be a better option for many villagers (Bucknall 2003: 4; DFID, Mott MacDonald 2003: 3 5;

⁷² The exact amount was dependent on the region. In the land-scarce south of the country, it was in general less, while in some places in the Chuy region it could amount to up to one ha per person (Mamaraimov 2007). Pastures were excluded from privatization.

⁷³ An *ogorod* is a small garden plot which every household in an FSK in the USSR was allotted for private subsistence agriculture. It has a different legal status than the other land.

⁷⁴ Already during the last years of the USSR, the significance of the *ogorod* was tremendous: in 1989, while *ogorods* accounted for only 3% of the cultivated area, they accounted for 25% of the agricultural production (Herbers 2006: 106).

Mamaraimov 2007). These constraints lead to wide spread poverty and prevalence of subsistence production. As a result, the Kyrgyz agricultural economy is mainly a barter economy with little cash transfer. It is assumed that a considerable share of all economic transactions is barter trade, even if exact details and data are unavailable (Hassan et al. 2004: 30). The agrarian sector is virtually “de capitalized” (DFID, Mott MacDonald 2003: 10 9).

This general situation could also be observed in Sokuluk Raion, where the local case study was conducted. The main cultivation products there are sugar beets, grain, melons, beans and grapes. In addition, fruit and vegetable are grown for subsistence. Despite the relative proximity of the capital, many villages do not dispose of good market access, as roads are bad and transportation costs high. The research focused on two villages: Studencheskoe was the former research and training farm of the Agrarian University (*Uchebnoe Khozyaystvo, UchKhoz*) and there fore used to be a rather wealthy village in Soviet times. However, like all rural places in Kyrgyzstan it suffered from a decline of all local facilities like the youth center, the public bath house, the library, the kindergarten after the break down of the collective system. School and streets are in a bad condition. Though there are some new employment opportunities (e.g. small furniture and noodle factories), people live very poorly. On average each household possesses 5 7 ha land. The *UchKhoz* still exists on a smaller scale, but nowadays is amended by 128 private farms. Studencheskoe is part of the Frunze a/o. The other three villages of the a/o belonged to the former *sovkhoz* “Frunze”. After it was dissolved in 2000, now most farmers are members of the cooperative “Altyn Talaa”.⁷⁵ The director of the cooperative is the former director of the *sovkhoz*.

The second research site was the village Zhany Pakhta, located in the lower part of the Sokuluk valley close to the border to Kazakhstan. The *Ayil Okmotu* of the same name consists of 5 villages – Zhany Pakhta, Zarya, Ak Kashat, Mayskoe, Mirnoe. Before the land reform, the whole area belonged to a state breeding farm (*Semenoe Khozyaystvo, SemKhoz*), which still exists on a smaller scale. Today, there is also an agricultural cooperative (*selskokhozyaystvennyj kooperativ, sk*) “Zhany Pakhta” and 113 small farms. The *ayil okmotu* owns 400 ha land that is partly rented to migrants. People here mainly cultivate cereals. Vegetables are not grown on a large scale, as the way to the market in Bishkek is too far to make it lucrative for the farmers to sell them. A consequence of the constraints in the agrarian sector observed in Sokuluk is that many people do not work on their fields but let their land and only use their garden plots for some small subsistence cultivation. Land is rented by other local farmers⁷⁶ or by businesses. They combine many plots to huge and lucrative fields. Many migrants from the south and Tajikistan, who came to the region only after land reform, do not possess land but rent it.⁷⁷

Tajikistan

At the time of independence, there were 362 *sovkhoses* and 206 *kollekhoses* in Tajikistan (FAO 1997). The first steps of land reform in Tajikistan date back to 1996 and 1998, when 100,000 ha land were distributed to farmers. However, a comprehensive reform program of converting

⁷⁵ In the beginning it covered 800 ha land, but now it is less as farmers left the cooperative. 300 households are members of the cooperative, which has 35 employees.

⁷⁶ These may be farmers who enlarge their own fields to grow cash-crops, or newly immigrated inhabitants who do not possess land. The latter, however, mostly rent land from the *Ayil okmotu*, as it is cheaper (and usually worse) than the private-owned land.

⁷⁷ Previously, the village Zhany-Pakhta was predominantly German populated. While most Germans and many Russians left migrants from the South of Kyrgyzstan and ethnic Kyrgyz refugees from Tajikistan moved to the village. Today the population is about half Kyrgyz and half Russian.

the state and collective farms into so called *dekhkan* farms (*dekhkanskoie khoz'yaistvo*, DF)⁷⁸ was developed as late as 2000 (Rakhmatilloev et al. 2003: 102).⁷⁹ All members of a former *sovkhos* or *kolkhos* have the right to a share of the land. This land is still state property but the farmers have inheritable tenure rights and complete legal freedom of independent farm management (AAH 2003:4). The principal government agency responsible for the implementation of the land reform is the State Land Committee (see chapter 6.1.2). As a result of the land reform, officially there are now three types of agricultural enterprises (AAH 2003: 6f)⁸⁰:

- 1) Individual farm: consists of one family, the land certificate is registered under the head of family;
- 2) Farmer's farm (*fermerskoie khoz'yaistvo*): consists of several families, the land certificate is registered under the chair of the farm with the names of all members listed in the document.

Both types are also often referred to as independent *dekhkan* farms. Both are formed based on the active application of the farmers and not by allotment. The individual(s) either apply to the farm administration and the *khukumat* to withdraw their shares of a collective DF or they apply for land from the special fund⁸¹ (Art. 11, law "On Dekhkan Farms"). Independent DFs are usually small with plots of less than 50 ha.

- 3) Collective *dekhkan* farm (*obshchestvennoie dekhkanskoie khoz'yaistvo*): the land certificate is registered under the farm's name with names of all members listed in an annex. With this type, one FSK is reorganized into one (sometimes several) DF in a topdown process. The chief of the FSK is "elected" chief of the DF. The land certificate is issued under the name of the farm with a list of all the members in the annex. All members should receive membership certificates.⁸²

Meanwhile a fourth type of farm is evolving, namely the association of *dekhkan* farms. Increasingly, independent DFs unite to become associations with a single management responsible for buying the necessary inputs, providing machinery, etc., and therefore taking a certain percentage of the profit (usually between 2% and 10%). The degree of autonomy of the member farms varies. In some cases, FSK have been transformed directly into associations of DFs, which might only exist on paper and function like the FSK before.

All FSK were supposed to be reorganized in *dekhkan* farms by December, 31st 2005 – a target which was not met. According to the National Land Committee, by 10/01/2005, 26,608 *dekhkan* farms were registered, of which 8,609 were collective and 17,459 independent (family and individual) farms.⁸³ By 2006, still only 400 of the 600 FSK had been transformed into *dekhkan* farms (MIWM, UNDP, EC IFAS 2006:37).

Official data suggest that land reform proceeded successfully albeit slower than anticipated. However, land reform in practice is conducted rather cosmetically. A stringent privatization would have challenged the interests of local networks and their resource base. By February 2005, only 9% of the agricultural land in Tajikistan was managed by independent *dekhkan* farms (ICG 2005: 8). The collective DFs are often only quasi privatized: they are managed in

⁷⁸ *Dekhkan* is the Tajik word for farmer.

⁷⁹ Exceptions exist for about 170 state farms for seed production, livestock breeding, and research.

⁸⁰ Author's interview with an agricultural specialist of GAA Aini, Aini, 09/28/2005.

⁸¹ The special fund distributes unused land of *sovkhos*es and *kolkhos*es. This land is typically of low quality.

⁸² A survey by AAH of farmers in Khatlon found that only 5.6% of the interviewed collective *dekhkan* farm members got a membership certificate. AAH 2003: 6.

⁸³ Author's interview with a senior official of the State Land Committee, Dushanbe, 11/01/2005.

the same style as the FSK before and the changes can be considered to be superficial (new name). In many cases, the farmers themselves are unaware of the reorganization.⁸⁴

An important aspect is that the land is not redistributed ‘automatically’ like in Kyrgyzstan but farmers have to apply for it, i.e. they have to become proactive themselves. Most of the farmers do not know about the reform, their rights, nor how to apply for a land certificate. Many even do not know what a *dekhkan* farm is. There is widespread ‘legal illiteracy’ among farmers. If farmers know about application procedures, the next hindrance is the high cost of the certificate. The official costs are 6 USD plus service charges (Presidential decree No. 600, Annex 3, 12/30/2001). The actual costs are considerably higher, they are indicated with up to 300 US Dollar with an average of about 50 USD (AAH 2003: 19f).⁸⁵ There are also cases where applications are refused, applicants are discouraged by local officials or whole *sovkhózes* or *kolkhozes* are declared as seed production or livestock breeding farms to prevent the establishment of independent DFs. One precondition to establish an independent farm is that the farmers become active and have access to information on their legal rights. These are tremendous obstacles, besides the need to have financial means to pay the official and unofficial costs of registration at their disposal and often they also have to have good personal relations with the local authorities. Hence, influential and wealthy persons are in a better position to become an independent farmer or to stay in the position of a director (AAH 2003: 21; Dethier 2003: 33f).

During the Soviet Union, the case study village Iskodar in Aini Raion was part of a *kolkhoz* which consisted of six villages. Now the village of Iskodar forms a single separate collective DF, called “Hasan Karamov” and is part of the Dar Dar Jamoat. As far as reported, nobody has exercised his right to separate from the DF to begin working as an independent farmer. People stated that the costs would be too high for the small piece of land they received: To “buy” the certificate would cost about 150 somoni (about 45 euro). The DF in practice works like the *kolkhoz* before and is still the primary organization in the village. The brigadier (this function also still exists) collects 30% of the market price of the harvest as the members’ contribution to taxes, staff, and administration. Some villagers said that farmers have to give up to 60% of their harvest to the collective DF.

In addition, one has to take into account that workers on collective DFs usually receive a very small salary (less than 10 USD per year) or no salary at all. Besides the lack of alternatives, the main reason why people still work on the collective farms is because they provide (like the FSKs before) families with garden plots (*ogorod*). Subsistence production makes up a considerable part of the whole agrarian production and is often carried out by women whose husbands work in the cities or abroad.⁸⁶ Experts therefore speak of a “feminization of agricultural labor force” (AAH 2003: 17). The local economy mainly survives thanks to barter trade and revenues from migrant workers employed in Russia and other CIS countries. Also in Iskodar, the DF does not, like the FSK used to do before, pay its members a regular salary; the farmers earn a living only with their harvest. The majority of the village population can be considered very poor. In 2004, the UN distributed flour and oil to the most vulnerable families. Due to land scarcity and the lack of alternatives for income generation, many young men

⁸⁴ In the above-mentioned AAH survey (see Fn 82), 64.3% of all interviewed households of the *dekhkan* farm workers thought that they still worked at the FSK.

⁸⁵ Informal conversation with a representative of an INGO, Dushanbe, 10/31/2005.

⁸⁶ According to IOM, since 2000 about 632,000 men from Tajikistan have been working as migrant workers abroad (mainly Russia or other CIS countries). They make up almost 10% of the whole population (AAH 2003: 17).

migrated to Russia. In almost every extended family one member works abroad or in Dushanbe.

The prevalence of collective DFs is not the only hindrance to effective land reform. Another major factor is that the state's prescriptions for production have not been abolished yet. This affects cotton in particular as it secures benefits for the state and the networks of the cotton business.⁸⁷ A yearly production plan is distributed to the *oblasts* and *raions*. In cotton regions on average 70–80% of the land has to be used for cotton cultivation. The farmer is only free to decide what to grow on the remaining area (AAH 2003: 9–11).⁸⁸ Besides those instructions, there are a number of informal pressures to grow cotton: Access to key resources like water, seeds, fertilizers, or loans is often dependent on whether the farmers cultivate cotton (Jones Luong 2003: 28)⁸⁹. For tobacco, production quotas still exist as well, as was the case in the case study area: According to the *raion* representative of the State Land Committee, every farmer is free to choose what to grow on 70% of his land. A state monopoly exists on the remaining 30% of the land, on which tobacco is grown.⁹⁰ The (officially independent) collective DF receives directives of how much and what to grow from the district *kbukumat* and is controlled by the *jamoat*.⁹¹ In addition, households grow wheat and vegetables on their garden plots (*ogorod*) mainly for subsistence.

The state cotton quotas are in part responsible for the high indebtedness of many farmers, which often leads to financial dependency. New DFs inherited the debts of their preceding FSKs, most of which owed the state payments for water, electricity etc. According to IMF estimations, altogether the FSKs owed about 125 Mio USD to the Tajik government at the time of reorganization. These debts were divided among the new farms according to their size. Consequently, most farms have debts ranging from several hundred to more than 1,000 USD per ha. The indebted farms located in the cotton areas are now obliged to cultivate cotton on state demand, while having to buy all of the necessary inputs themselves. This causes most farmers to be dependent on local investors, so called 'futures companies' (*fjuchersnye*), that provide pre finance for cotton production. The local investors on their part are contractors of the Swiss company Paul Reinhart AG, which controls 95% of all Tajik cotton exports. At the beginning of the agricultural year they provide seeds, fertilizer, fuel, salaries and other inputs on a loan basis. The credit has to be paid back with the cotton harvest. As the value of the harvest is often less than the value of the input (due to bad harvests and overpriced inputs), farmers run into debt with the investors and are obliged to continue working with them the next year and a vicious circle starts. The practice of the local investors, which each hold a monopoly on a certain region, is the object of frequent complaints by farmers concerning overpriced inputs, bad seed and fertilizer quality, late payments and deliveries. In 2000, cotton farmers owed 100 Mio USD to investors (GoT 2002: 25; AAH 2003: 12–15; UNDP 2003: 37–42; ICG 2005: 8–10).

The *fjuchersnye* are the ones that profit most from the cotton production and that have benefited the most from land reform by establishing lucrative patronage networks; for farmers, dependency relations remained more or less the same. The Government of Tajikistan in the PRSP also acknowledged that the persisting informal production prescriptions, the complex

⁸⁷ Cotton produces about 11% of all export incomes.

⁸⁸ As a voluntary incentive, the land tax is reduced by 50% for cotton-cultivated fields (author's interview with a representative of the State Land Committee, Aini, 10/01/2005). Such an incentive is not enough for farmers to grow cotton, as cotton generally brings fewer gains for the farmers than other crops (UNDP 2003: 39f).

⁸⁹ Author's interview with a NGO representative, Khudjand, 09/03/2004.

⁹⁰ Author's interview with a representative of the State Land Committee, Aini, 10/01/2005.

⁹¹ Author's interview with the head of the *maballa* committee, Iskodar, 09/30/2005.

and expensive system of land registration, the transfer of FSK debts to DFs, the indebtedness of cotton farmers to local investors, and the unequal access to land are the main problems of the agricultural sector (GoT 2002: 24f,30, 41f).

To sum up, agricultural reforms proceeded differently in both countries: In Kyrgyzstan, old structures were abolished and independent farms evolved. In Tajikistan, reforms were carried out merely cosmetically and the FSK structures mainly prevailed, resulting in new dependencies. Similar to most CIS countries, in both countries the privatization process in agriculture was characterized by non transparency, corruption, clientelism, and unjust land allocation. Influential and wealthy persons acquired better and larger land plots due to their networks and their better knowledge of the procedures and laws. In addition, despite the different reform paths and degrees of success in both countries, a joint outcome is the de capitalization of the agricultural sector and the advancement of barter trade that emerged as the main economic exchange mode.

5.5.4 *Institutions of Local Governance*

Local governance has to decide on regulations regarding the common issues of citizens of a certain 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 as they like the agricultural sector represent the concrete institutional environment where policies have to be implemented. Hence, this variable influences the implementation of new rules of water governance, especially those that address the local level of water governance such as user participation, fee collection, or management along hydrographic boundaries. As these mainly concern rural areas, I will restrict the description to local governance institutions in rural settlements.

Local governance is nested in three sets of rules: the national formal rules, the societal and economic environment, and the local culture and conventions (Lowndes 2005: 294). Each provides its own logic or rules for behavior in a certain situation. They can either be congruent or they may differ. The respective institutional answer to a challenge is determined by the specific interaction of the sets of rule in each case.

In Central Asia, local governance still represents a “seriously underresearched area of the nature of the state at local level” (Babajanian, Freizer, Stevens 2005: 218). In both countries, local governance had to be re organized after the land reform: The FSK was not only an economic entity and work place. It also fulfilled administrative, social, and cultural functions. It was responsible for health care, education, social welfare, and recreation. This multi functionality turned it into a “total social institution” (Hann, Humprey, Verdery 2002: 13). Hence, their official dissolution not only led to an economic restructuring, but also (formally) abolished “the principal unit of social organization” (AHH 2003: 1) in rural areas. Therefore, it was necessary to establish new entities responsible for local governance. Both governments introduced formal local self government, the *ajyl okmotu* in Kyrgyzstan and the *Jamoat* in Tajikistan. Beside these, informal political institutions at the local level are of importance and represent certain cultural norms. Thus, the authority of the elders in local decision making processes is represented by the *maballa* committee in Tajikistan and the *sud aksakalov* (court of elders) in Kyrgyzstan. The origins of these informal institutions go back to pre Soviet times.

They were tolerated in the USSR and gained importance during the transformation phase. Given the importance of the FSK, it is not surprising that it also still shapes power relations in rural places. Formal as well as informal local governance institutions of each case will now be described.

Kyrgyzstan

Following the government resolution No. 187 "On Establishing Executive Bodies Of Local Government (Village Authority)", the Kyrgyz government established 487 *ajyl okmotu* (municipalities, a/o) as authorities of local self government. Each a/o includes one to twelve villages, mostly matching the territory of the FSK. The *ajyl okmotu* administration usually has a staff between 11 to 17 employees (Giovarelli, Akmatova 2002). Functions and responsibilities formerly performed by the FSK or the Ministry of Labor and Social Protection were transferred to the a/o. In 1999, an elected local council (*kenesh*) was established. In most settlements, the local *kenesh* exists alongside several other elected or appointed organizations like the women's council and the veterans' council, which are legacies from Soviet times. Initially, the head of the *ajyl okmotu* was appointed by the head of the *raion* (district) with the consensus of the *raion's kenesh* (district parliament); since 2001 he is elected by the population. The reform process was assisted by programs of UNDP, WB, ADB, USAID, Soros Foundation and others. Still, however, local self governance suffers from inadequate budgeting, low professional capacity of the staff, insufficient state support, and a weak legal framework (GoK n.d.: 44f). Despite the elections, local *akims* generally owe their position to patronage networks, which in practice prevents opposing candidates from registering themselves and successfully running for office (Lewis 2006: 26). The local administration is by the principle of "double subordination" subordinate to the presidential apparatus (Hassan et al. 2004: 7f). Despite the fact that the councils and heads of a/o are now being elected instead of being appointed, the case study research gave no reason to assume that the local population considers itself well represented and trusts the official local governance institutions.

One important local value is social harmony and the avoidance of conflicts, which is monitored by local institutions such as the *maballa* committee or the *sud aksakolov*. One of their main functions is to solve conflicts peacefully within the village preferably without the involvement of official authorities especially not from outside the village. In this respect, the court of elders (*sud aksakalov* or *aksakal sotu*) plays a major role. The *sud aksakalov* refers to the traditional position of elders (*aksakals*) in regulating local relations and solving conflicts in the village and among or within local families.⁹² Based on customary law it aims to solve smaller conflicts: land disputes, family affairs, cattle theft and also water disputes. It achieves its goals by means of persuading, negotiation, and through the exertion of social pressure (such as sanctioning behavior with shame or prestige). This reflects the general authority of the elders, which represents a powerful norm in informal governance. During Russian colonization, the positions of *aksakals* were formalized and partly incorporated in the colonial regime such as the *aryk aksakal*, who was responsible for the small channels (*aryk*). Even though the Soviet government banned customary law and informal institutions in 1927, the influence of the elders prevailed informally. It gained relevance after independence when the old Soviet system of control eroded. Today's members of the court of elders are usually respected members of the community, who often held (or hold) important positions (director of *kolkhoz*, brigadier, policeman, teacher). They are mostly (but not necessarily) old and mostly men. In 1995, the court

⁹² Often, the court of elders as such is considered a traditional institution. Beyer (2006, 2007) showed that while the *aksakals* as village or clan elders have existed for a long time, the court of elders is a relatively new invention.

of elders received a temporary formal legal status thanks to a decree issued by the President “On Approval of Temporary Regularization on Courts of Elders in the Kyrgyz Republic” in 1995. In 2002, the Law “On Elders’ Courts” was approved by the Parliament. However, its role and range of activity varies considerably in each village (Giovarelli, Akmatova 2002: 6f, 12, 17; Bichsel 2006: 111 119; Beyer 2006: 144f). Despite the fact that the local court of elders in its current form is a new formal institution, its source of legitimacy is the authority of the elders, hence it functions according to the logic of the informal institution of village *aksakals*. In predominantly Uzbek villages in the south of the country, a similar function is performed by the *maballa* committee (see below in the section on Tajikistan).

Tajikistan

In 1994, the “Law on Local Self Government in Towns and Villages” was passed and subsequently 356 *jamoats* (municipalities) were established. A *jamoat* consists of several FSK, which generally consisted of several *kisblaks* (villages). The chairperson of the *jamoat* is appointed by the head of the district administration (*kbukumat*). On local level, there exist representative assemblies (*majlis*) comprising 5–7 members. However, their actual power is negligible. The chairperson of the *kbukumat* is also the chairperson of the *majlis*. The local government is responsible for the socio-economic development and the implementation of laws and other normative documents. Although *jamoats* are allotted some financial means by the *raion* councils, they do not have their own budget in a true sense, they have little autonomy, and virtually no power beside their consultative functions (Ilolov, Khodoiyev 2001: 614; IWPR 2007; Abdullaev 2004:10; Freizer 2004: 18f).⁹³ Compared to Kyrgyzstan, Tajikistan is much more centralized. This is a consequence of the post-civil war period when strong state control seemed necessary in order to prevent local warlords from gaining too much power. In addition, decentralization was considered a possible threat to the still fragile statehood (IWPR 2007). Consequently, local government is considered to be more an agent of the central government and the President than of the local population. While one reason is that its members are solely accountable to higher ranking officials, another reason is that the local population is rather passive due to the fact that they have no tradition of political participation and thus lack experience (Abdullaev 2004: 10f; Freizer 2004: 16). In the case study, the village Iskodar belongs to the *jamoat* Dar dar. It has a council of five people from every village. They are not elected but appointed by the village assembly and meet once in three months. Due to the lack of financial resources, the *jamoat* was perceived as rather inactive by villagers and also by local key actors.

While the official local government structure lacks trust, accountability, and representativeness, there are a number of informal institutions that “function more effectively as local self government entities” (Freizer 2004: 16). The most important local (informal) organization is the *maballa* committee. *Maballa*, most often translated as “neighborhood” or “local community”, refers to the residential network in villages as well as cities in the sedentary parts of Central Asia, ranging back beyond the 13th century. The *maballa* is organized according to the sedentary principle, and not based on kinship and involves a net of reciprocal relations and obligations. The *maballa* is governed by a *maballa* committee, consisting of local elders and other respected members of the community. It is the lowest level of local self organization. It is led by an elder (*aksakal*). It organizes collective religious and social events (like births, weddings and funerals), solves conflicts, provides social services, and helps the poorest members of

⁹³ In 2006, the government adopted a reform program and drafted a local administration law in order to enhance the powers of the local administration. However, it did not address the financial decentralization, which is considered to be the most crucial element by many experts (IWPR 2007).

society. It defines and perpetuates local values and norms of behavior. The *maballa* committee also has the authority to organize *bashars* (see above ch. 0). As each *maballa* usually had its own mosque, cemetery and communal building, these were constructed and maintained by *bashars*. During Soviet times, village life was organized by the village council (*soviet kishlaka*) and the brigades. However, Soviet organizations such as *sovkhoses* and *kollektives* replaced the former kinship based and mahalla institutions only superficially. *Hashars* were transformed into “*Subbotnik*”; brigades were organized parallel to *maballa* structures. As a matter of fact, the *maballa*, formerly mainly an urban institution, even gained importance in rural areas as part of a *kollektiv*. After the Soviet authorities’ attempts to supersede it had failed, it was tolerated but never was formally legitimized (Roy 2000: 85 100; Grundmann 2004: 10; Freizer 2005; Geiss 2001).

Also in independent Tajikistan, there is no legal basis for the activities of *maballa* committees yet. There are attempts to formalize the *maballa* committee and transform it into an official state structure for local governance. *Maballa* committees are also established in villages where they had not existed traditionally. However, the nature and performance of *maballa* committees as well as the extent to which the members of the community trust the *maballa* vary considerably in the different regions and differ from village to village. Sometimes they are connected very closely to state bodies for example when the chairman receives a salary, sometimes they are more independent, sometimes rather inactive (Abdullaev 2004:10; Ilolov, Khudoiyev 2001; Grundmann 2004:8f; ASDP „NAU“ 2003: 26f; Freizer 2004).

Another local institution is the village assembly. However, a general village meeting does not necessarily include the entire village population. Many village meetings only gather the male population. In some villages, it is more of a meeting of invited representatives of the different village *maballas*. Whether and in how far these representatives spread the information varies. In the village of the case study, village meetings are said to be held every Tuesday. Many locals, however, do not know about them or do not attend because they don’t have the time; because real problems would not be discussed; or because “only old men go there”. It was reported that generally about 15 20 people from every *maballa* actually participate in such meetings. Many interviewed locals did not really know about the *maballa* committee or the village meetings and did not appreciate its work:

“I haven’t participated in village meetings for seven years as I am too sick. Nobody from the mahalla committee comes to us and gives us information; they are not interested in us. I do not even know who is in the committee” (old man, Iskodar, 09/28/2005).

In addition to those ‘traditional’ village institutions, entirely new organizations are also created as counterparts for donor programs, such as Village Development Committees (VDCs), Village Organizations, *Jamoat* Support Centers, etc. These are often informal groups but some times they are also formalized. In some cases they are part of internationally funded projects to support local self governance, in other cases they are counterparts to projects, their main task being the distribution of resources (like microcredits). Often, these committees consist of the same respected people and leading figures as the *maballa* committee.

Patronage is the central mode of local politics. Historically, networks were mainly established along kinship ties. Even though they emerged as pre Soviet institutions, these values and loyalties still play a role. In many cases, they were transformed or even strengthened by Soviet institutions (Roy 2000: 85 100; Grundmann 2004: 10). The Soviet Union did not present a fundamental change in the logic of patronage politics. Independence and privatization did not change this either. Again the names were changed but personal affiliations, networks and patronage as the fundamental mode of distribution of resources remained. Despite the establishment of formal local government and the strengthening of traditional institutions, the FSK

though formally dissolved still is a dominant institution in most rural places. The FSK leaders are still in leading positions as the structures of the FSK in most places still exist, albeit officially with another name. As many rural dwellers are not aware of the implications of land reform due to lack of information, they still perceive the FSK director as their *rais*. The brigadier is one of the most powerful persons at the village level as he is the one who controls the distribution of land and water. Consequently, he is often perceived as the de facto leader of the village (Grundmann 2004: 19, 26).

Like the political regime in general, the arena of local governance in both countries is also characterized by the tension and complex interaction between partly democratic formal structures and patrimonial informal institutions: In both countries, formal organizations of local self government with democratic mechanisms were established. On the other hand, the local arena is characterized by personalistic leadership and patronage politics. Informal institutions in both countries are similar. Patronage networks of the FSK still exist. The fact that the people orient themselves towards the elders is indicative of the main characteristics of the local political culture: a lack of proactiveness and reliance on authorities.

5.5.5 Donor Policies as an Interfering Variable

In addition to these four variables, a fifth interfering variable emerged as prominent in the course of the research. An interfering variable is a variable that affects the relation between the independent (explanatory) variable and the dependent variable. This interfering variable is the role of international donor organizations.

On the one hand, donors are actors that take part in the political process by trying to put their priorities on the political agenda or by implementing projects. Thereby, they act in the institutional setting like other actors. In this respect, donors are influenced by the neopatrimonial regime in which they act: The neopatrimonial institutional environment sets parameters for donor involvement and influences their activities and outcomes. On the other hand, their policies, project guidelines, and loan conditionalities take on the character of informal institutions as they provide rules and incentives that influence the national actors' behavior. In addition, the formal and informal donor rules interact with the context and can mitigate or aggravate certain aspects of neopatrimonialism.

Due to the different context in both countries, donor involvement varies considerably: Kyrgyzstan was beside Kazakhstan the Central Asian state with the most liberal reform agenda (in political as well as in economic matters) after the dissolution of the Soviet Union. And it was very successful in marketing its democratic image as the 'Switzerland of Central Asia' (Dukenbaev, Hansen 2003: 28; Pétric 2005: 323; Anderson 1999). This proved to be essential in order to attract Western engagement as Kyrgyzstan is of no geo strategic importance, nor does it have nuclear weapons or oil resources, which may attract investments by Western companies and governments. Subsequently, international organizations and Western governments became the main 'investors' in the small country and a myriad of development projects started, while the government simultaneously formally endorsed democratic standards and rules. It was the first country of the former USSR to receive financial assistance from the World Bank (WB) and the International Monetary Fund (IMF) and is the only Central Asian member of the WTO (LaPorte 2005: 3). When counting official development assistance in aid per capita, the Kyrgyz Republic received 46 USD per capita in 1998 almost three times the

sum Tajikistan received (17 USD) (World Bank 2001: 314f). Although aid allotment to Tajikistan rose to 40 USD per capita in 2005, it reached 60 USD in Kyrgyzstan during that year.⁹⁴ Donor involvement in Kyrgyzstan reflected the initial interest to foster democracy and civil society in the early 1990s. Much effort and money were invested to establish NGOs according to Western models. The reason was beside donor priorities the political climate in Kyrgyzstan that allowed the active promotion of democratic values.

In Tajikistan, donor involvement was restricted to mainly humanitarian assistance during civil war (1992-1997) and during the following years. Only recently donors changed their policy and have begun to support middle and long term development projects. Nevertheless, food aid is still provided for about 71 Mio USD per year (in 2005). Proper development assistance in Tajikistan started later than in Kyrgyzstan, and it had to address the severe social problems of a post war country. In addition, it coincided with a change in the donors' strategies: In the late 1990s, the concept of community development re entered the development discourse of multi and bilateral donors and led to a focus on participatory practices at the grassroots level. The new aim was not to establish professional, urban, advocacy oriented NGOs that would be able to interact and deal with state structures (like the NGOs fostered in Kyrgyzstan) but to support community based organizations (CBOs), consisting of volunteers primarily interested in improving their communities' living conditions through small projects. This led to a stronger focus on such institutions as *maballa* committees, *aksakal*, or *basbar* that are often referred to as communal or traditional civil society (Earle 2005: 246-251; Freizer 2005). In Kyrgyzstan, a change toward more participatory and community based projects could be observed after the initial focus on supporting Western style NGOs had been criticized and poverty reduction became a main objective. In Tajikistan, this first phase of extensive support for the development of civil society structures is more or less missing. From the beginning on, development cooperation focused on social development and CBOs. Hence, the initial donor input in Kyrgyzstan was dominated by the idea of democracy building and formal rules (NGOs). In contrast, in Tajikistan, donors focused on poverty reduction and the establishment of bottom up informal mechanisms (CBOs).

5.5.6 Water Institutional Linkages

Having introduced the three independent variables and the interfering variables, this section will turn to the fourth independent variable. It is treated separately as it is essentially part of the dependent variable and not of the neopatrimonial exogenous context like the other three independent variables.

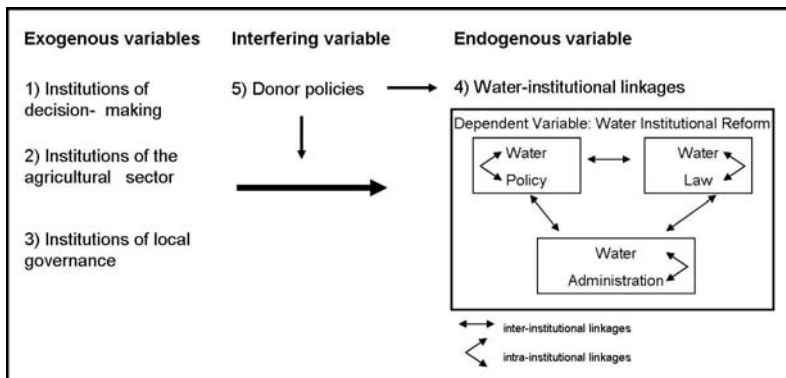
As was outlined above, water institutions are defined as water policy, water law, and water administration. These in turn consist of formal and informal institutions. Reform efforts address water institutions as a whole, but specific measures are directed at certain institutional elements. For example, irrigation management transfer to water user associations (WUAs) includes reforming the water policies (such as decisions on decentralization and participation), water laws (such as legal regulations for WUAs, conflict resolution mechanisms, etc), and water administration (such as change of organizational structures, new responsibilities of the staff, etc.). These institutional elements are closely interrelated, as was depicted in Figure 3. Saleth and Dinar (2004) conceptualized this interdependence of water institutional elements for gen

⁹⁴ World Bank: World Development Indicators 2006, <http://devdata.worldbank.org/data-query/> (accessed 06/10/2007).

eral performance and termed it “endogenous linkages within water institutions (institutional linkages)” (2004: 101). These endogenous linkages can be further differentiated: intra institutional linkages are those within an institution, e.g. between different legal regulations in water law or between staff payment and capacities of water administration. Inter institutional linkages refer to the influences different water institutions have on one another, e.g. legal regulations and administrative capacities.

As was mentioned before, all types of water institutions are addressed in the process of water institutional reforms. However, certain elements may change faster than others. Or reform strategies may concentrate on one aspect while disregarding others. This may result in discrepancies. Thereby it is also important to carefully look at informal institutions. As was mentioned above, formal and informal institutions change differently. Informal institutions are by definition difficult to change with state reform programs. Even when reforms are successfully change formal institutions, informal water institutions may persist and contradict the formal ones. Hence, it has to be evaluated whether incoherencies evolve during the reform process and whether this has an impact on the general reform process. These water institutional linkages are also influenced by donor policies through their involvement in reform processes. The status of this fourth variable is shown in the following figure:

Figure 8: Explanatory variables for water institutional reform



Source: own compilation

Hence, certain elements of the dependent variable can turn out to act as independent variables for other elements. Only in the analysis can we determine which one of the variables has this effect and whether one particular institution is especially relevant.

In order to avoid misunderstandings it should be stressed that coherency within water institutions does not refer to coherency regarding the content of different water reforms (e.g. of introduction of water tariffs and establishment of WUAs) or between reforms in different sectors (e.g. land and water reform), but within one reform program between law, policy, and administration. The other two kinds of incoherencies can certainly occur but they are not measured by this variable.

5.6 Summary

In the previous chapters, the main factors influencing the politics of water institutional reform were identified. Table 10 summarizes all of the variables that were discussed.

Table 10: Variables of water institutional reform in Kyrgyzstan and Tajikistan

Controlled context variables	Independent variable set	Dependent variable
<ul style="list-style-type: none"> ▪ Economic development and structure ▪ Water resources and water usage patterns ▪ Post-Soviet challenge to water governance 	<p>Neopatrimonial political regime</p> <p>Exogenous variables:</p> <ul style="list-style-type: none"> ▪ Institutions of decision making ▪ Institutional conditions of the agricultural sector ▪ Institutions of local governance <p>Endogenous variable:</p> <ul style="list-style-type: none"> ▪ Water-institutional linkages <p>Interfering variable:</p> <ul style="list-style-type: none"> ▪ Donor policies 	<p>Water institutional reform:</p> <ul style="list-style-type: none"> ▪ Formulation of new rules of water governance ▪ Implementation of new rules of water governance

Source: own compilation.

The context variables present those factors that can be expected to have an impact on WIR. As they occur in both countries with similar values, they are controlled for. Thus, it can be ruled out that they account for the differences in the dependent variable. In the economic realm, both countries are agrarian developing countries with only a small industrial sector. Both have rich water resources at their disposal; hence they do not suffer from natural water scarcity. In both countries, most of the water is used in agriculture, while hydropower plays a role as well. Historically, in both countries similar water institutions evolved, especially during their shared common past under Russian and Soviet rule. After independence, both countries were confronted with similar challenges: developing a sovereign water policy and coping with budget and capacity shortages.

The main research question is how a neopatrimonial context influences the politics the processes of decision making and implementation of water institutional reform. It was shown that both countries are characterized by a conflicting co existence of formal democratic mechanisms on the one hand and authoritarian and personalistic leadership patterns, clientelism, and corruption on the other hand. Both countries therefore can be considered hybrid neopatrimonial regimes. But they vary within this type: In Kyrgyzstan, democratization in decision making, privatization in agriculture, and decentralization in local governance was much more implemented than in Tajikistan, where these reforms mainly changed only the façade. It can therefore be assumed that the institutional corridor in Kyrgyzstan is broader than in Tajikistan, allowing for more change in water institutions. On the other hand, it was shown that informal institutions in both countries play an important role and outlast formal changes. To what degree and based on which mechanisms do these informal aspects modify formal institutions? Finally, donors' strategies and project rules present an interfering variable that interacts with all of the above mentioned factors and has to be considered in order to gain a full understanding of the politics of water institutional reform. All of these aspects again have an impact on water institutional linkages within the dependent variable.

6 Water Institutional Reforms in Kyrgyzstan

The previous chapter described the framework conditions of water governance in Kyrgyzstan and Tajikistan. How do these affect water institutional reforms, and which reforms are actually decided and implemented? This chapter will portray in detail the water institutional reforms in the Kyrgyz Republic.

For an understanding of the processes and interactions of WIR, it is necessary to first give an overview of the administrative structure and key organizational actors in water governance (chapter 6.1). It is equally important to obtain a general understanding of the general discourse on water in the country and the predominating problem perception (chapter 6.2). After these two more general sections, chapter 6.3 will elaborate on the political process of water institutional reforms: First, the formulation of general policy norms and direction in the National Water Strategy (6.3.1) and the general legal framework (6.3.2) are covered. After that, the reform programs to reach the objectives outlined in the policy papers are analyzed. These are the administrative reorganization (6.3.3), the introduction of irrigation service fees (6.3.4) and the transfer of local irrigation management (6.3.5). Each section will describe the processes and actors of political decision making and those of implementation with the outcome so far. Chapter 6.4 will then analyze in how far the neopatrimonial context factors have an influence on and can explain the processes and outputs. The final part (6.5) will summarize the findings of the Kyrgyz case study.

6.1 Administrative Structure and Key Actors of Water Governance

Who is formally entitled to decide and implement water policy? Who is actually involved in the processes? In order to assess the role of different actors in water politics in Kyrgyzstan, this chapter will give an overview of the organizations involved in water governance and their competencies. It must be noted that the structure of water management has changed several times since the country gained its independence, and it changed again shortly after the research period. Partly, these structural reforms will be the object of research (chapter 6.3.3). The given overview aims to include the most important former and actual agencies and competencies; however, due to the constant flux, we can make no claim of full fledged compilation.

6.1.1 *The Water Administration*

The highest executive body responsible for the usage and regulation of the water resources in the Kyrgyz Republic is the so called *DepVodKhoz*, the Department of Water Management (*Departament Vodnogo Khozajstva*) at the Ministry of Agricultural and Water Management and Processing Industries (*Ministerstvo Selskogo i Vodnogo Khozajstva i Pererabatyvayushei Promyshlennosti*) (see Figure 9). The *DepVodKhoz* evolved from the former Ministry of Water Management, *MinVodKhoz*, which was dissolved in 1996 (see chapter 6.3.3.2). It consists of three main sub

divisions: The Water Resources and Water Use Department is responsible for the allocation and distribution of water resources. The Irrigation Systems Maintenance Department is in charge of the physical maintenance of the infrastructure. The Department of Economics, Finance, and Registration controls the distribution of financial resources.

The staff in the central apparatus comprises 47 people.⁹⁵ In addition to their executive functions, the high ranking officials of the *DepVodKhoz* also participate in policy formulation and lawmaking by developing draft proposals and expert assessments (Hasan et al. 2004: 12). Formally, it is the main agency for water policy formulation. While other agencies are involved in regulation tasks (see below), there are no legal participation mechanisms for these in policy formulation and reviewing (Tursunaliyev 2002). Special project management departments for bigger donor projects are affiliated with the *DepVodKhoz*, as is the case with the Project Implementation Unit for the World Bank On farm Irrigation Project (*Otdel Upravlenii Proekta 'Reabilitatsiya Irrigatsionnykh System', OUP RIS*). In the context of this project, WUA support departments at central, province, and district level have been established, funded and staffed by the World Bank but are legally part of the water administration (see Figure 9).

The Irrigation Institute (*Institut Irrigatsii*) is attached to the *DepVodKhoz*. It was founded in 1953 as part of the National Academy of Sciences; later, it became part of the *MinVodKhoz* and subsequently the *DepVodKhoz*. Its main task is technical research and expertise on water distribution and irrigation technology. It employs between 50 and 60 people, the number varies depending on ongoing projects. Besides state subsidies, the institute receives most of its funding through international projects, e.g. with the FAO, EU TACIS, and USAID.⁹⁶

The *DepVodKhoz* has branches at provincial and district level which are upward accountable to it (see Figure 9): the *ObIVodKhoz* (*Oblastnoe upravlenie vodnogo khozyajstva i melioratsii*, Province Water Administration) in the seven *oblasts* (provinces) and the *RaiVodKhoz* (*Raionnoe upravlenie vodnogo khozyajstva i melioratsii*, District Water Administration) in the 40 *raions* (districts). The *ObIVodKhoz*es have been renamed in Basin Water Management Departments (*Bassejmovoe upravlenie vodnogo khozyajstva*) in 1997. This name is not used, however, and I will hence also use the common term *ObIVodKhoz* (see for details chapter 6.3.3.1).

The task of the *ObIVodKhoz* is mainly the supervision and control of the *RaiVodKhoz*. Concerning direct water distribution and system maintenance, the *ObIVodKhoz* is responsible for all channels crossing more than one raion, as well as for bigger rehabilitation projects and for coordination with neighboring *ObIVodKhoz*es at channels crossing the territory of more than one Oblast. The *ObIVodKhoz* aggregates data from water users, WUAs, and *RaiVodKhoz*es and each year develops a plan for water usage, which must be approved by the *DepVodKhoz* based on the limits defined according to national and international agreements.⁹⁷

The main implementation agency is the *RaiVodKhoz*. It is the one that at least in theory has direct and formal contracts with individual and collective water users on water delivery. It is in charge of the secondary channels delivering water to the tertiary 'on farm' channels⁹⁸, physical maintenance of the systems, operation of pumping stations, and water distribution to the users (individuals, cooperative farms, WUAs, and *aiyl okmotu*). The staff number of *RaiVodKhoz*es is relatively high compared to the *ObIVodKhoz*es due to the great amount of prac

⁹⁵ Author's interview with a senior official of the *DepVodKhoz*, Bishkek, 09/11/2003.

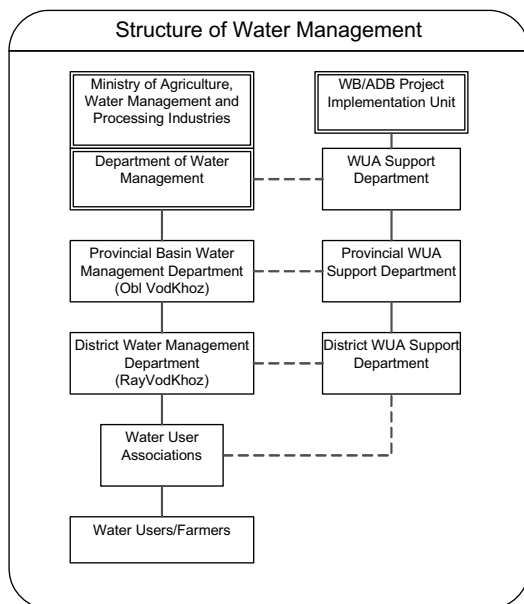
⁹⁶ Author's interview with the director of the *Institut Irrigatsii*, Bishkek, 09/13/2004. See also the institute's website at <http://www.water.kg/kniir/KNIR.htm>.

⁹⁷ Author's interview with a senior official of the *DepVodKhoz*, Bishkek, 09/11/2003; with the director of the *ObIVodKhoz* Osh, Osh, 09/22/2003.

⁹⁸ The term 'on-farm channel' is generally used for those channels that were on the territory of one FSK. Today they are in fact inter-farm channels between the individual farmers.

tical work, which depends on the environmental conditions: if pumping stations must be served, there is greater need for staff. The *RaiVodKhoz* of Sokuluk, the *raion* of the local case study, has between 100 to 115 employees, depending on the season. This is the same amount as during Soviet times.⁹⁹

Figure 9: Organizational structure of the water administration



Source: own compilation based on Hassan et al. 2004: 9.

Since the mid nineties, Water User Associations (WUAs) have become established as the lowest level of water management. They are designed as formally independent non state organizations responsible for the operation and maintenance of tertiary (on farm) channels. Their function and role in relation to the state water administration will be analyzed in detail in chapter 6.3. In order to assist, train, and control the WUA staff, World Bank financed WUA support departments have been established. They are attached to the central level, the *OblVodKhoz*es as well as at many of the *RaiVodKhoz*es in order to facilitate the interaction between the respective *RaiVodKhoz* and WUAs (see Figure 9). These normally consist of a WUA development specialist, a hydro engineer, and an accountant.

In the final year of the Soviet Union, budget allocations to the then Ministry of Water Resources were above 35 Mio USD. In 1999, the *DepVodKhoz* received about 5 Mio USD. This is a reduction by more than 85%. Today funding covers only about one third of all necessary operational costs (Bucknall et al. 2003: 4).¹⁰⁰ According to Johnson III, Stoutjesdijk, and Djabolbaev (2002: 8f), the budget consists of 2 Mio USD direct allocations from the Ministry of Finance, 1.7 Mio collected from water fees (ISF, see ch. 6.3.4) and 2.1 Mio grants from the European Commission. According to the *otdel podderzhenki AVP* (2001: 1), budget allocations

⁹⁹ Author's interview with the director of the *RaiVodKhoz* Sokuluk, Sokuluk, 05/10/2005.

¹⁰⁰ Author's interview with the vice-director of the *DepVodKhoz*, Bishkek, 09/15/2004

account only for 14% while 48% are ISF payments and 38% grants from the European Union. The salaries in the water administration are as in the public sector in general very low and not regularly paid out. They range between 10 USD per month for an ordinary employee and 30 USD for a *RaiVodKhoz* or *OblVodKhoz* director (Hassan et al 2004: 33).

Besides the *DepVodKhoz* and its structure, several other agencies can be included in the water administration in the strict sense. The Ministry of Ecology and Emergency Situations (*Ministerstvo Ekologii i Chrezvychaynykh Situatsii, MECbS*) is responsible for water quality and environmental issues. Similar to the *MinVodKhoz*, there was initially a separate Ministry on Environmental Protection (*Ministerstvo Okhrany Okruzhayushey Sredy*), which was later dissolved and integrated into the Ministry of Ecology and Emergency Situations. In 2003, its two ecological departments, the Department of Ecology and Environmental Monitoring and the Department of State Control and Nature Use, were combined to form the Department of Ecology and Nature Use.¹⁰¹ While water use itself is approved by the *DepVodKhoz*, this department is responsible for water quality and protection of water resources. It defines the ecological limits for water withdrawal and must approve all withdrawal. It also provides ecological assessments for planned projects and is one of the agencies in charge of water quality surveillance (together with the *DepVodKhoz* and the Ministry of Health).¹⁰² The Agency of Hydrometeorological Services (*Kyrgyzgidromet*), which is in charge of monitoring some surface waters particularly in the formation zone, is also subordinated to the *MECbS*.¹⁰³ The State Agency for Geology and Mineral Resources is responsible for groundwater. The department *sanepidemadsora* at the Ministry of Health is in charge of the drinking water quality. The Agency for Energetics (*Agenstvo po Energetike*) is in charge of the operation of part of the reservoirs for hydroelectric power.¹⁰⁴ Other hydropower and reservoir facilities have distinct administrative units.¹⁰⁵ The joint stock company “Power Plants” (*OAO Elektricheskie Stantsii*) is in charge of the dams. The municipal services of cities and districts are involved in the communal water supply (Tursunaliyev 2002; Djaloobaev 2004:72).¹⁰⁶

6.1.2 Further Actors Involved

The water administration in the strict sense presented above already involved various agencies. It might not seem surprising that coordination problems among them will later turn out to be one of the major problems of water governance. However, several more state and non state organizations at various levels are involved. These will be presented now.

¹⁰¹ Author's interview with a senior official at the *MECbS*, Bishkek, 09/17/2003.

¹⁰² After the research period, the ecological departments were again withdrawn from the Ministry. Its successor is the State Agency for Environmental Protection and Forestry under the Government of Kyrgyzstan (*Gosudarstvennyi agenzstvo po okhrane okruzhayushchey sredy i lesnomu khozyaystvu*).

¹⁰³ Author's interview with a former senior official of the *MECbS*, Bishkek, 09/16/2003; with a senior official of the *DepVodKhoz*, Bishkek, 09/15/2004.

¹⁰⁴ In 2007, these functions were transferred to the new Ministry of Industry, Energetics and Fuel Resources (*Ministerstvo promyshlennosti, energetiki i toplivnykh resursov*), the former Ministry of Industry, Trade and Tourism. See the Presidential Decree “*Ob organizatsionnykh merakh po realizatsii položenií Zakona Kyrgyzskoy Respubliki ‘O strukture Pravitelstva Kyrgyzskoy Respubliki’*” of March 16, 2007.

¹⁰⁵ There are three reservoir administrations: Orto-Tokoy, Popan, Kirov (authors's interview with a senior official of the *DepVodKhoz*, Bishkek, 09/11/2003).

¹⁰⁶ Author's interview with a senior official of the *DepVodKhoz*, Bishkek, 09/15/2004; with a university professor, Bishkek, 09/15/2003.

President and Presidential Administration

Kyrgyzstan has a strong presidential system; the President is the main actor in policy formulation including in the water sector. For advice and consultancy, he has a strong administrative apparatus at his disposal. Directly subordinated to him is the International Institute of Strategic Studies (*Mezhdunarodnyi Institut Strategicheskikh Issledovaniy*, MISI). This think tank is also involved in water policy discussions at the national as well as the Central Asian level.

Parliament

The Parliament (*Zhogorku Kenesh*) as the legislative body discusses and approves the legal framework for water management. Besides its function to approve laws, it is involved in water governance mainly by its right to define the height of water tariffs (see chapter 6.3.4). There is no special commission for water at the Parliament, but several commissions deal with water issues: the Commission for Energetics and Construction (*Komitet po Energetike i Stroitelstvu*), the Commission for Agriculture (*Komitet po Selskomu Khozyajstvu*), and the Commission for the Agro industrial Complex (*Komitet po Agropromyshlennyomu Kompleksu*).¹⁰⁷

Academic Institutes

Beside the above mentioned Institute of Irrigation, which is directly subordinated to the *Dep VodKhoz*, the Institute of Water Problems and Hydropower (IWP&HP) at the National Academy of Sciences of the Kyrgyz Republic is the main research institute in water issues and provides policy consultancy, such as in the preparation of laws. It was established in 1992. Other academic institutes of various universities are not directly involved in the policy process, but rather serve as cooperation partners for donors and take part in international research projects.

International Donor Organizations

Besides national actors, several international actors are also involved in water policy and politics in various ways and on different levels. The World Bank (WB) and the ADB have large scale projects in rural development and irrigation rehabilitation directly affecting water management. Other donors are involved in the establishment of WUAs (e.g., USAID), irrigation system rehabilitation (e.g., GTZ), or IWRM (e.g., SDC). These are often small scale projects, sometimes implemented by INGOs. Beyond these technically oriented projects, numerous donors are involved on a discursive level by supporting initiatives on interstate water management to prevent conflicts. Among these are UN SPECA, the German Friedrich Ebert Stiftung, EU TACIS, the Swiss Agency for Development and Cooperation (SDC), and many others.

NGOs

It was already mentioned that Kyrgyzstan has the most active NGO scene in Central Asia (see chapter 5.5.2). Most relevant for water governance are environmental NGOs, which are concerned with ecological lobbying or expertise. Some NGOs are involved at implementation levels for consultancies; however, these take on more the role of public service contractors than of genuine civil society representation.

¹⁰⁷ These commissions were reorganized after the research period. Since December 2006, relevant commissions are the Commission on the Fuel and Energy Complex and Water Resources (*Komitet po Toplivno-Energeticheskomu Kompleksu i Vodnym Resursam*) and the Commission on Agricultural Policy (*Komitet po Agrarnoy Politike*) (KyrgyzNews 2006).

State and Collective Farms, Local Government

Prior to their dissolution during land reform (see chapter 5.5.3), *sovkhózes* (state farms) and *kollekhózes* (collective farms) owned the on farm irrigation systems (tertiary channels). They were responsible for their operation and maintenance, which they had to finance from their own resources. After land reform, this responsibility was transferred to the local government (*aiyl okmotu*). It was supposed to cover the initial vacuum left with no organization responsible for O&M of tertiary channels. In those places where WUAs have not yet been established, it is formally still the *aiyl okmotu* that is in charge of water distribution.

This overview of the various actors in the current water governance structures shows that these comprise state as well as non state actors at multiple levels (local, regional, national, and international). Their specific role in and influence on water institutional reform will be shown in chapter 6.3. Before turning to this, the next chapter will describe the main problems perceived and objectives formulated in water policies. It will be shown that these vary considerably among the listed actors.

6.2 Problem Perceptions and Policy Objectives

Turdakun Usulbaliev, from 1961 until 1985 First Secretary of the Communist Party of the Kyrgyz SSR and until 2005 Member of Parliament, published a book in the 1990s titled “Water dearer than gold” (*“voda dorozhe zolota”*). This title is indicative of the value attached to water resources in Kyrgyzstan. As Kyrgyzstan hardly possesses any noteworthy resources, the economic significance of water in agriculture and hydropower is relatively high. Water is often perceived as a national, strategic value and ideologically charged. More than a few interviewed experts referred to the water resources of the country as “our only resource”, the “national wealth”, or the Kyrgyz “heritage”. However, despite its rich water resources, water in Kyrgyzstan is perceived as being scarce. This scarcity is explained by the previously mentioned fact that Kyrgyzstan only has the right to exploit a small amount of the water resources originating on its territory due to regional agreements (see chapter 5.4.3). This leads to a sensation of injustice. The patterns of regional water distribution are considered a reason for water shortage in Kyrgyzstan. Consequently, water governance is mainly perceived as a foreign policy issue. Water is often compared to other resources such as oil, coal, and gas, especially when people refer to its economic value. In addition to its economic importance, water is seen as a strategic resource as Kyrgyzstan with its upstream location has a powerful position opposite the downstream states (see ch. 5.4.3): “Under the conditions of the Central Asian republics water is the most important strategic resource” (Dzhailobaev 2003: 71, translation JS).

The perception of water scarcity is astonishing in that Kyrgyzstan does not even use the full water quota it is entitled to: Of the 11km³ allowed per year, Kyrgyzstan uses approximately 8 km³ (MISI, FES 2003: 7). Thus there is at least in the short term no ‘objective’ reason to worry about more water. The rationale behind this perception is however also one of principle: Kyrgyzstan would be denied its right to use its resources according to its own interests and potential future needs. While other states possess full sovereignty over the usage of their resources, this would be denied to Kyrgyzstan. Hence, the question of reasonable sharing of water resources is connected to the sensitive issue of national sovereignty and regional relations. In addition, Kyrgyzstan must cover the costs of the operation and maintenance of reservoirs, built in Soviet time on Kyrgyz territory but mainly serving the interests of irrigation

agriculture in neighboring Uzbekistan and Kazakhstan. Adequate mechanisms for cost sharing on the part of the downstream states are not in place.¹⁰⁸ This question of equitable cost and benefit sharing is in the context of regional relations characterized by power asymmetries and mistrust severely ideologized and used for political power struggles (Giese, Sehring 2007).

These foreign water policy issues are much more present in public and expert debates than are national and local level problems and challenges of water governance and reform policies. Nevertheless, we shall now turn to the level of domestic policy. As was outlined with the policy cycle model (see chapter 0), the basis for any reform process is a perceived problem. So, the first task of an analysis of water reforms in Kyrgyzstan will be to identify the problems perceived by different actors. The perception of problems was recovered by qualitative content analysis of water expert interviews (in total, 30 interviews were evaluated for the following analysis).¹⁰⁹ In the analysis, three thematic blocks evolved (see Table 11):

- 1) Technical, financial, and human resources capacities;
- 2) Political institutional factors;
- 3) Other issues.

Table 11: Perceived problems in water management

Technical, financial, and HR capacities		Institutional factors		Other			
Technical infrastructure	54%	Administrative fragmentation	28%	Interstate water regulation	38%		
Lack of finance	34%	Inadequacy of water law	28%	Rational water use	25%		
Staff qualification	11%	Socio-economic environment	26%	Water quality	25%		
		Level of awareness	9%			Policies of international donors	13%
		Lack of political strategy	9%				
Total	100%	Total	100%	Total	100%		

Source: own data collection and analysis.

The first block summarizes problems seen broadly in the lack of capacities. Most are related to the state of the technical infrastructure, which concerns the deterioration of irrigation infrastructure as well as of monitoring facilities (gauging stations, meteorological posts, etc.). A second relevant aspect is the lack of finance; another point is the qualification of staff. All three are closely interrelated as for example the lack of financial means results in the non implementation of maintenance work as well as in low salaries not attractive for qualified staff.

¹⁰⁸ Concerning the Chuy and Talas rivers, such an agreement meanwhile exists between Kazakhstan and Kyrgyzstan. See www.talaschu.org.

¹⁰⁹ For details on the interviews see chapter 5.2

This problem perception shows a rather technocratic view on water management problems (equivalent to the paradigm of industrial modernity described in chapter 2.1.1).

The second cluster summarizes political institutional factors. The most frequently mentioned institutional problems were the fragmentation of administrative responsibilities and competencies, inadequacies in water law, and the general socioeconomic situation that limits the performance of water reforms like the introduction of water service fees. Under “inadequacies in water law” we summarize various aspects mentioned by the interview partners, including contradictions between laws, ambiguous regulations, the lack of effective sanction mechanisms, and frequent violations of water laws. Concerning administrative fragmentation, the dispersion of competencies and responsibilities among various agencies with overlapping and a lack of coordination were mentioned as a major obstacle in water resource management. It was assessed as the “most serious misery”.¹¹⁰ For example, in the 1999 Law on Drinking Water, seven bodies are named as being responsible for the control of drinking water protection areas.¹¹¹ Other political institutional factors mentioned by the interviewees were the lack of awareness on part of the water users and the lack of a clear political strategy as a norm to set rules. The second bloc shows a problem perception more in line with the described political institutional water paradigm stressing the importance of sound policies and structures.

The final bloc includes all other problems mentioned. Most prominent here was the question of interstate regulation of the transboundary water resources. The lack of and need for rational water use in general was also mentioned several times, as well as the issue of water quality. One other point was the policies of international donors that were considered to be inadequate in addressing the problems or even harmful (e.g. when international consultants ignore local expertise).

Comparing the frequency of naming, institutional factors account for 46% of all problems mentioned. The technocratic problem perception is slightly less with 37%. Other factors account for 17% of the total (see Table 12). It is now interesting to analyze whether the problem perception is uniform among the political actors or whether the actors’ perception vary and contradictions can be found between them. Therefore, the interviewees have been grouped according to their organizational affiliation.¹¹² It can be seen that perceptions differ between representatives of different organizations involved in water management. A political institutional problem perception is especially prevalent among representatives working for international donor agencies and NGOs. Representatives of water user associations (WUAs) and of lower parts of the state administration tend to stress technocratic factors. They are the ones most often confronted with practical problems. Academics had the least technocratic perception.

While these results are not statistically representative, they point to a cleavage in the problem perceptions of different actors. Farmers and meso level bureaucrats complain about deteriorated infrastructure and lacking finances; when they mention political institutional factors, it mainly relates to difficulties with the local water administration not providing the agreed amount of water, illegal water withdrawal by farmers located upstream, or favored distribution to relatives and friends of the village elite. These internal disputes on water delivery and water

¹¹⁰ “самая большая наша беда”. University professor, Bishkek, 09/15/2003. Similar statements were made by many other interviewees.

¹¹¹ Author’s interview with a local consultant of a donor organization, Bishkek, 09/28/2004.

¹¹² This is sometimes problematic as people can be affiliated with several organizations. The interviewed representatives of the World Bank WUA support program who work directly in the *DepVodKhoz*-structure and are meant to be part of it while financed by World Bank have been classified as international as they were selected by the WB and receive training from it.

allocation, however, are not mentioned by political actors of the central level as pressing problems. Strong awareness of the problem of fragmented policy making and legal inconsistencies, on the other side, is especially visible with representatives of donor organizations and NGOs but not by the central bureaucracy which should be expected to suffer from it most. Water quality issues were rarely mentioned. This reflects the low significance attached to ecological aspects in general. These are mainly only considered due to donor pressure that make environmental assessments an integral part of projects and support the Ministry of Ecology.¹¹³

Table 12: Problem perception by different organizational actors

Organization	Number of interviews	Technical, financial, and HR capacities	Institutional factors	Other	Total	n
WUA	7	56%	44%	0%	100%	18
State administration, meso level	5	46%	38%	15%	100%	13
State administration, central level	6	36%	41%	23%	100%	22
International agency	6	33%	52%	14%	100%	21
NGO or independent	3	25%	58%	17%	100%	12
Academic institutions	3	13%	38%	50%	100%	8
Total	30	37%	46%	17%	100%	94

N = number of problems mentioned (more than one possible).

Source: own data collection and analysis.

Despite the differing perceptions, it is apparent that institutional shortcomings are definitely a prominent problem and as such are acknowledged by political actors. The Comprehensive Development Framework of 2001 formulates several institutional objectives concerning water usage: changes in water legislation; the completion of Water Cadastre; the establishment of a uniform database on water usage; the establishment of WUA; and the introduction of economic tools (Djailoobaev 2004: 76). Also, the national report for the UN SPECA initiative on the rational and efficient use of water and energy resources in Central Asia puts institutional issues on the forefront and mentions the same aspects. It highlights “poor coordination of water consuming sectors, lack of clarity in the separation of functions and powers between agencies” as major problems (SPECA 2004: 46). The following sections will now look at the institutional reforms conducted and to what extent they addressed these problems and reached their objectives.

¹¹³ However, in practice those environmental aspects of projects are hardly implemented, often only an expert assessment is commissioned in order to fulfill the donor requirements.

6.3 Institutional Reforms

After the overview on the administrative framework, the main actors, and the key problems of water governance, this chapter now looks at the content and processes of water institutional reforms. Although all individual reforms are interrelated and in practice difficult to separate, for analytical purposes they will be analyzed individually. This is important in order to assess later whether certain aspects are differently affected by neopatrimonialism. For each reform, the decision making process and the involved actors will be reconstructed (as far as possible), the implementation progress so far described, and the outcome assessed. In the sub chapters on hydrographic management approaches, ISF and WUA, short excursions on the local case studies will strengthen the argument.

6.3.1 *The National Water Strategy*

During the time of the Soviet Union, water usage was determined by Soviet division of tasks between the Republics (see above ch. 0). With independence in 1991, the new sovereign state was confronted with the task of developing its sovereign policy. Kyrgyzstan lacked a political strategy for the water sector. To address this gap, the government established in 1996 or 1997 the National Committee on a Water Strategy.¹¹⁴ This committee was designed to develop a policy strategy and be involved in lawmaking processes (Hassan et al. 2004: 10). Initially, the National Water Strategy (NWS) was intended to be the basis for the new Water Code (see chapter 6.3.2.1). Due to the fact that the discussions on the Strategy took longer than anticipated, the development of both proceeded simultaneously.¹¹⁵ Finally, the Water Code was approved by the Parliament before the National Water Strategy that was not approved at all. The draft strategy of the National Committee was published in 2003. We will now first describe its content and then the process of its development.

The objective of the NWS is to develop a long term strategy for water usage in Kyrgyzstan in acknowledgment of the dependence of other states on the resource as well. The draft NWS comprises an inventory part that covers water resources, the effectiveness of water usage, water quality, water and sanitation sector, irrigation, hydropower, fishery, water economization, technical facilities, and monitoring. On basis of these data, it makes recommendations for the future direction and improvements of water resource management in Kyrgyzstan with regard to domestic and transboundary waters. The fundamental recommendations of the draft strategy for domestic water policy are as follows:

To reform the legal foundation in order to overcome contradiction between laws and sublegislative acts, concretize rights, functions and competencies of involved bodies, and specify regulation and control;

To reform the institutional structure by decentralizing and privatizing implementation functions so that the national agencies can concentrate on strategic planning, legal and economic regulation, coordination between ministries as well as between state and private bodies;

¹¹⁴ Exact date was not available.

¹¹⁵ Author's interview with a water expert at the International Institute for Strategic Studies under the President (MIS), Bishkek, 09/16/2003.

- To modernize the decision making system in order to overcome bureaucracy and corruption;
- To make participation of civil society and user groups a basis for effective water management;
- To make rehabilitation of infrastructure a priority in order to enhance effectiveness;
- To differentiate the payment for water usage in the long term;
- To reduce state funding in the long term;
- To strengthen state bodies for control, protection, and monitoring;
- To foster capacities and qualifications of staff and users by targeted programs (MISI, FES 2003).

We see that the draft NWS addresses many issues of good water governance and indicates clear requirements for water institutional reform. However, this draft was never approved. In order to understand why, we will now take a closer look at the process of its formulation.

The National Committee on Water Strategy was established by the President in 1996/97. It consists of experts from different ministries and agencies as well as scholars. The International Institute for Strategic Studies under the President (MISI) was authorized to coordinate the committee, which is chaired by the Prime Minister. Though characterized as a “think tank” by some authors (Hassan et al 2004: 12; Herrfahrdt et al. 2006: 52), the working group does not seem to have been working as team. Rather, the atmosphere in the group was described as difficult and tense without real coordination. The *DepVodKhoz* drafted the basic proposals for the NWS, which were the “Primary Suggestions of a National Strategy for the Usage of Water Resources” in 1998 and the “Primary Concepts for a National Water Strategy (first draft)” in 2001 (Mamatkanov 2003: 101). Other documents included the “Conception of the Complex Use and Protection of the Water Resources of the Kyrgyz Republic” developed by the Institute of Water Problems and Hydropower (IWP&HP), as well as materials and documents from international projects. The process of development and discussion is described as tedious due to the numerous contradictions between ministries and agencies, at the national as well as the international level. It did not succeed in reaching final consensus. In 2002, the chair of the commission, the Prime Minister, was instructed to “bring it to an end”.¹¹⁶

Subsequently, with support of the German Friedrich Ebert Foundation (FES), two Round Table discussions were organized on 10/21/2002 and 01/21/2003. They were attended by representatives of the Parliament, the Foreign Ministry, the *DepVodKhoz*, the Ministry of Ecology and Emergency Situations (*MEChS*), the Ministry of Justice, the Ministry of Finance, the Ministry of Industry and Commerce, the National Security Service, the State Agency on Energetics, the State Agency on Geology and Minerals, the JSC “Power Stations”, the National Academy of Sciences, and the Center for Transfer of Technology (MISI, FES 2003: 3). The evolving version of the National Water Strategy was subsequently published in the summer of 2003 by MISI and FES (MISI, FES 2003). Since then, it has awaited its adoption by the government and Parliament. This is reportedly blocked because one member of the committee is against it and the government is waiting for his positive reaction.¹¹⁷ So the process of the National Water Strategy has not been finalized. Two interviewees in 2004 consequently stated that there would be no water policy at all: “We do not have a domestic policy to solve the water problem”¹¹⁸ and “There is no water policy, because water policy should be defined in a nation

¹¹⁶ Author's interview with a water expert at the MISI, Bishkek, 09/16/2003.

¹¹⁷ Author's interview with a local representative of an international NGO, Bishkek, 09/27/2004.

¹¹⁸ „У нас нет внутренней политики решения водных проблем“. Author's interview with a local representative of an international NGO, Bishkek, 09/27/2004.

al water strategy. But according to law, no one is responsible for its development, and it is not clear who must approve it. It is a big problem".¹¹⁹

The chances that the National Water Strategy will still be approved and enter into force are marginal. In the new Water Code of 2005 (see subsequent chapter), it was decided to establish a National Water Council that is authorized to develop a Water Strategy (§ 18). The existing Commission is not mentioned in this code. This duplication of functions between the National Water Council and the National Commission on the Water Strategy was pointed out by the Ministry of Justice in its comments on the 2003 draft version of the Water Code.¹²⁰ Regardless, the final version of the Water Code does not make any reference to the Commission or the existing version of the Water Strategy, either. A round table discussion among water experts in December 2006 hence again brought forward the old problem when it complained about "the obvious absence of a clear and coherent strategy on the part of the government in this sphere" (IPP 2006). Ten years after the establishment of the National Committee on a Water Strategy the problem is still the same and the process seems to have started again from the beginning.

6.3.2 General Legal Framework

In the USSR, law was de facto subordinated to party decisions oriented at the centralized planned system. Hence, ambiguity and vagueness were not a problem, as law provided no more than a very general framework for party decisions. In independent Kyrgyzstan, a formal democratic state with rule of law, there is a need for clear rules and rights that law must provide by which decisions can be oriented (Tursunaliyev 2002). However, due to the lack of an official water strategy or policy (see above), the laws established shortly after independence lack coherence and are said to reflect only the ideas and interests of their respective authoring agencies (ISRI, Socinformburo, FES 2004: 38f). One main reform effort after independence therefore concerned the reform of the general water law. In this chapter we do not intend to discuss every single aspect or every amendment but rather only to concentrate on the general legal framework insofar as it defines the main governance principles and serves as a framework for further bylaws and for existing laws must be adapted. The first sub chapter addresses the development of the Water Code, the second one that of the Law on Transboundary Waters.

6.3.2.1 From the Law "On Water" to the Water Code

The Law "On Water" was the first water law after independence, passed by the Parliament on January 14, 1994. Its development began in 1992 under leadership of what was at that time the Ministry of Water Management (*MinVodKhoz*).¹²¹ The law in its main aspects perpetuates the respective law of the Kyrgyz SSR. It defines principles of water management and the general

¹¹⁹ „Нет водной политики. Потому что водная политика должна определяться в национальной водной стратегии. Но по закону у нас никто не ответственен за то, что бы её разработать и не понятно кто её должен принять. Это большая проблема.“ Author's interview with a local consultant of a donor organization, Bishkek, 09/28/2004.

¹²⁰ See *Vodnyy kodeks Kyrgyzskoy Respubliki. Projekt (11 iyulya 2003 g)* (Water Code of the Kyrgyz Republic. Draft, 11 July 2003), Annex (no pagination).

¹²¹ Author's interview with a senior official of *DepVodKhoz*, Bishkek, 09/11/2003.

competencies of Parliament, government, and local authorities. The main differences between this and the previous one are that the sovereign Kyrgyz Republic is now solely responsible for and has ownership of the water resources (§ 5); the introduction of economic mechanisms of water usage, such as the payment for the service of water delivery (excluding the agrarian sector) and for sewage discharge (§ 39); and the possibility to lease water facilities (§ 39).

The law is basically a framework law providing guidelines that would have required concrete bylaws and enforcement mechanisms. These, however, were missing until the time it was replaced. It was considered to be weak and neglecting important aspects of the new conditions but rather still reflecting the old Soviet style of management. It lacked clear assignments of competences to certain agencies and mechanisms for coordination and consultation among them. Additionally, important regulations were absent. These included provisions for the performance of inspections and keeping registers on licenses as well as regulations on flood control or glacier monitoring. Increasingly, there were contradictions with laws issued subsequently (Dzhajlobaev 2003: 69; Tursunaliyev 2002). Some amendments and changes to the law were made in order to improve the situation. This, however, led to more than 40 laws concerning water, which were partly still from Soviet times, and partly new ones, which were often contradictory. Out of all these reasons there was a general agreement that the legislation is unsatisfactory and that a new, sound water law is needed.

This discontent led to the development of a new Water Code that was approved by the *Zhogorku Kenesh* (Parliament) on January 12, 2005. The Water Code is a collection of legal documents aimed at providing the legal basis for the reform of water policy. Its main changes opposite the old Law “On Water” are:

Administration along hydrographic principle (§ 5 and others);

Legal regulations for contracts on water delivery and 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 I&D activities (§ 11);

Participation of stakeholders in basin councils (§ 10).¹²²

The Water Code aims to overcome administrative fragmentation by establishing a water management structure oriented toward hydrographic principles. It provides more detailed prescriptions for important aspects that were unclear before, such as competencies of different state bodies, contracts on water delivery, ownership questions of water facilities, and prosecution in the case of violation. It includes mechanisms for user participation and it defines water rights for the first time.

However, Kyrgyz water experts view the Water Code skeptically at least, sometimes they even totally object to it.¹²³ Apart from representatives of the concerned ministries, who mainly held a neutral view, none of the experts interviewed had a positive opinion of it. As reasons have been mentioned that the Water Code would be too blurry, a framework without concrete norms (especially as long as it is not supplemented with concrete bylaws, implementation mechanisms etc.). Old laws would be annulled before providing concrete new regulations and mechanisms, causing a legal vacuum. Also, its prospects for realization were highly questioned. Finally, another point of criticism was that it involved no directives on international water

¹²² See *Vodnyy kodeks Kyrgyzskoy Respubliki* (Water Code of the Kyrgyz Republic).

¹²³ All interviews were conducted before the Water Code was approved by Parliament.

relations. Although different ministries with their representatives and other experts took part during the official process of formulating the law, the widespread critique by many of the concerned actors shows that there is obviously no sense of ownership for the new law. In order to understand the low grade of identification with the new Code, a closer look at the decision making process is necessary.

Just as in the case of the National Water Strategy, the development of the Water Code was a process that endured much longer than anticipated. Its development began in 2000. While the *DepVodKhoz* initially hoped the code could enter into force by autumn 2002,¹²⁴ it was only in December 2004 when it was finally sent to *Zhogorku Kenesh*, which approved it on January 12, 2005.

The discussions between all concerned ministries during the process of drafting the Water Code were described as involving many intricate questions and contradictions with difficult conciliation between all interests. The main point of concern seems to have been the new administrative regulations and definitions of competencies. These were included with the objective of reduction of duplications and enforcement of accountability. While this is in line with the problem perception described above, this was exactly the point most resisted by the involved bodies:

“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: everyone only looks: 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 competences and only agree to legal proposals in which their interests remain preserved.

Yet this is not the only reason for the widespread criticism. Another reason is that international donors (unofficially) played a considerable role in the development of the bill. The World Bank, USAID, and the UNDP have been mentioned as being involved in or even as mainly preparing the draft code. Only the draft was then spread to Kyrgyz agencies for comments.¹²⁵ Although a consultant hired by the World Bank to prepare the Water Code claimed that the process would have been very participative and involved all levels until down to the water users,¹²⁶ this might not be the case: Several national scholars stated that they quit participation as they were no longer invited to the discussions after they made critical remarks, that the invitations sent were incorrect, and that even already the first drafts prepared by international projects would have been too weak to make participation worthwhile.¹²⁷ Public participation beyond a selected expert circle was not observable at all. Another hint that points to the opaqueness of the development of the Water Code is that at the time of the approval of the Water Code by the Parliament, it was barely known not only to the general public, but also to interested experts and employees of the lower levels of the water administration.

Implementation of the Water Code cannot yet be assessed as it was only approved at the end of the field research period. The code itself foresees that normative acts should be developed within six months. However, in the meantime the country would be without effective

¹²⁴ Author's interview with a senior official of the *DepVodKhoz*, Bishkek, 09/11/2003.

¹²⁵ Author's interviews with a former senior official of the *MEChS*, Bishkek, 09/16/2003; with a project implementation officer at the World Bank, Bishkek, 09/19/2003; with a local consultant of a donor organization, Bishkek, 09/28/2004; informal conversation with a local official at UNDP, Bishkek, 05/06/2005.

¹²⁶ Author's interview with a local consultant of a donor organization, Bishkek, 09/28/2004.

¹²⁷ Author's interviews with a representative of a local NGO, Bishkek, 09/16/2003; with the director of an academic institute, Bishkek, 09/15/2003.

law, as the old law was abolished at the time when the new Water Code was not yet provided with the necessary bylaws to make it work. As turned out later, this interim period endured longer than anticipated due to the political turmoil in March 2005 and the subsequent time of instability. Only after the presidential elections in July 2005, did work begin again, and it was only by the end of 2005 that eight normative acts to realize the Water Code had been prepared.¹²⁸ As far as structural reform is concerned, the steps to implement these will be described in chapter 6.3.3 on administrative reform.

6.3.2.2 Laws concerning Transboundary Waters

This study focuses on domestic water policy. Still, I will now insert a short chapter on foreign water policy. This is important for the following reasons: First, water is rather perceived as an issue of international relations than of domestic politics in Kyrgyzstan, so a comprehensive understanding of water policy must cover these aspects as well. Second, all main rivers in Kyrgyzstan are transboundary (Naryn, Talas, Chuy, Sary Dzhas) with Kyrgyzstan located up stream, so all decisions on the economic usage of water resources always have implications on downstream states and thus affect foreign relations. Third, a comparison of the decision making process in this sphere with domestic water policy allows for interesting insights and inferences.

An initial presidential decree on transboundary water issues “On the foundations of the foreign policy in the area of usage of water resources of rivers that originate in Kyrgyzstan and flow to the territories of bordering states” was issued in 1997 but did not have much impact (Mamatkanov 2003: 100). Of much more importance is the 2001 “Law on International Use of Water Objects, Water Resources and Water Management Facilities of the Kyrgyz Republic”. This law defines water as a natural resource that possesses economic value. It should therefore be treated according to economic principles; thus, payment for water should be introduced on the international level. It reflects the position emerged that Kyrgyzstan should “sell” its water resources like its neighbors sell their coal, gas, or oil resources.¹²⁹ According to this law, Kyrgyzstan has ownership of all water resources originating on its territory. Therefore, Kyrgyzstan claims the right to use as much water as it requires for its present and future needs, which ultimately means that the legitimacy of the international agreements on regional water distribution is put into question. The law is also a consequence of the discontentment about lacking cost sharing mechanisms for the operation and maintenance of hydro technical facilities on Kyrgyz territory that discharge irrigation water to Uzbekistan and Kazakhstan (see ch. 5.4.3).

The law provoked harsh reactions by neighboring states. The President of Kazakhstan as well as the Prime Minister of Uzbekistan severely criticized the law as being incompatible to standards of international water law and refused to accept it (Shalpykova 2002, Usulbaliev 2002).¹³⁰ But the law is criticized not only by the neighboring countries but also in Kyrgyzstan. It reflects an extreme position that is also widely contested within Kyrgyzstan but nevertheless

¹²⁸ Author's interview with a senior official of the *DepVodKhoz*, Bishkek, 11/03/2005.

¹²⁹ Author's interview with the director of the IWP&HP, Bishkek, 09/15/2003; with a NGO representative, Bishkek, 09/12/2003; with a senior official at the MISI, Bishkek, 09/16/2003.

¹³⁰ Meanwhile, Kazakhstan acknowledged the legitimacy of compensation mechanisms and is involved in payment for Chuy and Talas water facilities.

evolved as a main issue in the discourse about water.¹³¹ This may be one reason why there are no mechanisms for the implementation of this law and also no efforts to do so. The Kyrgyz government is said to claim its right without concrete implementation activities (Mamatkanov 2003: 101f). At this point it is insightful to review on the process of decision making:

The law on transboundary waters is commonly associated with one Member of Parliament: Turdakun Usulbaliev. Sometimes the law is even called “*zakon gospodina Usulbalieva*” “the law of Mr. Usulbaliev”. As mentioned earlier, Turdakun Usulbaliev is the former First Secretary of the Kyrgyz Communist Party. The fact that his version of problem perception found its way to the top of the agenda and the law was passed shows his continuing influence as former leader of the Kyrgyz Soviet Republic. He was supported by the influential director of IWP&HP, who is a much valued academic. Just like Usulbaliev, he gained much of his authority in the Soviet Union. For several years, the IWP&HP was already lobbying for water pricing mechanisms. According to the director, this law presents the interests of Kyrgyzstan, while the proposals of the *DepVodKhoz* would rather reflect the interests of the neighboring countries. He sees it as the merit of his working group that the significance of inter state water distribution was finally recognized by officials at the highest levels of the Foreign Ministry while the staff of the *DepVodKhoz* and the Agency of Energetics demonstrated a lack of understanding for it. He perceives himself more as a politician than as a scholar. He says he fought for years to convince the government and ministries that “would not understand the problem” to see matters his way (Mamatkanov 2003: 99 103).¹³²

The law can therefore be seen as a personal mission of Turdakun Usulbaliev. This was also visible in the subsequent discussions with representatives of Uzbekistan and Kazakhstan. Even when they in their letter of critique addressed the concerning ministries or the Parliament, it was Usulbaliev who replied to them (see Usulbaliev 2002). Although the problem is only perceived by some actors, it is a prominent topic of political debate and much more on the agenda and in public discussion than other water problems and reforms. However, similar to the Water Code, this is again a policy document contested by considerable parts of the expert community and without implementation mechanisms.

After these first two chapters on Kyrgyzstan focused on the general policy strategies and mainly on decision making, the subsequent chapters will look at several concrete reform processes in decision and implementation.

6.3.3 Administrative Reorganization

The fragmentation of competencies in the water sector is considered a serious problem. One reform effort was therefore to establish a structure capable of comprehensive, integrated management of water resources. According to the current discourse, this should be reached by introducing hydrographic principles as well as cooperation and coordination mechanisms among all concerned bodies in the different sectors. These two reforms will now be looked at in detail.

¹³¹ There is considerable disagreement over whether water is to be treated as an economic good – in general, but especially in international respects. The reasons are besides normative also practical considerations on the impossibility of its implementation.

¹³² Author's interview with the director of the IWP&HP, Bishkek, 09/15/2003.

6.3.3.1 Management along Hydrographic Boundaries

One management objective of IWRM is the management along hydrographic boundaries. This means that water resources should not be administered by sectoral or administrative approaches but based on hydrographic units. There should be one body responsible for each basin and not several bodies in each administrative unit like provinces or districts. Kyrgyzstan also officially endorsed this approach. At the time of independence, water resource management was based on administrative boundaries of *oblasts* and *raions* (see chapter 6.1.1 on water administration). Already in 1997, the *oblast* water management departments (*ObVodKhoz*) were reformed into basin water management departments (*basseynoe upravlenie vodnogo khozajstva*). Thus, formally, it may seem that the reform is already long implemented. In practice, however, the *ObVodKhoz* have simply been renamed without any structural changes. This is justified by the argument that the management would already occur to hydrographic principles to a certain degree, as the *oblasts* would coincide with river basins.¹³³ While this is partly the case, administrative and hydrographic boundaries do not exactly coincide. For example, the Chuy River originates in Naryn *oblast*, then crosses Issyk Kul *oblast* before entering Chuy *oblast* and finally flowing into Kazakhstan. Most *ObVodKhoz* do actually not manage a basin, but only that part of a basin that is in their administrative boundaries. Even inside their territories they do not have full control, as hydrological facilities such as bigger dams and reservoirs are managed by a distinct agency. So, despite the reform the water administration in practice still occurs along administrative boundaries instead of along hydrographic ones (SPECA 2002: 41).

Consequently, in the Water Code of 2005, one objective is again the reform towards basin management. It plans to establish basin councils with representatives of all stakeholders and basin management units (*basseynoye vodnye administratsii*) to be responsible for policies, rehabilitation, and fees (§ 10, 11). However, according to the vice director of the *DepVodKhoz*, the state structures are intended to stay the implementing agencies without any changes in their structures.¹³⁴

This persistence of the administrative principle is also reflected in the newly established Water User Associations (WUAs) (see chapter 6.3.5). This reform will be discussed in detail later, but it should be noted here that the transfer of local irrigation management from *ajyl okmotu* (a/o) to WUAs in theory also marks the transfer from administrative (local municipalities) to hydrographic (one channel subsystem) boundaries.¹³⁵ In fact, however, most WUAs are not established on hydrographic considerations. They as well as the *ajyl okmotu* are aligned along the boundaries of the FSK. In Chuy province, these often coincide with hydrographic boundaries as many FSKs had a cohesive irrigation system. This is, however, not always the case, particularly not in the south of Kyrgyzstan, where irrigation systems predate collectivization.¹³⁶ Thus, the situation at the local level is similar to the *oblast* level: As the administrative boundaries are partly oriented along hydrographic ones, management often is based on hydrographic boundaries. Yet this is rather unintended and not the result of a reform. The underlying principle is still the administrative one, no matter which new names for organizations are introduced. In the local case study, for example, the WUA “*ked orsel*” is oriented along the territorial boundaries of Frunze a/o, although it should for hydrographic reasons include the

¹³³ Author's interview with a senior official of the *DepVodKhoz*, Bishkek, 09/11/2003.

¹³⁴ Author's interview with a senior official of the *DepVodKhoz*, Bishkek, 11/03/2005.

¹³⁵ There are also long-term plans of WUA federations along hydrographic lines. However, as the WUAs themselves are still very weak, these plans are not yet concrete and realization in the near future seems unrealistic.

¹³⁶ Author's interview with a university professor, Bishkek, 10/01/2003.

Kayzhanovka a/o as well. During field research, only one WUA was encountered that included lands from different a/o and hence was purely hydrographic.

In summary, it can be stated that on the basin as well as on the local level the introduction of hydrographic principles, albeit fostered for ten years now, is still implemented merely cosmetically.

6.3.3.2 Intersectoral Cooperation and Coordination

In chapter 6.2, it already became evident that the lack of proper coordination and regulation between the various agencies involved in water management is one of the most often mentioned problems in the interviews and also in policy documents. The centralized Soviet system led to experience only in upward accountability, not in horizontal coordination. The new challenges after independence, however, demand horizontal coordination instead of vertical subordination (and policy formulation instead of mere implementation). The negative impacts of the lack of interagency coordination are aggravated by the generally strong centralized, hierarchical system with top down decision making of public administration that is also characteristic for the water sector (Hassan et al. 2004: 33). The establishment of horizontal coordination mechanisms was thus one institutional reform effort.

While the difficult intersectoral coordination was one of the motives for the proposal to develop a new Water Code (SPECA 2002: 42), it was also one of the reasons why this Water Code was so difficult to develop, as was already mentioned before. "The question that is the most conflict ridden of all at the moment is the division of competencies among different subjects".¹³⁷ For a long time, nothing was done to address this serious problem.

Its negative impacts are reinforced by the lack of a policy strategy. The results are not only overlapping competencies and the duplication of functions, which may be seen mainly as a concern of efficiency and cost effectiveness of state bureaucracy, but also inconsistencies in law that have various practical negative implications for water users. WUAs, for example, faced many difficulties, as the Tax Code was not changed according to the provisions of the WUA law. This meant that they must pay up to 20% taxes on their proceeds, which is an enormous burden for the financially liable organizations and was mentioned by many WUA representatives as the most pressing problem.¹³⁸ For farmers, it is a problem that the land rights as codified in the Land Code (*Zemelnyj Kodeks*) had no analogy in codified water rights of the farmers until the 2005 Water Code (Dzhajlobaev 2003: 69).

This situation was worsened even more with an amendment that even abolished a coordination mechanism: the decision to liquidate the system of licenses, which was made because of donor pressure. Different agencies received licenses for water usage from the state and were

¹³⁷ „Вопрос, сейчас чаще всего конфликтные вопросы на границе раздела ответственности между различными субъектами“. Director of a local NGO, Bishkek, 09/12/2003.

¹³⁸ The underlying cause is that the legal status as non-commercial organizations has not yet been clarified. In the 2002 Law on WUAs, they are defined as non-commercial organizations, but the tax code has not been changed accordingly. The transfer of the irrigation system to the WUA also bears difficulties: All facilities with on-farm relevance (and also some off-farm) should be transferred to the balance of the WUA. But according to law, the one who transfers it (in this case mostly the FSK or the *ajyl okmotu*) should pay 20 % of its value as tax to the state. However, as some sets are worth 1 Mio som or even more, it means that they would have to pay 200,000 som to the state. Understandably, with a lack of money anyway, those organizations want to give away facilities but they do not want to pay for it. And the WUA as a recipient does not have the funds to pay for it, either. There were some proposals to make this transfer without payment (Law of April 6, 2004), but again the tax code was not changed accordingly.

allowed to give certain licenses to users, which is a globally practiced system to control and regulate water consumption. The *ObVodKhoz* used to be allowed to distribute licenses for water use up to 500,000 cubic meter. Licenses for bigger amounts had to be issued by the *DepVodKhoz*. In 2001, the Law on Licenses was amended according to the demands of donors and therewith the system of licenses for water use abolished (SPECA 2004: 58).¹³⁹ A senior official at the *DepVodKhoz* did not know the reason for the abolishment of licenses.¹⁴⁰ This led to a “legal vacuum” (SPECA 2004: 58) and even to less means for coordinating water demands of different sectors:

“We do not know how to regulate them, whatever they want, they do (...). The *DepVodKhoz* used to make the decision on water usage or the so-called licenses, they defined the limits. Now these licenses do not exist any more, no limits. This is why everybody takes as much as he wants. A mess emerged because of the foreign consultants. They have advised our government; we cannot” (senior official of the *DepVodKhoz*, Bishkek, 09/15/2004).¹⁴¹

Problems arise in the control of hydropower sector, for example: The JSC Power Plants used to receive licenses to which they had to adjust the mode of operation of the dams. Now there is no regulation and coordination of the hydropower plants with general water management.

Besides the fragmentation, the status of the *DepVodKhoz* itself is perceived as problematic. In the first few years after independence, a discrete Ministry of Water Management (*MinVodKhoz*) existed. As long as FSKs existed, the *MinVodKhoz* stood in terms of significance even above the Ministry of Agriculture. With the dissolution of the FSKs, such a huge ministry seemed unnecessary. Simultaneously, international financial institutions pressed for a reduction in the total number of ministries in order to reduce public expenditure.¹⁴² So in December 1996, the Water Ministry was merged with the Ministry of Agriculture and became the Ministry of Agricultural and Water Management and Processing Industries.¹⁴³ There it is the *DepVodKhoz* that is in charge of the elaboration of policies and strategies. However, now it is criticized that one agency, the *DepVodKhoz*, is in charge of water resource management in general but is itself part of the Agricultural Ministry, which represents one of the primary water using sectors. This leads not only to possible conflicts with other sectors such as energy, fishery, etc. that may feel disadvantaged as the *DepVodKhoz* lacks objectivity but also to legal contradictions (i.e. management and control by same body) (Djailoobaev 2004: 73, 77; SPECA 2004: 46). Consequently, the report of UN SPECA proposed to dissociate water management from the Ministry of Agriculture in the context of a general reform of the organizational structure of water management (SPECA 2002: 41f; SPECA 2004: 60). The new Water Code of 2005 addresses this problem.

In order to overcome the fragmentation of competencies and the questionable subordination of the *DepVodKhoz* to the Agricultural Ministry, the Water Code foresees the establishment of a National Council (*Natsionalnyi Sovet*) and a State Water Administration (*gosudarstvennaya vodnaya administratsiya*) in order to coordinate all activities and policies in water resource management (see ch. 6.3.2.1 above). The National Council should be the main decision making agency with the State Water Administration in charge of implementation. The State Water

¹³⁹ Author's interview with a senior official of the *DepVodKhoz*, Bishkek, 09/11/2003.

¹⁴⁰ *Ibid.*

¹⁴¹ „как их регулируют, не знаем, они что хотят, то и делают (...) департамент водного хозяйства и выдавали разрешение на водопользование или так называемые лицензии, лимиты выдавали, сейчас уже этих лицензий нет, лимитов нет. Поэтому, кто сколько хочет берет, получился бардак из-за иностранных консультантов, они вот такое наконсультировали нашему правительству, мы не можем.“

¹⁴² In total, about one third of all administrative bodies were abolished or reorganized (GoK n.d.: 42).

¹⁴³ Author's interviews with a senior officials of the *DepVodKhoz*, Bishkek, 09/11/2003 and 09/15/2004.

Administration is designed to have standing above the Ministries of Agriculture and Ecology and is headed by a member of the government.¹⁴⁴

Although its implementation is beyond the research period of this study, as far as information is available, a short assessment on its prospects shall be provided here. In February 2006, more than a year after the Water Code was approved by the Parliament and the old Law on Water lost its validity, a bylaw on the establishment of the National Water Council was decreed by the Prime Minister.¹⁴⁵ The members of the Council are

- The Minister of Economy and Finance;
- The Minister of Justice;
- The Minister of Agriculture, Water Management, and Processing Industries;
- The Minister of Emergency Situations;
- The Minister of Foreign Affairs;
- The Minister of Industry, Trade, and Tourism;
- The Minister of Public Health;
- The chairs of concerned Parliamentary committees;
- The governors of the *oblasts*;
- The mayors of Bishkek and Osh;
- The directors of other concerned state agencies.

The National Water Council does not contain any members of civil society organizations, private companies, or academic institutes. In the same directive, it was also decided that the State Water Administration is “temporarily” transferred to the *DepVodKhoz*. Hence, despite the desired comprehensive approach to water resource management, the main agency will stay the same and will remain part of the Agricultural Ministry. It can be anticipated that the State Water Administration just like the basin administration will be a mere change of name without any practical implications.

The perspective that the fragmentation will persist is supported by another development: Two months after the establishment of the National Water Council under the Prime Minister, a “National Council on Hydropower Policy” under the President was founded by Presidential decree in April 2006.¹⁴⁶ In contrast to the National Water Council, the members of this council are not restricted to state agencies. Members include several members of Parliament, representatives of the Ministry of Foreign Affairs, the Ministry of Economy and Finance, the Ministry of Justice, the Ministry of Transport and Communication, the *DepVodKhoz*, and other state agencies. Further, the directors of several private hydropower companies, of the IWP&HP, the MISI, and other experts are included. This Council is, in contrast to the National Water Council, established directly under the President, who possesses considerably more power and constancy than the Prime Minister (see chapter 5.5). It has the objective of coordinating and developing a consistent position on hydropower relations with the neighboring states and to advise the government on rational usage of the country’s hydropower resources. Hence, an important part of water politics is not discussed by the National Water Council, but instead by this council. However, after the first session in May 2006, the council was dissolved again and all functions transferred to the National Water Council.¹⁴⁷

¹⁴⁴ Author’s interview with a senior official of the *DepVodKhoz*, Bishkek, 09/15/2004 and 11/03/2005; with a local consultant to international donor organization, Bishkek, 09/29/2004.

¹⁴⁵ *Postanovlenie No. 64: O Natsional’nom sovete po vode* of 02/03/2006.

¹⁴⁶ *Ukaz No. 174: O Natsional’nom sovete po vodnoenergeticheskoy politike pri Prezidente Kyrgyzskoy Respubliki* of 04/17/2006 and *Ukaz No. 185* of 04/27/2006.

¹⁴⁷ *Ukaz No. 410: Ob uprasdenenii Natsional’nogo soveta po vodnoenergeticheskoy politike pri Prezidente Kyrgyzskoy Respubliki* of 08/03/2006.

To sum up, the objectives of administrative reform of the water management bodies are to improve the coordination and prevent inconsistencies by eliminating double functions and separating functions more clearly. These measures should thereby also reduce the number of administrative staff members and decrease the share of budget funding for the water sector. These efforts are resisted by agencies afraid to lose any competencies. As these agencies are also involved in the decision making process, it proved difficult to come to a decision on reform. Consequently, the *DepVodKhoz* “operated as it used to under the USSR preserving the same internal structure and even, in some cases, using the same documents and procedures” (Tursunaliyev 2002, no pagination). No internal restructuring has taken place at *oblast* and *raion* levels, either.¹⁴⁸ While the problem of administrative fragmentation, overlapping, and inconsistencies is widely acknowledged, efforts to tackle it fizzle out due to the dominance of partial interests which are rooted in the precarious financial situation of the public bodies.

6.3.4 Introduction of Market Mechanisms (Irrigation Service Fees)

The introduction of market economic mechanisms is often seen as the main tool to reach more efficiency in water usage. For Kyrgyz policymakers, however, as almost everywhere in the world, the impulse for introducing irrigation service fees (ISF) came from a crisis in the national budget rather than from environmental concerns about more efficient water use: “The government realizes that they have no money for O&M, so they say we give it to the farmers to pay.”¹⁴⁹ Water fees should help to cover the costs the state has for operation and maintenance of the hydro technical systems and facilities that remained in its responsibility. The term “irrigation service fee” clarifies that the fee is not on the usage of water as such, but on the service (by the state) to operate and maintain the infrastructure necessary for the transportation of water and to deliver the water timely to the place needed.

Water fees were already formally introduced with the Law on Water of 1994. However, the agricultural sector was initially excluded from these payments due to resistance from the Parliament. In 1995, an amendment was made in order to allow the introduction of service fees on water use in agriculture and forestry (Dzhajlobaev 2003: 69). Simultaneously, the state reduced its apportionment of funds to 50% of the expenditures of the *RaiVodKhoz*es. The other 50% should now be covered by the users with ISF. On farm systems (tertiary channels) managed by FSKs, a/o, or, more recently, WUAs are to be covered completely by user fees.

After the general decision on the introduction of an irrigation service fee was made, the next step was to decide on its amount. Again, the Parliament acted as a major veto player to the government. Due to its enduring refusal, a cost recovering tariff could not be decided on and the final water tariffs for agriculture were only established in 1999.¹⁵⁰ The ISF is calculated on a volumetric base, which means according to the volume of water delivered.¹⁵¹ Its height is 3 tyn¹⁵² per cubic meter in the vegetation period and 1 tyn off season (§ 2).¹⁵³ This fee is rather

¹⁴⁸ Author’s interview with the director of the *OblVodKhoz*, Osh, 09/22/2003.

¹⁴⁹ International consultant, Osh, 09/18/2004.

¹⁵⁰ *Zakon Kyrgyzskoy Respubliki Ob ustanovlenii tarifov za uslugi po podache polivnoy vody na 1999 god ot 24 marta 1999 goda* (Law of the Kyrgyz Republic “On the determination of tariffs for the service of irrigation water delivery in 1999” of March 24, 1999).

¹⁵¹ One point of criticism is that the fees are standardized in the whole country regardless of the specific climatic or ecological conditions and regardless of the mode of irrigation (e.g., pumping, earth channel, length of channel, etc. with all resulting in different costs).

¹⁵² 100 tyn are 1 Kyrgyz som. 1 som is equivalent to about 0.02 Euro.

symbolic; it covers only approximately about 20% of the actual O&M costs.¹⁵⁴ The fees have not been increased since then although a yearly review takes place in theory. Respective laws have been submitted to Parliament in 2000, 2001, and 2002, but they were not accepted (Johnson III, Stoutjesdijk, Djailobayev 2002: 4; Dzhalobayev 2003: 70; Djailobayev 2004: 74). The opposition of the Parliament is a consequence of the farmers' interest as a main voter group. "The ascertainment of the tariffs does not depend on economic factors, does not yield the needed expenditures, but all too often the height of the tariffs is defined by political conditions" (Dzhalobayev 2003: 70, translation JS). The determination of the height of ISF hence "is a political decision rather than an economic one" (Johnson III, Stoutjesdijk, Djailobayev 2002: 4). In the 2005 Water Code, the authority to determine the height of the ISF is transferred to the government, while the Parliament has now the final say on the height of the state budget allocations to the water sector. Additionally, the Parliament can establish a fee on the usage of water as natural resource (§§ 40, 48, 83). It remains to be seen whether this will lead to an increase in the amount of the ISF. While government experts stress that the ISF had to be raised, they are also reluctant to say it in public. At a workshop for WUA representatives, one government official even announced that ISF could decrease after WUA federations are formed – a completely unrealistic scenario.¹⁵⁵

Besides the reluctance to establish effective water fees, even implementation of the symbolic ISF, i.e. the collecting of the water fees from the farmers, is far from being realized. With the establishment of WUAs there was hope that collection rates increase as they are now in charge of collecting the ISF from their members (see chap. 6.3.5 below). However, though payment rates improved in recent years, they are still low throughout the country. There are no exact data on ISF collection rates. Older World Bank data state a rate of 19% in 1995 and 80% in 1997 (Thurman 2002: 8). However, other data are presented in Table 13. These data cover only WUAs, where one can assume that the rate is higher than in those places where WUAs do not yet exist. In areas without WUAs, the collection rate is even less, as the *RaiVodKhozhes* do not have the staff capacities for individual collection from the farmers. But as the table shows, even under suitable circumstances, only half of the ISF are collected. Additionally, a considerable part of ISF is paid in kind.

Table 13: Collection of ISF in WUAs in 2003

<i>Oblast</i>	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.

¹⁵³ For regions with "difficult natural conditions" the fees are lower.

¹⁵⁴ Author's interview with a local consultant of an international donor organization, Bishkek, 09/29/2004. There are different calculations and estimations as to how high they should be. Hassan et al (2004: 39) assume that the current fees would have to be raised by 5 to 7 times. One expert estimated that the real O&M costs are about six USD per ha of irrigated land (international consultant, Osh, 09/18/2004). There are efforts by the *DepVodKhoz* to increase the ISF to at least 6-10 tyn per cubic meter.

¹⁵⁵ Author's observation at a WUA workshop in Osh, 09/17/2004.

In acknowledgement of the situation in the agricultural sector (see ch. 5.5.3), farmers have officially been allowed to pay 30% of the ISF in kind. In fact, however, it is between 50% and 80% that are actually paid in kind. It results not only in limited cash flow to the water agencies, but it also increases transaction costs and generates additional costs (storage, transportation, etc.). As the *RaiVodKhoz* must barter or sell these products, it loses material value and working time of its employees. The repair and cleaning of channels in exchange for water by farmers, which also occurs, lacks proficiency needed to make it sustainable.

The government did not take any steps to create the technical preconditions necessary to implement volumetric ISF: Technical equipment for exact volumetric water measuring is in existence at most channels. Hence, the amount of water released to one farmer cannot be measured, and sometimes not even the amount of water to one FSK or WUA. "The act of asking (...) to regularly measure individual farm deliveries is not physically possible during an irrigation season."¹⁵⁶ The costs of the necessary technical equipment are very high (they can even exceed the cost of water supply), thus neither the state nor WUAs so far took action to install it. In fact, in most WUAs at the moment only a quasi volumetric charging is applied with fees based on estimations (DFID, Mott MacDonald 2003:11 21; Hassan et al.: 10).

Non payment of the water fees is in most cases not followed by the suspension of water delivery. This has on the one hand technical reasons: The formerly centralized system of channels often makes it difficult to exclude those farmers from water delivery who did not pay for it. On the other hand, persons in charge at *RaiVodKhoz*es as well as those at WUAs are reluctant to impose sanctions. Although some WUA representatives claim that they would not deliver water to farmers who did not pay their debts of the previous year, no actual cases of enforcement could be verified. At one WUA in the case study, people are expected to pay 30% in advance and the remaining amount later, at the latest at the end of the harvesting period. However, during observation in the local case study it could be witnessed that farmers receive their receipt of payment for their water supply without paying in advance. Therefore, one of the case study's WUAs had between 1,000 and 1,500 som debts remaining from farmers who did not pay the previous year. Other WUAs are owed even more money by farmers. The WUAs, in turn owe the money to the *RaiVodKhoz*. In the Sokuluk case study, many WUAs have debts of unpaid fees at the *RaiVodKhoz*, which leads to tensions between them. The *RaiVodKhoz* for its part needs the ISF for O&M work. Due to lack of financial means, it is not able to do all the necessary work at the off farm channels, which again leads to water losses and difficulties in water delivery.

Partly, the WUAs try to work the debts off by *bashars*,¹⁵⁷ e.g., cleaning services at the main channels. The WUA lists all the work it has done (in a so called *akt protsentovki*) and *RaiVodKhoz* gives the WUA water in the monetary value of the work performed. As mentioned above, the *RaiVodKhoz* is only allowed to take maximum 30% of WUA payments in kind. In reality, however, it accepts more. However, the workers often lack the required level of competency and equipment so that the work does not meet the required needs and therefore leads to further disagreements between the WUA representatives and the *RaiVodKhoz*. In December 2003, the indebtedness of WUAs due to fees not paid to the government was 42 Mio som, which is equivalent to 1 Mio USD (Alymbaeva 2004: 11). Hence, WUAs do not effectively support the implementation of ISF.

The non payment of water consumed seems to be an accepted or at least comprehensible behavior. Consequently, with hardly any sanctions following non payment, few incentives exist

¹⁵⁶ Email communication with an international consultant, 10/16/2005.

¹⁵⁷ See chapter 5.3.

to pay on time. Moreover, due to the deteriorated infrastructure and unauthorized water with drawal (see below), timely payment is no guarantee for the timely water delivery. The *RaiVodKboz*es are not expected to cover their costs with ISF that do not come close to covering the real costs, even if these were collected in full. The *RaiVodKboz*es hence do not have the means to improve their services, e.g., to reduce water losses or ensure the reliability of water delivery by way of technical improvement. This again results in a lack of benefits of ISF payment for farmers and increases their unwillingness to pay. Due to the poor condition of the off farm channels, for which the WUA is responsible, enormous water losses result that must be paid for by the WUA. For example, one WUA director in the case study complained that of 50 cubic meter ordered, only 32 to 33 cubic meter would reach WUA territory. Thurman (2002: 12) cites a farmer from Talas: "the irrigators take the money from the population, but produce no real improvements of the irrigation system." Farmers do not see any benefits from payment.

In the case study, it could be observed in the weekly meeting of WUAs with the *RaiVodKboz* that several directors complained to the *RaiVodKboz* director that they had to collect money from the people, and then the water was not delivered on time. They had to organize their members for rehabilitation work of the channels, and then the *RaiVodKboz* would not give them the full monetary value as it is dissatisfied with the quality. They had to solve all the problems, argue with people, and then *RaiVodKboz* would not fulfill its part. These complaints also show that the payment problems do not only concern payment of WUA to the *RaiVodKboz* but also vice versa, meaning the fulfillment of the obligations on the part of the *RaiVodKboz*. It is hence also a problem of accountability. Yet water users are not used to asserting their rights, as the following situation of the case study shows: A WUA director, when telling the author about a conflict with the *RaiVodKboz* about undelivered water,¹⁵⁸ seemed to want to justify his behavior as he stressed that this situation lasted for some time and they were in dire need of the water. Interestingly, he did not argue that they paid for it and they therefore had the right to receive it.

Water fees are obviously not perceived as legitimate rules even by those who should enforce them and who would in theory benefit from them. This can be seen by the fact that non payment is rarely followed by any sanctions. Farmers who do not pay still receive water, and often those farmers who do pay are not guaranteed the delivery of water due to the deteriorated infrastructure). While different mechanisms are in place to enforce payment (like partial payment in advance), they are not generally implemented in practice. There is no correlation between actual water payment by the individual farmer and water delivery from the WUA and consequently also no incentive for farmers to pay ISF. The reform is thus not effectively implemented: technical implementation measures were not taken; non payment is widespread and does generally not result in sanctions. Under these circumstances, the question arises why farmers pay at all. This will be addressed in the subsequent analysis (chap. 6.4).

6.3.5 *Transfer of Irrigation Management*

The last major water institutional reform is the transfer of local irrigation management from the state to independent Water User Associations (WUAs). The study of this reform process is especially useful as it involves elements of the previously mentioned reforms: introduction of

¹⁵⁸ One head of section sold water to several WUAs without delivering the full amount and taking the money for himself.

the hydrographic management principle on the local level and the collection of ISF. As these aspects were already discussed in a separate chapter, the analysis of WUA will concentrate on the transfer of state responsibilities to an independent organization and the participation of water users. In this respect, the concept of the Water User Association (WUA) seems ideal for merging all the main normative objectives of the current water governance discourse: It is a democratic grass roots organization of the water users themselves at a decentralized level, independent from state structures, financed 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 vis à vis its members the farmers equitable water distribution should be guaranteed.

During the Soviet regime and in the first years of Kyrgyzstan's independence, the state and collective farms were in charge of irrigation management in their areas. Regarding their dissolution during land reform (see chapter 5.5.3), the government in 1994 transferred the responsibility for O&M of the on farm irrigation system to the newly established local government bodies, the *aiyl okmotu*. However, it soon became apparent that this places too excessive demands on the local authorities.¹⁵⁹ A government decree therefore envisaged the transfer of these systems to the farmers themselves (Alymbaeva 2004:8f).

The first legal foundations of WUA were the government decrees "Regulations on WUAs in Rural Areas" (1995) and "Statute of WUAs in Rural Areas" (1997). These decrees roughly defined the WUA concept, regulated its activities in O&M, and determined its organizational and financial structure. The latter already regulated the transfer of on farm infrastructure to WUAs, allowed the trade of water, stipulated bookkeeping procedures and fees, and allowed WUAs to impose sanctions in the event of violation of regulations. Neither, however, paid much attention to transparency and democratic processes. Alymbaeva (2004: 9) therefore comes to the assessment: "The legacy of a centralized management model was translated into the contents of these laws." The shortcomings of the inadequate legal framework resulted in WUAs that were neither financially nor organizationally viable. In 2002, therefore, a new "Law on WUAs" was passed that also addressed the governance aspects of WUAs issues of rule of law, participation, transparency, etc. (Alymbaeva 2004: 10; Otdel podderzhki AVP 2001; ADB 2000a: 1; Hassan et al 2004: 15; Kozhoev 2004: 4f).¹⁶⁰

The Structure and Tasks of a WUA

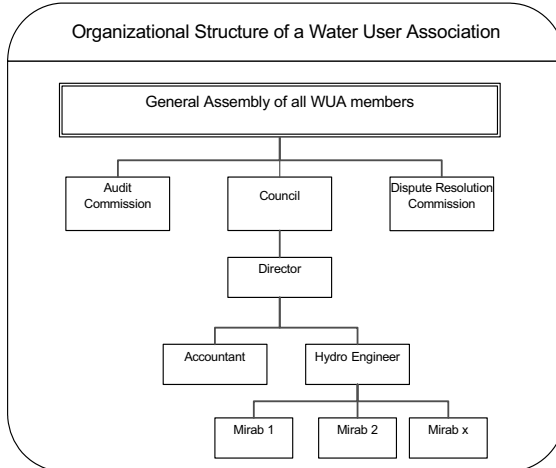
Figure 10 presents the model structure of a WUA. A WUA is headed by an elected council (usually seven to eleven members) with a chairperson, all of whom work in an honorary capacity. The election modalities vary: sometimes all council members as well as the chair are elected directly by the WUA members; sometimes the members are divided into groups of users (e.g., village or side canal) that each elect one representative to the council, which then elects the chairman (Hassan et al 2004: 16). The paid staff usually encompasses a director, a hydro engineer, and an accountant. These are appointed by the council. Apart from them a number of *mirabs* (water masters) are employed during irrigation season for daily operation of

¹⁵⁹ At the same time, it was also given responsibility for other tasks the government did not have money for any more: schools, roads, drinking water systems, etc. without having enough funds.

¹⁶⁰ Author's interviews with two officials of WUA support departments, Bishkek, 09/23/2004; with a university professor, Bishkek, 10/01/2003.

the channels. Due to limited financial means, sometimes the accountant or the hydro engineers is only given a seasonal position, or the director and accountant are merged in one person.

Figure 10: Structure of a WUA



Source: own compilation.

Some WUAs also have zone representatives, which take on a mediating position between the WUA staff and council and the farmers. The WUA executive is accountable to the general assembly of its members. This general assembly takes place once a year. At least 60% of all members must participate to constitute a quorum. To register, the WUA must present a statute (*ustav*), an article of agreement (*uchreditelnyj dogovor*), the minutes of the general assembly, and the chart of the irrigation system.

At the beginning of the season, each farmer must sign a contract with the WUA about the amount of water he or she needs. Accordingly, the WUA makes a contract with the *RaiVodKhoz* on the total amount of water. All WUAs must pay an ISF of 3 tyn per cubic meter to the *RaiVodKhoz* for the delivery of the water.¹⁶¹ They have the right to determine themselves the sum they demand from their members. This is calculated according to the estimated costs the WUA has.¹⁶² Most WUAs take 4.5 tyn per cubic meter, so that 1.5 tyn per cubic meter remain for the WUA. The general assembly must adopt the yearly budget including the ISF. In general, the budget is prepared by the WUA staff with help of the WUA support department at the *RaiVodKhoz*, decided by the WUA council, and then presented to the general assembly for approval. The budget should be accessible to the members, so that every member can see how much money is spent for what purposes. People who are not members of the WUA but who use water from channels under WUA responsibility must pay a higher ISF. According to law it should be 1.5 times the sum members have to pay. The WUA can set the exact amount itself.

¹⁶¹ The only exceptions are WUAs in mountain areas that take water directly from mountain rivers in self-managed channels without the involvement of the *RaiVodKhoz*.

¹⁶² The expenses to be covered are: the water fee to *RaiVodKhoz*, staff salaries, social security contributions, rehabilitation of channels, taxes, transportation costs, administrative costs, water loss, and loan repayment.

The first WUAs were established by the Kyrgyz government in the mid 1990s. Their number was limited and most of them failed.¹⁶³ The concept as well as pilot projects were then developed with the help of loans granted by the ADB, FAO, and the Japanese government. Since the end of the 1990s, countrywide development of WUAs takes place with the support of the World Bank, since 2001 it was amended by the ADB.¹⁶⁴ In 2000, a WUA support department (*otdel podderzhenki AVP*) was created at the *DepVodKhoz* and at its branches in the seven *oblasts*, as well as in many of the republic's 42 *raions*, financed by the World Bank. The employees of the WUA support departments are paid using project funds with a salary orientated toward the usual wages in public service. As a long term aim, they are to be integrated into the water administration. The WUA support departments at the *raion* level helps WUAs with tasks such as registration, setting up their budgets, and making the contracts on water with the farmers and the *RaiVodKhoz*. It provides training measures for WUA staff and council members on topics such as the foundation and development of WUAs, financial administration, engineering, water usage, and legal issues.

In April 2004, more than half of the irrigated land area in Kyrgyzstan was managed by WUAs, as presented in the following chart (Table 14).

Table 14: Water user associations in Kyrgyzstan, as of April 1, 2004

Oblast	Raion	Number of WUAs	Total irrigation area, ha	Irrigation area managed by WUA, in ha	Irrigation area managed by WUA, in %
Batken	Batken	8	14885	11620	78%
	Kadamzhay	10	26046	19795	76%
	Ljajljak	6	14408	9924	69%
	Kyzyl-Kija	0	2150	0	0
	Total	24	57489	41339	72%
Jalal-Abad	Suzak	12	29482	17895	61%
	Bazar-Korgon	6	18271	10865	59%
	Nooken	12	22900	20947	91%
	Ak-Syj	4	11924	8437	71%
	Ala-Bukin	8	16863	14070	83%
	Toktogul	5	14049	5790	41%
	Toguz-Torouz	6	3642	2137	59%
	Chatkal	1	7061	3550	50%
	Total	54	124192	83691	67%
Issyk-Kul	Ak-Suj	8	40682	16521	41%
	Dzheti-Oguz	5	42285	16318	39%
	Issyk-Kul	9	32935	15088	46%

¹⁶³ E-mail communication with an international consultant, 10/16/2005.

¹⁶⁴ The respective projects are the World Bank's "On-Farm Irrigation Project" (since 2001) and the ADB's "Agriculture Area Development Project" (since 1998). These projects target the general rehabilitation and more efficient management of off- and on-farm irrigation canals with the establishment of WUAs being one component. Both projects cooperate closely. The WUA component is supposed to introduce WUAs as a new organization and to strengthen them so that they can take over the operation and maintenance of the irrigation infrastructure of the former *kollektives* and *sovkhoses* in the long term.

Oblast	Raion	Number of WUAs	Total irrigation area, ha	Irrigation area managed by WUA, in ha	Irrigation area managed by WUA, in %
	Ton	7	23935	10944	46%
	Tjup	2	23540	2032	9%
	Total	31	163377	60903	37%
Naryn	Ak-Talin	8	15172	7183	47%
	At-Bashin	6	31638	7343	23%
	Dzhumgal	9	18429	10462	57%
	Kochkor	13	30172	23567	78%
	Naryn	7	24830	7468	30%
	Total	43	120241	56023	47%
Osh	Alay	1	6538	250	4%
	Aravan	15	22353	20099	90%
	Kara-Suu	21	42453	32982	78%
	Naukat	15	26766	22126	83%
	Uzgen	10	21341	13854	65%
	Chon-Alay	1	8418	462	5%
	Kara-Kuldzhin	2	6524	2107	32%
	Total	65	134393	91880	68%
Talas	Talas	17	37837	23688	63%
	Bakay-Atin	10	27690	19406	70%
	Kara-Buurin	15	30554	30554	100%
	Manas	11	18819	15029	80%
	Total	53	114900	88677	77%
Chuy	Moskov	7	44426	24738	56%
	Yssyk-Atin	11	56000	33120	59%
	Chuy	5	31327	9404	30%
	Sokuluk	14	56604	26462	47%
	Kemin	9	29160	20599	71%
	Panfilov	15	31336	27659	88%
	Zhail	12	42740	32054	75%
	Alamedin	10	37399	19206	51%
	Total	83	328992	193242	59%
Total		353	1043584	615755	59%

Source: Kozhoev 2004, own calculations.

At first glance, these numbers indicate that the reform processes are running smoothly and successfully. Only a few years after the projects' start, more than half of the irrigation systems were already transferred from the FSK or a/o to WUAs. However, these numbers do not mean that these are all really functioning WUAs. A closer look at the existing WUAs shows that they are performing differently than expected and than outlined in the formal prescriptions. Only 37 of 353 WUAs in 2004 fulfilled the seven criteria of eligibility for World Bank loans (Ko

zhoev 2004: 7).¹⁶⁵ The performance of WUAs is generally low and they cannot guarantee equitable water distribution. Professional qualifications of WUA staff, especially of the director and the chairperson, are crucial as they must deal with conflicts and implement tough decisions. A precondition and main incentive to acquire qualified and engaged personnel and avoid abuse of the position should be an attractive salary and adequate training of WUA staff, especially directors. The monthly salaries of the staff of both WUAs in the case study were 600 som for the mirabs, 1200 som for the accountant and the engineer, and 1500 som for the director (equivalent to 12, 24 and 30 euro respectively), which is a low salary even for rural Kyr gyzstan. In addition, the salary often cannot be paid. This low and unreliable payment leads to difficulties in finding qualified staff. In the WUA *BCbK Sovkboz'nij*, the director left at the time of the author's field research due to his low salary. The WUA had great difficulties in finding someone new. This problem is reinforced as the job is connected with a great deal of responsibilities and difficulties. During the field research in Sokuluk *raion*, two new directors to WUAs who were already appointed later refused to accept the position. In both cases, the low salary and anxiety about the director's responsibilities as reasons for withdrawing one's application. Representatives of Frunze *ajyl okmotu* said that people are afraid of it: "Nobody wants to take the responsibility and scold people all the time."¹⁶⁶ And this even in Sokuluk – a region with relatively few water conflicts.

Hardly any WUA is self financing, and many are even deep in debt (see chapter 6.3.4 above). An evaluation in 2001 showed that of 223 WUAs, approximately 50 existed only on paper (Kozhoev 2004: 7; Alymbaeva 2004: 11). In Chuy Oblast, according to a staff member of the *oblast* WUA support center, about 22 to 25 WUAs do not function, i.e. they are highly indebted or completely inactive, which is about one fourth of all WUAs in the *oblast*.¹⁶⁷

In the following, the findings of the case study will first be presented, followed by a general assessment of the implementation and outcome of the transfer of irrigation management. As already noted, we will deal here not with the issues of fee collection and establishment along hydrographic boundaries, which were already discussed above, but rather concentrate on the questions of independence from state structures and user participation.

*Case study: Sokuluk Raion*¹⁶⁸

The area of irrigated land in the *raion* is 56,604 ha. WUAs manage about half of the irrigated land in the *raion*; in May 2005 the area was 28,513 ha. There are 16 WUAs, of which 14 are legally registered. All but one are organized according to territorial principles with one or two WUAs in one *ajyl okmotu*, covering the area of the FSK. In areas without WUA, the *ajyl okmotu*

¹⁶⁵ To be able to apply for loans from the World Bank or ADB, a WUA must meet seven criteria: (1) Founding and legal registration of the WUA, opening of a bank account; (2) Drawing up of a financial plan and of a work program; (3) A plan drawn up by the WUA's council and administration with regard to the use and maintenance of the irrigation system; included in this an annual plan concerning the collection of fees from the members – these fees should increase annually, until cost recovery is reached; (4) The WUA members pay for all costs the WUA encounters with regard to the operation and the maintenance of its systems, as well as the taxes for the *RaiVodKhoz*; (5) In the first year, all taxes for the *RaiVodKhoz* should be paid, as well as at least 30% of the operating costs; (6) Together with the Oblast and Raion water administration, the WUA administration works out different technically, economically, and ecologically sensible variants of renovation and calculates their costs. The WUA members choose one variant; (7) The members give their vote concerning the loan application and the WUA council approaches the Project Implementation Unit with the project proposal. (*Proekt "Vnutrikhozjajstvennoe oroshenie"* 2002: 1). 75% of the costs for rehabilitation projects are provided as a grant by World Bank or ADB, while 25% must be covered by the WUA. Some WUAs receive an initial loan for equipment such as a computer, an office, or a car.

¹⁶⁶ Director of the agricultural cooperative, Frunze, 05/13/2005.

¹⁶⁷ Author's interview with two senior officials of WUA support departments, Bishkek, 09/23/2004.

¹⁶⁸ For general information, see chapter 5.

or the cooperative evolving from the FSK take care of water distribution, or the individual farms have direct contracts with the *RaiVodKhoz*. The World Bank financed WUA support department at the *RaiVodKhoz* had existed since March 2002 and has three specialists working there: one specialist for development of WUAs (the head), one specialist for water use, and one engineer. Every week on Tuesday is the “Day of WUA” (*den AVP*) at the Sokuluk *RaiVodKhoz*. This is a weekly meeting of ideally all WUA directors (or other representatives) together with the head of the support department and the head of *RaiVodKhoz*.

WUAs “BCbK Sovkhozniy” and “kd orset”

The WUA “BChk Sovkhozniy” is located in the village Studencheskoe, which is one of four villages of Frunze *ajyl okmotu*. The village of Frunze, where the *ajyl okmotu* administration is located, is several kilometers away. The WUA covers the area of the former research farm of the Agrarian University (*Uchebnoe Khozyaystvo, UcbKhoz*). The WUA is named after the two main channels from which it takes water: The Big Chuy Canal (*Bolsboy Chuyskiy kanal, BCbK*) and the *Sovkhozniy* canal. The WUA was founded in March 2001 and has 129 members: 128 individual farms and the *UcbKhoz*. The *UcbKhoz* used to cover 2500 ha of land and was responsible for water management. In 1999, the land was redistributed and a cooperative was founded. In the beginning, all farmers were members, but now it is said to exist only on paper. Presently, in the village are mainly small individual farms. The *UcbKhoz* still owns 174 ha of fields, of which 145 ha are irrigated land. The WUA comprehends 2,667 ha of land, of which 1,867 ha are irrigated. All farm owners are members of the WUA. Paid positions include that of the director, the accountant, the hydro engineer and seasonally two *mirabs*. The council consists of seven members. The WUA received a grant from the ADB for a computer and a motorcycle.¹⁶⁹ The ISF is currently 5.5 tyn, but plans have been made to increase it to 6 tyn for the upcoming season. At the time of field research, not all farmers had signed their contracts of water delivery yet, even though the irrigation period was already about to start. Although there is in general enough water for everyone, huge losses are incurred due to the deteriorated water infrastructure.

The WUA “kd orset” covers the whole area of Zhany Pakhta *ajyl okmotu*, which is located in the lower part of the Sokuluk valley near the border to Kazakhstan. It consists of five villages with 5983 inhabitants. Before land reform, the whole area belonged to a state breeding farm (*Semeinoe Khozyaystvo, SemKhoz*). The people there cultivate mainly cereals. The local WUA was founded in 2002 and is responsible for water withdrawal from two channels: the 10th and the 11th channel. It has 242 member farms. There are three large members of the WUA: the *ajyl okmotu* (which has 400 ha of land)¹⁷⁰, the agricultural cooperative (*selskokhozyaystvennyj kooperativ, sk*) “Zhany Pakhta”, and the breeding farm (*SemKhoz*) “Zhany Pakhta”. The breeding farm and the cooperative are the successors of the FSK. Though formally independent organizations, they share offices, staff members, and even have the same director who was the director of the FSK before. Before the WUA was established, the *SemKhoz* was responsible for water distribution. The irrigation set belongs on paper to the *SemKhoz*. The ISF was 5 tyn in 2004 and increased to 6 tyn in 2005. The WUA staff consists of the director, the accountant, the hydro technician, and six *mirabs*. The council consists of nine members. It also has an arbitration committee.

¹⁶⁹ The motorcycle is important for the *mirabs* to drive along the channels and control them. The lack of transportation means (motorcycles or bicycles) is a problem in many WUAs. In other cases the director uses his private car. The computer the WUA got is not used in the office, as there is no electricity (and also no telephone), but stands in the WUA director's home. During field research, it was mainly used by his sons for computer games.

¹⁷⁰ With land reform, the *ajyl okmotu* got assigned 25% of FSK land that stayed in government ownership.

Independence

Though formally independent, close relations between the WUA and formal as well as informal local governance structures could be observed. In both WUAs, the respective director of the agricultural cooperative that succeeded the FSK is the chairman of the WUA. At the WUA “kd orset”, the WUA chairman is the former director of the FSK. Now he is director of the agricultural cooperative, chairman of the local *kenesh* (municipal council), deputy to the district council, and a close friend of the head of the a/o. Of the eleven deputies of the local *kenesh*, four also have a function in the WUA: Besides the previously mentioned chairman, also two WUA council members as well as the WUA director are deputies of the *kenesh*. The chair of the *sud aksakalov* (court of elders) is also a member of the WUA council. He worked 15 years as leading agronomist and one year as leading economist in the *sovkhoboz*. The WUA chairman and he both say they have their position thanks to the respect they gained among the villagers in Soviet times.

At the WUA “BChK Sovkhozniy”, the legacy of the FSK, in this case the *UchKhoz* is also evident: the director of *UchKhoz* is the chair of the WUA. The former director of the *UchKhoz* is now the head of the *ajyl okmotu*, and the WUA director used to work as a hydro engineer at the *UchKhoz* earlier. It was reported to be an unofficial rule that the head of the *UchKhoz* will be the chairman of WUA. Farmers often believe that the WUA is a special department of the *ajyl okmotu*. Sometimes they also connect it with the FSK or the *RaiVodKhoz*. Some can associate persons with it, but hardly anybody knows the exact name or what “WUA” stands for. They do not generally perceive it as “their” organization. This was also confirmed by the study of Hassan et al. (2004: 36): “The WUAs are perceived as someone else’s organizations, either of the chairman or of the village.” Occasionally, the WUA establishment stems from the initiative of the *ajyl okmotu*: At Frunze, the *ajyl okmotu* was busy setting up a WUA for the area of the FSK “Frunze” at the time of field research. It was obviously the a/o’s initiative and not the farmers’ one. The a/o had not only already determined the name of the WUA (*Frunzyskiy*) but also who would be the director. In Zhany Pakhta, the office of the WUA is situated in the a/o building. This may contribute to the WUA being associated as part of *ajyl okmotu* administration by villagers. Even a member of the local *kenesh* said that a special commission exists at the *ajyl okmotu* to deal with water (meaning the WUA).

User Participation

One main aim of the WUA concept is raising community awareness and empowerment of the rural population by introducing self responsibility for the management of their irrigation system, thereby raising ISF collection rates and efficient water use. Awareness about the meaning of WUA among water users is low, however. Though the cases in which farmers do totally not know about WUA are rare as are instances in which farmers exactly know what the WUA is. People in general know that there is some organization responsible for water, if only because someone comes to their homes to collect fees. However, farmers in general do not perceive the WUA as an independent organization. Hence, they are also not aware of their participation rights and mechanisms. The internal structure of WUA was adapted from government authorities with minimal functions of the members’ meeting on the one hand, and a strong position of the chairman and the director as an “executive” on the other hand. While the general assembly meets once a year, the idea of the council is to meet more often, about every two months. It was difficult to recreate how often the council actually meets. Questions to this end were usually answered with “according to the requirements”. It seems that official meetings are

rather rare – probably not much more than the mandatory one time per year. In general, councils of WUAs are weak and do not effectively carry out their function.

These findings are not unique to the case study area; rather similar conditions could be observed in other places as well. An internal World Bank project evaluation showed that in 102 WUAs, either the head of *aiyl okmotu* or his deputies are members of the council.¹⁷¹ Some a/o heads even held themselves the position of the WUA chairman (Musabaeva, Jailloobaev n.d.: 2). In many cases, the a/o is related to WUA development from the beginning. The support departments followed a top down approach, especially in the first years. They relied on the *aiyl okmotus* to help set up WUAs and to organize the first meetings, as the support departments themselves do not have sufficient capacities. Generally speaking, WUAs cannot be regarded as existing independently from state structures. The transfer of local irrigation management to WUAs therefore still needs time and support before it will be successful and sustainable.

6.3.6 Summary

To conclude and summarize the results of the previous subchapters: There are two water laws, one concerns domestic and one foreign water policy, which both do not receive wide support. Both seem to have been approved only to satisfy the pressure of certain actors (one time donors and one time old Soviet nomenclature). Neither is accompanied by adequate implementation mechanisms. In the case of the National Water Strategy, which is meant to be the basis for laws, without a powerful actor with a strong interest in finalizing it, it was not possible to officially adopt it. It can be argued that no coherent policy or reform exists as a result of an inclusive decision making process. The administrative fragmentation, considered one of the main problems of the Kyrgyz water sector, results in fragmented policy making.

However, despite the lack of clearly stated policy norms and objectives, there are programs to implement reforms. Yet these did not meet their objective, either: Administrative reorganization towards hydrographic principles and the establishment of a coordinating body to overcome fragmentation turned out to be pure paper tigers. ISFs are not effectively implemented even though elite commitment can be assumed. Hardly any WUAs are financially and organizationally stable and independent. How can these difficulties be explained? The next chapter will discuss the impact of the previously defined factors of the neopatrimonial regime on the politics of water institutional reform.

¹⁷¹ Author's interview with a WUA development specialist, OUP RIS, Bishkek, 09/15/2004.

6.4 Effects of Neopatrimonialism on Water Institutional Reform

This chapter will assess the characteristics and dynamics of the neopatrimonial institutional context of water reform and the effects it has on actors' behavior. The neopatrimonial political institutions as described in chapter 4.3 shape perceptions of problems and options and provide concrete incentives or constraints for actors. Four variables have been identified – institutions of decision making, institutional conditions in the agricultural sector, institutions of local governance, and institutional linkages – plus one interfering variable: donors as institutions. How do these factors actually influence the processes of water institutional reform? This will be analyzed in this chapter for each of the four factors. The interfering variable will not be analyzed individually but rather in each aspect.

6.4.1 *The Impact of Institutions of Decision Making on WIR*

This aspect will look at how neopatrimonialism influences which actors are involved in the decision making process for WIR, whose problem perceptions gain access to the agenda, and whether decision making is characterized by joint or fragmented policy making. It will be shown how the strategies and interests of actors are shaped by the institutional context. Finally, we will shed light on the special role donors as actors play in decision making; I will argue that they not only directly influence the formulation of water policy and laws, but also already have an impact on the problem perception.

As described in chapter 5.5.2, the institutions of decision making are characterized by an increasing dominance of the presidential apparatus on policy formulation, internal agenda setting, and limited participation of NGOs or other actors external to the government bureaucracy. Also concerning water, decisions on laws, policy, and finance are made by the government (and then approved by the Parliament). Stakeholders and civil society are at the utmost consulted, but do not actively participate. Although the discussion on the national water strategy and the national water code took so long, there was hardly any public knowledge about it. The Commission on the National Water Strategy was established under the President and headed by the MISI, which subordinate to the President, not by the *DepVodKhoz*. The MISI also participates in many of the international donor projects on water. From the two new coordinative councils formed, the one that is probably more important, on hydropower, is directly subordinate to the President.

However, there is still a certain degree of openness of the decision making process. Actors from concerned ministries and agencies as well as academic institutes were involved in the development of the Water Code and the National Water Strategy. However, they mainly evolved as veto players and not as active agenda setters. This role is rather performed by donors: In the case of the Law on Water User Associations it was ADB and the World Bank that put it on the agenda. They have ongoing projects to establish WUAs for which they needed a legal foundation. The new Water Code is said to have been developed mainly by USAID. They all therefore represent donors' problem perception and not those of Kyrgyz political actors. Only in the case of the Law on transboundary water did agenda setting occur by way of two members outside the government and the Presidential administration. This is connected to the authority they gained in Soviet times, one as a party cadre and one as an academic. Especially striking is the wide non appearance of the Parliament. It only became active in its resistance to

the ISF and in the making of the Law on transboundary water. Apart from Usulbaliev, Parliamentarians were never mentioned in interviews.

Foreign consultants are actively involved in the development of almost all major reform projects. There was a wide perception among national water experts that international consultants have more influence on the government's decisions on water issues than do the country's own specialists. Several interviewees pointed to the de facto decision making power of donors with slogans such as: "The one who pays orders the music"¹⁷² or "The one that finances commands"¹⁷³. 90 percent of the budget of the water sector is provided by donors.¹⁷⁴ This is partly project based lending and grants (especially for rehabilitation) but also general funding by way of which donors influence, albeit not necessarily directly, policy directions. National scholars from universities and NGOs are rarely involved despite their considerable professional expertise. Their participation is mainly reduced to implementation, where it does not threaten existing decision making patterns. Academic expertise generally involves only the IWP&HP of the Academy of Science and the institutes affiliated to the *DepVodKhoz*, like the *Institut Irrigatsii*. University scholars complain about their exclusion from projects.¹⁷⁵ For lower level stakeholders, no institutionalized participation mechanisms are in place (Hassan et al. 2004: 12).

Agenda setting is therefore essentially dominated by a relatively confined range of actors. This 'partial openness', as I will call it, allows for a certain scope of actor involvement but has unintended negative consequences: the internal agenda setting and decision making process leads to a highly fragmented policy. The administrative fragmentation and insecurity is mirrored by a policy fragmentation with inconsistent policy programs and ineffective framework laws. Each agency sees water from its own point of view and priorities and has an corresponding strategy. Each has a different understanding of water. As each ministry is interested in the strategy that is most "lucrative" for its budget allocations, no joint understanding and decision can be reached:

"The water specialists speak in different languages and they are therefore not able to come to an agreement. And if the Ministry of Foreign Affairs then also takes part, then there is no decision, no compromise possible at all" (Representative of NGO, Bishkek, 09/12/2003).¹⁷⁶

The organizational self interests of the respective ministries are one main obstacle to reform (ISRI, Socinformburo, FES 2004: 51). All ministries are confronted with insufficient allocation of financial means to conduct their work. If competencies and responsibilities are reorganized and eventually assigned to another agency, this would mean a further reduction in funding. Each ministry therefore tries to preserve as much competencies as possible.¹⁷⁷ As was already shown in the chapter on the Water Code, agencies fear loss of competencies, which explains their resistance to implement mechanisms or accept policy documents that foresee a reallocation of competencies. This also hinders the introduction of basin management: "No ministry and no agency agree to a reform of water management on hydrographic principals. If the state

¹⁷² „Кто платит деньги, тот и заказывает музыку.“ Author's interview with a senior official at the *DepVodKhoz*, Bishkek, 09/11/2003.

¹⁷³ „Кто финансирует, тот командует.“ Author's interview with a former senior official of the *MEChS*, Bishkek, 09/16/2003.

¹⁷⁴ Author's interview with a senior official at the *DepVodKhoz*, Bishkek, 09/11/2003.

¹⁷⁵ Author's interview with a university professor, Bishkek, 10/01/2003.

¹⁷⁶ „Специалисты-водники говорят на разных языках и поэтому они не могут договориться, а если в этом еще участвует МИА (министерство иностранных дел), то вообще, т.е. не принятие никаких решений, никакого компромисса.“

¹⁷⁷ Author's interview with local consultant for international donor organization, Bishkek, 05/24/2005.

allocated enough money, they would agree, because they would not need their competencies so urgently” (Independent water expert, Bishkek, 09/28/2004).

This means that one result of the constellation in the decision making arena is that fragmented responsibilities and shortages in funds lead to a dominance of self interest and fragmented policies instead of joint decision making. Reform efforts to overcome these fizzle out. This especially affects those reforms that aim to restructure administration. Despite efforts for comprehensive approaches, international programs also tend to reflect the policy fragmentation:

“There are at the moment several international programs, (...) the European Water Initiative, (...) Central Asian Water Initiative, Regional Environmental Action Plan, Aral Sea Basin Program II — I have just read out six programs, and each of these is operationalized with another agency” (Representative of NGO, Bishkek, 09/12/2003).¹⁷⁸

Another result of the institutions of decision making is the dominance of issues of transboundary water governance over domestic water governance issues in political discourse. In the public political debates on water, the conducted reforms and the widespread perceived problems are underrepresented. Instead a strong focus on transboundary water exists, and the actors sometimes tend to ideologized viewpoints. In a political discourse that does not really influence decision making, symbolic gains play an important role. Here, the water issue promises high symbolic value. I argue that this is the reason why the transboundary water issue is so prominent in political discourse. It is a useful means in international politics as it generates more (symbolic) gains there than in national politics. In the words of one interviewee: “Water has two main components: it is economy, and water is, let’s say, politics. Economy this is energy production, this is irrigation. Politics this is to play with the neighboring states” (senior official of the *MEChS*, Bishkek, 09/17/2003).¹⁷⁹

The harsh perception of transboundary water issues resulted in the 2001 law on transboundary water issues. Besides ISF, it was the only reform decision, in which donors were not involved and which was solely based on national actors and where the Parliament played an agenda setting role. The strategic value of water lies not only in the area of international politics, it serves domestic purposes as well. In times of economic crisis and political reorganization the search for ‘external enemies’ provides a good means of dealing with problems (see Huskey 2002: 84f, ISRI, Socinformburo, FES 2004: 73). For the government and Parliament it is more comfortable to blame problems on a lack of economic mechanisms in international water relations than to enforce farmers’ payments of adequate water fees, which would mean risking the loss of their political base.

Here again, the policies of donors play a role: A second reason for the concentration of the public discourse on international water issues can be seen in the incentives set by donors. The involvement of donors also shapes the national discourse about water and consequently the problem perception. One of the main areas of donor involvement in Central Asia has been and still is water. In the 1990s, many scholars anticipated violent conflicts in the regions. Conflicts about water distribution and use were seen as one of their most possible causes. Conse

¹⁷⁸ „Мы сейчас имеем несколько международных программ, то есть, это экологическая стратегия векта по Восточной и Кавказско-Центральной Азии. Это значит Европейская водная инициатива, в которой мы участвуем. Это Центрально-Азиатская водная инициатива, региональный план действий охраны окружающей среды и программа бассейна Аральского моря 2, то есть, я сейчас читал 6 программ, и вот каждая из этих программ задействована в разных ведомствах, то есть, вода одна и та же, а ответственные исполнители - различные ведомства.“

¹⁷⁹ „Вот вода она ест двух главных составляющие, это экономика (...) и вода, это так скажем, политика. Экономика - это энергетика, это ирригация. Политика это которая играет с соседями внешними.“

quently, many international projects focused on interstate water relations. By way of capacity building programs, seminars, the development of regional strategies, and conferences donors tried to stimulate cooperation and the building of trust between the states. In Kyrgyzstan alone, the World Bank, the European Union, the UN, the Swiss Agency for Development, the German Friedrich Ebert Foundation, the Soros Foundation, and many others have not seldom redundant projects to develop a water strategy for Central Asia.

These projects are very inclusive in that they try to build lines of cooperation in Central Asia. Numerous Kyrgyz scientists and professionals take part in these programs. Experts in ministries as well as those at academic institutions and NGOs are constantly invited to attend seminars, to participate in projects, or to make contributions for books or conferences. All the main actors from different state agencies, donor projects and academic institutions know each other from numerous (donor initiated) conferences and projects (Koshmatov 2003: 11). Those not involved in these projects or not invited are hence excluded from discussions. Therefore, for actors in the field of water policy, there are a number of incentives to focus on international water relations to finance salaries and technical equipment, attend conferences in Central Asia and abroad, and gain prestige. The consequence is that the problems of international water relations are much more present than those of national water policy.

This tendency is reinforced by the fact that, while building up an inclusive discourse on regional water management, donors at the same time exclude national experts from problem definition and solution finding efforts in domestic water policy. As already mentioned, all current reforms are initiated by donors. The donor projects often work with foreign consultants and cooperate with national institutions only when it comes to project implementation but not for problem definition and project development. Therefore, experts at national agencies have no incentives to focus their capacities on national water management problems.

We can sum up the impact of the institutions of decision making on WIR as follows: On the one hand, there are numerous actors who participate in the decision making process. On the other hand, as it is still presidentially dominated, these actors scarcely have the possibility for agenda setting and making final decisions. They are restricted to the role of veto players or to symbolic politics. This has fatal effects: the administrative fragmentation leads to many interests and possible veto players. Especially those reforms that are perceived as a threat to the status quo are therefore blocked. The role of donors interferes with these conditions as they (1) are involved as actors in the decision making process; and (2) set with their project rules their own parameters toward which national actors orient themselves and which thereby influence the discourse.

6.4.2 The Impact of the Institutional Conditions of the Agricultural Sector on WIR

The close interrelatedness of land and water reform is obvious. The dissolution of the FSK made it necessary to reorganize irrigation management, individual land rights made the need for water rights obvious, and so on. While privatization was clearly a factor that pushed for WIR, the interaction between both sectors is far more complex. Beyond the practical need for cooperation, the aim of this analysis is to reveal how the general institutional setting of the agricultural sector enables or hinders water institutional reform. As explained in chapter 5.5.3, despite radical privatization, the agricultural sector is still characterized by a general lack of market conditions, widespread subsistence agriculture, bartering, and persisting patronage

patterns. What kind of 'behavioral corridor' do these institutional constraints leave to actors, and which incentives become effective under these conditions?

The agricultural variable has most sincere effect on the economic dimension of WIR, meaning on the introduction of monetary mechanisms, ISF. We have seen that the reform is not effectively implemented. First, many water users do not pay; second, many officials do not enforce payment or sanction non payment. The way ISFs are implemented indeed rather prevents efficient water management: The expansion of barter trade through payment in kind leads to increased transaction costs and unprofessional maintenance work.

Donor representatives and some officials tend to blame a so called 'Soviet mentality' for the unwillingness to pay.¹⁸⁰ Others mention religious values: In Islam, water is considered a gift of God. This contradicts its definition as a resource one must pay for. However, there is no fee on water as a resource but only on the service of water delivery. Thus, this obstacle could be overcome by way of sound information policies. The farmers often do not know what exactly is going to happen, why they must pay for something they were not charged for before, which costs must be covered, and how they benefit from it. The unwillingness to pay is therefore not only connected to traditional values or a 'Soviet mentality' but also to a simple lack of information that results in non acceptance.

While these motivations explain the farmers' unwillingness to pay, I would argue that the inability to pay is the main reason: widespread rural poverty due to the institutional conditions of the agricultural sector. It is obvious that in a decapitalized environment as that of Kyrgyzstan's agricultural economy, the introduction of monetary mechanisms face difficulties. Many farmers are too poor to pay fees due to the institutional constraints in the agrarian sector. Apparently, already the symbolic price poses a problem for farmers, because they are almost unable to earn a profit with agriculture. Very small land plots and the lack of an adequate domestic market to sell agricultural products, combined with no access to export markets, contribute to the farmers' poverty level.¹⁸¹ Even a water expert at the Presidential Institute for Strategic Studies admits that "at the moment it is nonsense to take money from them [the farmers]". He stresses that the concept of water fees should be understood as a perspective concept: "It is a perspective idea. To speak about tariffs now is certainly a dream."¹⁸² Also, water bureaucrats at the meso level seem to have an understanding for the farmers' situation and know that is impossible to demand fees from them, even though the former depend on this

¹⁸⁰ This refers to awareness patterns that evolved during Soviet times, when water did not have to be paid for on a quantitative basis. Together with a general ideology of nature being solely an object for human exploitation, this resulted in the development of a very wasteful consumption attitude along with the expectation that water should be available for free.

¹⁸¹ Another consequence of the constraints in the agrarian sector observed in Sokuluk is that many people do not work on their fields but rather rent out their land and only use their garden plots for a small amount of subsistence cultivation. The land is rented by other local farmers or by businesses. The latter combine many plots into huge and lucrative fields. The other tenants are often migrants from the south, who came to the village only after land reform, and therefore do not possess land. In Studencheskoe only a few people work on their fields themselves, while most rent it to others. In the WUA "Shorgo", where the land is situated quite far away from the homes of its owners, about 80% of them give it for rent. However, the WUA concept implies that only the ones that possess land can become members of a WUA while short-term tenants make a contract with WUA (see chapter 2.3). Hence, many of the actual farmers and water users cannot become members of the WUA, as they do not possess land. This results in the paradoxical situation that the de facto water users are not members of WUA, while the WUA members cannot afford to be water users. The system in this way actually excludes many water users instead of empowering them.

¹⁸² „сейчас с них брать какие-то деньги за воду это бессмысленно. (...) Сейчас говорить о тарифах, конечно, это мелочь“. Author's interview with a water expert at the MISI, Bishkek, 09/16/2003.

money. They tolerate non payment and do hardly sanction it.¹⁸³ The first answer of the director of a *RaiVodKhoz* when asked about his wishes for future water management was hence “that the farmer would get good yields.”¹⁸⁴ This shows that officials at the meso level are aware of the difficult situation farmers are in and may explain why the former do not enforce payment.¹⁸⁵ The economic conditions are not only a hindrance to ISF but also for the functioning of WUAs, which involve farmers’ financial contribution to O&M and staff payment. This was confirmed by several other studies as well. Hassan et al. (2004: 32) come to the conclusion that “[m]arket constraints are among the key obstacles of sustainable institutional change in water resources management in Kyrgyzstan“. The same is stated by a Central Asian wide study of the British Department for International Development (DFID, Mott MacDonald 2003: 10 10): “Unless farms are profitable, irrigation management transfer will fail.”

Concerning the transfer of irrigation management to farmers, other institutional conditions of the agricultural sector besides the economic ones are significant. With agricultural reform, farmers had to learn many new forms of organization: New forms of farms (cooperatives, family farms, individual farms, etc.) are set up, then go bankrupt, and then are reestablished under a new label. Apart from this, people have been confronted in recent years with a number of foreign experts coming to their villages and trying to make them member of various organizations: agricultural cooperatives, microcredit unions, drinking water associations, and water user associations. Farmers are often swamped with the many new organizations and new names for old organizations on the local level without seeing the benefits. Also, the psychological aspect must be considered that after learning that *kolkhozes* and communism were ‘bad’, everyone is now telling them to unite again into cooperatives and associations which often remind them of socialist patterns and therefore cause a bit of mistrust (Hassan et al. 2004: 32).¹⁸⁶

Another constraint of the agricultural sector is its number of still prevailing clientelistic features, although land reform together with other decentralization measures gave farmers greater independence. Advantages in water access have often already been determined during land reform, when the people with the respective powerful positions got allotted the fields near the canals (Bichsel 2006: 84f). These farmers will receive enough water, while those at the end of the channel are faced with scarcity. Not only land, but also technical equipment was not distributed fairly during land reform: It did not stay with communal facilities, but was often ‘bought’ by wealthy individuals and must now be rented at expensive rates by the WUA. This in turn has negative impacts on the O&M activities.¹⁸⁷ In this respect it is also interesting to look at the role the FSK leaders still play. They often dominate local governance and power structures and hence also WUAs. These clientelistic features are best analyzed as part of local governance and will therefore be discussed in the following chapter.

¹⁸³ As described above, such sanctions are also technically difficult to implement, as in many places it is hardly impossible to exclude a single field from water delivery in practice.

¹⁸⁴ Author’s interview with the director of the Sokuluk *RaiVodKhoz*, Sokuluk, 05/10/2005.

¹⁸⁵ Mamaraimov (2007) describes a similar situation concerning fertilizer, which many farmers cannot afford to buy. He observed a high-ranking official requesting from his colleagues not to bother farmers who are smuggling fertilizers from Uzbekistan.

¹⁸⁶ Author’s interview with an independent water expert, Bishkek, 09/28/2004.

¹⁸⁷ Informal conversation with a WUA director, Sokuluk *raion*, 09/06/2005.

6.4.3 *The Impact of Local Governance Institutions on WIR*

Similar to agriculture, local governance saw formal reforms introducing democratic mechanisms while clientelistic informal institutions persist as well. Formally, the *aiyl okmotu* has been established as a local government structure. It is amended by several informal institutions. The *sud aksakolov* has meanwhile been formalized, but it functions differently in each village. Also, the network of the powerful actors of the FSK (former director, brigadier, etc.) still plays a role. This variable affects those aspects of WIR that must be implemented on the local level and that change existing local water governance rules, namely the transfer of irrigation management to WUAs and the payment of ISF.

Three main impacts will be described: First, WUAs are not active as independent organizations but instead are co-opted by local governance structures. Second, neopatrimonial features are transferred into the WUA and become principles of water governance as well. Third, new water institutions can come into conflict with other local rule sets and be undermined by them.

Yet before we describe these, it should be mentioned that there are positive interactions as well: For regular maintenance, WUAs generally apply *bashbars* (see chapter 5.3). Many reportedly gather their members once or twice a year for voluntary cleaning work in the channel. Also, where there are no WUAs, *bashbars* are organized for the irrigation set, e.g. by the FSK. Sometimes *bashbars* are also part of loan programs, meaning when a WUA gets a loan or grant for materials and then the community members do the work. *Hashbars* are also organized by WUAs for the cleaning of off farm channels for the *Raivodkeboz* as a payment in kind for water delivery (see chapter 6.3.4 above). With the revitalization of this well known and accepted rule of common work at the village level, it is possible to maintain the channels without vast financial means. This way, it may even be possible to create a sense of ownership for the facilities. It also has its limitations, however: first, *bashbars* are only suitable for small canals. Their use for cleaning work in larger channels can only be a temporary measure but does not offer a long term perspective. Second, as its basic principle is voluntariness, it enters into difficulties if it is included as mandatory in loan programs.

Co-optation by the Local Government

At the beginning of the WUA reform, there were reports of opposing local administrative bodies. Very soon, however, they seem to have discovered the advantages of WUAs for themselves and therefore a motivation to actively support their establishment. Several cases were encountered in field research in which the *aiyl okmotu* itself initiated the WUA. This is understandable, as a WUA facilitates work of *aiyl okmotu* and at least to date does not oppose it.¹⁸⁸ WUAs do not work as independent, empowered farmer organizations, but rather as a kind of public service provider closely linked to the *aiyl okmotu*. This process mirrors the general attitude towards non governmental organizations on village level: In the beginning, they were feared by the authorities, as NGOs with access to donor grants possess financial means that the *aiyl okmotu* does not have. However, local authorities learned to co-opt NGOs instead of seeing them as a rival. In general, *aiyl okmotu* seem after initial hesitation to welcome NGOs as they can use them as a means to gain access to donors. This process is similar with WUAs. The WUA is a way to gain access to loans and is therefore attractive to the *aiyl okmotu* and the

¹⁸⁸ The fact that WUAs do not present any type of challenge to the *aiyl okmotu* is confirmed by the fact that many *aiyl okmotu* in the case study *raion* did not pay their ISF (for the 25% of FSK land that remained under government ownership) without the WUAs effectively demanding the money from them.

FSK that are in charge of O&M of the channels (as well as to the *RaiVodKhoz*, see below). This can have positive effects for the WUA: An assertive head of the *aiyl okmotu* can be mobilizing and supportive for the WUA. On the other hand, the *aiyl okmotu* can also undermine the independence of the WUAs. This leads to the fact that WUAs often only exist formally in order to fulfill the conditions for project applications.¹⁸⁹ Furthermore, it may end up with the domination of the WUA by local officials: Statements like “I founded the WUA” expressed by the WUA chair or the head of the *aiyl okmotu* point to the fact that the WUA is a result of a top down process rather than a bottom up one.¹⁹⁰ Some *aiyl okmotu* representatives even perceive WUA as subordinated (“The WUA belongs to us”) and attempt to dominate it. Even though these are no formal subordinates, this fact is sometimes not accepted. This is not only to be explained by hierarchical patterns of political culture that allow the *aiyl okmotu* to push through its candidates, but also by the fact that farmers often turn to the head of the *aiyl okmotu* in the event of a water dispute despite the existence of a WUA. They have more trust in existing institutions than in new ones. Even when the *aiyl okmotu* does not perceive the WUA as subordinate, the WUA may subordinate itself due to a lack of experience with independent decision making. This is also a result of the previously mentioned top down process in which most WUA are founded and reflects a “history of following state instructions” (DFID 2003:6 5) and negligible experience in proactiveness, democratic processes and the awareness of one’s own rights. Therefore, Hassan et al. (2004: 34) come to the conclusion: “The WUA acts as a service organization under the local government and not as a civil society association embedded in the community.” Such close relations to the a/o are possible, as WUAs are mainly established along administrative and not hydrographic boundaries. On the local level, it was argued that establishment of WUAs along administrative boundaries is easier as people would know each other and hesitate to work with people they do not know. This therefore presents an adaptation to local culture in order to make the reform feasible. However, it can turn out to be a hindrance to effective work: The director of the hydrographically organized WUA “*Sborgo*” in the case study *raion* stated that it is easier to work with people who do not know each other, as otherwise too many other factors influence conflict solution.

Concerning the impact of local governance institutions, the way donors implement projects also plays a role: Due to strict time constraints, the time for awareness raising and the preparation phase before the establishment of WUA is limited. Also the staff capacities to conduct such activities are generally too low. This means that the support departments often contact the a/o or the FSK and rely on them to spread the information further. They thereby rely on existing networks and support those in power, who now have even more power as they have a privileged access to donors. It should be noted that this course of action is as much in the interest of donors as it is in the interest of the government: The government, which receives a loan for the project, does not want to spend too much of its budget on participatory methods. As well as the government, also the donor or the assignee NGO are interested in

¹⁸⁹ Such an incentive is not exclusive for WUAs but also for other NGOs. NGOs at village level are often founded on short-term basis for a certain goal, for instance in order to acquire funds for the renovation of the school. In Zhany-Pakhta, in 2004, for example, drinking water management was transferred from the *aiyl okmotu* to a drinking water association (SOOPV) to receive a loan for water pipes from the ADB, which only would give it to organizations. The director of the SOOPV is the one who was responsible for drinking water at the *aiyl okmotu* before this time.

¹⁹⁰ How initiatives take place became apparent at on one “*den AVP*” in Sokuluk attended by the author: the head of the support department informed the WUA representatives that there is a new Japanese grant for which are only *vodokhozajstvennij sovet* (councils of all WUAs of a system) are eligible. She therefore proposed setting up such a council. She handed out the statute of the new council, and after the WUA representatives posed some questions, a chair was quickly elected.

presenting ‘hard facts’ in their project reports: kilometers of channel rehabilitated, WUAs formally established, etc. These are easier measurable than activities like awareness raising or participative consultations, the impact of which is hardly to quantify. This hinders the realization of the empowerment and participation idea of the WUA concept.

Internal Adaptation to Neopatrimonialism

Just as WUAs are ‘externally’ assigned their place in the patrimonial structures of local governance, they also incorporate its logics internally. The internal structure of WUAs reflects that of political bodies in general: minimal functions of the members’ assembly and the council, and a strong position of the chairman as well as the director. Theoretically, the main decision making power inside the WUA is the council, and it should therefore have a clear vision about the association’s strategy and delegate the implementation of this strategy to the director. In practice, in most WUAs visited for this study, the chair was quite strong, whereas the rest of the council remained weak and inactive. A true election process with concurring candidates was not reported; rather, the candidates were preselected in advance with no more candidates than positions. The people in the council are typically not professionals but respected individuals from the community. Especially in the southern part of the country, the respected older men are often elected to the council. If a WUA encompasses several villages, its council is often composed of one elder from each village. They often lack the energy, time and understanding to undertake the necessary efforts toward raising community awareness which are expected from the council. Also, they may see their main task in representing their respective village’s interests. On the other hand, it is essential for there to be people with authority in the council because they must explain and convince people of the new rules, such as those concerning payment, for example. It was argued by various practitioners in this field that the new rules are more likely to be accepted when demanded by respected elders than by professional experts.

One must also consider that the position of a director or chairman of WUA demands a lot of time, meaning that an average farmer who has to work in his or her fields cannot afford to deal with WUA tasks on a daily basis. Only someone who has employees or relatives to work in the fields or who earns another sort of income can afford to do so, as the salary for WUA staff is not enough to earn a living. Due to the lack of the WUA funding for things such as motorcycles, directors must often use their private car to control the channels. Some of the directors interviewed in our research were therefore rather wealthy farmers. This means that they are most likely the more influential ones who benefited from land reform and had the right connections. Other directors were not wealthy but then had difficulties in fulfilling their tasks as they had for example no vehicle at their disposal.

Even weaker than the position of the council is that of the farmers themselves. The level of awareness and knowledge about the meaning and functioning of the WUAs is low. Though the cases in which farmers know nothing about the WUA are rare, it is just as rare to encounter farmers who exactly know what the WUA is. As was described, farmers in general do not perceive the WUA as an independent organization. Often they think it is a special department of the *aiyl okmotu*, or relate it to the FSK or the *RaiVodKboz*. In the case study, some farmers could associate persons with it, but hardly anyone knew the exact name or what “WUA” stands for. They do not perceive it as ‘their’ organization, but mostly as connected to *aiyl okmotu*. This was also confirmed by the study of Hassan et al. (2004: 36): “The WUAs are perceived as someone else’s organizations, either of the chairman or of the village.”

The influence of the powerful village elite in the WUA is reflected in water distribution. Cases of favored distribution to relatives or people in the same network are often reported in

literature. It is said that the local people of authority abuse their power in order to supply their relatives or clients with water. This is possible among other reasons because there are no effective intra WUA control mechanisms of exact water amounts (see above). However, the access question was often already decided with the land distribution during land reform: Powerful villagers were able to secure the better fields for themselves, meaning the plots situated near the main channel and at the upper end where water delivery is more secure than in the fields located further down the channel. Although the area of the case studies is not a water scarce and thus conflict prone region, tensions persist and scandals occur on a regular basis because of water distribution, even if everyone initially denies it. In particular, villagers who have their plots at the end of channels complain that the water does not reach their fields. Interestingly, corruption and bribes were not mentioned in the interviews. Other studies also stress that this seems to not be a common phenomenon in securing water access. This may be surprising. I would explain this by the fact that other strategies exist and have proven to be successful in securing access to water, which makes reliance on corruption less necessary for those who are already close to the channel and the WUA chair. And for those at the end of the channel, it would be difficult to secure enough water even with bribes. More successful strategies that are in compliance with existing local institutions will be discussed in the next section.

Differing Institutional Logics

One final point to consider is that new water governance institutions can come into conflict with other local institutions. In such a situation the actor can choose toward which rule set he or she wishes to orient his or her behavior as both institutional logics provide a legitimate way of behavior.

One important local value is social harmony. Consequently, the avoidance of conflicts evolved as a rule, the enforcement of which is monitored by village organizations such as the *maballa* committee and the *sud aksakolov*. One of their main functions is to solve conflicts peacefully within the village – preferably without involvement of official authorities, especially those outside the village. Many WUAs also have a conflict committee, at least on paper. Yet farmers hesitate to contact it or even the *RaiV'odKhoz* due to the above mentioned culture of conflict avoidance. Not a single case was reported when a dispute resolution committee at any WUA got became active. Alymbaeva's findings (2004: 28f) also revealed that farmers hesitate to approach the conflict commission or are not aware of its existence. Most members of a WUA know each other and will not directly confront the person with whom they have a grievance, especially if it is a rich or respected person. This is even reinforced when one must follow an official procedure. If someone has the authority to solve conflicts, then it is the elders or the *aiyl okmotu*, but not a little known, new organization like the WUA. The elders can make decisions in water disputes, as in cases where one farmer lacks water because of excessive withdrawal by others. Hence, the *sud aksakalov* may fill this gap. But it is embedded in local structures and there are many reports of elders protecting distinguished members of the community in their decisions. Avoidance of an open conflict by peaceful persuasion may also mean that conflicts are suppressed and individuals are urged not to go to court to assert their rights as they would bring shame to the village. This is in conflict with the idea of a right to water through the payment of ISF. It seems that in case of doubt, community values are given precedence over individual rights.

The situation is reinforced by the widely observable and widely accepted illegal withdrawal of water. It is often referred to as “water theft”, as it formally is a violation of the water allocation prescriptions. In this case, the task of the WUA is to control water withdrawal, guar

antee timely water delivery to those who paid and punish violation of the rules. In theory, each WUA has mechanisms to punish water theft. Many WUAs have a dispute resolution committee and agreed on the amount people must pay when they violate the rules – usually between 300 and 1000 som. At the WUA “kd orset”, the official penalty for water theft is 1000 som, but to date no one has paid it and not a single case has been brought to the dispute resolution committee or the general assembly. In most cases, stealing water has no consequences. Bichsel (2006: 87) even encountered in her case study understanding for illegal water withdrawal among those who suffered from it (i.e., the farmers located down stream). Unauthorized water withdrawal is so common and accepted that it can be described as an informal institution as it represents a widely non confronted rule of behavior which possesses a certain degree of legitimacy. Bichsel (2006: 80f) therefore rightly points to the need to rethink the usage of terms such as “water theft” or “stealing of water” in order to describe unauthorized water withdrawal, as they have a negative connotation and involve moral judgment of people’s activities that the perpetrators might not perceive as illegitimate. Moreover, Thurman (2002: 19) links the increase in unauthorized water withdrawal since independence to the vacuum created by the erosion of responsibility of the FSK and the not yet accepted or created WUAs.

The roles of the *ajyl okmotu* and the court of elders display general attributes of Kyrgyz culture, a strong hierarchical culture and respect for elders and community. Such values can have more influence on people’s actual behavior than incentives appealing to self interest or formal rights. Hence, in the local context it is more disprized to appeal for one’s right in court (for example) than to illegally (but not illegitimately) withdraw water. For a farmer to receive irrigation water in a timely manner and an adequate amount, it is much more rational to ‘invest’ in stable patronage relations than in the payment of ISF. The former is a much more reliable source of water than the latter. However, with the incorporation of the patrons into the WUA, they could foster ISF payment. It can be argued that it is precisely the incorporation of existing power structures that gives them the authority to work effectively and collect ISF, for instance. As we have seen, more than half of the total ISFs are collected in WUAs even though they do not guarantee water delivery. This payment can be attributed to the authority of the WUA chairmen and directors. However, the effect is then that while ISF are paid, the ideas behind it (the right to water and efficient use thereof) are not transmitted.

6.4.4 *The Impact of Water Institutional Linkages on WTR*

Besides these exogenous variables, the water institutions themselves also influence each other and the reform or change of institutional elements. The analysis revealed a major discrepancy between a predominantly patrimonial water administration and new policies and laws. Yet linkages between water policy and law as well as intra institutional linkages within water law also play a role.

The idea behind ISF payments is that they ensure people a right to water. However, a right to water was only codified with the new Water Code in 2005. Before that, users had to pay for water without a guarantee that it would result in factual delivery. Such a situation makes it highly irrational to pay fees. This can explain why unauthorized water withdrawal and non payment are common. The question is rather why farmers *do* pay for their water usage. Based on the analysis given above, it can be estimated that payment occurs because of patronage mechanisms. In those places where fees are collected by WUA staff, it is the authority of the

WUA chair or director that convinces people to pay and not the theoretically attached timely and guaranteed delivery. Water institutional reforms are thus undermined by their incoherency.

Furthermore, the reform to transfer irrigation management was implemented without adequate laws. It was mentioned that WUAs faced many difficulties, as their legal status was not clarified until the Law on WUA of 2002 and regulations on the transfer of I&D systems are still lacking. The yearly contracts on water delivery between the *RaiVodKhoz* and the WUAs also lacked legal foundation until the new Water Code of 2005. Previously, these contracts did not provide a codified right to water. Due to the inexperience of WUAs, they often do not succeed in completing their lists of water demands before the beginning of the irrigation season. That results in the commencement of water delivery while contracts have not been signed yet or are subject to change (i.e., when more or less water is needed than anticipated). Such changes often are only made orally.

Both inter institutional linkages hence affect the water law. The reform of water law lagged behind the reform of water policy and organization. Water law reform went through a partly democratic process in which various stakeholders participated. Due to conflicts of interest, it was a long process. Certain policies, such as the IMT to WUAs, begun without that process being finalized but instead were decided by the government and donors. They were implemented more quickly, but not more successfully among others due to the described interdependencies.

Inter institutional linkages are important to consider in order to assess the implementation of laws and policies. The broad non implementation of ISF is besides the factors discussed above also a consequence of a water administration that is not in the position to implement these. After land reform, the *RaiVodKhoz*es were given the task not to deal each with several *sovkh*ozes and *kolkhoz*es, but instead with hundreds of individual farmers. Yet no additional means were allotted to manage the systems, collect ISF, train water users, etc. On the contrary: the budget allocations from the government even declined as it was expected to cover 50% of its expenses by collecting the ISF. In addition, the Parliament hindered cost recovering fees. So even if all ISF were collected, the meso level administration of the *RaiVodKhoz*es would not have enough means to carry out all its tasks. The precarious financial situation is also an obstacle to the routine performance of daily work. For example, at several meetings of the author with officials at the district as well as the province levels, the telephone line was dead as the Ministry could not pay the bill.

Several features of water administration are not only evidence of their patrimonial character but also have severe impacts on water institutional reform. In its hierarchical culture, accountability is only perceived upwards. This has effects on WUAs, which are supposed to be independent from state structures and accountable to its members rather than to local water or government bodies or the donors that finance them. However, although formally independent, they can de facto be considered as subordinate to the *RaiVodKhoz*, the donor agencies represented by the WUA support department, and the *aiyl okmotu*. WUAs depend financially on the donors and on the *RaiVodKhoz* for water. Accountability is perceived and exercised from the bottom up (*RaiVodKhoz*, donors/WUA support department, *aiyl okmotu*) and not from the top down to the members. As a matter of fact, reform could not challenge the hierarchical style of water administration. The director of Sokuluk *RaiVodKhoz* appreciates WUAs as they make the work of the *RaiVodKhoz* easier: "In principle, it is a structure like the Soviet system, when we gave water to the FSK. A similar system".¹⁹¹ This quotation reveals once more that a technocratic view on WUA prevails.

¹⁹¹ Author's interview with the director of a *RaiVodKhoz*, Chuy oblast, 05/10/2005.

For the *RaiVodKhoz*es, WUAs facilitate their work after the dissolution of the FSK, as WUAs ended the “administrative nightmare” (DFID 2003:6 6) of making individual contracts and pursuing individual fee collection with every single farmer. The *RaiVodKhoz* does not feel accountable toward WUAs; this is visible in the insecurity of water delivery. The WUAs, for their part, lack the awareness to demand this accountability – apart from the fact that they are in many cases indebted to the *RaiVodKhoz* and therefore have an unfavorable position.

Another aspect that is important to *RaiVodKhoz* is that WUAs provide a possibility to gain access to loans and grants to rehabilitate the irrigation infrastructure. The existence of a WUA is a precondition for an application for loans or subsidies from the WB and the ADB (and other donors). Therefore, the establishment of a WUA is often the only way of completing necessary rehabilitation work. The director of a *RaiVodKhoz* in Issyk Kul *oblast* described it very clearly: “The state is allocating fewer resources to the *RaiVodKhoz*. That is why we need WUAs, because they will receive money from donors. (...) There is only one way: WUA. All donors work via WUAs” (Director of a *RaiVodKhoz*, Issyk Kul *oblast*, 09/20/2004). This attitude of the meso level is understandable, as the *RaiVodKhoz*es were given a considerable number of new tasks – including the collection of ISFs and dealing with WUAs (which are much in need of support) – while simultaneously allotted means were reduced and training not provided. Therefore, in many of the World Bank project *raions*, WUA support departments were set up at the *RaiVodKhoz*es. In the long term, these should be part of the water bureaucracy. This is a useful and necessary component of the project to enable the water administration to cope with the new challenges.

The patrimonial organizational culture of the water administration also has another intra-institutional effect that downsizes the effectiveness of capacity building programs conducted by various donors. Many of the Soviet educated experts possess sound technical knowledge but not the competencies needed for new policies, such as to empower and train WUAs. The impact of training activities is limited, however, as the trained staff members have not yet been able to apply and disseminate their new knowledge: Senior staff did not accept this new knowledge and felt threatened by the new competencies of the younger colleagues. The mentality of the ‘hydrocrats’ in the state bureaucracy is still shaped by the Soviet style of management that did its best to prevent change and initiative on one’s own (ADB 2000a: 2f ; ISRI, Socinformburo, FES 2004: 38f). Another obstacle to capacity building is that staffing is not always oriented toward one’s qualification but rather toward patronage principles or bribes: “(...) people are not appointed according to the principle of how well they know the issue or not. Whoever gives more becomes the head and runs everything. Because of this principle of management, the reforms in the water sector got stuck”¹⁹² (University professor, Bishkek, 10/01/2003).

In the case of the *DepVodKhoz* as well, there are rumors that the director at time of research bought his position.¹⁹³ Yet those staffing decisions do not only affect the leading positions and also do not stop at the WUA support departments funded by the World Bank. Interviewed staff members complained that they had to work with unqualified, inexperienced, and unmotivated colleagues hired only due to their relations to persons in higher positions.¹⁹⁴ This is certainly not to say that all people in the water administration attained their positions like this.

¹⁹² „...назначают людей не по принципу там хорошо знает это дело или нет, кто больше даст, тот начальником становится и все командует, вот, вот такой принцип управления и из-за этого сейчас считайте реформа, реформа буксует в водном хозяйстве.“

¹⁹³ Author’s interview with university professor, Bishkek, 10/01/2003.

¹⁹⁴ Personal communication with the director of a WUA support department.

There are many qualified experts with years of relevant experience. But some experts have been excluded because they did not have the right connections while others fill positions without having the right qualification. This is why efforts to reform the water administration not only structurally but also with regard to its internal rules are met by resistance.

6.5 Summary

The structure of water governance in Kyrgyzstan is characterized by a strong administrative fragmentation that results in incoherent policies and competing interests and strategies of the involved actors. Besides the *DepVodKhoz*, the most important ones are the Presidential apparatus (especially the MISI) and donor agencies (especially the World Bank, ADB, and USAID), but they also include several other state agencies and the IWP&HP.

This first half of the chapter described in detail the water institutional reforms conducted in Kyrgyzstan between 1991 and 2005 and traced the processes of decision making and implementation. It showed that the political elite did not succeed in deciding on a policy in the strict sense of the word. Only at the end of the research period was a Water Code approved which is, however, contested in many parts of the expert community. Despite the lack of a policy strategy, several reform programs are being conducted: administrative reorganization, introduction of the ISF, and the establishment of Water User Associations. While all three might be assessed as successful when one only looks at formal aspects, closer inspections have revealed that none of them met its objectives.

The politics of these water institutional reforms is influenced by the neopatrimonial regime. The decision making institutions are relatively open to different actors from state agencies, civil society and scholars, as well as donor organizations. However, agenda setting and leadership in policy formulation are dominated by the president. Under these circumstances, other actors are restricted to veto playing, foster self interest, or switch to symbolic politics. The institutional constraints of the agricultural sector seriously limit the feasibility of introducing ISF. Apart from its economic features, the continuing dominance of the FSK structures also hinders a functioning market economy which good water governance ideals implicitly presuppose. Finally, water management is closely nested in the institutions of local governance. WUAs are incorporated in their logic of patronage, and ISF are undermined as local institutions provide alternative and more reliable rules for water access. Concerning water institutional linkages, the meso level of the water administration is characterized by internal rules opposite those embodied in the new water institutions: hierarchy, patronage, and no accountability to the target group. These rules are still applied and shape assumptions how new organizations like the WUAs should function; they are subordinated to this logic. Water law reform took considerably longer than reform of water policy leading to gaps and contradictions that hinder the functioning of the new rules.

Donors are involved in this process as actors as well as rule setters toward which national actors orient themselves. Their role is also a result of the political situation in Kyrgyzstan, not only due to the open regime inviting donor involvement but also due to the capacities of societal actors to articulate and participate in the political process. In organizing conferences and adopting strategies that are nice to read but have no concrete consequences for existing power structures, the interests of the government, experts, and donors coincide.

7 Water Institutional Reforms in Tajikistan

This chapter presents the case study on Tajikistan. Its structure is similar to the one on Kyrgyzstan: First, the key political actors in water governance will be described (7.1). Then an overview of the perceptions of the problem will be given and the general policy objectives presented (7.2). The subsequent subchapters deal with the various reforms: the formulation of a policy (7.3.1), the reform of the general legal framework (7.3.2), the introduction of irrigation service fees (7.3.3), and the transfer of irrigation management (7.3.4). In the following discussion of the water institutional reforms, the influence of the neopatrimonial institutional context on the above mentioned processes and outcomes will be analyzed (chapter 7.4). The final subchapter will summarize the findings of the case study (ch. 7.3.5).

7.1 Administrative Structure and Key Actors in Water Governance

To start with, this chapter will give an overview of the organizational actors involved in water governance and the competencies of each. It will first describe the water administration in a narrow sense (7.1.1), and then it will go on to name other agencies and actors involved in water governance (7.1.2).

7.1.1 *The Water Administration*

In Tajikistan, the *MinVodKhoz* (*Ministerstvo Melioratsii i Vodnogo Khozyajstva*) is a distinct Ministry of Irrigation and Water Management, which already existed in Soviet times. The basic responsibilities of the *MinVodKhoz* include the development of the policy strategy for water management and implementation mechanisms for laws; the allocation of irrigation water via licenses; updating of the state water register (*kadastr*);¹⁹⁵ operation and maintenance (O&M) of inter farm facilities for irrigation agriculture; and water supply for pastures. In rural areas, it is also the *MinVodKhoz* that is responsible for the maintenance of the drinking water supply; in the cities and municipalities, it is the local administration, the *kbukumat*.¹⁹⁶

The structure of the *MinVodKhoz* and its subdivisions has hardly changed since the end of the USSR. The only new department to emerge since Tajikistan's independence is a special division for foreign investments. Its task is to coordinate donor projects. All donors are expected to inform the department on the projects. In practice, the department only attends to

¹⁹⁵ The water register is published each year based on information on water usage that all water users are required to provide.

¹⁹⁶ Author's interview with the vice-minister of the *MinVodKhoz*, Dushanbe, 10/09/2003; with a senior official at the *MinVodKhoz*, Dushanbe, 08/20/2004.

major multi million dollar projects, mostly those of the international financial institutions (WB, ADB, and IDB).¹⁹⁷

The amount of allocated financial means declined from 72 Mio USD in 1991 to 6.5 Mio USD in 2002, or by more than 90% (UNDP 2003: 33). Since 1996, only 50% of the costs of the *MinVodKhoz* have been financed by the state budget while it is expected to cover the other half of its expenses with the ISF. It should be noted that due to the costs for electricity at the pumping stations, irrigation in Tajikistan is more expensive than in other Central Asian countries. The electricity costs alone amount to approximately 22 Mio USD per year; many local water departments have gone into debt to the power providers.¹⁹⁸ Salaries are low. In Tajikistan, the average wages in the public water sector are 15 USD per month. Such salaries are hardly enough to cover living expenses and hence do not only lessen the attractiveness of the positions and the motivation of the personnel, but they also make the employees vulnerable to corruption. Many employees are forced to follow other income generating activities besides their job (which means less commitment), accept bribes, or earn extra money through involvement in donor projects (an option open to higher level bureaucrats). This limits the effectiveness of the administration as low salaries do not provide an incentive to perform well (GoT 2002: 19; UNDP 2003: 25f). In the words of one director of a *RaiVodKhoz*, “for twenty somoni you do not work, you only come to work in the morning and leave work in the evening.”¹⁹⁹ In addition, with the collapse of the Soviet Union, many Russian experts who filled senior technical and administrative positions emigrated. In Tajikistan, this general Central Asian trend was even greater due to the civil war.

The Ministry has branches in all *oblasts* (*ObVodKhoz*) and *raions* (*RaiVodKhoz*) and regional offices in Kulyob, Dushanbe, Gissar, and Vaksh. In areas with pumping irrigation, special agencies for O&M of the pumping stations and boreholes exist.²⁰⁰ The local *RaiVodKhoz* is responsible for the water supply for irrigation, melioration, operation of pumping stations, ground water wells, and channels. It used to be responsible for the delivery of water to the *sovkhoses* and *kolkhoses*, while they themselves managed the on farm irrigation systems. Where the state and collective farms have been dissolved, the *RaiVodKhoz* has contracts either with the DFs or, in those places where they already exist, with Water User Associations (see ch. 7.3.4 below).²⁰¹ The department for foreign investments has no branches in the *oblasts* and *raions*. In regions with many donor projects, this leads to excessive demands directed at the local water agencies and a lack of coordination of donor projects.²⁰²

Only approximately 77 people work in the central apparatus of the *MinVodKhoz*, but many are affiliated with its various sub divisions. There are no exact data on the total number of employees, but according to the vice minister, about 16,500 people work for the *MinVodKhoz*.²⁰³ In the northern Sughd *oblast*, for example, there are 4,000 employees, primarily people

¹⁹⁷ Author's interview with official at the department for foreign investments of the *MinVodKhoz*, Dushanbe, 10/28/2005.

¹⁹⁸ Author's interview with the vice-minister of the *MinVodKhoz*, Dushanbe, 10/09/2003.

¹⁹⁹ Author's interview with the director of a local water department, Sughd oblast, 09/01/04. 20 somoni is about 7 USD.

²⁰⁰ These are the agencies LoPremo, KTTPremo, Dumo, KTPremo, GBAOPremo, SE “TSHVS” (MIWM, UNDP, EC-IFAS 2006:71).

²⁰¹ Author's interview with the vice-minister of the *MinVodKhoz*, Dushanbe, 10/09/2003; with the director of the *ObVodKhoz* Sughd, Khudjand, 09/02/2004.

²⁰² Author's interview with a senior official at the CFPS, Dushanbe, 10/13/2003 and with a senior official the *ObVodKhoz* Sughd, Khudjand, 10/11/2005.

²⁰³ Author's interview with the vice-minister of the *MinVodKhoz*, Dushanbe, 10/09/2003.

who are responsible for operating the pumping stations.²⁰⁴ In one *RaiVodKhoz* in Sughd oblast, for instance, there are 346 employees. Here as well, many people (about 160) work at the pumping stations, while there are only about 25 employees in the administration.

The *RaiVodKhoz* of Aini, where the local case study was conducted, is responsible for 960 ha of arable farmlands that are irrigated by way of pumping irrigation, using water from the Zeravshan River. They are served by nine pumping stations and 70 km of channels. The *RaiVodKhoz* is responsible for these pumping stations. In the beginning of every year the *OblVodKhoz* submits a plan to the *RaiVodKhoz* that determines how much water the latter are allowed to use. 1540 ha of land is served by canal irrigation directly from mountain springs. Many villages have self managed canals that divert water from a spring or a small mountain river to the village and onto the fields. In these cases, the *RaiVodKhoz* is not involved in the water management and the users therefore do not have to pay the irrigation service fee (ISF) to the state.²⁰⁵ The *RaiVodKhoz* Aini is also responsible for the neighboring *raion* Gornaya Mat cha, and has 132 employees. As in the above mentioned cases, most of them have been hired to run the nine pumping stations: At each station there are always three persons working on a 24 hour shift.²⁰⁶

Agencies subordinated to the *MinVodKhoz* are the *TajikGiProVodKhoz*, which plans projects for renovations, bank reinforcement, and land reclamation; the *tajik gidromeliorativnaya ekspeditsia*, which takes stock of the land plots and develops the cadastre; the associated enterprise *TajikSelKhozVodovodStroy*, which is in charge of the rural water supply including pumping water supply to pastures; and the *Tajik Nauchno Issledovatel'skij Institut Gidrotekhniki i Melioratsii (TajikNIIGiM)*.²⁰⁷

The Scientific Institute for Hydrotechnology and Melioration (*TajikNIIGiM*; listed last above) and its 34 scientific employees are in charge of research on irrigation, melioration (including questions of water and soil quality), and water management (including water fees, cost recovery, management issues such as WUAs and basin management, IWRM). In addition, they are responsible for updating the water use register and maintaining an information system. In recent times, research on institutional aspects has received more attention. The *TajikNIIGiM* participates in the development of laws and other normative documents. It is also involved in projects on the development of regional water policy and closely cooperates with the International Fund for Saving the Aral Sea (IFAS/*Mezhdunarodnyi Fond Spaseniya Arala, MFS-A*) and the Interstate Commission on Water Coordination (ICWC/*Mezhhgosudarstvennaya Koordinatsionnaya Vodkhozaystvennaya Komissiya, MKVK*), as well as with various international donor organizations, NGOs, and foreign academic institutes. While basic funding is provided by the state, the institute is entitled to acquire additional means by participating in tenders and cooperation projects. The institute has departments in Gissar, Varzob, Kolkhozabad, Kurgan Tjebbe, and Sughd.²⁰⁸

The 1993 Water Code mentions three authorized state agencies besides the *MinVodKhoz*: The Environmental Ministry, the Committee of Geology, and the Committee on State Supervision of Industry and Mining Works (§ 9). In 1993, the Environmental Ministry evolved from the Committee on Protection and Rational Usage of National Resources to the Ministry of Protection and Rational Usage of Resources. In 1996, the name was changed to the Ministry of

²⁰⁴ Author's interview with the director of the *OblVodKhoz* Sughd, Khudjand, 09/02/2004.

²⁰⁵ Author's interview with the director of the *RaiVodKhoz*, Aini, 08/30/2004.

²⁰⁶ Ibid.

²⁰⁷ Author's interview with two officials at the CFPS, Dushanbe, 10/09/2003 and with one senior official at the CFPS, Dushanbe, 10/09/2003; with the vice-minister of the *MinVodKhoz*, Dushanbe, 10/09/2003.

²⁰⁸ Author's interview with director of the *NIIGiM*, Dushanbe, 09/07/2004.

Environmental Protection. The responsibility for the protection of water resources was transferred from the *MinVodKhoz* to the Environmental Ministry. The Committee on Geology (*Komitet po Geologii*) is responsible for the groundwater resources and already existed in the same structure in Soviet times. The Committee on Supervision of Industry and Mining Works (*Gos GorTekhNadzor*) is responsible for thermal and mineral waters. In addition, the state company *Barki Tojik* is responsible for dams and electric power supply. It is deep in debt due to massive non payment of power supply fees (MIWM, UNDP, EC IFAS 2006: 22; Jones Luong 2003: 31).²⁰⁹

7.1.2 Further Involved Actors

In addition to these main organizations, there are other actors concerned with water governance. These include agencies in the agricultural and hydropower sectors, academic institutions, NGOs, and international donor organizations.

President and Presidential Administration

Tajikistan has a strong presidential system; the President is the main actor in policy formulation. For advice and consultancy, he has an extended administrative apparatus at his disposal. Directly subordinated to him is the Center for Strategic Studies (*Tsentr Strategicheskikh Issledovaniy Pri Prezidente Respubliki Tadjikistan*), a think tank which is also involved in water policy discussions on the national as well as on the Central Asian level.

Parliament (Majlisi Oli)

The Parliament (*Majlisi Oli*) has to approve laws and can amend them. According to the 1993 Water Code, it determines the main directions of the water policy. In the Water Code of 2000, however, its role was completely eliminated (see chapter 7.3.2 below). No interviewee mentioned it as a major actor in the political processes of water governance.

Center for Farm Privatization Support (CFPS)

The “Republican Center for Farm Privatization Support under the Government of Tajikistan” (CFPS) is located in the Ministry of Agriculture but is formally subordinated directly to the government. It was established in 1998 and is the project implementation unit for World Bank projects supporting farm privatization (“Farm Privatization Project”, 1999 2004, 20 Mio USD, and “Rural Infrastructure Rehabilitation Project, 2000 2006, 20 Mio USD) (World Bank 2001a). It is, among other things, in charge of supporting the establishment of WUAs and controlling their performance. The CFPS consists of a *tsentr upravleniya* (administrative center) in Dushanbe and several *tsentr ispolneniya* (implementation center) in the pilot *raions* of the World Bank project. The latter were set up in order to provide administrative and technical support, and to organize and oversee the rehabilitation work. Its staff includes several experts of the *MinVodKhoz* and the *NIIGiM*. The CFPS cooperates with the *MinVodKhoz*, the Ministry of Agriculture, and the respective *RaiVodKhoz*es.²¹⁰

²⁰⁹ Author’s interview with a senior official at the CFPS, Dushanbe, 10/09/2003; with the vice-minister of the *MinVodKhoz*, Dushanbe, 10/09/2003; with a senior official of the *MinVodKhoz*, Dushanbe, 10/10/2003.

²¹⁰ Author’s interview with a senior official at the CFPS, Dushanbe, 10/13/2003; with an official of a *tsentr ispolneniya* of the CFPS, Dushanbe, 10/14/2003.

State Land Committee

The State Land Committee is in charge of the organization of the land reform, i.e. the privatization of the state and collective farms (*sovkebozes* and *kolkebozes*). It is directly subordinated to the government. As the FSKs were also in charge of the infrastructure, the Land Committee must organize its transfer, including the transfer of irrigation infrastructure and canals. According to the Law on Land Reform, all of the on farm channels that turn into off farm channels due to the split up of the FSK should be transferred to the jurisdiction of the *MinVodKhoz*. Therefore, cooperation between the two agencies is necessary.²¹¹

Ministry of Energetics

The Ministry of Energetics was established in 2000 upon the recommendation of the ADB. The objective was to improve the stability of the energy sector and to secure the energy supply. Its main task is to safeguard energy security and develop the hydropower industry. This mainly becomes apparent in the investments in new dam projects like the Rogun and Sangtuda dams, which affect the availability of water resources. Due to the rising importance of hydro energy, its significance may increase.²¹²

Academic Institutes

Besides the NIIGIM – a research institute directly associated with the *MinVodKhoz* – academic capacities on the research of water resources are low. In 2001, the Tajik government decided to establish the Institute of Water Problems, Hydro Power, and Ecology (IWP) at the National Academy of Sciences with an academic staff of currently 33 persons. It addresses the issues of soil erosion, salinization, rising groundwater levels, water quality, and transboundary management problems. In 2004, a new department for water management and transboundary rivers was established. The institute is primarily financed by the state, but additional means are acquired through international projects. It cooperates with the *MinVodKhoz*, the Environmental Ministry, MKVK, MFSA, and also with universities and academic institutions from abroad in scientific projects.²¹³ Although the Institute is involved in many international projects and cooperates with all national agencies, it has so far seen little scientific appreciation of its work by other water experts in Tajikistan.

The Agrarian University in Dushanbe has a faculty of hydro melioration, which was established in 1951. Most Tajik water cadres who received their training during Soviet times studied there. At some other universities there are also individual scholars and institutes that deal with water issues, but all lack capacities to conduct substantial research or to ensure up to date teaching by qualified teaching staff. The financial means for excursions, field research, and other such things are lacking as well.²¹⁴

International Donor Organizations

Various donor organizations are also involved in water governance. Foreign investments cover virtually all of the large rehabilitation and renovation works that have been conducted since independence and hence are also able to impose conditions for those. It is not possible to describe all of the rehabilitation activities in the water sector; thus, this section will focus on donors' involvement in institutional reforms. Here donors are especially active in the transfer

²¹¹ Author's interview with a senior official of the State Land Committee, Dushanbe, 11/01/2005.

²¹² Author's interview with a senior official at the Ministry of Energetics, Dushanbe, 08/24/2004.

²¹³ Author's interview with the director of the IWP, Dushanbe, 10/15/2003.

²¹⁴ University instructors earn about 20 somoni (less than 5 euro) per month. Therefore, they often have additional jobs. Author's interview with two university professors, Dushanbe, 09/08/2004.

of irrigation management to Water User Associations (WUAs). The World Bank's activities have already been mentioned. In addition, UNDP, ADB, IDB, SDC, USAID, and many international NGOs are active as well. The latter primarily work on projects at the local level, which foster community and rural development, including the rehabilitation of small scale irrigation systems and the drinking water supply.

Non Governmental Organizations (NGOs)

The number of NGOs that aim to influence the policies of the government and/or donors is very limited. NGO activities and their influence are marginal. Their activities mainly focus on the implementation of projects, in which specific implementation work is often done by NGOs or (often informal) community based organizations (CBOs), or on consultancies for donors. On the local level, many CBOs have been set up as donors especially international NGOs often prefer to work with them instead of with state structures. The staff of both water research institutes, NIIGiM and IWP, also established NGOs: The staff members of the NIIGiM has since 1999 a NGO called "WaterConsult", and the employees of the Institute of Water Problems form the NGO "BIOS". They use these NGOs to participate in projects to which they would not have access as government institutes, such as consultancies and rehabilitation projects.²¹⁵

State and Collective Farms

Before their dissolution, state and collective farms were (and where they still exist are) in charge of O&M of on farm irrigation channels. They have a contract with the *RaiVodKhoz* on water delivery.

7.2 Problem Perception and Policy Objectives

The aim of this chapter is to reflect on the general discourse on water and the problems perceived by actors and by the public by identifying the topics dominating the public debate. This is also a part of the framework in which institutional reforms must be conducted. In the discourse on water resource management, two problem perceptions are extremely dominant: the financial situation and the deterioration of the infrastructure. The dramatic decrease in budget allocations and its technical and economic effects were described in the previous chapter. Consequently, when it comes to priorities for strategies to tackle the problems of the water sector, reaching cost recovery and rehabilitating the infrastructure are among the key priorities: "A crucial area in the improvement of water systems in Tajikistan is finance." (UNDP 2003: 52).

Institutional aspects receive less attention. In a national report for the GWP, the priorities in the water sector are ranked as follows:

- 1) Improving the utilization of the hydropower potential and achieving power independence;
- 2) Food security, employment, and poverty reduction;
- 3) Rehabilitation of the water infrastructure;
- 4) Increasing state financing of O&M and rehabilitating the water infrastructure, developing economic mechanisms for water use;
- 5) Improving access to drinking water and the sewer system (Pulatov 2004:88).

²¹⁵ Author's interview with the director of the IWP, Dushanbe, 10/15/2003; with the director of the NIIGiM, Dushanbe, 09/07/2004.

Except for the development of economic mechanisms, institutional reform is not mentioned. This problem perception is also apparent in the National Report for the SPECA working group on energy and water issues, where institutional problems were hardly mentioned, especially when compared to Kyrgyzstan (SPECA 2004). On the one hand, this reflects the serious financial and infrastructural problems (which are exacerbated in Tajikistan due to the civil war period). On the other hand, it also shows that the awareness of institutional issues is relatively low and a technocratic problem perception prevails.

On the international stage, however, the Tajik government has shown a strong commitment to water reforms. The International Year of Freshwater 2003, which as declared by the UN, and its follow up event, the UN International Decade for Action 'Water for Life' from 2005 2015, are both initiatives of Tajikistan. Among its activities for the International Decade the Tajik government hosted several conferences, such as the Dushanbe Fresh Water Forum in 2003 and an international conference on regional cooperation in transboundary river basins in 2005. The recommendations of the delegates of the latter conference included the development of national strategies aiming at good governance, decentralization, and integrated management in the water sector (anon. 2005: 101f).

Yet one does not even have to talk to a government official in order to gain the impression that water is a top priority for the government: The whole country is paved with posters advertising slogans such as "Water is Life" and the dates of the UN water decade (2005 2015), or the UN Water Year 2003 in that year. Many citizens, however, do not know that these are international campaigns and believe that they are only conducted in Tajikistan. Also, they commonly only refer to them cynically, as these campaigns did not result in any improvements in the water supply. Beyond the drinking water supply, which affects the daily life also of the inhabitants of the capital, there is little awareness of problems of water resources management. A perception that water management is also an issue of water governance is inexistent among most water experts.

7.3 Institutional Reforms

After this overview of the key actors in water governance, this chapter will describe the water institutional reforms that have been conducted thus far. First, we will take a look at the policy strategies that have been developed (ch. 7.3.1). The following chapter will address the general legal framework (ch. 7.3.2). After that, the aspects of the introduction of water tariffs (irrigation service fees, ISF) and the transfer of irrigation management to WUAs are discussed in detail (ch. 7.3.3 and 7.3.4). The transition to management along hydrographic boundaries will not be discussed in a separate chapter as in the case study on Kyrgyzstan, but rather will be analyzed in the section on the general framework, as no concrete reform decisions have been made yet. In the sections on ISF and WUA, short digressions on the local case studies will enrich the argument.

7.3.1 *Formulation of a Policy Strategy*

Tajikistan has long lacked a sound policy strategy for water resources management. This again can be explained by the unstable situation during the 1990s. Only in 2001 was a "Concept on Rational Use and Protection of Water Resources in the Republic of Tajikistan" published. In

addition to the Water Code of 2000 (see ch. 7.3.2), it is the fundamental document on water policy. In it several institutional objectives for water reform are highlighted, such as:

- Introduction of an Integrated Water Resources Management (IWRM);
- Transition to basin management;
- Establishment of Water User Associations (WUAs);
- Differentiation of the Irrigation Service Fee (ISF);
- Introduction of market mechanisms for water use;
- Decrease in organizational hierarchy;
- Better coordination between states, regions, districts, and sectors;
- Stakeholder participation (Pulatov 2004: 85f).

These issues reflect the general definition of good water governance. Similar subjects are also raised in the PRSP of 2002 as well as in the governmental plan for achieving the UN Millennium Development Goals (MDG) of 2003 (GoT 2002: 41f; Pulatov 2004: 85).

In 2005, the 2001 Concept was updated and a new Water Sector Development Strategy was formulated. It reflects a growing commitment to IWRM in the international debate, a change in the national situation with a turn from locally and short term oriented humanitarian assistance to long term development, and the quest for the MDGs. In June 2006, this new Water Sector Development Strategy (WSDS) came into force. The WSDS mentions full cost recovery, the establishment of WUAs, and the transfer of irrigation management as main objectives in the institutional realm (MIWM, UNDP, EC IFAS 2006: 9). The 2005 draft lists the following problems: the mismanagement of water, land, and environment, the poor maintenance and state of the existing infrastructure, lack of funds, poor strategic planning, a weak institutional framework, an inadequate pricing system, a lack of regional cooperation, and poor management of the infrastructure. It also recognizes the need for better coordination among state bodies as well as donors, NGOs, and civil society (UNDP, UNECE, National Working Group 2005:2).

No information was available on the development of the 2001 concept. The development of the 2005 Water Sector Development Strategy proceeded rather quickly. Reportedly, the initiative resulted from the preparation of the PRSP. Since 2003, a working group had been assigned to develop a reform program. The working group consisted of 15 representatives from the *MinVodKhoz*, the Agricultural Ministry, the CFPS, the Parliament, as well as scientists and other specialists such as economists and lawyers. It was headed by the Minister of the *MinVodKhoz*. Its tasks were defined according to four areas: (1) development of a recommendation for the reform of the water administration in general; (2) development of a legal foundation for WUAs; (3) identification of priorities in rehabilitating irrigation systems; and (4) analysis and assessments of the costs of water.²¹⁶ In August and September 2005, the UNDP organized discussions on strategies and priorities. In October, the national working group was consigned to develop the strategy together with the UNDP until December 27, 2005. In addition, three three month consultancies were tendered. This may also have been related to the commitment of the Tajik government at the 2003 Johannesburg WSSD to establish a national IWRM and water efficiency plan by the end of 2005. On June 26, 2006, the final version of the strategy was approved by decree No. 121 of the *MinVodKhoz* (MIWM, UNDP, EC IFAS 2006: 3 4; UNDP, UNECE, National Working Group 2005: 4, 6).

Do these activities and policy papers give evidence of a strong political will to pursue good water governance? It is difficult to assess whether the documents alone suffice to reflect

²¹⁶ Author's interview with a former senior official at the *MinVodKhoz*, Dushanbe, 08/23/2004; with a senior official at the CFPS, Dushanbe, 10/13/2003.

a commitment of all key water actors, as the processes of their development are too intransparent to be scrutinized and not much open debate takes place. It is also striking that several issues have continuously been mentioned in all of the documents since 2000. Their repeated announcement already points to the conclusion that they may not have been implemented; otherwise they would not have had to be mentioned as objectives again and again. The following subchapters will provide a closer look at these further steps: the institutional reforms, their implementation, and their outcomes.

7.3.2 General Legal Framework

The main legislation concerning water is the Water Code.²¹⁷ The first law regulating water governance after independence was the Water Code of 1993. In the same year, the Law on Nature Protection was approved that also includes regulations relevant to the *MinVodKhoz* as it determines the quantitative and qualitative standards for water.²¹⁸

The Water Code defines water as an exclusive state property (§ 4). Economic mechanisms like water fees are not mentioned in the Water Code. It defines the competencies of the *Majlisi Oli* (Parliament), the government and the local authorities, and the four authorized state agencies (§§ 5–9). It outlines the main directions for the usage, regulation, and protection of water resources. The 1993 Water Code thereby included provisions adopted from laws of other countries that partly contradicted or duplicated still existing Soviet laws (Kholmatov 2003: 152).

In 2000, a general revision of the Water Code took place and on November, 29 the new Water Code was enacted after it had been approved by both chambers of Parliament. It continues to define water as an exclusive state property. The main changes in institutional respect are the introduction of fees for water usage (§ 31),²¹⁹ hence its adaptation to the changes made by the Presidential decree in 1996 (see below chapter 7.3.3). It also includes a new definition of the competencies of different agencies. The new code describes the competencies of the government and its subordinate organs, and the local authorities (§§ 6, 7). The Parliament – the primary body for determining the policy direction according to the old Water Code – is not mentioned in the entire document. The Code involves a strengthening of the rights and obligations of water users and water suppliers: The obligations of water users are, among other things, to make timely payments and to mind water rights (§ 45). Article 43 contains the right of farmers to organize themselves in water user associations (WUAs) in order to operate and maintain tertiary irrigation systems, distribute water fairly between DFs, collect 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 principle (§ 9). This process should include the gradual privatization of water facilities (excluding those of strategic

²¹⁷ Other laws, which will not be presented in detail but that affect water management, are the Law on Mineral Resources, Law on Energetics, Land Code, Law on Payment for Land, Law On State Sanitary Inspection, Forest Code, Law On Veterinary Inspection, Law on Protection and Use of Fauna, Civil Code, Criminal Code, and the annual state budget (Kholmatov 2003: 153).

²¹⁸ Author's interview with two officials of the Environmental Ministry, Dushanbe, 10/07/2003; with a senior official at the CFPS, Dushanbe, 10/13/2003.

²¹⁹ These fees are restricted to such types of water usage in which technical infrastructure is involved (so-called special water use) and are not levied on water usage in general (so-called general water use is still free of charge).

importance). Decisions with regard to privatization have to be made by the government.²²⁰ The Water Code also stresses that violations must be prosecuted and compensations made (§ 142 and 144) (Pulatov 2004: 84). It is interesting to note that both the old and the new Water Code provide for the possibility to include water users in maintenance works, hence in a certain respect a legal foundation for *bashars* (§ 70 and 78 respectively).²²¹

The Water Code was enacted together with a series of sub normative acts, by laws, and implementation mechanisms. It is, together with the 2001 Concept in Rational Water Use (and since 2006 the Water Sector Development Strategy) the basis for water resource management and water governance. In 2003, some minor amendments were made to the code. For 2006, a further amendment was planned concerning WUAs and basin management (MIWM, UNDP, EC IFAS 2006: 75).²²²

Detailed information of the process of policy formulation was not available. Reportedly, the new Water Code was developed mainly by the *MinVodKhoz*. Representatives of the Environmental Ministry and of the State Inspection on Protection and Rational Use of Water Resources have also been involved. The CFPS contributed Article 43 on WUAs.²²³ The new amendments that have been suggested are supported by a World Bank project. The particular aim of the project of the World Bank is to incorporate recommendations made by the UN ECE Environmental Performance Review 2004 on the transition to WUA and basin management (UNDP, UNECE, National Working Group 2005: 5).

Privatization in the agricultural and industrial sector was mentioned as the main reason for the development of the new Water Code: The old Water Code was no longer considered suitable for the new situation as new forms of control were needed. Most experts endorsed the Water Code and its objectives as meeting this demand.²²⁴

As the Tajik Water Code does not seem to be as contested as the one in Kyrgyzstan, it could be assumed that since its approval in 2000, implementation has progressed. Experts suggest that at least 30 sub legislative acts would be necessary in order to implement the Water Code and the 2001 Concept. In February 2002, the government decided on 25 normative acts to be developed in order to implement the Water Code (Kholmatov 2003: 154). However, for some projects decided on in the Water Code, no implementation mechanisms were developed even after several years. By the end of 2005, fewer than ten subsequent acts had been adopted and these have only been partially applied (UNDP, UNECE, National Working Group 2005: 7). The prosecution of violations of the Water Code is apparently not pursued stringently. According to off the record information, no cases have been filed with the prosecutors in relation to violations of the Water Code. 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”.²²⁵ Like him, most of the experts interviewed see the problem of the lack of

²²⁰ Author's interview with a senior official of the *MinVodKhoz*, 10/10/2003.

²²¹ More so than according to the 1993 version, the respective paragraph in the 2000 Water Code refers to voluntary work.

²²² Author's interview with a senior official at the CFPS, Dushanbe, 10/13/2003.

²²³ Author's interviews with a senior official at the CFPS, Dushanbe, 10/13/2003; with two officials of the Environmental Ministry, Dushanbe, 10/07/2003; with the vice-minister of the *MinVodKhoz*, Dushanbe, 10/09/2003.

²²⁴ Author's interviews with a senior official at the CFPS, Dushanbe, 10/13/2003; with two officials of the Environmental Ministry, Dushanbe, 10/07/2003; with a senior official at the *MinVodKhoz*, Dushanbe, 08/20/2004; with a professor at a research institute, Dushanbe, 09/07/2004. Only a few experts point out weaknesses. Still, this must not be misinterpreted to indicate that everyone is content with the Code. It may also be a signal of the lower openness of the political system in Tajikistan. In general, it seems that there is no fundamental discontent.

²²⁵ „То есть на законодательном уровне вроде бы недостатка законов не имеется, но нужны дальнейшие шаги.“ Author's interview with former senior official of *MinVodKhoz*, Dushanbe, 08/23/2004.

implementation not in the Water Code itself. The problems were (if at all) related to the proper implementation of the Water Code by those who were expected to apply it: administration, courts, etc. 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 concerned agencies do not have sufficient information about the law or their rights and obligations, and therefore do not know how to apply it and how to make use of their rights. Water users are generally insufficiently informed about their rights and obligations. They do not know whom to approach when their rights are violated. There is no transparency with regard to which agency is responsible for what even if it is written in the Code. Many people do not know that they can turn to offices in the *oblast* or the capital if problems are not solved on the local level – or, if they are aware of this option, they do not dare to use it.²²⁶ An NGO representative involved in campaigns for raising awareness of water problems described the situation as follows:

“We could convince ourselves that today many people do not know the legal basis of water usage. Even experts. First, virtually nobody has the water code. (...) There was an amendment in 2003. This is the new version of the water code. Unfortunately virtually nobody knows it. When we went to the regions we asked: Do you have the Water Code? They said no“(NGO representative, Dushanbe, 08/25/2004).

Lack of proper information among all involved parties is one of the main obstacles to the effective implementation of the Water Code.

Even farmers who withdraw water unauthorized barely face sanctions, despite the fact that the Water Code explicitly prohibits unauthorized water withdrawal in order to increase or reduce the water supply (Water Code § 76). The consequences are reported by a *RaiVodKhoz* director: After a case of “water theft”, he first wrote a letter to the director of the concerned *dekbkan* farm that he should prosecute the responsible person. But the director simply did not react. After that he turned to the court, but it had no effect, as the court did not know about the regulations on how to apply the law.²²⁷ This case exemplifies how a lack of willingness to comply with law (on part of the DF director) and a lack of capacity to enforce the law (on part of the administration and the judiciary) foster each other.

The transition to management along hydrographic boundaries, one objective of the 2001 Concept which is also mentioned in the 2000 Water Code, has not been implemented so far, although most experts referred to it as an important step: “The main principle of governing the water sector is transition to a hydrological rather than administrative management framework” (Pulatov 2004: 86). Despite repeated commitments, current practices are still based on the administrative principle. Only locally have some *RaiVodKhoz*es been merged into one water agency (Pulatov 2004: 86).²²⁸

Concerning inter sectoral coordination, the respective competencies of each agency are determined in a special protocol which was approved in the Water Code. The government is responsible for a clear delineation of competencies. In general, interviewees stated that there were no problems concerning competencies and coordination. Nevertheless, there were indications that the inter sectoral cooperation does not run as smoothly as officially presented. This is not surprising given the lack of transparency of the competencies and functions mentioned above. This is especially relevant for the coordination with the agricultural sector and land reform processes. These are discussed in detail in chapter 7.4.2. Also in the case of the *Min*

²²⁶ Author’s interview with an NGO representative, Dushanbe, 08/25/2004; with a professor of an academic institute, Dushanbe, 09/07/2004; with the director of a *RaiVodKhoz*, Sughd oblast, 09/01/04.

²²⁷ Interview with the director of the *RaiVodKhoz*, Sughd oblast, 09/01/04.

²²⁸ Reported cases are from the Rasht valley and the Khatlon oblast.

VodKhoz and the Ministry of Energetics, it is officially stressed that there were neither coordination problems nor conflicts between both bodies. Only one official of the *MinVodKhoz* admitted that the relations between both ministries might have to be further clarified.²²⁹ Others stated that the ministries complement each other without interfering in each other's work; hence, coordination was not necessary. In practice, this does not always seem to be the case.²³⁰

In summary, while a Water Code exists, it is not widely applied. It can therefore be stated that in practice, no coherent legal framework is in place yet. This especially refers to the management of irrigation systems and water rights (SPECA 2004: 46). When normatively assessed against the principles of good water governance, the national water legislation lacks clear definitions and steps on democratic mechanisms, water rights, and the participation of water users.

7.3.3 Introduction of Market Mechanisms (Irrigation Service Fees)

As described in chapter 7.1.1, government budget allocations to the water sector declined dramatically. Today, they only cover 10% of those at the end of the 1980s. This is perceived as one of the most pressing problems in the water sector (see ch. 7.3.1).

In order to overcome the water sector's financial crisis, volumetric water tariffs for irrigation water delivery were introduced in 1996 with the Presidential Decree No. 460 "On jurisdiction and collection of charge for the exercise of the service of water delivery". This represents a change from the former quantitatively free access to water to payment as rule for water supply. This irrigation service fee (ISF) is not levied for water as a resource but for the water delivery service. Water as a resource and water use in general are free of charge. Tariffs have to be paid for the services of accumulation, transportation, distribution, and obtainment of the right to use water (Water Code §§ 25 and 31). Therefore, only those water users must pay for irrigation water who receive it from the district water administration (*RaiVodKhoz*), i.e. who use water transported by state managed infrastructure (channels, pumps). Those who use water that is directly discharged from mountain springs or by self owned groundwater pumps do not have to pay.²³¹

There are no intentions to introduce economic mechanisms for water services on an international level, although there are sporadic sympathies for the Kyrgyz position and some indications that it might become more popular in the near future.²³² The new Water Sector Development Strategy postulates such mechanisms.

In the ISF proposal of the *MinVodKhoz*, the real costs were taken as basis for the calculation of a water fee. The government, however, decided on a lower level of fees according to the economic possibilities of the water users. This fee level covers about 30% of the actual costs (Kholmatov 2003: 153). The objective was to create awareness first and to then gradually

²²⁹ Author's interview with a senior official at the *MinVodKhoz*, Dushanbe, 08/20/2004.

²³⁰ For example, there is a conflict at the Kairakum reservoir: The dam is in the budget of the *ObVodKhoz*, while the attached GES is listed in the budget of the Ministry of Energetics. All the costs for dam maintenance have to be covered by the *ObVodKhoz*, while the Ministry of Energetics does not contribute even though it uses the dam to produce energy, which is perceived as unjust by water officials. Author's interview with the director of the Sughd *ObVodKhoz*, Khudjand, 09/02/2004.

²³¹ In many areas, villages use water directly diverted from a mountain spring or pumped by a pump built by humanitarian assistance. These water users do not have to pay ISF to the *RaiVodKhoz*. However, they usually pay (mostly in kind) the local *mirab* who is responsible for the maintenance of the infrastructure that delivers water to the *ogorod*, since he is not longer paid by the FSK. The rates vary.

²³² Much arable land was flooded for the Kairakum reservoir in Northern Tajikistan. Uzbekistan compensated only part of the O&M costs.

progress toward full cost recovery. The ISF of initially 30 kopeks per cubic meter was raised gradually and has been 1.2 dirham²³³ per cubic meter since August 2004. In the long run, there are plans to introduce differentiated fees (according to type of irrigation and soil).²³⁴ Despite the fact that the current fees are insufficient for full cost recovery, local water agencies have been expected to cover part of their costs by fee collection since 1996.²³⁵ The *RaiVodKhoz* Aini, for example, receives 60% of its funding from the state budget and 40% from ISFs.

The implementation of the ISF is best assessed by looking at the payment rates. Unfortunately, no exact data on payment rates are available. In the first few years, the payment rates were very low; then they gradually increased. The SPECA report notes a payment rate of 15 17% in 1996 99 and 40% in 2000 (SPECA 2004: 67). The 2006 Water Sector Development Strategy mentions 60% (MIWM, UNDP, EC IFAS 2006: 18). Estimates calculated by different officials of the *MinVodKhoz* and other agencies range from 56% to only 8% for the years 2002/2003.²³⁶ Even the most positive assessments thus estimate that almost 10 years after the introduction of the tariffs, only half of the total amount due is paid.

It is impossible to say whether payment is better in those areas where WUAs have been established and are responsible for the fee collection as no such data exist. While representatives of the CFPS claim payment rates were about 80 90% that in their pilot WUAs, a *RaiVodKhoz* director said that it makes no difference and that in one of the pilot WUAs in his *raion*, the payment rate was only 5%.²³⁷

In addition, a considerable part of the water fees is paid in kind. The Water Strategy states that two thirds of the payments are made in kind (MIWM, UNDP, EC IFAS 2006: 18). According to a senior official of the *MinVodKhoz*, 70% of ISFs are paid in kind.²³⁸ In those cases, in which the population pays only the local *mirab* for his services and does not pay an ISF to the state, this might be an appropriate system. However, it has negative effects on state water management, as in kind payments bear additional transaction costs and therefore further impair the weak financial situation of the *RaiVodKhoz*es. Also in the case study *raion* of Aini, ISF is partially paid in kind. Its collection from the DFs poses a problem; the *RaiVodKhoz* director considers poverty and poor harvests to be the main reasons for non payment.²³⁹

Even when considering the positive numbers of more than 50% of payments, it is important to remember that this means that a decade after the political decision was made, the reform has not been effectively implemented. One important reason for this is that there are no effective implementations mechanisms and lacking information on ISF. Many of the farmers who were interviewed were not aware of the purpose and need for ISF. They did not know why they are now expected to pay. In many villages that were visited during field research, knowledge about ISF was very limited and specifications on the amount they paid varied among villagers. At some WUAs, also members of the council or even the director were unsure, how much ISF the members must pay. Finally, violations are usually not prosecuted. Unlicensed water withdrawal is common. Even when sluices are secured with locks, they are

²³³ 100 dirham = 1 somoni.

²³⁴ Author's interview with a senior official of the *MinVodKhoz*, Dushanbe, 10/10/2003; with a professor at an academic institute, Dushanbe, 09/07/2004.

²³⁵ Author's interview with the vice-minister of the *MinVodKhoz*, Dushanbe, 10/09/2003.

²³⁶ Vice-director of *MinVodKhoz*, Dushanbe, 10/09/2003: 8-9%; senior official at the *MinVodKhoz*, Dushanbe, 10/10/2003: until 2000: 15-18%; 2000: over 20%, 2001: 40%, 2002: 56%; senior official at the CFPS, Dushanbe, 10/13/2003: about 50%; director of a *RaiVodKhoz*, Sughd *oblast*, 09/01/2003: about 30%; director of the Sughd *ObVodKhoz*, Khudjand, 09/02/2004: 50-60%.

²³⁷ Author's interview with the director of a *RaiVodKhoz*, Sughd *oblast*, 09/01/2003.

²³⁸ Author's interview with a senior official of the *MinVodKhoz*, Dushanbe, 08/20/2004.

²³⁹ Author's interview with the director of the *RaiVodKhoz*, Aini, 08/30/2004.

broken to let water flow onto certain fields.²⁴⁰ There were no reports that farmers who do not pay were cut off from the water supply after non payment. There is an “absence of clear payment mechanisms” (SPECA 2004: 67), which have not been defined by the government or the *MinVodKhoz*. In fact, the service of water delivery in many places is still free of charge.

In addition, it is currently impossible to measure the amount of water delivered to farmers due to widely non existent measuring facilities. There are no water meters at the DFs, and even at the points of water delivery to the FSKs, measurement facilities exist at only about one third of these (MIWM, UNDP, EC IFAS 2006: 18). There are no government plans to introduce metering systems nationwide, which would be a prerequisite for the effective implementation of volumetric payment. Due to the lack of measurement points at tertiary channels, it is actually not possible to measure the exact amount of water delivered to one field. Hence, the amount of ISF farmers must pay is not calculated according to their actual water consumption but according to estimations based on the area of land and crop cultivated.²⁴¹ Even when ISFs are paid, they are therefore volumetric only in theory.

7.3.4 Transfer of Irrigation Management

During the process of land reform, thousands of new independent farms came into existence. Instead of several hundreds of *kollekhöz*es and *sovkhöz*es that had to be supplied with water, there are now more than 20,000 farms (see chapter 5.5.3). This implies that the *RaiVodKhoz* would have to make a contract with each individual farmer – a task far beyond its capacities. Therefore, it seems more practicable that the individual water users along one channel unite into one association and distribute the water among themselves on their own. The reform of local irrigation management in Tajikistan transfers the responsibility of the tertiary channels (on farm channels²⁴²) to such Water User Associations (WUAs). They are expected to be responsible for the operation and maintenance (O&M) of the irrigation system in their area, the collection of ISF, and equitable water distribution and conflict resolution (Water Code § 43).

A Water User Association is an independent member organization with a democratically elected board and an executive staff. It finances itself with members’ payments for the service of water delivery. The first projects to establish Water User Associations (WUAs) in Tajikistan were conducted by the World Bank within the framework of the Farm Privatization Project (1999 2005) and the Rural Infrastructure Rehabilitation Project (2000 2006) (World Bank 2001a).²⁴³ Their primary objective is the development of the agricultural sector. Within this framework they provide grants for the rehabilitation of irrigation systems. WUAs were established essentially to be responsible for the rehabilitated irrigation systems to ensure their maintenance and hence the sustainability of the project. The implementation agency is the specially established Center for Farm Privatization Support (CFPS) at the Ministry of Agriculture (see 7.1.2). The CFPS developed together with the *MinVodKhoz* an exemplary WUA charter that was endorsed by the government (Rakhmatilloev et al. 2003: 102).

²⁴⁰ Author’s interview with Vice-Minister of the *MinVodKhoz*, Dushanbe, 10/09/2004.

²⁴¹ Author’s interview with two officials of the CFPS, Dushanbe, 10/09/2003; with two officials of the Environmental Ministry, Dushanbe, 10/07/2003.

²⁴² The term ‘on-farm channels’ refers to the channels on the territory of the former *kollekhöz*es or *sovkhöz*es, for which these used to be responsible, in contrast to off-farm channels, which are state-managed.

²⁴³ Author’s interview with a representative of the World Bank, Dushanbe, 10/21/2003; with a senior official at *MinVodKhoz*, Dushanbe, 08/20/2004.

The World Bank project initially comprised ten FSKs: four in Khatlon, three in Sughd, and three in the regions of Republican subordination (RRS²⁴⁴). The scope was extended in the course of the project. The first WUA was founded in July 2000 (Rakhmatilloev et al. 2003: 102), and officially registered on December 25, 2001. In October 2003, there were 28 WUAs working: ten in Sughd, seven in the RRS, and eleven in Khatlon. WUAs are financially supported during the initial years of their existence: 75% of the costs for salary are paid by the project in the first year, 50% in the second year, and 25% in the third year. By the fourth year, WUAs should be fully self financed.²⁴⁵ ADB and USAID started similar projects.

Besides the WUAs established by these top down oriented projects, there are also projects that adhere to a bottom up approach. Two kinds of projects can be distinguished: first, those aimed solely at setting up WUAs; second, projects that establish WUAs as part of community development (CD) programs with a wider focus. In these projects, irrigation water management is one mechanism among several to reach the general aim of community development. Other components of the projects include issues such as drinking water supply, health services, and microcredits. The establishment and legal registration of associations is part of the sustainability component of these projects. For the most part, these projects are implemented by international NGOs, although the UNDP has such programs as well. In contrast to the CFPS project, these projects do not provide any loans or grants for salaries. They provide grants for the rehabilitation of the irrigation system as an incentive but expect a certain contribution to the costs (usually between 15-30%) as a sign of ownership on part of the community.

Despite these numerous implementation activities, there is no nationally coordinated irrigation reform program on the level of policy formulation, and there was no proper legal definition about the status and tasks of WUAs until 2006. After the programs to establish WUAs began, it soon became obvious that Article 43 of the Water Code was insufficient as a legal foundation for WUAs and that a separate law on WUAs was necessary. The financial aspects (e.g., tax liability and non commercial status) especially required clarification. A draft for such a law was prepared in the framework of the Farm Privatization Project by the Center for Farm Privatization Support (CFPS) together with the *MinVodKhoz*. The first draft was circulated in 2003. Various donors have been involved in the process by providing consultation and organizing meetings.²⁴⁶ Only after the research period of this study, by the end of 2006, was the law finalized and approved by Parliament. The final law also included suggestions from Winrock International, ADB, USAID and other donors. The USAID financed Water User Associations Support Program (WUASP) organized together with a local NGO an open Parliamentary hearing (ACTED 2005: 4; WUASP 2007). This activity is a result of the fact that the existing framework proved to be inadequate for the projects planned by donors.

Because of the legal deficits and the plurality of actors implementing WUAs, WUAs in Tajikistan have no uniform structure. The following Figure 11 presents two examples of typical structures of WUAs. The upper half of the chart presents the administrative or legislative section, while the lower half is the executive section. The executive positions are normally paid, although in some of the bottom up WUAs they are non paid in the beginning. Often the WUA is divided into territorial sub groups whereby every group sends a representative to the council. At the WUA “Mirob”, for example, the 464 member farms are divided into nine

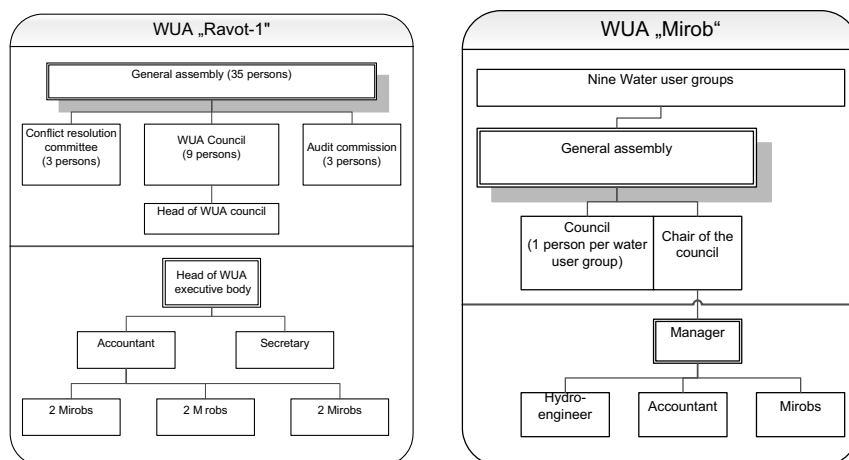
²⁴⁴ The RRS comprises 12 districts (*raions*) in Central Tajikistan that are not subordinate to province (*oblast*) but directly to the central government.

²⁴⁵ Author's interview with two officials of the CFPS, Dushanbe, 10/09/2003.

²⁴⁶ Author's interview with a senior official at the *MinVodKhoz*, Dushanbe, 08/20/2004; with a senior official of the CFPS, Dushanbe, 10/13/2003.

groups. The council usually meets every one to three months. The number of staff depends on the irrigated area that the WUA manages. It usually consists of a director, an accountant and several mirabs, their number depending on the cultivated area (usually one mirab for about 500ha irrigated land).

Figure 11: Structures of the WUAs “Ravot-1” (Kanibadam, established by ACTED) and “Mirob” (Shakhrinov, established by CFPS)



Source: own compilation.

The basic incentive for the establishment of WUAs is the rehabilitation of the respective irrigation system, which is done using grants provided by a donor.²⁴⁷ After a defined period of support, the WUAs are expected to become self financing through the collection of irrigation service fees (ISFs). The ISF per cubic meter varies, as it depends on each WUA how much they collect. Those that are connected to the *RaiVodKhoz* must pay 1.2 dirham per cubic meter to the *RaiVodKhoz*. Additionally, they collect slightly more to cover their own expenses. If a WUA takes 1.4 dirham, for example, 0.2 dirham got toward WUA expenditures. Those WUAs, which do not use water from the state managed infrastructure, collect ISF to cover their own expenses for O&M.

There are no exact and official data on how many WUAs exist in Tajikistan, as the *Min VodKhoz* does not gather information on all of the activities conducted by various donor projects.²⁴⁸ According to WSDS, there are about 40 WUAs (MIWM, UNDP, EC IFAS 2006: 18). The following table is based on data provided by the CFPS, ACTED, Winrock, MSDSP (Aga Khan Foundation), and GAA on their WUA activities. It may, however, also include

²⁴⁷ Sometimes WUAs are established after rehabilitation to maintain the new technique; sometimes the establishment of the WUA is a precondition before rehabilitation starts. The registration costs are often either covered fully or partly by the donor. Occasionally farmers have to cover the costs fully themselves (ACTED 2005, Winrock International 2005).

²⁴⁸ While state officials blame donor organizations for not providing the information, the latter claim that they always inform the *kbukumat* of their activities and that it is their responsibility to circulate information inside the administration to the respective ministries.

water committees established for drinking water.²⁴⁹ From some donors, such as the UNDP, it was not possible to obtain information, so there are probably more WUAs in reality.²⁵⁰

Table 15: List of WUAs in Tajikistan by 2005

WUAs in Tajikistan					
Province	District	Implementing agency	Funding agency	Number of WUA	ha
RRS	Rudaki	WinRock	USAID	8	1164
RRS	Kabodiyon	WinRock	USAID	2	1379
RRS	Shahrinav	CFPS	World Bank	3	4647
RRS	Rudaki	CFPS	World Bank	1	997
RRS	Gissor	CFPS	World Bank	1	1705
RRS	Rudaki	CFPS	World Bank	3	3786*
RRS	Rasht	MSDSP	GTZ	5	*
RRS total				23	16274
Khatlon	Vakhsh	ACTED	EC	1	677
Khatlon	A. Jomi	ACTED	EC	1	3015
Khatlon	Yovon	CFPS	World Bank	4	6276
Khatlon	Kolkhozobad	CFPS	World Bank	2	14760
Khatlon	Khuroson	CFPS	World Bank	2	5512
Khatlon	Baljuvon	GAA Baljuvon	EC TACIS	6	1090*
Khatlon	Shaartuz	WinRock	USAID	6	2596
Khatlon	n/a	Mercy Corps	n/a	15	*
Khatlon total				37	31330
Sugd	Kanibadam	ACTED	EC	2	*
Sughd	Mastcha	CFPS	World Bank	3	7284
Sughd	Zafarobod	CFPS	World Bank	8	68746
Sughd	Penjakent	GAA Ayni	EC	3	84
Sughd	Ayni	GAA Ayni	EC	10	291*
Sughd	Gornaya Matcha	GAA Ayni	EC	14	451*
Sughd total				40	76856
Total				100	124460

* Data not available for all WUAs

Sources: ACTED 2005, Annex; Winrock International 2005; MSDSP n.d.

According to these data, the total area managed by WUAs comprises less than a fifth of all irrigated land in Tajikistan. Despite the incomplete information, this list shows one important characteristic of WUAs in Tajikistan: All existing WUAs are connected to international donor activity. No WUAs have been established without donor involvement.

²⁴⁹ There is no coherent usage of the term WUA among donors (see also below).

²⁵⁰ For a detailed list see Sehring 2006: 53-55.

Coordination is insufficient among all WUA projects implemented. It was only in October 2005 that the first meeting of all the donors involved in WUA establishment was held. Since then, monthly meetings have been conducted, reflecting the need for better coordination.²⁵¹ However, in the meantime, each donor had already established its distinctive approach, method, structure and even name for the WUAs, making a coherent reform even more difficult.²⁵²

Case Study: Aini Raion

This section will look at one WUA to gain an idea of the inside mechanisms and assess the local level of water institutional reform. For deeper insight into the implementation process, a case study of the WUA “Zargar” in Iskodar village was conducted. Iskodar belongs to the Dar Dar *jamoat*, in the Aini raion (Sughd oblast).²⁵³ There are no WUAs in Aini at the irrigation systems delivered by the *RaiVodkhoz*, and the *RaiVodKhoz* is not engaged in establishing any. Yet there are WUAs established in the context of rehabilitation projects implemented by the NGO German Agro Action (GAA) in villages that have self managed small channels from mountain springs.

The WUA “Zargar” was established in 2005 in Iskodar for all farmers of the collective DF. This WUA includes 105 ha of irrigated fields served by a canal that brings water from a nearby mountain spring and provides the village with drinking and irrigation water. The canal has not been in the responsibility of the DF but is ascribed to the village population in general. The WUA establishment is part of a community development project by the NGO German Agro Action. The main reason for its establishment was a project for the rehabilitation of the canal by GAA.

The WUA is supposed to guarantee maintenance of the canal and distribution of irrigation and drinking water. With its establishment, irrigation management was transferred from the DF to the WUA. Before the establishment of the WUA, there was a *mirab* who distributed the water but no one was responsible for the maintenance of the system as a whole.²⁵⁴ Also, since the *mirab* did not receive a salary from the *kolkehoz* after its dissolution, he ceased to fulfill his work as required.²⁵⁵ The WUA was formally established on August 7, 2005 and was officially registered on November 10, 2005. It started working about two months before the field research for this study began. The WUA has about 300 members, i.e., all the households in the village.

The WUA is closely connected to the Village Development Committee (VDC). The VDC was established in April 2004, when GAA started to work in the village, as a counterpart for its projects. The VDC has nine members (including two women). According to the council members, the initiative to establish the VDC came from its chair, the *rais*²⁵⁶ of the DF. The VDC got a room in a building belonging to the DF. The VDC and the WUA are difficult to separate. The members of the VDC are the members of the WUA council. There are three members

²⁵¹ Representatives from ACTED, WinRock International, USAID, CFPS, ADB, Luis Berger International, GTZ, GAA, MSDSP, Mercy Corps, and UNDP participated in the first meeting. At the January 2006 meeting, a representative of the *MinVodKhoz* also attended.

²⁵² Besides WUA, designations such as “water committee”, “water user group”, “voluntary water user group”, or “water and health committee” are used.

²⁵³ For general information on Aini raion see chapter 5.

²⁵⁴ Author’s interview with the WUA specialist of the GAA, Aini, 09/27/2005.

²⁵⁵ Author’s interview with a WUA representative, Iskodar, 09/27/2005.

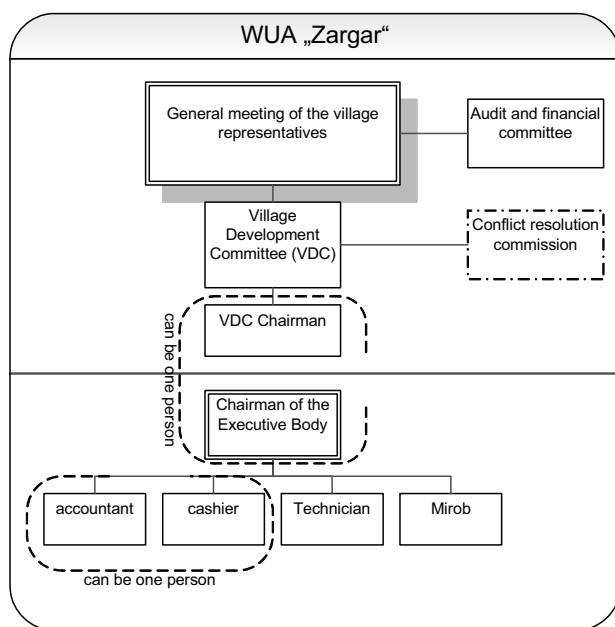
²⁵⁶ *Rais* is the old Persian term for a person in a leading position. Today, it is used to refer to the director or the chair of a *kolkehoz* municipality, *maballa*, company, etc.

from every *maballa*²⁵⁷ in the WUA council/VDC. As a GAA representative explained, it would make no sense to elect a new committee for the WUA, as the most respected people of the village are members of the VDC and people would most likely nominate them again.

Concerning the internal structure, there is no clear separation of the legislative and executive as intended in the structure because the paid position of a director (chairman of the executive body) is not filled but performed by the VDC chairman (see Figure 12).

Paid positions are those of the sanitary technician and the *mirab*, who each earn 30 somoni per month²⁵⁸. There is also an accountant who does not yet receive a salary. The *mirab*, who is appointed by the VDC, can be regarded as a technical executor of the chairman’s decisions. It is the chairman who gives the *mirab* precise instructions on the water distribution. Statements on council meetings differed. According to the *rais*, the council meets every morning. However, during the research period it was not possible to witness this. Another council member said that the whole council meets only twice a year.

Figure 12: Organizational structure of the WUA “Zargar”



Source: own compilation.

In order to cover the costs of maintenance and the salaries of the WUA staff, an ISF was decided on. The WUA chair said that they collected one somoni from every WUA member as a starting fee. Then farmers must pay five somoni per year per ten *sotka*²⁵⁹ for irrigation water and 20 dirham per person per month for drinking water. Even though this decision was re

²⁵⁷ See chapter 5.5.4.

²⁵⁸ Equivalent to approximately 9 euro.

²⁵⁹ One *sotka* is 0.01 ha.

portedly made at a village meeting, most of the people interviewed have not yet been asked to make a payment and did not know that they are expected to pay for water in the future. Some people heard rumors about future fees. The attitude towards fees differed: some considered them to be justified as the canal was repaired now, while others were reluctant. This contradicts statements by the WUA chair who claimed that after some initial difficulties, 80% of the farmers now paid their fees.

It also has to be mentioned that there are no water meters to monitor exactly how much water each farmer uses. The *mirab* calculates the water volume by the flow velocity. The ISF is calculated according to land size and not according to actual water use. As all farmers grow more or less the same products (due to state prescriptions and subsistence agriculture), they also use more or less the same amount of water.

Community awareness is seen as a key component to reach sustainability of the WUA and to change patterns of behavior in water management. Like all CD programs, GAA conducted several awareness raising campaigns in Iskodar. Before the VDC was established, GAA staff visited the village about twelve times during three months and organized meetings and seminars. GAA met in the beginning with a group of eight people, including the *rais* of the DF, representatives of the *Maballa* committee, the school director and the mullah. They were asked to spread information and invite more people to future meetings.²⁶⁰

The members of the VDC/WUA council were elected by a general village assembly. This meeting was reportedly attended by 70 to 80 mainly male participants of all three *maballas*. The villagers are requested to contribute 25% of the costs of the rehabilitation project as another means to ensure ownership and sustainability. Since they can “pay” these with working time, several *bashars* have been organized to do the necessary work. This was organized by the chair of the VDC, the *rais*.

Despite awareness raising activities, hardly anyone of the interviewed villagers knew of either the VDC or the WUA. If people knew of the VDC, it was because of the presentation of GAA. Even then, it was not entirely clear to them what the VDC and the WUA do exactly. The usual reaction from people who had heard of the WUA was: “Yes, they were here, they rehabilitated the canal” or “They brought the drinking water to the *maballa*.” Virtually no one was aware that he or she was a member of this organization. Also those villagers who participated in the *bashars* were not really aware of the meaning of WUA. People relate these events to the *rais* and not to the VDC or the WUA. Even one member of the VDC did not know about the WUA. This man was not even sure whether he was a member of the VDC, as he is a member of almost all important groups at the village, *jamoat*, and *raion* levels: “There is now this VDC in the village. I am probably a member there as well. Well, I am a member everywhere. Wherever they establish a group, they elect me to it.”²⁶¹ The WUA under scrutiny is part of a CD project with presumably more community mobilization activities than in top down established WUAs. Still, broad community awareness is virtually non-existent.

General Assessment of WUA Reform

The current situation of irrigation management is characterized by a “multitude of pilot experiments on the local, rural levels” (UNDP, UNECE, National Working Group 2005: 3). These “experiments” are conducted by international donor organizations and reflect their interests and ideologies. National water agencies play only a marginal role in the whole irriga

²⁶⁰ Author's interview with a GAA staff member, Aini, 09/29/2005.

²⁶¹ Author's interview with the director of the *maballa* committee, Iskodar, 09/30/2005

tion management reform process. A coherent legislative framework is lacking, as well as coordination of all these “experiments”.

In order to summarize and organize the multitude of uncoordinated activities, the current state of local irrigation management can be classified into three types of organizations:

1) *Dekhkan* farms

In places without donor involvement, there are no efforts to implement irrigation reform. In these places, local water management is now often task of the collective DF. A substantial part of the FSK has not yet been transformed into individual DFs, but into collective DFs. There, the old structures prevail and the DF often has a *mirab* who is in charge of water management. However, due to legal ambiguities, the DF does not necessarily perceives itself as being in charge of O&M and lacks the funds to do it due to high debts (see chapter 5.1). In many cases in practice, this means that no one takes responsibility. Especially when one FSK has been dissolved into several DFs or into individual DFs, no one effectively controls the water distribution and cares for the maintenance of the channels.²⁶² This situation prevails in all places without external donor projects.

2) Focused WUAs

The second type of organization is represented by the Water User Associations established solely for this objective. The WUAs of the World Bank pilot projects (by CFPS) and some of the bottom up WUAs like those established by Winrock or ACTED belong to this category. These WUAs can be differentiated into WUAs that were established top down and those that were developed bottom up.

3) WUAs as part of CBO

Other WUAs are established in the framework of community development (CD) programs. These programs focus on general community mobilization or poverty reduction and use water management as a means to achieve this. This broader focus leads to the fact that WUAs are mostly established to function within a general CBO such as a village development committee (VDC) that already existed before, albeit sometimes informally.

Not all WUAs that were established are fully functional. In technical respects, the current system of irrigation is too complicated for farmers to fulfill the functions performed in the past by highly specialized agencies. Therefore, training of WUA staff is needed in order to build the professional capacities for irrigation management. At the CFPS and other programs, special short term training sessions are offered in order to provide for the most urgently needed qualifications.²⁶³

Unofficially, a transfer of irrigation management to informal local institutions takes place. *Hashbars* are used for O&M work. On the one hand, it is a makeshift of the local *RaiVodKhozes*, which lack the means to do professional channel cleaning and therefore “outsource” it to the population. In one *raion* of Sughd oblast for example, channels have only been maintained by *hashbars* for more than ten years.²⁶⁴ This may be justified as a temporary solution; however, apart from legitimacy concerns it is not adequate for larger channels. On the other hand, *hashbars* are often required by international NGOs as a community contribution to the project, which is supposed to guarantee its ownership and sustainability.

As already mentioned, there was no specialized WUA law during the research period and also no clear legislation on the relationship between CBOs and governmental agencies. The

²⁶² Author’s interview with two representatives of a *Jamoat* Support Center, Khatlon Oblast, 10/19/2005; with two representatives of a WUA support center, Sughd oblast, 09/01/2004.

²⁶³ For an exemplary curriculum see Rakhmatilloev 2003: 107.

²⁶⁴ Author’s interview with director of *RaiVodKhoz*, Sughd oblast, 09/01/2004.

unclear legal situation created difficulties for the locals involved in such associations as they are not aware of their relation with state authorities and which rights they have exactly.²⁶⁵ The state agencies often do not know about this either, due to a lack of clear information on the rules.²⁶⁶

The registration process for the WUA is often done by the donor agency that facilitates the process initially. However, it hinders the local representatives from gaining knowledge and experience on how to deal with the authorities and what their rights are exactly. The primary contact for the WUAs with problems is not the *RaiVodKboz* but rather the donor agency that established them. Most donor representatives interviewed are aware of these problems. As one foreign INGO representative concluded, “the greatest failing of the NGO community is not to help CBOs to understand their status opposite state structures.”²⁶⁷ In addition, most WUAs are established with the principal reason of getting access to loans and grants. After the disbursement stops, the motivation for further engagement wanes. One *RaiVodKboz* director describes it as follows: “The WUAs only exist superficially. They have been developed top down and do not function. They would have to arise due to the wish from the farmers; they themselves have to see the necessity. Now they only wait for the Center [CFPS] to give them support.”²⁶⁸

Many experts therefore doubt the long term success of WUAs and do not expect them to function long after the financial support ends.²⁶⁹ To date, there is no experience on what happens when a donor organization withdraws and the WUA is expected to function both financially and institutionally without (at least constant) support. Many donors lack a clear strategy for the future of the committees.²⁷⁰ According to a survey on CBOs in Sughd oblast, 80% of all *Jamoat* directors said that CBOs stopped functioning after the donors left.²⁷¹ It is not unlikely that many WUAs will meet the same fate.

7.3.5 Summary

The previous sections showed the current state of water governance and water institutional reforms in Tajikistan. There is one main agency, the *MinVodKboz*, responsible for policy formulation and implementation, which must however cooperate and coordinate its activities with other actors.

On the normative level, a new Water Code and several policy strategies were developed, partly with donor involvement and all relatively quickly and without much public debate and participation. Their realization faces difficulties, mainly as no sub normative acts and other implementation mechanism were established. Inter sectoral coordination and the proposed

²⁶⁵ Also with the new Law On WUAs, the legal situation remains ambiguous: In 2007, a new Law on Public Associations was approved and its relevance for WUAs is unclear. Email communication with project officer of INGO, 06/21/2007. And it was also clear before the WUA law was issued that it will not provide clear rules for all WUAs, as not all WUAs which were established by donors fit into the prescriptions of the law (Winrock International 2005: 7).

²⁶⁶ Author's interviews with an NGO representative, Khudjand, 10/07/2005; with an INGO representative, Khudjand, 10/03/2005.

²⁶⁷ Author's interview with an INGO representative, Khudjand, 10/03/2005.

²⁶⁸ Author's interview with the director of a *RaiVodKboz*, Sughd oblast, 09/01/2004.

²⁶⁹ Author's interviews with a local INGO representative, Khudjand, 10/14/2003; with an NGO director, Khudjand, 09/03/2004; with a local senior official at a donor agency, Khudjand, 10/04/2005; with a local NGO director, Dushanbe 08/25/2004.

²⁷⁰ Author's interview with a local NGO representative, Khudjand, 10/07/2005.

²⁷¹ Author's interview with a local NGO representative, Khudjand, 10/07/2005.

transition to management along hydrographic boundaries are issues that have not yet been addressed.

Concrete reform programs exist in two areas: the introduction of irrigation service fees and the establishment of water user associations. Despite the fact that they were decided already in 1996, ISFs are still only collected in part. WUAs are merely established by donors without active involvement of district and province water agencies. Their factual functioning is considerably different from the ideal assumptions. Hence, all water institutional reforms, even where formally conducted, in general do not meet their objectives. The next chapter will explain to what extent these shortcomings are connected to the neopatrimonial context in which these reforms are being conducted.

7.4 Effects of Neopatrimonialism on WIR

The previous chapter described the manner in which water institutional reforms in Tajikistan have been decided and implemented. Without doubt, many problems and obstacles to the reform are rooted in technical and economic aspects and the difficulties of the country's transformation period. The interest of this study is how beside these factors (which are controlled for in the research design), the neopatrimonial institutional context affects water institutions reform. This chapter will discuss how the political processes of these reforms were influenced by these conditions. How have the interests and strategies of the actors in the policy process been shaped by the neopatrimonial features in the decision making process, in agriculture, in local governance, and by water institutional linkages?

7.4.1 *The Impact of the Decision Making Institutions on WIR*

As described above, Tajikistan is characterized by a strong authoritarian system with weak open debate, whereby the main power lies with the presidential apparatus and depends on regional patronage networks, and which also has characteristics of fragile statehood after a civil war. One consequence of the authoritarian regime is that detailed information on political processes is not easy to obtain. Officials do not speak openly about decision making processes, so that it was difficult for the researcher to gain access to information and to assess its reliability. Consequently, the assessment of the decision making process will be considerably more brief than in the case of Kyrgyzstan.

However, this can also be seen as an indicator for the lack of transparency. As for the researcher, it is also not easy for the interested citizen to obtain information. There is little public knowledge on laws in process. Often, information is only published in newspapers when the law has already been submitted for approval to the Parliament. Draft versions are usually only obtainable via personal relations.²⁷² Agenda setting and decision making are processes in which only a restricted group of government experts tend to participate, while the public is almost entirely unable to receive information. Laws are developed by experts and discussed in the respective ministries and agencies before they are sent to Parliament for discussion and approval.

²⁷² Author's interview with an NGO director, Dushanbe, 08/25/2004.

The development of policy documents seems to proceed rather quickly and without discussion on conflicting points. Policy fragmentation was not considered a problem by the experts interviewed. This may be related to the strong *MinVodKhoz* but also to the less participatory style of decision making, where different interests cannot be formulated and hence do not cause problems.²⁷³ However, as is the case in Kyrgyzstan, budget allocations to ministries and agencies in Tajikistan depend on the competencies and functions they perform. This insecurity might be enforced by the occasionally subjective character of budget allocations. Sometimes, the decided budget is not allotted in the end (GoT 2002: 19; ADB 2000). This means that an agency cannot even be sure to receive the funds attached to its responsibilities. “As a result, public bodies focus on extending their authority and increasing budget financing, rather than on policy making and supervising implementation” (GoT 2002: 19).

Despite the political instability, two versions of the Water Code (1994 and 2000) and the policy strategy (2001 and 2006) were developed and approved. This however must not be misinterpreted as representing a consensus on main policy issues, but rather is yet another indication of the lack of open debate – not only with the public, but also among experts. As a result, there is obviously no commitment to implement the decisions: The approved policy documents lack proper sub normative acts and implementation mechanisms.

The Parliament is not a relevant actor in the water decision making process and is not even mentioned in the 2000 Water Code as having a function. There are no formal mechanisms for the interests of the water users to be recognized in political decisions. The civil society capacities to accompany the processes are limited; the number of advocacy oriented NGOs and academic institutions is insignificant.

The prominent commitment to water as a policy priority – as reflected in the activities for the UN Year of Freshwater and the subsequent decade – does not reflect actual problems perceived by the water users nor is it followed by any concerted action to address at least the disastrous situation in the water and sanitation sector. It seems that these activities are restricted to a symbolic level without concrete actions to follow. The Tajik government, which is often only associated with civil war, drug trafficking, and an authoritarian regime, uses water to gain a good international reputation. Not surprisingly, a slightly critical exhibition developed by a local project for the 2003 Dushanbe Freshwater Conference about water use in Tajikistan was banned from being displayed in the official conference building.

Donors have a noteworthy impact on the decision making process. The WSDS and the Law on WUAs were drafted with donor involvement. The Law on WUAs reflects the need for donors to have a legal foundation for the WUAs, which they established. Hence, the decision making process is characterized by presidential dominance and by a lack of capacities of and possibilities for the participation of stakeholders. It follows the interests of the President and the donors and not the problem perception of the water users.

7.4.2 *The Impact of the Institutional Conditions of the Agricultural Sector on WTR*

The reform processes in the agricultural sector have repeatedly been mentioned as the main reason for the development of the new water code (see chapter 7.3.2) as well as the establishment of WUAs: “It is a mandatory process: if there are private *dehkan* farms, they have to

²⁷³ As was shown, conflicts of interests do exist, although they are hardly openly communicated.

have associations of water users²⁷⁴ (senior official, *MinVodKhoz*, Dushanbe, 10/10/2003). The close interrelatedness of both sectors and the need for proper coordination between land and water reform is widely acknowledged by all experts. “In Tajikistan, land reform without water is not possible (...). That is why we are conducting a land water reform.”²⁷⁵ (Vice Minister of the *MinVodKhoz*, Dushanbe, 10/09/2003)²⁷⁶. The affirmation of the close interrelation of both issues by policy actors could lead to the assumption that it is reflected in the reform processes.

Especially on the local level, however, the cooperation between the State Land Committee and *MinVodKhoz* does not seem to proceed very smoothly. The Presidential Decree No. 522 contains instructions concerning the ownership of the water infrastructure that previously was in possession of a state or collective farm: With its dissolution, its infrastructure can be transferred to the respective state agencies (§ 7 of annex 2). Hence the irrigation system could be assigned to the *MinVodKhoz*. The regulation is non compulsory, however, and without any clear guidelines. As no financial means are allotted for these additional systems, the *RaiVodKhoz*es are not interested in having the deteriorated irrigation facilities in its area of responsibility. In most places, they therefore remained the responsibility of the collective DF.²⁷⁷ In places with primarily individual DFs, the secondary channels are perceived as no one’s responsibility. In many cases, the consequence is that farmers at the upper end of a channel use as much water as they want. They sometimes regard the part of the channel crossing their territory as their property, giving them the right to full usage.²⁷⁸ Real coordination would have needed to be initiated at the beginning of the land reform with the redistribution of plots along hydrographic principles. Now, however, some *dekhkan* farms own fields on different channels, a fact that makes the establishment of WUAs along hydrographic boundaries difficult, in that one DF would then have to be member in different WUAs. As the new farms are still oriented along the FSKs, WUAs are also located along those boundaries. This reinforces the dominance of the former FSK power holders. Hence, the government (GoT 2002: 25) also stated: “The creation of water user associations has not kept up with the land reform process causing problems.” Despite this insight, there was no increased action on part of the government in subsequent years (see previous chapter).

Yet it is not only the insufficiency in coordination that presents an obstacle to water institutional reform. Rather, it is also the agricultural sector as such. In chapter 5.5.3, the insufficient implementation of land reform was described – persisting informal production prescriptions a complicated, nontransparent, and expensive system of land registration; the transfer of FSK debts to DFs; the indebtedness of cotton farmers to local investors; the absence of legal assistance to farmers; and the frequently unfair access to land. This leads to the prevalence of old farm structures, lack of a free choice of crop, and a debt crisis. These factors not only impede land reform and prevent farmers from using the full economic potential of their land, but they also influence water reform.

First, ISFs are often paid in kind, but even more often not paid at all. Poverty is a main reason for non payment. A considerable part of the rural population cannot earn a living from agriculture and depends on money transfers from migrant workers or on food aid from inter

²⁷⁴ „Это обязательная процедура: если есть частные дехканские хозяйства, у них должна быть ассоциация водопользователей.“

²⁷⁵ „В Таджикистане реформа земельная без воды никак не возможна (...) Поэтому мы проводим земельно-водную реформу.“

²⁷⁶ Similar statements were made by two other senior official at the *MinVodKhoz*, Dushanbe, 08/20/2004; an NGO representative, Khudjand, 09/03/2003; and a professor at an academic institute, Dushanbe, 09/07/2004 .

²⁷⁷ Author’s interview with a senior official of the State Land Committee, Dushanbe, 11/01/2005.

²⁷⁸ Author’s interview with a professor of an academic institute, Dushanbe, 09/07/2004.

national organizations. Farmers in the cotton sector are usually highly indebted to their creditors. In a de-capitalized agricultural sector, monetary water fees are doomed to fail.

Second, water fees as incentives to grow less water demanding crops cannot work if there is no free choice which crops one may grow. As described above, state quotas on cotton and tobacco still exist. These cotton quotas are not only a legacy of socialist production plans but also present a lucrative system for a network of officials and local investors. Such constraints limit the variety of choices for farmers to redirect production to less water intensive crops, for instance. For farmers, it is actually more lucrative to grow other crops like fruit, which would give them more profit and do not require as much water as cotton. But they simply do not have the option to change the cultivation patterns.

One NGO representative cynically describes the situation as follows: "If I would be a really smart farmer and would have had studied at Cambridge, then I would know my rights and could get access to land. But if I then decide not to grow cotton, I will not get any water" (NGO representative, Khudjand, 09/03/2004). This ultimately limits efforts to develop the agricultural sector, which is also a precondition for successful water reforms: "Donors always want to support democracy and societal development, but it stops at the corruption in the cotton market" (Deputy regional director of an international donor agency, Khudjand, 10/04/2005).

Beyond the cotton sector, the agricultural economy is characterized by patronage patterns as well. The people's lack of awareness of WUAs and other structural changes (like the transformation of the FSK into DFs) can be explained by a lack of access to information, but it is also a consequence of the fact that those "changes" do not affect power relations in their daily lives. In the perception of most local people, the structures remained more or less the same. For example, the brigades – the sub units of the FSK – also often still exist (informally). The subgroups of the WUA are sometimes organized according to the former brigades. Roles are usually assigned to persons and not to organizations. The *rais* is the patron of the village. Whether he is the *rais* of the *kolkhoz*, the DF, or the WUA and whether his networks lead to Moscow, Dushanbe, or an international donor is secondary and often unknown. At WUAs the leaders of the DF often play an important role.

The insufficient implementation of and coordination between land and water reform reinforces the reliance on existing power structures and hinders empowerment. The unclear status of the water management facilities and the resulting uncertainty regarding access to water contributed to the reluctance towards the dissolution of the FSK. The DF still controls access to the main resources, especially land and water. The fear of lacking access to water is obviously a further hindrance to farmers becoming independent. They remain in the collective DF as they then have a perceived secure access to irrigation water. Moreover, many farmers still consider canal maintenance as the responsibility of the FSK. This is also the reason why a sense of ownership and responsibility for the state of channels cannot evolve among the farmers. In this case, reluctance to pay and to participate in O&M is a consequence of their lack of knowledge about land reform and about their rights in general.

Imperfect land reform impedes water institutional reform and vice versa: Deficiencies in water institutional reform create insecurities for farmers, thereby hindering their empowerment against vested interests. Ambiguities in legislature as well as the farmers' lack of information and knowledge help to preserve the status quo for those benefitting from the present institutional arrangements. In this way, existing patrimonial characteristics of the agricultural sector such as patronage relationships are perpetuated. They undermine democratic water governance and hinder the empowerment of water users and equitable water distribution.

7.4.3 *The Impact of Local Governance Institutions on WIR*

Local water governance is embedded in the institutions at the local level. They affect ISF and WUA reform. As was described in chapter 5.5.4, formal local self government has been established but in practice, local power relations in rural areas are characterized by patronage relations between the villagers and the *rais*. These are more or less strong in each place; a uniform pattern cannot be identified. However, for those places with such strong patrimonial features as observed in the local case study, their impact on WIR is comparable.

In the case study, official local self government could not be identified as playing an active role in village life. At first sight, the *jamoat* seems to be related to WUA activities. The chair of the *maballa* committee (and member of the WUA council) is also a representative to the *jamoat*.²⁷⁹ In practice however, the *jamoat* is astonishingly absent and the abovementioned connections were never mentioned by WUA council members when asked about their relationship with the *jamoat*. The interviewed member of the *jamoat* council stated the *jamoat* itself could not act due to the lack of resources but only participates in meetings. State structures do not appear directly in daily village life and in WUA activities. If they play a role at all, then through the *rais* or the brigadier, who are perceived as representatives of *jamoat/ kbukumat* decisions by the local population.

In general, the WUA reform does not actively address official local governance institutions. One of the donors' arguments is that local organizations like the *jamoat* council (*sovet jamoata*) and the DF director are not democratically elected bodies but nominated by the *jamoat* or *kbukumat*. If they establish new bodies, the process would be transparent right from the beginning. Instead of addressing official local self government, the bottom up WUA projects in the framework of community development programs refer to a certain 'community' as a partner and try to incorporate its traditional organizations into the programs. Such inclusion can ease the acceptance of the new organization by the farmers. Some local organizations have democratic potential: *Maballa* committees and their chairs are in theory elected by consensus and people can complain to them. Village assemblies theoretically involve all inhabitants of a settlement. In how far this is true in practice depends greatly on the specific community, as each village is characterized by different power structures. The local level can be rather democratic or highly unequal. In the local case study, villagers complained that the *maballa* committee did not care for them and that they could not approach it. The village assembly was only attended by a minority of the inhabitants.²⁸⁰ In addition, as was explained above, village assemblies are often only gatherings of men. However, most agricultural work is done by women. Due to inexistent or marginal salaries, many men migrate to Russia or other CIS countries.²⁸¹ Since independence, Tajikistan therefore has faced a growing "feminization of agricultural labor force" (AAH 2003: 17). At the same time, women are only marginally represented in local decision making processes. Public participation of women is often limited, and some times they are completely excluded.

Hashar is the most popular local institution used in irrigation management. In many places without WUAs, *hashars* are the only mode in which channels have been maintained since inde

²⁷⁹ The *jamoat* has a council of five people from every village. They are not elected but appointed by the village assembly. They meet once in every three months.

²⁸⁰ Due to the fact that the so-called general village assemblies are seldom really assemblies of the whole village, the new WUA organizational chart of GAA names it "meeting of village representatives". This name mirrors reality more unambiguously.

²⁸¹ According to IOM, since 2000 about 632,000 men from Tajikistan have worked abroad as migrant laborers (that is almost 10% of the entire population). 84% work in Russia. (AAH 2003: 17).

pendence and are therefore an inherent part of water management. In many WUAs, *bashbars* are used for the community contribution to the project or for food for work programs. They are often organized by the director of the DF or the WUA chair and not by the director of the *mahalla* committee. The *bashbar* has its limitations, though. It may be suitable for small canals but not for large channels that require professional supervision and equipment. One must also consider that one of the basic principles of *bashbar* is voluntarism. This is lost when it becomes a compulsory part of donor projects. Therefore, a fundamental question is whether those 'traditional' decision making mechanisms are still applicable to post Soviet realities and can legitimize WUAs.

It is also questionable whether the process of setting up a VDC or WUA can differ considerably from other local bodies, as the same institutional conditions apply to both. The bottom up approach could guarantee a better embeddedness among and ownership by the local population. However, those projects are also curtailed by their tight timeframes and output requirements. The structure of the CBO – be it a VDC on *jamoat* or *kisblak* level, a WUA, or an initiative group – is created rather quickly. The donor organization is in need of a partner in the village to implement their project, so they usually set up the CBO (typically informally, at least in the beginning) during the first few weeks after they start working. Real community awareness raising activities start only after that and through this CBO.

In doing so, many donors follow an idealized notion of the 'village community' and seem to perceive a village assembly as a public sphere free of domination where competing interests and opinions are articulated freely. It comes as no surprise that this ideal is not met in reality. Unsatisfactory mechanisms have resulted in farmers being unaware that they are members of a WUA. Yet voluntary membership of empowered farmers is a basic feature of WUA. If this is not achieved, irrigation reform would in essence have the same effect as land reform: presenting options on papers to farmers who are not free to choose in reality. The case study showed that often the same people are nominated for all local (formal and informal) organizations. According to a local UNDP representative, about half of the VDC members in its projects are also members in the *jamoat* council.²⁸² A Tajik NGO hence poses the question

“whether the new [community] institutions, representing the part of the community which has access to knowledge and resources as well as development donors and agencies contribute to strengthening of social capital and whether they may cause further social stratification by creating an elite in the community” (ASDP “NAU” 2003: 5).

Another consequence is that the local population is overloaded with the number of committees, in which they are expected to be members and which substitute state bodies. One representative of a local NGO therefore criticized, that “if the school is renovated, a school committee is established; if medicine is to be distributed, a medicine committee; if grapes are planted, a grape committee. For every 50 people there is some kind of committee” (Local NGO representative, Khudjand, 10/07/2005). In effect, instead of addressing the failure of state bodies to fulfill certain basic functions, these are outsourced to the impoverished (and mainly female) rural population.

As a consequence, the majority of the water users interviewed for this study were not aware of the fact that they were members of a WUA. As seen in the case study, even some council members were unaware of their membership. A precondition for successful WUA performance is, however, awareness and understanding of the purpose and meaning of WUA and ISF by the local leaders and the water users. All programs provide trainings for WUA staff

²⁸² Author's interview with a local representative of a donor agency, Khudjand, 10/04/2005.

before and after the establishment. These training activities often also include *jamoat*, *kbukumat* and *RaiVodKhoz* representatives and address issues like the setting up of a water use plan, water law, and conflict resolution, among others.²⁸³ The impact of those activities is limited, though. This is rooted on the one hand in the tight time frames of projects and an often merely instrumental understanding of participation. In general, a majority of the village population is marginalized in local decision making processes. Little knowledge and awareness of WUAs is thus not a special feature of this organization but rather is typical for all local level organizations.

The dilemma is that donors can establish democratic mechanisms (like WUA council elections) but these can only serve as a frame for democracy that has to be filled by the local actors. The non democratic environment and the high degree of patronage present a difficult environment for the implementation and support of projects aimed at strengthening self governance and empowerment. People expect the *rais* to take care of them and are not used to become pro active themselves. This is also reflected in the decision of the CFPS to tolerate the unification of the positions of WUA chair and director in one person, as is the case in many WUAs. While this contradicts the separation of executive and legislative powers inside the WUA, it is accepted with the justification that it reflected the expectations of local farmers to have an authoritative leader and hence is a necessary concession to the institutional conditions (Rakhmatilloev et al. 2003: 102f).

Despite all of these institutions that are formally or informally legitimized to organize village life, the main local organization remains the DF as a subsequent organization of the *kolkhoz*. In the case study it became evident how the role of the patron is fulfilled by the director of the *dekkkan* Farm, who was the brigadier of the *kolkhoz* before. He was often referred to as *rais* of the village. People expect the DF to be in charge of the village's well being. This perception is a result and heritage of the *kolkhoz* (and the Soviet state in general), which provided them with everything they needed for a living. Today, the center for resource distribution (the patron of the patron in this clientelistic system) is no longer the party committee in Dushanbe but the government, private structures (like the cotton investors), and international donor organizations. The agency for the distribution of these resources is no longer the FSK but instead the DF as well as newly established community based organizations. People were accustomed to the Soviet system that took care of everything, and then they witnessed international humanitarian aid taking on this role. The involvement of intermediaries, which is necessary to comply with the tight timeframes and goal orientation of development projects, strengthens existing leaders. They not only have access to resources, but also receive further training and knowledge which can even intensify inequality. This new role of the patron could be defined as "local development broker", a category introduced in development sociology to describe the role of intermediaries between the local population (the target group) and development agencies (Bierschenk et al. 2002). In this way, donors become part of the patronage system.

As shown, local governance institutions in particular have an impact on WUA reform. In theory, the WUA is meant to be based on the participation of all water users and is supposed to serve as a self governing organization, independent from the official administrative structures. In practice however, it mirrors the existing power structures in the village. WUA directors and councils feel more accountable to the donor organization that promoted it than to its members, i.e., the people who elected them. This certainly is also connected to the fact that

²⁸³ Author's interview with a local representative of an INGO, Khudjand, 10/03/2005.

many farmers are unaware of the role and task of WUA, so they will also not demand accountability. Once again, the crucial importance of community awareness becomes obvious.

7.4.4 *The Impact of Water Institutional Linkages on WTR*

The last chapter will address the question to what extent reform processes in the different water institutions are linked with each other and whether any negative impacts can be observed.

A temporary discrepancy existed between the policy to establish WUAs and hence reorganize water management at local level, which has already been implemented, and the lack of a legal foundation for these activities. As was described, a law was only approved in 2006. Before, the unclear status of WUAs created difficulties and insecurities. This was reinforced by a lack of training of WUA as well as *RaiVodKhoz* staff on their respective rights and duties, and by the many different donor concepts of WUAs.

While reforms in water law and water policy were rather successful at least concerning their formulation (a new Water Code in 2000 and two policy strategies in 2001 and 2006), the organizational body of the water administration has hardly been reformed. The change of organizational structures towards more inter sectoral coordination or management along hydrographic boundaries is not a reform issue. The Water Sector Development Strategy of 2006 stated accordingly that on the national level, water management has remained more or less like it was in the USSR (MIWM, UNDP, EC IFAS 2006: 37). A *RaiVodKhoz* director in the southern part of the country stated: "It is like before [independence], we work like then".²⁸⁴ Additionally, as was shown, lower officials repeatedly lacked information on how to apply new regulations; new laws and policy decisions are not communicated adequately or implementation mechanisms are completely lacking. Even if the staff receives training, the organizational and financial constraints at the meso level administration hinder the application of new approaches as one interviewee in Tajikistan mentioned: "I participate in seminars [of CFPS], but then I come back, and what can I do here?"²⁸⁵

Beyond this formal organizational level, the administrative culture has hardly changed either. The performance of the administration's functions is influenced by the internal institutions that characterize it – hierarchical decision making, lacking horizontal coordination, patronage, and corruption. This is reflected in the current state WUA relations, for example. A basic idea is that the WUA is not subordinate to the *RaiVodKhoz* but acts as an independent organization. This would require acknowledgement of the independence of WUAs by state agencies (*RaiVodKhoz*, *jamoat*, *kbukumat*) as well as a transfer of resources, knowledge, and competencies to WUA staff.

In practice, however, local state agencies are reported to intervene in WUA affairs in a way that does not acknowledge their independence, thus prolonging the old system in which the state agencies dominated.²⁸⁶ Among the water officials, WUAs are commonly seen as technical agencies and as a means for better fee collection but not as empowered, self governing farmer organizations. Such an attitude is visible in statements like "WUAs are the assistants of the *RaiVodKhoz*"²⁸⁷ by a senior official of oblast water administration.²⁸⁸ The main incentive

²⁸⁴ Author's interview with the director of a *RaiVodKhoz*, Khatlon *oblast*, 10/20/2005.

²⁸⁵ Author's interview with a senior official at the *ObiVodKhoz*, Khudjand, 10/11/2005.

²⁸⁶ Author's interview with two senior officials of a WUA support center, Sughd *oblast*, 09/01/2005.

²⁸⁷ „АВІП ПОМОШНИКИ РАЙВОДХОЗА.“

for state agencies to set up independent Water User Associations is that they lack the money to invest in the deteriorated infrastructure themselves.²⁸⁹ However, the state WUA relation is also substantially influenced by a lack of training on both sides on how to deal with each other and which rights and obligation all parties have. This again is also the result of the non-existent legal foundation until 2006. Hence, there is a need to strengthen WUAs, *RaiVodKhoz*s, and local self-governance structures simultaneously, so that they are capable of dealing with each other. This shows the necessity to address the meso level in reforms, which is excluded from many donor projects. It is only when both sides know and accept their respective roles, rights, and responsibilities that they can fulfill their assigned tasks in irrigation management.

The role of the administration is limited in all of these reform processes. When looking at the implementation of WUA reform, the limited role of government agencies is especially obvious. Main efforts to implement irrigation reform in Tajikistan are carried out by donor agencies and not by government agencies. Although there is no official record of all the WUAs set up as yet, there is without much doubt no WUA in Tajikistan that was established without donor involvement. The water administration itself is only in a limited scope engaged in WUA development. They give advice to donors on where to establish WUAs, or they propose projects to donors. One obvious reason for their weak role may be the lack of financial and human capacities to implement reforms. But it also became obvious during the interviews with various state officials that they do not consider reform implementation their primary responsibility but rely instead on donors to do it. Although state officials do not hesitate to criticize aspects of the donors' approaches and WUA performance, they do not take the initiative to make their own proposals on how to improve the program or even take action to set up WUAs themselves. This lacking sense of responsibility can be witnessed not only at the local level but also at the oblast and national levels. For example, several representatives of the *MinVodKhoz* confirmed the need for a special department at all levels of the *MinVodKhoz* to coordinate and support the activities to set up WUAs. However, all of them stated that donors should set up and finance such a department, be it at the central or at the *oblast* level. There is obviously no perception of the option of becoming proactive, nor is there a sense of ownership of the process.

The *MinVodKhoz* is not even the coordinating organization for all on-going and planned water management projects. While the department for foreign investments at the central *MinVodKhoz* coordinates some of the larger donor projects, information about all ongoing projects was not available either at the central level in the Ministry or at the *oblast* branches. In the whole water administration, no one seems to have an overview of where and how many WUAs exist. This is again a consequence of weak capacities paired with a certain organizational culture as described above, but also a result of a lack of donor coordination. This lack of donor coordination is a common complaint of the state water agencies, local NGOs, INGOs, and the donors themselves. On the other hand, it is to a certain degree also the failure of the state agencies. As most donors have close contact with the *kbukumat* and/or *jamoat* (district and village administration) in the regions where they work, it should be their responsibility to distribute this information further, such as to the *RaiVodKhoz* or other respective agencies and to the superordinated authority. So both groups of actors blame each other for the opaque situation.

The patrimonial features of the water administration have another effect that may be, albeit indirectly, even more powerful: most donor agencies perceive the bureaucracy as non

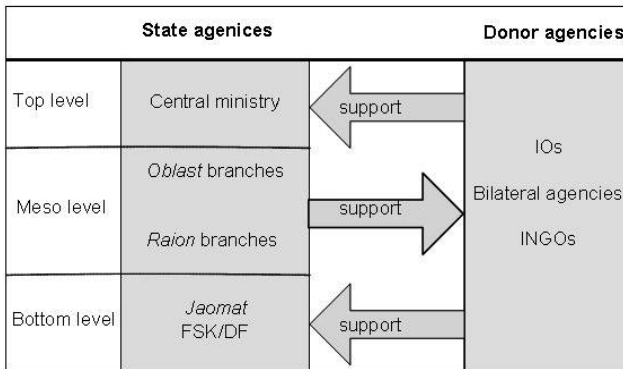
²⁸⁸ Author's interview with a senior official of the *ObVodKhoz*, Khudjand, 10/11/2005.

²⁸⁹ Author's interview with the director of the *ObVodKhoz*, Khudjand, 09/02/2004.

transparent, corrupt, and non democratic. Their consequence is, however, no to direct special reform efforts to the reform of water administration. On the contrary: They try to avoid working with the state administration. They only cooperate with the central level concerning decision making processes and cooperation agreements. When it comes to concrete projects and their implementation, they in general avoid the meso level and prefer to work with non state actors instead.²⁹⁰ It is excluded from reform activities and from access to grants and loans. While it is sporadically included in training and capacity building activities, it is not systematically supported (e.g. with WUA support departments as in the CFPS projects).

This marginalized situation is reinforced by the fact that many qualified experts leave the water administration and accept alternative, better paid job opportunities in donor agencies (Bucknall et al. 2003: 4; UNDP 2003: 25f)²⁹¹. Therefore, I will argue that the mode of donor state interaction even tends to weaken the water administration, especially at the meso level. Figure 13 illustrates how the meso level of water administration, instead of being the object of reforms and receiving support by donors, actually supports them.

Figure 13: Interaction between donor and state agencies



Source: own compilation.

A sort of ‘brain drain’ exists from state to donor agencies. This brain drain is certainly more complex than on an international level and has its positive effects as well: those experts still work for their country and guarantee that international projects include national expertise. Yet national professionals are seldom consigned with the development of the project but rather with its implementation. In addition, those projects are generally perceived as ‘foreign’ projects and are therefore characterized by a lack of ownership, low feedback, and limited learning effects for the state agencies. Qualified professionals working for donor agencies are missing in the *MinVodKhoz*, its branches on *oblast* and *raion* level (*ObVodKhoz* and *RaiVodKhoz*), and in WUAs: “There are no experts (...). There, where experts should work are none. No water

²⁹⁰ There are also exceptions. The IWRM Fergana project (of SDC, IWMI and NIZ-MKVK) e.g. involves the Sughd *ObVodKhoz* (Author’s interview with director of *ObVodKhoz*, Khudjand, 09/02/2004).

²⁹¹ Author’s interview with an NGO representative, Dushanbe, 08/25/2004, with a *RaiVodKhoz* director, Sughd Oblast, 09/01/2004.

experts. All normal water experts have been taken by the international organizations²⁹² (NGO representative, Dushanbe, 08/25/2004).

To give an example: One water expert, who worked for the state water administration on *oblast* level for 23 years, left it to become a WUA specialist at an international NGO. He is very committed to his work in supporting the establishment of three WUAs. One must ask whether he could not have had a greater impact on the institutional reform, if he had received the same training but had stayed in the state administration.

This may result in a sense of exclusion from the political processes and resource flows by meso and local level 'hydrocrats'. Consequently, the state agencies that should implement the reform lack not only the capacities but also the ownership for real commitment to the reform processes. Water institutional reform is expected to be a donors' issue. This role of donors is not only rooted in donors' interests, but it also reflects the interests of some state actors: With donors and international NGOs taking over tasks like the provision of water from the state, there is a tendency to rely on donor and NGO engagement and thus "outsource" certain state activities and responsibilities.

Clearly, there are several institutional linkages through which the different water institutional elements influence each other. Concerning WUA reform, policies are implemented without the necessary legal framework, resulting in an insecure position of the newly established water rules. The strongest discrepancy is between water policy and law on the one side and water administration on the other side. This leads to serious contradictions that have an enormous negative impact on the overall reform process.

7.5 Summary

In its first part, this chapter described the major water institutional reforms conducted in Tajikistan. The country renewed its 1994 Water Code in 2000. One year later, a water policy strategy was issued, which was replaced by a new one in 2006. Concerning concrete reform measures, ISFs were introduced in 1996 and the transfer of irrigation management to water user associations (WUAs) began in 1999.

Although several reforms have been decided on and a legal framework and policy strategies were also developed, the reform objectives have not been met so far. The Water Code still lacks important implementation mechanisms and is often not applied due to the lacking knowledge and will to apply it. The ISF are also not widely implemented. The basic precondition for effective implementation is communication of the political decisions to those who are expected to implement them. This is already the first obstacle to the implementation of water institutional reform in Tajikistan. In fact, institutional and policy innovations on the local level are made by projects such as those of WB, ADB, UNDP, USAID, SDC and of international NGOs and not by the water agencies. This led to a multitude of uncoordinated projects. It is a result of the history of foreign engagement in Tajikistan, which has until recently been concentrated on local projects. The new Water Sector Development Strategy can provide a sound basis: It again underlines the commitment to IWRM, basin management, and WUA establishment. But for its realization it needs to be streamlined in the Water Code, other legal acts, policies and projects. Given the experience in policy processes so far, this seems rather unrealistic.

²⁹² „У нас что нет специалистов, (...). Там где должны работать специалисты их нет. Нет специалистов-водников. Всех нормальных водников забрали международные организации.“

The second part assessed the impact of the neopatrimonial environment on the politics of water institutional reforms. It was shown that stakeholders do not participate in decision making, which is dominated by the government and donors. The agricultural economy and the local governance institutions both present serious obstacles to water institutional reforms: Concepts such as WUA and ISF implicitly rely on empowered, rights aware water users in a democratic market economy. However, while land reform and decentralization introduced such principles for agriculture and local government on paper, de facto pre existing power relations and dependencies persist. These hinder the successful implementation and functioning of new water institutions. Water institutional linkages lead to discrepancies particularly due to the disregard for the water administration in reform activities.

8 Comparing the Politics of Water Institutional Reform

The previous two chapters offered a detailed description and analysis of water governance and water institutional reforms in Kyrgyzstan and Tajikistan. This chapter aims to compare the similarities and differences in both countries and to assess to what extent the identified variables are able to explain them. The first section compares the water governance structures and the water institutional reforms in both states, thus the dependent variable (chapter 8.1). The next part (8.2) discusses the role neopatrimonial features play and how donor policies interfere with them. Subsequently, three sub chapters sum up the reform experience in both countries under three thematic foci: first, the introduction of monetary economic mechanism (8.3); second, the introduction of new administrative principles, namely hydrographic and inter sectoral management approaches (8.4); and third, the involvement of stakeholders by way of user participation and decentralization (8.5). After this comparison of the empirical findings, we will turn to the theoretical assumptions formulated in the beginning. What do these cases tell us about institutional change? Where can we identify path dependent developments? What was the impact of the juncture both countries experienced – was it critical? And finally, is the ultimate result an outcome of path dependency, of path change, or of institutional bricolage? This will be discussed in chapter 8.6. The final section of this comparative part (8.7) will address the question of which lessons can be learned from this analysis and should be considered when conducting water institutional reforms.

8.1 Water Governance and Water Institutional Reforms in Kyrgyzstan and Tajikistan

This thesis started with general considerations on water governance as an analytical perspective and good water governance as a normative objective. It is based on the premise that the current water crisis is primarily caused by institutional designs and political decisions that prevent equitable and sustainable usage of the limited water resources. The first step of analysis was to identify the governance structure, meaning to conduct an ‘institutional mapping’ of actors and organizations involved and their mutual relations. For both countries it was shown that water is regulated by various state and non state actors at multiple levels.

Both states inherited a highly hierarchical and fragmented governance structure from the Soviet Union, in which a distinct Ministry of Water Management (*MinVodKhoz*) was the main organization with centralized power. It included a hierarchical structure of departments at the republican, provincial and district levels. No noteworthy horizontal coordination existed. These legacies still shape the current water governance structures. In Tajikistan, the organizational structure remained more or less unchanged. In Kyrgyzstan, the *MinVodKhoz* was dissolved and subordinated as *DepVodKhoz* to the Agricultural Ministry. Upward accountability principles and lack of transparency are still characteristic for the institutional culture.

However, not only the water administration in the strict sense governs water. In both cases, it became obvious that it is necessary to include state as well as non state actors and structures from other sectors into the analysis. This concerns regulations regarding land reform,

hydropower, and environment, as well as the actors in these fields. In Kyrgyzstan, academic institutes and to a lesser extent NGOs are involved in the political discourse, without real impact on decision making, however. In Tajikistan, NGOs are only active in the implementation arena. The analysis revealed coordination problems, resulting in overlapping competencies on the one hand and responsibility gaps on the other hand. Especially in Kyrgyzstan, administrative fragmentation was considered a serious problem.

The broad range of water governance institutions does not only entrench different sectors, but also different levels: At the international level, both states signed agreements that restrict their usage of water resources. International discourses and actors bring in certain norms on water governance, which has an impact. International donor organizations and NGOs enter 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. Legal reforms in both countries could not speed up with the factually conducted projects, resulting in contradictions and ambiguities. At the provincial level, water agencies implement, but also have decision making power in their area, on water distribution, for example. At local level, beside the water agencies, formal and informal local governance bodies interact with each other and set the framework to which water users orient themselves. WUAs are established as new non state actors whose roles were initially vaguely defined in both states and are still contested in practice. Also, the local governance structures are part of water governance, especially in Kyrgyzstan where the *aiyl okmotu* has been officially involved in the O&M of tertiary irrigation canals. Thus, water governance has to regulate across different sectors and different levels.

A further challenge is integrating formal as well as informal institutions and organizations, which may be in conflict with each other. This complexity was not addressed by the previous approaches of water management. The governance perspective, in contrast, allows for an integration of this complexity in the analysis: across sectors, scales, levels, and including formal as well as informal rules. With the good water governance objective defined internationally, WIR strive to establish water institutions that guarantee efficient, equitable, and sustainable usage of water, and democratic governance structures. The ultimate objective of water institutional reforms is to overcome identified shortcomings and gaps in the regulation and governance of water resources.

Being post Soviet states depending on international aid, the challenges for water governance in both countries are similar: Both countries have had to cope with a deteriorated infrastructure; with decreasing financial means and professional capacities; with the disintegration of the regional water governance system; with a hierarchical governance system not adequate to meet the new challenges; and with the necessity to develop an own policy strategy. In addition, 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 budget crisis and donor pressure – a situation similar to many developing countries (Meinzen Dick et al. 1997: 13). Consequently, they share many reform projects in response to international norms (management along hydrographic boundaries, decentralization, user participation, ISF) and to post Soviet needs (ISF, new legal framework, transboundary management).

The reforms conducted during the period of investigation (1991–2005) are listed in Table 16. The table shows for both countries policy decisions on reforms and indicates the year of the respective law or decree. Decisions by law are indicated with dates in bold. The years in brackets indicate that these were no 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 the result of the analysis as an assessment of the effectiveness of the implementation process.

Table 16: Comparison of water institutional reforms in Kyrgyzstan and Tajikistan

Reform policies	Kyrgyzstan		Tajikistan	
	Policy decision	Implementation	Policy decision	Implementation
Water policy strategy	Draft 2003	not likely	2001; 2006*	partly
New legal framework (Water Code)	1994; 2005	..**	1993; 2000	partly
Regulation of trans-boundary waters	2001	no	-2000	-
Irrigation service fee (ISF)	(1994) 1995 / 1999	partly	1996	partly
Hydrographic management principles	1997	no	(2000; 2001)	no
Inter-sectoral coordination	2005	not likely	-	-
Irrigation management transfer to water user associations (WUAs)	1996 / 2002	ongoing	1999 / 2006*	ongoing

* approved after research period

** implementation efforts only started after research period

Source: own compilation

It can be seen that in Kyrgyzstan more concrete reforms were initiated. Distinct reform measures were agreed on the issues of hydrographic management approaches, regulation of trans boundary waters, and inter sectoral coordination. In Tajikistan, these issues are, if at all, included in the general Water Code without sub normative acts to specify them. Regarding inter sectoral coordination, there is no perceived need for it and no reform at all. Another difference worth noting is that in contrast to general reform activity Tajikistan succeeded sooner in the development of a policy strategy and a new legal framework: in 2001 (plus a new one in 2006) and 2000, respectively. In Kyrgyzstan, the new Water Code was only approved in 2005 and a policy strategy does not yet exist at all. Thus, Kyrgyzstan lacked a coherent foundation and framework for its reforms for the whole researched period, while in Tajikistan this was at least partially in place. This is remarkable not only because Kyrgyzstan has more reforms going

on in general, but also because Tajikistan had to cope with a civil war and political instability and therefore could be expected to have fewer capacities than Kyrgyzstan to develop these fundamental legal and policy documents.

However, there are also similarities. It is striking that both countries have a number of formal policy decisions but neither has successfully implemented one reform until now. Some reforms need a long term perspective and might achieve better performance in future, notably the irrigation management transfer to WUAs. But even reforms such as the introduction of the ISF, which have been started around ten years ago in both states, are still not fully implemented. For recent reforms like the policy strategy or inter sectoral coordination in Kyrgyzstan it can already be anticipated that they will not function based on the experiences hitherto. The only reform that is systematically implemented, at least in Kyrgyzstan, is the transfer of irrigation management. But in both countries this reform is implemented by international donor agencies and NGOs, and was so before an adequate law existed and before both countries' Parliaments approved the reform. In both cases, the WUA reform acted solely on a government decree in its first years.

The analysis of the dependent variable thus revealed a discrepancy between policy decisions and policy implementation in both states. While this is a shared outcome in both states, there is a difference in reforms started (general ones in Tajikistan, concrete ones in Kyrgyzstan) and in the ways they are formulated and implemented. The case studies described these politics of the reform processes in detail. The next chapter summarizes and compares the results in both countries in reference to the impact of the neopatrimonial regime and thereby also highlights and explains the differences in the politics of water institutional reform in both states.

8.2 Effects of Neopatrimonialism on Water Institutional Reform

The basic research interest of this study is to reveal how neopatrimonialism influences the political process of water institutional reform. Based on three analytical approaches – institutionalist policy analysis, implementation research, and political anthropology – and the empirical findings, four variables and one interfering variable were identified in which this influence occurs: the decision making institutions, the institutional conditions of the agricultural sector, the local governance institutions, the water institutional linkages, and the role of international donor organizations as interfering factor (see chapter 5.5). These shape the institutional corridor for reforms and institutional change, i.e. for actors' behavioral options for setting and implementing new rules. This chapter will compare the impact of these variables in both case studies and discuss the scope of their differences and similarities.

Institutions of Decision Making

The degree of democratic decision making influences the formulation of new rules. While both countries are characterized by internal agenda setting and domination of the presidential apparatus, in Kyrgyzstan the decision making is more open and more actors have the capacity to participate. The result of the latter is paradox: In Tajikistan, laws and policy strategies were developed and approved considerably faster than in Kyrgyzstan. While the institutional setting in Kyrgyzstan allows for more participation, many actors are restricted 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 (ISF, WUAs, at least on paper also management along hydro

graphic boundaries) are based solely on presidential decrees, while those issues in which more actors were involved (Water Code, National Water Strategy) got stuck already in the decision making process. The economic and organizational reforms were most contested, as they threatened the self interest of those involved in decision making. This is also connected to administrative fragmentation, which is perceived as one of the most serious water governance problems in Kyrgyzstan. In Tajikistan, policy fragmentation was not as much considered a problem by the interviewed experts as in Kyrgyzstan. This may on the one hand point to less fragmentation, but on the other hand to less open articulated conflicts and less participation of the higher levels of administration in decision making so that it cannot amount to policy fragmentation. However, coordination problems clearly exist beyond the surface.

It became obvious that in both countries the Parliament is not a major actor in water policy. This reflects the general marginal role of Parliaments in Central Asia. The authoritarian tendencies in both countries are reflected in both new Water Codes where the competencies of the Parliament were further reduced (Kyrgyzstan) or completely expelled (Tajikistan). In Kyrgyzstan, however, Parliament hindered the implementation of water fees, and with the law on transboundary waters it once became proactive in decision making. However, this law is not applied and can be considered to be merely symbolic. For Kyrgyz politicians, it is more attractive to focus on economic mechanisms at the international level, where actual difficulties with, as well as resentments against, Uzbekistan can be utilized, than to discuss economic mechanisms domestically that threaten to displease the voters and therefore are opposed. Also in Tajikistan, this symbolic level of water policy can be observed, namely in the campaigns of the UN Year of Freshwater and the subsequent decade. These activities also served the international audience more than the domestic needs.²⁹³

Concerning problem perception in water policy in Kyrgyzstan and Tajikistan, we can find similarities and differences. Due to similar conditions, many topics are the same: deteriorated infrastructure in agriculture; regional water distribution; and the need to reform administration, to introduce economic mechanisms and rational usage. Nevertheless, the way they are perceived and the priority attached to them differs: In Kyrgyzstan, international water relations and the legal status of water obtain the first places on the agenda, while in Tajikistan a concentration on technical problems (such as infrastructure and financing) prevails.

Despite differences in problem perception patterns, the same rules are established in both countries. This can be explained by the influence of donors and international discourses, which stress the same norms. Donors in both countries are influential actors in decision making. They actively participated in the drafting of the Laws on WUAs, the Kyrgyz Water Code, and the Tajik Water Sector Development Strategy. Many basic ideas of water institutional reforms have not originated from the countries but have been 'imported' by international organizations, consultants, and NGOs. Therefore, the policy reform process may be read not only as the implementation of a government reform, but also as response (adoption, co option, or resistance) to the global norms how water should be governed.

²⁹³ Concerning the regional dimension of transboundary water management, which receives so much attention in Kyrgyzstan, this point is not such a prominent and especially not such an ideologized issue in political debate. Despite the perception of a certain unfairness as Uzbekistan and Kazakhstan do not provide cost recovery mechanisms for O&M of the Kairakum reservoir, Tajikistan still regulates it according to the irrigation modus out of 'tradition' and to show good will (Petrov 2003, author's interview with a representative of the EC-IFAS, Dushanbe, 10/21/2003). Although in Tajikistan as well certain actors perceive that the country is in an unjust position and should try to get a bigger water quota or treat water as an economic good, this point of view didn't gain access to the political discourse, as it does not promise to be politically lucrative in the momentous situation of Tajikistan.

Yet beside their active involvement, donors also exert indirect influence. First, through their financial budget support; second, through the objectives they formulate in their projects and to which all those must orient who want to be included in projects. This influences problem perception and agenda setting. Exemplarily this is mirrored in the statement of the vice minister of the *MinVodKhoz* in Tajikistan: “My scientific subject is exactly the management of water resources, because this gets very much attention by the financial institutes, when they make investments and give grants for this issue.”²⁹⁴

To sum up, while Kyrgyzstan and Tajikistan are both neopatrimonial regimes, Kyrgyzstan has stronger democratic structures in decision making institutions than Tajikistan. The results show, however, that the more participatory decision making process in Kyrgyzstan has counterfactual effects as ‘partial democratization’ allows veto playing but not agenda setting for some of the actors. Contradictory interests therefore lead to a mutual blockade or to inexact framework laws without sub normative implementation mechanisms. This is the reason why it was more difficult in Kyrgyzstan than in Tajikistan to agree on the legal and policy fundamentals of WIR. Two other features of the decision making process can explain why policies are decided on without the will for implementation: First, pleasing certain donor interests entails decreeing laws and other normative acts without real reform commitment; second, it fulfills certain symbolic politics: both states use water in the international arena to detract public attention from domestic problems. In Kyrgyzstan, focus is placed on regional geopolitics and transboundary water management issues. In Tajikistan, international campaigns and conferences are organized.

Institutional Conditions of the Agricultural Sector

The agricultural sector is the direct economic context in which most water institutional reforms are conducted. It has its strongest impact on WUA and ISF reform. It has shared as well as differing features in both cases: While Kyrgyzstan conducted a relatively fast and radical land reform, in Tajikistan the process is slow and occurs mostly on paper without practical impacts. State production prescriptions and old farm structures and dependencies are still in place. Therefore, the Kyrgyz institutional environment is more suitable for enabling reforms that implicitly assume independent farmers as decision makers on their crop choice and water use. In Tajikistan, farmers cannot, for instance, turn to less water intensive crops even if they wanted to. Also, there is less of an incentive to invest in the O&M through ISF payment or WUA commitment when the channels and irrigated land are not perceived as ‘own’, but as that of the FSK. Similar conclusions were made by Thurman (2002: 58) in his study of irrigation in Kyrgyzstan, Kazakhstan and Uzbekistan, where he observed a link between the degree of privatization and the readiness to become active for O&M of I&D systems as “in areas where the restructuring of farms has been largely cosmetic, farmers do not view themselves as part of the solution”. The output concerning the actual living conditions of the farmers is similar in both countries, however: Rural poverty is widespread and the sector is characterized by reliance on subsistence agriculture, de capitalization, and widespread barter economy. These conditions make the implementation of market based reforms with monetary mechanisms difficult in both countries. The failure of general ISF collection particularly can be attributed to this variable.

This variable is in so far connected to the neopatrimonial regime as unsound formal reforms strengthen (in Tajikistan) or at least do not overcome (in Kyrgyzstan) informal institu

²⁹⁴ „моя научная тема как раз управление водными ресурсами, поэтому очень большое внимание обращают финансовые институты, когда дают инвестиции, гранты на это дело.“

tions constituting patrimonial dependency relations. The structures and networks of the FSK still exist in both countries and in many cases they are more reliable than new rules or organizations. Wegerich (2005: 178f) made the same observation in Uzbekistan, where land reform did not really change the structure of the agricultural sector and new farm organizations as well as WUAs reconfirm old FSK power patterns.

Despite the problems in Kyrgyzstan, it has a better prospect for future reform success than Tajikistan, where agricultural dependency patterns are much stronger. The empowerment of water users, which is one objective of WUAs (and to a certain degree also of ISF), cannot be achieved without the empowerment of the same persons as farmers. Sound agricultural and land reform therefore turned out to be a necessary precondition for water reform as far as it addresses agricultural water usage. WUAs only can work effectively when farmers are independent. ISF can only work in a market economic environment.

Apart from these fundamental constraints, there are several other institutional factors that have limiting effects on rural well being. For example, farmers cannot use the economic potential of their fields due to missing knowledge and experiences in agricultural practices and management. The current farmers are usually formerly specialized FSK workers or teachers etc. without training in farming. Often, they 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 specialized academic institutes lack the means to train people at the local level. Wasteful water use is therefore at least partly rooted in lacking access to knowledge about irrigation techniques and results in a 'the more, the better' attitude.²⁹⁵ The current features of the agricultural sector in both states limits water institutional reform.

Noticeable, donor interference in this variable could not be observed in either of the case studies. It should be mentioned that donors' water projects, especially the WUA programs, are embedded in wider agricultural or rural development programs and the interrelatedness of water institutions and agricultural performance is reflected in most of the donor projects.

Institutions of Local Governance

The local governance variable only influences the arena of implementation of those reforms that have to be implemented locally, i.e. the establishment of WUAs and the collection of ISF. In both countries, official local government structures are accomplished by informal ones that are characterized by power asymmetries. Patrimonial features such as patronage relations play an important role. That said, there are differences concerning their strength: In Kyrgyzstan, decentralization and, thus, the position of formal local government is stronger than in Tajikistan, where the FSK structure is more powerful.

As was shown in the analyses of the WUA reforms, WUAs 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 organizations, but rather as part of the *ayyl okmotu* (in Kyrgyzstan) or of the cooperative that replaced the FSK (in both). 'Internally' means that the positions of chairs and in the council are filled with the key actors of the village (in both local case studies the WUA chairperson was also the head of the agricultural cooperative and had a leading position in the FSK before) 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 WUA council is rather weak. Water users show little knowledge and awareness of their membership rights. In Tajikistan, many of the farmers interviewed were not even aware

²⁹⁵ In a study conducted by ASDP „NAU“ in the Zeravshan Valley in Tajikistan, none of the farmers interviewed were able to identify different species of wheat and potatoes and the amount of water required (ASDP „NAU“ 2003: 18).

that they are members of a WUA. The greater part of the farmers in both countries is unaware of their rights and responsibilities, as well as of the exact tasks of WUA. Similar observations were made by the studies of Hassan et al. (2004: 34ff) and Alymbaeva (2004: 32f). This reflects the general situation, in which the majority of the rural population is excluded from information and decision making in the villages.

It is important to note that the close interrelation of the WUAs with informal and formal village organizations may have positive aspects as well: the involvement of existing institutions can contribute to the acceptance of WUA and its principles by the population and enforcement by the village authorities. It can be assumed that when ISF are paid and WUA decisions are accepted, it is mainly because of this integration of newly introduced institutions into existing ones with an accepted authority to solve conflicts and power to enforce rules. However, then the character of the new institutions changes. Local organizations like 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. WUAs in some cases foster power accumulation by those already powerful and enable a misuse of this position, which means favored water distribution to their own network and insecure water access by the marginalized part of the population. The manner in which projects are typically implemented by donors and NGOs strengthens existing power patterns since donors rely on the village elite to realize their project in the given timeframe. This is also the case in bottom up projects, like those described for Tajikistan, though they have more awareness raising components.

Additionally, donors tend to, if not ignore, then idealize 'traditional' local institutions like village assemblies and *basbar* and utilize them for their own objectives. For example, *basbar* as a type of collective labor is used as a participation mechanism in projects by donors to ensure community commitment and awareness. But *basbar* is a specific form of reciprocity, and not participation in the sense of democratic decision making. The way *basbar* is used in these projects has more in common with the instrumental way it was used by the Russian colonial regime and the Soviet Union (as duty in kind) than with its original societal function and meaning. Consequently, it also fails short in reaching community commitment. Most projects hence work *with* local institutions rather than *for* them. While those projects want to be locally adaptable, they use existing institutions in an instrumental way.²⁹⁶ Thereby, the democratic potential of these institutions wanes: An *basbar* is not participation in the sense of taking part in decisions affecting one's own life, if it is simply announced by the local *rais* or an *aksakal* and

²⁹⁶ Therefore, some scholars distinguish between a 'method' and a 'process' orientation in community development (Earle 2005; Freizer 2005): Are CBOs seen as an end in itself, i.e. is the empowerment of local communities the main target, or are CBOs mainly seen as a means to reach more ownership and more sustainability of projects? The latter is the approach of many donors that have rediscovered the CD approach since the end of the 1990s. On the one hand, this reflects the critique addressed to Western donors of trying to introduce Western concepts of civil society and neglecting 'traditional' civil society as represented in different informal institutions such as *maballa* committees, *aksakals* or *basbars*. On the other hand, it often coincides with a romanticized notion of 'community' and its institutions, which neglects local power asymmetries and thereby sometimes strengthens them. Also in scientific research, not a few institutionalist studies that highlight indigenous or local strategies in natural resources management rest upon a naive and idealistic image of 'community' and neglect social hierarchies and power relations (Mehta 2000: 14f). At this point, it should be mentioned that my findings derive from one bottom-up developed WUA in Tajikistan and two top-down established ones in Kyrgyzstan. There is no substantial difference in that respect to observe. The question is whether these different approaches actually do make a difference or whether the local institutional setting is dominant. Further research would be necessary here. See for discussion also Platteau 2004 and Chhotray 2004.

the rehabilitated irrigation channels serve mainly his network while the work has to be done by poorer farmers that will not have any benefit from it.²⁹⁷

WUAs inherited the bad infrastructure of the canals. WUAs lack the technical equipment for adequate cleansing and rehabilitation work and the financial means to hire professionals. Rehabilitation is therefore only done when funded by donor programs. As access to grants is often the main incentive to set up a WUA, donors get incorporated in the patronage logic. Reforms are conducted (on paper) in order to get 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 local case study, the ambivalent role of donors is especially apparent. They become incorporated into the logic of patronage and rely on local development brokers. Their power base is not only the access to resources, but also to information. They receive training from donors, WUA support departments, or other projects, which reinforces the power and brokerage position. This aspect is also emphasized by Wegerich (2005: 189) on WUAs in Uzbekistan, where he states that “expert ‘knowledge’ and ‘information’ were power tools to keep the original hierarchy in place.” 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, i.e. the donor agencies, ends. It is questionable whether the reforms will be sustainable under these circumstances. Hence, donors have a considerable impact here as well, even if they try to be sensitive to the local context. This is also observed in local level projects beyond the water sector:

“[I]nternational donors’ inadequate conceptualization of the nature of local politics and power relations can negatively impact community driven projects. Thus community driven development is often conceived as a depoliticised project, and it ignores the important political and institutional constraints on the civic sphere.” (Babajanian, Freizer, Stevens 2005: 221)

To summarize, some of the new water rules can come into conflict with existing local rules such as conflict avoidance or patronage principles. These are obviously more reliable in ensuring access to water than the formal principles (such as payment) and they prevent sanctioning of non payment or unauthorized water withdrawal. But rather than providing two alternative systems, both are merged: Reforms to introduce new institutions rely on old institutions. WUAs are active when the heads of local patronage networks are committed to it. ISF are paid when local authoritative persons demand it and not because of the market logic associated with it.

Water Institutional Linkages

Concerning the mutual influence of the water institutions to be reformed themselves, it became obvious that linkages are evident. They have a negative impact on reform processes when they lead to contradictions between water policy, law, and administration. One reason are different time horizons of change: legal processes for water rights require more time than a presidential decree on a new policy; and informal rules within the water institutions cannot be changed by a decision at all, but require long term strategies. Another reason for inconsistencies is that reform efforts in both countries focused on water policy and water law and neglected water administration.

Therefore, in Kyrgyzstan as well as in Tajikistan the most serious endogenous impact comes from the water administration. Despite the importance of the water administration for overall reform (the central level of bureaucracy is involved in the rule formulation, the meso

²⁹⁷ For such an example see the case study in Earle 2005:252ff.

level in the implementation), only in Kyrgyzstan reforms of the water administration in the strict sense are conducted. Both countries inherited the administrative structure of the Soviet Union and this legacy still shapes today's administrative culture. As public administration in general, also water administration still follows a very hierarchical model with strong centralization 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 the officials, and a general low level of transparency and accountability (GoK n.d.: 43; GoT 2002: 18f; ISRI, Socinformburo, FES 2004: 38f). Patrimonial features shape staffing policies and internal accountability, which is generally only perceived upwards and not towards the target group. These internal, institutionalized rules of the water administration have a negative impact on the implementation of reforms.

First, they contradict principles of stakeholder participation and decentralization of competencies, as aimed for in WUA reforms: WUAs are generally perceived as subordinate and not as independent and equal partners. Second, they do not encourage compliance to ISF payment, as there is often no comprehensive information on reason for payments given to water users and no accountability exists in respect to guaranteed water delivery in case of payment. This affects the trust of water users in state agencies. Thurman (2002: 57) describes for Kyrgyzstan that "stakeholders (...) appear to have abandoned any hope for a state led solution to their difficulties. Indeed, (...) villagers assert that local officials are part of the problem instead of the solution". But the situation is similar in other countries of Central Asia: „Presently, underfunded and overburdened local ministries of water management, WUAs, local authorities and farms are often unable to curb rent seeking by farmers with enough informal connections or money to capture an unfair share of water“ (Bucknall et al. 2003: 6). While Soviet legacies in public administration play an important role here, the described situation is not a typical for many countries also outside the FSU region: "Transparency and accountability (...) are not part of the institutional culture of most irrigation agencies" (Meinzen Dick et al. 1997: 55). As these features are nevertheless critical ones of good water governance, internal rules of water administration have to be addressed by reforms.

The importance of these inter institutional linkages was not adequately considered in the reform programs. Interestingly, donors' policies toward the water administration turned out to be different in both countries. In Kyrgyzstan, IFIs pressured for reductions in the state bureaucracy, which was the reason why the former *MinVodKhoz* was dissolved. Projects conducted with different agencies intensify fragmentation instead of overcoming it. The meso level is directly addressed in the WUA reform by establishing WUA support departments that are meant to become part of the water administration in the long term. However, the impact of these and other capacity building programs is hindered by the existing patronage and hierarchical patterns. In Tajikistan, in contrast, WUA reform has been so far mainly implemented by INGOs, which tend to reduce cooperation with the state water agencies to a minimum. As a result, the meso level is marginalized in the whole reform process and lacks knowledge on its new role and responsibilities. This situation might change as WUA support departments are now planned by the ADB. The whole water administration is affected by a brain drain of its qualified staff to donor agencies. This seriously weakens the capacities of the meso level. In this study, this was especially noted in Tajikistan. Pétric (2005: 325) notes a general "internal brain drain" from state to INGOs and donor funded NGOs for Kyrgyzstan as well. The state meso level, being itself in a precarious situation, is confronted with the support for NGOs and

CSOs that receive financial assistance, technical equipment, and professional trainings from donors:

“Being comparatively well funded, they [CSOs] daily remind the governments of their own lack of resources, incompetence, ineffectiveness, and overall fragility, but without providing those same governments and the bureaucrats who comprise them with the means of improving the situation from within” (Starr 2006: 15).

In both cases, donors do not address the water administration as much as they do address the policy and law dimensions. Within the water administration, the meso level is especially critical: the level of provincial and district bureaucrats who must implement reforms or circulate information. This “messy middle” (Mehta et al. 1999: 16) is the place where formal and informal structures meet, where the weaknesses of the administration are more visible and more effective than on 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 organization. This level is critical for every policy reform. Yet, it is not sufficiently addressed in the reform processes.

To summarize: Incoherencies between the different water institutional dimensions are in both countries especially frapping between the water administration on the one hand and law and policy on the other hand. The former actively resists reforms that threaten its status quo and hinders decision making or implementation (especially in Kyrgyzstan); it sometimes also unintentionally does not implement reforms due to 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 and instead a reliance on donors for implementation. The limited activity of the administration to implement reforms and to reform itself, is even if indirectly supported by the activities of donors that partly overtake its tasks.

Donor Policies

In the previous discussion on the effects of neopatrimonialism on WIR, donors as actors and rule setters were identified as an interfering variable to neopatrimonialism as they mitigate or aggravate certain aspects. Donors play a considerable role in the politics in both countries, in policy formulation as well as in implementation. As this was already shown in the preceding sections, this part only shortly summarizes the general parameters of donors’ engagement in both countries.

Both countries experienced different donor strategies and, consequently, also different incentives set and demands articulated by donors. In both countries, the conditions for donor involvement are grounded in the political institutional setting. The mode of political transformation in Kyrgyzstan shaped the path for donor involvement and an academic and political discourse on water that is mainly concerned with interstate instead of national water management, while in Tajikistan a technocratic problem perception persists that focuses on finance and rehabilitation problems. In Kyrgyzstan, the liberal regime invited donor involvement putting emphasis on fostering the capacities of societal actors to articulate and participate in the political process. More local water experts are involved in projects on regional water management than on national water reforms. In Tajikistan, humanitarian assistance prevailed and access to donor funds was mainly possible through technical proposals for projects like the rehabilitation of destroyed infrastructure etc. Consequently, for Tajik water experts the suitable strategy was not to publish a paper on the status of water in general, but to write a concrete project appraisal for the renovation of an irrigation channel in a village. To give an example: Two Tajik research institutes set up a NGO with all employees as members, in order to get access to donor projects on infrastructure rehabilitation. Because many academics emigrated

out of Tajikistan, there have been no capacities for seminars, conferences or scientific work. There are water experts engaged in international donor programs, but their number is relatively small and until recently there were not so many projects with a regional focus going on in Tajikistan itself as in Kyrgyzstan. One has to see whether there will be in Tajikistan as well a turn to foreign water relations in the future as donor involvement changes. The Institute of Water Problems, Hydro Power and Ecology of the National Academy of Sciences in 2003 already set up a new department on transboundary water usage. In both countries, national experts complained about an ignorance of their knowledge and expertise by donors, who would use the respective country as an "experimental field" for their concepts they would transfer from Africa or South Asia neglecting the water management history of thousands of years in Central Asia.

Especially in decision making, donors are more influential than part of the national actors. As a result, laws lack ownership and are partly not feasible. The WUA reform is in both countries almost exclusively implemented by donors. Their interest in WUAs is not in assisting national reforms decided on before, but in the need for counterparts for rehabilitation projects in order to achieve sustainability. Thus, these activities reflect the donors' interest rather than problem perception of national policy actors. However, it became also apparent that even different donor approaches, such as to WUA development, do not necessarily lead to different outcomes. This shows the significance of the existing context, which limits the activities of international actors as well as their impact.

As was shown, the four variables and the interfering variable shape the politics of water institutional reform, and their analysis allows for a better understanding of the processes. In all variables, 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. Concerning the patrimonial features, the impact of personalistic leadership and patronage could be widely observed. Corruption, however, turned out to be a decisive factor in water politics. This was also noticed by Bichsel (2006: 98) and Thurman (2002: 22). Concerning the formal democratic structure, it proved to have also an impact as its higher value in Kyrgyzstan in all variables broadened the options for actors and therefore for politics.

The impact of each variable differs according to the respective reform issue. Therefore, the next section will discuss the politics of water institutional reform specifically for certain institutions: first, the introduction of ISF (8.3); following, the administrative reforms (8.4); and finally, the participation of water users (8.5). The three foci can also be seen as representing three aspects of reform: ISF as the economic aspect with the aim to achieve efficient and sustainable usage patterns, administrative reforms as the organizational aspect with the aim to reach equity and coherency among sectors (and thereby ultimately also improving efficiency), and participation as political aspect aiming to achieve democratic and equitable water governance. Undoubtedly, all three are closely interrelated (best seen in WUAs that merge all three aspects); however, for analytical purposes we will now look at them individually.

8.3 Introducing Economic Mechanisms: from Free Usage to Payment for Service

The establishment of volumetric fees for water presented an enormous change as water use had not to be paid for on a quantitative basis before. While also during Soviet times there was no complete free access to water as a wholly unrestricted usage did not exist, delivery was not determined by financial means but instead depended on allocation schemes developed top down on base of production plans. In the perceptions of the water users, they were suddenly expected to pay for something for which they had not to pay before. The main reason for the government in both countries to introduce ISF was the wish and need to gradually handle the financial crisis of the water sector and reach cost recovery. This coincides with the emphasis on economic mechanisms by many donors, especially the multilateral development banks. Not only cost recovery but also efficiency was the main target from their side: The expectation is that payment will lead to more efficient water usage and reduce wasteful usage patterns.

While both governments had already introduced ISF in the mid 1990s, in both countries the factual collection rates are about 50%. This does not mean that 50% of all water users do not pay any fees, but that many only pay part of the fees. How many users do not pay at all, cannot be said. Ten years after the decision on the reform it is still not fully realized. More ambitious plans such as differentiated fees, which are discussed in both states, stay ideas. It is interesting to note that the ISF reform, which can be expected to have more elite commitment than others (no pressure by donor, interest in less state allocations to the water sector), did not show better implementation results than those reforms where donors play a bigger role and that might have less ownership.

While different mechanisms are in place to enforce payment (like partial payment in advance) they are generally not applied. This shows that it is not only a technical problem (capacity of fee collection, ability to cut off fields from water supply), but also of the will to enforce it. It is also noteworthy, that even if the reform would be implemented as decided, the target of cost recovery would not be met, as the fees in both countries are rather symbolic. In the local case studies, various interwoven reasons for the non payment of fees by farmers and the non enforcement by the authorities have been identified. How are these reasons related to the neopatrimonial context? In both countries, ISFs were introduced by government decree. Only little information on the decision making process in Tajikistan was available, but it seems not that there was any opposition to the ISF. However, this is not surprising, as the decision making is generally characterized by a lack of open discussion. The decision making process in Kyrgyzstan is interesting, however. It is frapping that the Parliament, usually not visible as a key actor, evolved on stage: It was the Parliament that resisted introduction of water fees, first in the Law on Water, where agriculture was excluded, and then as it refused to determine and later raise the amount of ISF. Here, we could see an exception to the otherwise observable institutions of decision making with a non prominent role of the Parliament. The reason for its resistance to the ISF is generally not attributed to programmatic considerations but rather to the Parliamentarians' commitments to their voters, which have to pay the ISF. In contrast to Tajikistan, the institutions of the decision making process allow veto playing and a political debate. However, this role of the Parliament for setting the level of the ISF was expelled in the new Water Code of 2005.

The institutional conditions of the agricultural sector are the main variable influencing the implementation of ISF reform. Both countries conducted a land reform in the 1990s, although with different results: While agriculture in Kyrgyzstan is almost completely privatized, state

production plans in Tajikistan are still in force despite formal privatization. The consequences in both cases are similar, however: general poverty and widespread subsistence production. The agricultural economy is mainly a barter economy with little cash transfer. Those conditions make it difficult to introduce monetary mechanisms like water fees. In both countries farmers possess neither the necessary means nor the necessary knowledge for lucrative agriculture. Interviewed officials showed an understanding of the situation of the farmers and know about the limits to collect fees or sanction all those that cannot pay. *RaiVodKhozhes* and WUAs usually do not sanction non payment despite it being against their self interest. It shows that water fees are obviously not perceived as legitimate rules even by those that should enforce them.

Another consequence of the agricultural barter economy is that it is 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. 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 lack the proficiency needed to make it sustainable. Under those conditions, despite ISFs irrigation systems continue to deteriorate, leading to constant water loss (which also has to be covered by the ISF) and unreliable water delivery. Hence ISF do not provide any short term, visible benefit for farmers. Additionally, one could even ask whether any rational farmer will pay ISFs. 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. So, non payment is hardly followed by any sanctions. And payment does not necessarily lead to the benefit of guaranteed and timely water delivery. The puzzle to be explained seems under this perspective less why users do not pay fees, but why users do pay fees.

Local governance institutions also play a role, as they present an institutional logic that can come into conflict with rule implementation and might be assessed higher. An argument often brought in favor for ISF is that they would not only promote efficiency, but also equity. It is well known that current institutional arrangements without ISF in general privilege large, influential water user while small water users are disadvantaged. However, just introducing ISF does not mean that everybody who pays will receive water. While in theory water fees should lead to a water right and guaranteed water delivery, in practice reliance on patronage is still more to ensure water delivery. While payment may or may not result in water, patronage relations will result in water. To ensure timely and sufficient water supply to his field, the most rational behavior for a farmer is, hence, to invest in patronage and not in fees. Patronage ensured already during land reform the allocation of the plots located near and upstream the channel and ensures the non sanctioning of an authorized water withdrawal. To explain why farmers do pay ISF, it seems more valuable to refer not to incentives but to patronage: When benefits are no incentive to pay ISF, then payment can only be explained with the authority of the one who demands payment. WUA chairs and directors, often former cadres of the FSK, have the authority to enforce payment. In doing so, ISF becomes part of the unequal patronage relations instead of a sign of the right to water, as it is often celebrated in theory.

In addition, water institutional linkages play a role. The governments in both countries did not take any steps to provide the necessary capacities for the water administration (e.g., technical facilities or additional staff to collect the fees). In most places, it is currently impossible to measure the water amounts delivered to individual farmers due to widely non existing measuring facilities at the former on farm channels of the state and collective farms, some times not even to the area of an entire WUA. In most places, currently only a quasi volumetric

charging is applied, with fees based on estimations built on the area of land and crop cultivated (DFID and Mott MacDonald 2003: 11–21; Hassan et al. 2003: 10).

But not only capacities, also a lack of transparency and accountability in water administration in both states play a role. The farmers often do not know why they have to pay for some thing they did not have to pay for before, which costs have to be covered, and how they benefit from it. This – rather than the often claimed ‘Soviet mentality’ or religious values – leads to unwillingness to pay on part of the water users. It is often the result of a lack of transparency why and for what they have to pay, and in a lack of accountability of the water administration towards the farmers; hence, a guarantee that payment leads to timely and sufficient water delivery. Often, local water agencies still have difficulties with their new role of being accountable not upwards but to the users. On the other side, water users are also not used to claiming their rights. This is reinforced by inter-institutional discrepancy between water policy (in this case ISF) and water law: a codified water right does not exist in Tajikistan and was established in Kyrgyzstan only in 2005.

These findings in Kyrgyzstan and Tajikistan correspond to other experiences. The theory of water pricing widely failed in practice (Azevedo, Baltar 2005; Hellegers, Perry 2006; Meinen Dick et al. 1997: 13). Indeed, when accountability is not ensured, ISF reforms face resistance from two sides: from large and powerful water users who gain from the current situation and therefore have no interest in any change, and from the small water users who are “undoubtedly reluctant to support a change which brings the certainty of higher cash payments combined with less certain promises of better services and higher incomes” (Azevedo, Baltar 2005: 24). Azevedo and Baltar (2005: 26) conclude:

“It is now known that the international water community as a whole may have underestimated the challenges and the complexity of implementing such [water pricing] reforms especially under the vast variety of physical, climatic, historic, legal, cultural, institutional, etc., conditions around the world”.

In a similar vein, Hellegers and Perry (2006: 83) state: “This socio-political problem [of the economic burden of water fees for farmers], plus the technical and administrative complexity of measuring and accounting for water, make pricing an unsuitable approach to balancing supply and demand.”

Hence, economic mechanisms are far from leading ‘automatically’ to more efficiency in water usage. 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 institutionally and economically necessary conditions are not in place, water fees cannot be an adequate tool for more efficient water usage.

8.4 Restructuring Administration: from Administrative and Hierarchical to Hydrographic and Inter-Sectoral Principles

During Soviet rule, water was managed in a hierarchical state command system without user participation. Withdrawal quotas were decided on at the central level according to the interests and needs of the USSR as a whole. Horizontal coordination of different sectors at the level of the republican ministries was virtually absent. While at the regional level water was managed in an integrated manner on basin principle, at the level of the individual republics, the organization of water administration followed administrative principles. After independence, these

administrative principles were even reinforced with the new nation states claiming sovereignty on their respective water resources and abandoning the joint water energy system of the Aral Sea basin.

Both countries introduced new management principles in their reformed Water Codes: Both formulated a commitment to a management oriented at hydrographic boundaries, which meant a restructuring of the current water administration. In Kyrgyzstan, the need for better inter sectoral coordination was acknowledged and addressed as policy fragmentation is considered one of the major obstacles for sound water governance. However, despite an apparent consensus on the necessity of such an approach, efforts to overcome fragmentation were not successful thus far. The reorganization along hydrographic boundaries in Kyrgyzstan is merely cosmetic: while the name of the *ObVodKhoz* changed, the structure remained. In Tajikistan, implementation measures have not yet been started at all. In both countries, the organizational structures as inherited by the Soviet Union basically prolonged. Hydrographic management principles however do not only concern river basins but small scale canal systems as well: WUAs should ideally also be established along hydrographic boundaries. As was shown, this is apart from those cases where administrative and hydrographic boundaries coincide hardly the case. Water user associations are not a reversal from the administrative approach; they are rather a supplement to the water bureaucracy, added at the lowest level.

As for the impact of the decision making process, it again can be said much more for Kyrgyzstan than for Tajikistan. For Kyrgyzstan, it was shown that the resistance to the new Water Code and also, therefore, the necessary longer development time was rooted in its new regulations on the administrative structures. Agencies fear losses of competencies and subsequently budget allocations and because of this block all reforms that threat their status quo. This is connected with their insecure situation and their inability to reach financial stability by other means, as Dethier (2003: 13) describes as general for administrative units in the CIS: "There are often no effective mechanisms to force recognition at the political level of the resource limits that exist and to force political choices in establishing expenditure priorities." Consequently, resistance to reform seems the only option to ensure finance. While public choice theorists point to the fact that self interest is always one motivation guiding bureaucrats (Araral 2005: 140), in neopatrimonial regimes it is their main interest. Posts are usually seen as a source of revenue generation for the incumbent rather than as a duty for public service. This influences the public administration as collective actor (in preserving its interests in decision making) as well as the individuals in concrete job performance.

Under the insecure conditions of the transformation period, these interests count even more. Since independence, the water administration has been threatened by a massive curtailing of their allotted means as well as by demands of donors to reduce staff and organizations. Agencies in both countries suffered from a weakening of their position, and not only financially: In Kyrgyzstan, the *MinVodKhoz* was dissolved and integrated into the Agricultural Ministry. Hence, most resistance to administrative reform comes from the administration itself and less from the exogenous factors.

However, local institutions also play a role in the transition to hydrographic management principles, as envisaged by the WUAs. WUAs are generally not established along hydrographic boundaries. Experts suggest that the administrative mode of management supports nepotism and inequity in the water sector as the *RaiVodKhoz* are close to the *raion* administration and provincial governors who interfere in the its performance. A pure hydrographic organization would be less affiliated to local authorities, more independent from the administrative layers,

and could protect water users' interests more easily.²⁹⁸ This may be exactly the reason for resistance to reform. On the other hand, the empowerment idea of WUAs is easier to achieve in established communities as people would prefer to organize in familiar structures than with 'strangers'. In this respect a trade off can obviously occur on local level between hydrographic principle and empowerment of stakeholders for participation.

8.5 Establishing Democratic Mechanisms: from State-Command System to User Participation

The last focus under which both countries are compared is the democratization of water governance: the involvement of stakeholders and the decentralization of decision making and implementation competencies to water user associations (WUAs). A fundamental observation is that participation of non state stakeholders in both countries is more often than not restricted to implementation of policy objectives. Participation of civil society actors in decision making, on the definition of general policy goals, hardly occurs. These are already defined by the government, the donors, and some few other actors that can influence decision making. Therefore, to assess participation local governance institutions are the main explanatory variable, since participation, as fostered by reform policies and projects, is mainly restricted to the local level. In this subsection, the focus is on the democracy aspect of the WUA reform.

A precondition of active stakeholder participation is the empowerment of water users to make them able to effectively claim their interests. This task ultimately tackles the question of whether democratic sector reform is possible in a non or partly democratic environment. Thus, can democratic politics be achieved without a democratic polity? Likewise with other laws, the WUA reforms also provide formally democratic mechanisms. The way they are realized, however, mirror the general politics: formal democratic mechanisms are introduced but undermined by informal patrimonial practices.

The decision making process on WUA reform is similar in both countries: it can be stated that implementation started long before the actual decision making. In both countries, reforms were initially based only on a government decree and are virtually exclusively implemented by donors. The lack of a legal foundation for WUAs in their first years was an inter institutional obstacle for reform. Donors obviously wanted to quickly put through their policy objectives because they needed WUAs as counterparts for their rehabilitation projects. But the water law component could not be changed as fast as the policy component. Subsequently, many WUAs suffered from legal ambiguities. Only after the difficulties due to legal inconsistencies and gaps became obvious, the law making process began. Unsurprisingly, and not very different from the other reforms, donors were also actively involved in the drafting of the respective WUA laws.

WUAs do not act as independent organizations, neither toward the local water agencies, nor toward other local governance organizations. In general, WUAs are not established independently from these, but rather dominated by them. These governance structures are formally the local government, but this is in both countries a newly introduced institution. Therefore, the key actors of the former *sovkeboz/kolkhoz* and its various follow up organizations are still major players. Additionally, (informal) local governance structures outlived the Soviet era and gained importance during the unstable transition period. These are the court of elders (*sud*

²⁹⁸ Author's interview with a university professor, Bishkek, 10/01/2003.

aksakalov) in Kyrgyzstan, in Tajikistan the *maballa* committee and the village assembly. The positions in WUAs are usually staffed with the main village actors 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 *kolleboz* or *sovkeboz* is the chairman of the WUA.

There is low awareness and use of participation mechanisms among water users. In the Kyrgyz case study, the farmers at least knew about WUA, while many farmers in Tajikistan were not even aware that they are WUA members 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 and a clear understanding of the role of the WUA. This observation was also made by a comparative study on WUAs in Kyrgyzstan, Nepal and India (DFID, Mott MacDonald 2005: S 2). This is a result 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 expect them to spread the information further to the farmers. Long term community awareness raising programs in advance hardly exist. However, it also has to be mentioned that in Kyrgyzstan awareness was higher than in Tajikistan, where local governance institutions are informally closely interwoven with the FSK structures and farmers are highly dependent on them.

So, while in theory WUAs are meant to be established independently from the official administrative structures of the village and to involve all water users, in practice they mirror the existing power structures. The fact that patrons and elders are heading local WUAs is questionable from a democratic viewpoint. However, that does not have to be counterproductive for water management. First, people tend to rather accept the advice of elders than of outside experts. It also can be argued that powerful actors have to be involved in the council as they have the authority to convince people on new rules. It might be even exactly the informal power structures that make WIR work. Second, the leading persons in a village are the former leaders of the FSK – be it the director, the brigadier, or the leading agronomist. They know the fields and the irrigation system very well. Therefore, it might be wise to include those who have the status to educate people and convince them. Hence, there is a possible trade off between empowerment and effectiveness objectives: Increased empowerment of water users may reduce the implementation of WIR while reliance on an empowered farmers and established power relations can enforce it in certain respects.

However, regardless whether participation is an end in itself (as it is in WUAs established in community development projects), or whether it is only a means for water management (in top down established WUAs), both approaches fall short in achieving real empowerment of farmers. Reasons are on the one hand the project logic: Predefined and measurable outcomes have to be achieved in a narrow defined timeframe. On the other hand it is a consequence of the context in which the WUA is established. The local 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 (factual or imagined) kinship ties. The *sovkebozes* and *kollebozes* replaced the former kinship based organization in many places 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 modes of distribution of resources remained. Little knowledge and awareness of the 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. This is thus a result of the way the reform is implemented as well as of the local political culture.

This tendency is similar with the meso level of water administration. The reform would have needed to change the hierarchical internal culture of water administration and train them how to deal with WUAs as independent organizations. In Kyrgyzstan, the WUA reform involves WUA support departments for this task; in Tajikistan, the reform occurs without addressing the water administration directly. This leads to serious intra institutional incoherencies within the water administrative component. The inherited internal institutional structures shape in both countries the way local water agencies interact with WUAs: They are mainly perceived as subordinated and not as independent organizations. The technical aspects, like their responsibilities for fee collection and O&M, are stressed while the empowerment aspects get minor attention. The fact that WUAs are seen as ‘assistants’ to the state agencies without real empowerment was also observed by Araral (2005: 147) in the Philippines: “In short, IAs [Irrigation Associations] were a cost saving measure for NIA [National Irrigation Agency] more so than institutions for developing authority and ownership.” The consequences of the patron client relationship between the Irrigation Associations and the state agencies are financial dependency on the state, insufficient means for O&M, and no governing capacities. These characteristics also apply to our cases, especially to Kyrgyzstan, where many WUAs are indebted to the state agencies due to non paid fees.²⁹⁹

Under these conditions, independence of WUAs is hardly achieved, especially when connected to a lack of process related and legal knowledge on side of WUA representatives. The observations at the WUA support department in Kyrgyzstan showed the dependency of WUA representatives on the knowledge of procedures that the support department has. This is also a reason why WUAs at least in the beginning are also dependent on the support departments or on the donors that establish them and help them with all the formal requirements. Thus, finance and knowledge are key aspects of WUA independence.

8.6 Reflections on Institutional Change

The preceding chapters showed how the neopatrimonial context influences the politics of water institutional reform. This chapter will address the research question formulated in the beginning of this thesis: Can Water Institutional Reforms be effective in achieving good water governance in a neopatrimonial institutional context? Are they able to introduce democratic governance mechanism? Or are they undermined by the patrimonial informal ones? In order to address this question, this chapter will refer to the theoretical concepts of institutional change. At the beginning of this thesis, several assumptions on institutional change and persistence were formulated, based on historical and sociological new institutionalism. Factors of path dependence could lead to persistence of old water institutional patterns and reform failure. On the other hand, the political, economic, and societal change with the break down of the Soviet Union could have provided a critical juncture with the potential of a path change in water governance. Or, old and new elements could get combined and re interpreted in a process of institutional bricolage. With the comparison of the two countries, it is possible to make inferences: Are the shared historical legacies in both countries so strong that they lead to path

²⁹⁹ For Tajikistan, no data on this were available. It can be assumed that the situation will develop in a similar vein once WUAs are established on a large scale.

dependency, and hence, to similar reform results? Or is the bigger critical juncture in Kyrgyzstan with more formal democratization, decentralization, economic liberalization enabling a path change, which may be not possible in Tajikistan?

Historical legacies are still shaping water institutions. In the first years, water laws continued Soviet regulations. The water administration is still characterized by a strong hierarchical culture, strong fragmentation, lack of horizontal coordination, and no experience in own policy formulation—legacies from the Soviet Union. The immediate context with reorganization of administrative structures, constant curtailing of financial allocations, and donor pressure to reduce state expenses fosters the predominance of organizational self interest in the preservation of the status quo. These aspects are similar in both countries. In Kyrgyzstan, these old administrative patterns are stronger threatened by reforms, what consequently also led to more resistance.

However, despite the interest in preventing change, many reforms have been decided on. Laws have been changed and new policies formulated, which overcome Soviet water governance patterns. If one were to only look at the formal aspects, like laws and decrees issued, it could be concluded that a path change took place in both countries and that one institutional arrangement was substituted by another. On a formal level, new institutions have been established: laws have been approved, WUAs have been registered, and fees have been introduced, etc. However, these policy decisions are either not at all, only partly, or only on paper implemented.

In practice, new institutions are transformed according to the existing institutional logics. The economic aspect to introduce ISF is not implemented because the de-capitalized agrarian sector does not provide the necessary economic and institutional preconditions. Additionally, 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, this is not fulfilled. The administrative aspect of arranging water management along hydrographic boundaries and enhancing intersectoral coordination is contested by the administration itself. Here as well, formal decisions have been taken without working in practice.

Does this mean that formal changes do not have any meaning at all and are undermined in both states similarly by informal patrimonial practices? That is also not the case. The detailed look shows differences between the two countries. To grasp these differences and developments, the concept of institutional bricolage is more appropriate than the other two mentioned as it allows tracing back continuities as well as changes and the interaction of both. Based on this, the strategic options these interactions and co-existences offer for the actors can be assessed. Institutional reform in water governance is rather a complex process of institutional bricolage than the simple displacement of institutions like it would seem if we look only at the formal aspects. Actors in decision making as well as in implementation influence the outcome of reform through their selective adoption of certain rules which seem appropriate or instrumental (as water fees or transfer of responsibilities), but do neglect others that do not seem appropriate to existing logics (as democratic participation). Through bricolage, different logics are mixed: Fees are paid, but not because the logic of market economy, but because the patron (e.g., the *rais* or an *aksakal*) 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 before to the village elite. And the acceptance of WUA rests on a respected villager being its head.

The relationship of institutions and power is not only manifested in power seeking actors that shape institutions in pursuit of their own interests, but also in the population that expects certain power structures and, hence, in the institutional environment and its logics. “The legitimacy of power derives from the groups’ political culture – that is, the people’s expectations about the nature of power and how it should be attained.” (Lewellen 2003: 92). This is one aspect that also has to be considered. The respective legitimacy of power affects institutions: New institutions have to be correspondent to it or they will be transformed in a way that they correspond.

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 as rules demanded by donors) institutions. This process of bricolage also shows the complementarity of different approaches of new institutionalism in explaining institutional change as incentives (access to financial and technical resources of donors, enhancing of power position as broker) as well as appropriateness (existing informal institutions) and path dependencies (administrative culture) play a role for 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 (and may be actively enforced by some actors), though there is also some space for actors who want to modify the existing institutions. The size of this space depends on the degree of juncture in the country. In Kyrgyzstan, the formal democratic structure is despite the backlash still stronger than in Tajikistan. It accomplishes the patrimonial dimension and thereby constrains – though not rules out – the impact of the patrimonial elements.

Consequently, while there are many similarities between both countries, it can be concluded that the institutional corridor is broader in Kyrgyzstan than in Tajikistan. In close and overlapping institutional settings such as agriculture and local governance reforms were conducted, which broaden the options and strategies for actors beside the patrimonial ones – the juncture of the regime collapse developed to a more critical one than in Tajikistan. There, land and decentralization reforms stayed merely cosmetic and many old structures remained unchanged; hence, the elements of which actors can *bricoler*, which they can combine and interpret, are much more restricted. If these simultaneous reforms continue in Kyrgyzstan, there is a chance for a gradual path modification. However, to be successful, the design of water institutional reforms has to acknowledge the setting of reforms and the various logics and levels involved in water governance. The next and last chapter will therefore present some inferences that can be drawn from the analysis for the design of reform policies.

8.7 General Inferences and Strategies for Water Institutional Reform

This study examined the politics of water institutional reform in two countries with their specific setting. The aim of the last chapter is to broaden the scope and ask which inferences can be drawn for other countries, and to discuss some practical implications of the insights gained.

Can the findings of this study be generalized for other countries – for other Central Asian countries, for other neopatrimonial states, or even for all water institutional reforms? This research was carried out in two countries without physical water scarcity in order to exclude

physical reasons for problems of water distribution and usage and highlight the role of institutions. It might be argued that this constrains the explanatory power of the results as the problems might be simply not pressing enough and reforms would be better carried out if they were of greater necessity. In this respect it has to be said that, first, it was shown that water problems are perceived as serious and as a political priority issue in both countries. Second, one can take a comparative look at an area affected by scarcity of water in the same region. This study showed that even under rather favorable water conditions, reforms face resistance. The studies of Wegerich (2005, 2006, 2006a, 2008) and Veldwisch (2007) on local and meso level water institutional reform in Khorezm, Uzbekistan (a water scarce region at downstream Amu Darya) show that many similar problems occur: the constraining impact of a state dominated agricultural economy, patronage, the resistance to hydrographic boundaries, and undermining informal arrangements. Their results indicate that patrimonial influences are even stronger in subverting formal rules when water is scarcer. Also for other neopatrimonial states, it can be concluded that the independent variables as well as the dependent one will be characterized by a similar balancing act between formal and informal institutions, and by patrimonial elements that are in conflict with formal good water governance mechanisms. The impact of the interfering variable – donor policies – affects all countries dependent on foreign aid.

The validity of the four variables in shaping the politics of water institutional reform can be also assumed for water institutional reforms in general. The stringent comparative design was chosen in order to allow for bounded generalizations. This is not to say that the impact of the variables is the same, but that these are the factors that have to be studied and that – according to their content – can exert a supportive or obstructive effect. They present the set of institutions from which actors choose elements and which constrain actors in their behavior as they are – beyond water institutions as such – part of the institutional environment and hence the wider water governance structure. While the objective of this study was – as a first step – to identify the variables of water institutional reform, systematic comparative research on these factors would allow differentiating distinct parameter values and weighting the variables according to their respective significance for reform success or failure.

How should reforms be designed and implemented in order to avoid obstacles? It should be clear that there cannot be a one size fits all recommendation or blueprint on how to bring WIR to success. When the concrete institutional arrangements are of utmost importance, as was shown for the two case studies, in any other case the setting might be dissimilar and may require a different approach. Nevertheless, we would like to point to five aspects, which as results of the analysis are considered important for WIR.

Sound Sequencing of Reforms

The first point is the question of sequencing of reforms. The analysis of both states showed how reforms already conducted or not yet conducted in related sectors can have positive or negative impacts on water institutional reform. This affects especially reforms in the agricultural sector, but also reforms addressing decentralization and local government structures. As we have seen, the land reforms conducted were a major incentive for reform of local irrigation management in Kyrgyzstan. However, establishment of new cooperatives not based on hydrographic principles proved to be an obstacle for hydrographic water management afterwards. In Tajikistan, the de facto non realization of land reform hindered the introduction of new water governance approaches. The lack of a real market economy in both countries' agricultural sectors prevented the conditions necessary to successfully introduce market mechanisms. The need for an integration of land and water governance is obvious and was acknowledged by experts in both countries, but is not followed in practice. This is not specific for the two coun

tries studied; throughout the world knowledge on this linkage and practice in coordination remains weak (UNESCO 2006: 54f). Therefore, a consequence for future water institutional reforms is that the links between water and land as well as between all sectors affected should be studied in detail and reforms aligned. It is of crucial importance to define preconditions necessary for water institutional reforms and then develop a schedule of which reforms have to happen first. Sound sequencing of reforms requires not only the coordination between the sectors but also between all donors active in the country. This is certainly a challenging task. It means that conflicting interests have to be discussed and solved before single reforms can begin. That will make the decision making process considerably longer. But it can prevent counterfactual effects and ease implementation afterwards.

Avoiding the Marginalization of the Meso Level

The analysis of water institutional reforms revealed how processes in both countries face obstacles due to inter- and intra-institutional incoherencies within water institutions. These are rooted in different time horizons of change, but also in one-sided reform activities. It was shown that the meso level of water administration especially is not sufficiently addressed, although it is crucial for the implementation of reforms. It appeared rather passive and marginalized in decision making, resulting in a lack of information on, ownership of, and commitment to reforms. This is aggravated by its precarious situation at the level of the individual employees as well as of the organization in general. In practice, the meso level is marginalized in politics, by the central level as well as by the donors. Despite the rhetoric change in donor discourses that stresses the need of strengthening of water governance capacities, it is not necessarily followed by a change in practice. It was already mentioned that budget allocation to water projects do not get priority, and most of the money is still spent on infrastructure (see ch. 1). As a consequence, in both cases the meso level appeared as an obstacle to reform rather than a guarantee for its proper implementation.

Hence, the inclusion of the meso level in decision making and in projects is an essential precondition in order to encourage implementation and to achieve compliance to reform. Capacity building programs and trainings on rights and responsibilities should not only address WUA staff and members, but also the officials of the state water bureaucracy. In Kyrgyzstan, the administration is involved in reforms at least with the WUA support structure, but in Tajikistan merely. The strong presidential apparatus may not mislead to the imagination that these states would be strong. Tajikistan is a fragile state and also Kyrgyzstan is rather “under governed” (Starr 2006:14f). Under such circumstances, the neglecting of state structures as those that have to be the ones that enable institutionalization and formalization of new forms of behavior might have fatal effects.

CBOs and NGOs receiving donors’ aid feel generally accountable to their financier and not to the population. While the same might be said of state administration, the latter is at least de jure accountable to the population. It might be more wise to pressure for its de facto accountability and transparency than to replace them by CSOs and outsource responsibilities; hence, accepting undemocratic structures as a given. In this respect, Dinar (1998: 371) noted on decentralization of irrigation services:

“What is important is not so much who does what but that there are clear lines of authority and accountability, where every right, task and responsibility (from water rights to service definition and authorization to delivery, payment and regulation) is assigned to someone and agreed to and understood by all.”

Here lies also the problem in the two case studies. Transparency is a basic precondition for water institutional reforms and it is the water administration that has to coordinate and provide

information, even if certain tasks are overtaken by NGOs. Consequently, at least as a coordinating agency the meso level has to be strengthened.

Paying Attention to the Complexity of Informal Institutions

The crucial role of informal institutions became obvious in various aspects of WIR. Different informal institutions however also have different effects; it cannot be said that informal institutions impede reforms or provide a more suitable governance mechanism per se. Sometimes, they tend to undermine reforms and hence political actors should try to overcome them. In other instances, it seems crucial to adapt to informal institutions in order to get people to accept reforms. Sometimes informal institutions replace non functioning formal ones. Also, informal institutions can be in line with the normative goals of good water governance and should be promoted. Thus, there cannot be a general recommendation on how to deal with informal institutions. It is exactly their complexity and different impacts that have to be acknowledged and incorporated when planning and conducting WIR. Often, this complexity is underestimated. Similar to the findings of this study, the aforementioned study by DFID and Mott MacDonald (2005) on WUAs in Kyrgyzstan, Nepal, and India noted as reasons for the domination of WUAs by elites and the lack of embeddedness in the community under mere the external promotion without considerable acknowledgement of the local social and political context and power relations. Thus, in every case where water institutional reforms are planned, the specific context of water governance has to be studied before reforms are started.

In a review of WUA evaluations, Meinzen Dick et al. (1997: 28) concluded that “WUAs that are adapted to local conditions will be more effective and sustainable than those that follow a single blueprint design.” This is an insight that seems to be followed by those WUAs developed in community development projects, involving informal local institutions such as elders and *hasbar*. Although the community oriented programs strive to integrate local institutions and adapt to local society and culture, in fact this happens only partially and instrumentally. The role of the local institutions is limited by the decision to establish new structures instead of incorporating water management into existing ones, e.g. by broadening the responsibility of the *maballa* committee. This was recommended by a local NGO in Tajikistan, as this would be suitable for the complex character of local water management and ease acceptance by the population. The task of irrigation reform would then be to strengthen the capacities and democratic features of existing institutions. On the global scale, there are different examples of how the domination of WUAs by local elites has been tried to prevent using mechanism that ensure the inclusion representatives of marginalized groups such as women, small farmers, tenant farmers, or tail enders (Meinzen Dick et al. 1997: 29f; UNDP 2006: 19).

Galvan (2002: 3), based on his experience in the African context, also stresses the fact that institutionalization efforts should not concentrate on the CBO and its leaders, as they are inevitably short term, but rather address socio cultural rules of participation and representation in order to establish an institutional environment that would enable the regular emergence of local organizations in a community. Hence, the strategy for addressing local institutions should be similar to that concerning the meso level of water administration: in the light of democratic shortcomings of existing structures, the strategy should not be to establish new ones (which then work similarly because the informal patterns persist), but to address and transform existing ones – certainly a considerably more ambitious and longer task than the timeframes of donor projects and election periods seem to allow.

When adopting a broad water governance perspective, religion and religious authorities should be included in analysis and integrated in reform activities. In both countries religious life was restricted during Soviet time. In general, religious authorities today are not involved in

the regulation of land or water (Giovarelli, Akmatova 2002: 14f). Still, the status of water in Islam and Islamic law is an important aspect, which shaped and still shapes common attitudes towards water usage. Religious arguments are sometimes used to oppose water fees. However, as the fees are not for water as a resource, but to cover the costs of infrastructure and services necessary for water delivery, they are not in conflict with Islamic principles.³⁰⁰ It would be necessary to inform farmers exactly about the purpose of the fees. Due to the discussion on water fees, Islam is often perceived as an obstacle to rational water management. The potential of Islam in water management is in contrast largely neglected. The Quran as well as the *hadith*³⁰¹ make explicit statements on the duty to use water economically, equitably, with consultation of all stakeholders, and with respect to the environment (Faruqui 2001). However, religious institutions in Central Asia are rarely involved in awareness campaigns in water projects.³⁰² Certainly, their influence is restricted, but in rural areas imams are persons of authority and their potential positive role should not be wasted. In a community level project in Pakistan, complaints about water shortage due to illegal pumps reduced by 26% after a local group included the imam in its campaign (Shah et al. 2001). Despite the lesser importance of religion, there is also the potential to use its influence for more rational water usage and awareness in Kyrgyzstan and Tajikistan. A survey on reasons for water conservation in the Syr Darya basin e.g. found out that financial incentives only count for 20% of the respondents, while 30% mentioned moral and religious motives (Abdullaev 2005: 7).

When acknowledging the complexity of the respective institutional setting of water reforms, it is clear that global blueprint concepts as such of WUAs, volumetric ISF, or quasi apolitical hydrographical management principles cannot work and cannot be transferred without modification. Rather, specific, case sensitive institutional designs of water institutions have to be developed.

Avoiding a Dogmatic ISF Approach

Water fees often are considered a magic bullet in order to reduce wasteful water use, induce rational and responsible usage, and reach cost recovery. On the other hand, there is a wide international debate on the economic as well as social sense of such water fees, especially from a poverty perspective, and on the general question of whether water is an economic good or a human right. Beyond these normative (and sometimes ideological) considerations, worldwide experience to date has shown that ISF reforms are hardly successfully implemented anywhere (Azevedo, Baltar 2005: 28). Hence, regardless of how one might assess ISFs theoretically, in practice they have proved to be an infeasible tool to reach the objectives of economic efficiency and cost recovery. Still they are proposed worldwide.

As we saw, ISFs are not implemented in Kyrgyzstan and Tajikistan due to technical reasons (no volumetric measurement facilities), economic reasons (poverty), incentive reasons (no perceived benefits), and awareness reasons (no explanation). In addition, many farmers simply lack the agricultural knowledge on how much water is needed for specific crops. Often this results in as much irrigation as possible. In this case, training would there be a more appropriate measure than ISF.

Even if more awareness raising and training activities were conducted and farmers were convinced of the need to pay ISF and those responsible for water allocation were to sanction

³⁰⁰ Even Saudi-Arabia and Iran, which base their laws on the *sharia*, introduced water tariffs (Faruqui 2001: 13).

³⁰¹ *Hadith* are the written collections of the words and deeds of Prophet Mohammed.

³⁰² One staff member of Mercy Corps in Tajikistan developed a project proposal on cooperation with and training of imams for water awareness campaigns, which, however, was not realized (Mercy Corps n.d., author's interview with a representative, Khudjand, 10/03/2005).

non payment, the economic and technical obstacles would persist. As long as these basic conditions for reasonable ISF are not met it might be wise to turn away from a dogmatic approach towards water payment. Though the long term goal can be an ISF according to used water, for a transition period payment per crop and ha could be a better solution. This practice is used widespread around the world as it is easier and less cost intensive to implement than a volumetric system and, therefore, often more efficient as well (Johansson et al. 2002: 185f). It would reduce costs of measurement technique, *mirabs*, etc. When WUAs got stronger, farmers better trained, and the economic and technical situation better after a number of years, one could switch to payment per cubic meter. There is also the option of combining both ways, a basic charge per ha combined with a volumetric fee. Alymbeava (2004: 20) proposes that a volumetric charge to the *RaiVodKhoz* should be combined with a fix O&M fee to the WUA. This would also make financial planning for WUAs more reliable: The pure volumetric payment means that in years with much precipitation (i.e. when farmers use less water) the WUA would not receive the expected income and could not pay salaries or credit rates (DFID, Mott MacDonald 2003: 11 21). This aspect points to another pitfall in the ISF efficiency link: volumetric water charges may, on the one hand, decrease demand; on the other hand, they may increase supply: As the financial survival of the water distributing agency or WUA depends on fees, it has an interest in encouraging water use (Hellegers, Perry 2006: 81).

Given these experiences, it is increasingly acknowledged that the respective context – the institutional conditions, the political will, and the interests of different stakeholders – determine success or failure of ISF reforms and that blueprint reform processes developed externally without national ownership and without acknowledging special conditions will not promise to meet their objectives (see e.g. Azevedo, Baltar 2005). This insight has to be transferred into practice.

Adopting a Long Term Perspective

One main challenge of water institutional reforms is that their benefits are long term and/or intangible: ownership, reduced conflict potential, transparency of water distribution, reliable water service, and accountability are not readily visible and difficult to communicate. Yet, national decision makers as well as international donors usually have a short term perspective; results have to be achieved before the next election or project evaluation respectively. Therefore, short term incentives are set, e.g. grants for rehabilitation, in order to achieve commitment to WUA or ISF reforms. The support provided by donor projects also aims for the establishing of formal structures and capacity building for the holders of functions (seminars), rather than for broad community awareness, and accountability and transparency of office holders to the WUA members. In addition, incentives alone can also have conversel effects. For instance, it may be an incentive for water administration and FSK to free themselves of responsibility for run down irrigation infrastructure, it presents no incentive for farmers to care for an irrigation set that is extremely deteriorated and needs a lot of capital investments. Also the need for increasing the ISF due to WUA administrative costs rather works discouraging than stimulating.

The only tangible, short term incentive in WUA reform in particular is the mentioned access to loans and grants, which can also motivate individual farmers. However, when this is the only incentive for WUA establishment, the interest is to set it up quickly and not to change attitudes of water users. This fits with interest of the programs to set up as much WUAs as possible. This can have negative impacts on the sustainability (long term durability) of WUAs: Farmers have to see a value in participating and engaging in the WUA also after the completion of rehabilitation. Otherwise, the fate of the Central Asian WUAs could be similar to

those in Pakistan: there, out of 17,000 WUAs registered, only a few continued to exist after water course lining, the initial incentive to create a WUA, was completed (Meinzen Dick et al. 1997: 44). There are some projects that successfully tried to integrate local knowledge and not only allow participation with the outcome already defined, e.g. the projects of *dom vody* in Tajikistan. Due to these circumstances, raising awareness turns out to be crucial, because only then water user will be informed about and can appreciate the long term, intangible positive effects of WIRs.

This study highlighted among others the role informal institutions play in water governance. This became not only evident at the local level, but also within the water administration, where informal rules and patterns of behavior proved to be strong in their persistence. Reforms to change governance modes have to change informal institutions. A reform focus on formal institutional change alone is therefore doomed to fail from the beginning. Water governance is nested into certain cultural norms of behavior, which limit the compliance to rules if they are not perceived as legitimate. When an institutional reform of water governance acknowledges the fact that informal institutions play a role, it must develop adequate strategies to change them. However, informal institutions cannot be changed by authoritative decision, but rather only by social dynamics themselves. Therefore, again change can not be induced by short term incentives alone, but only by long term efforts to change perception patterns and normative attitudes.

Though many donors acknowledge the importance of raising awareness and a change of attitude as a basic prerequisite for sustainability, these components in general do not receive the attention they need. The aforementioned donor demand for some kind of community contribution in WUA rehabilitation projects is the typical means to ensure identification of the local population with the project and in this way to ensure its sustainability. This approach reflects a learning process after the general failing of donors' 'gifts' to communities that do not achieve ownership and therefore deteriorate quickly due to a lacking sense of responsibility. But one has to ask whether voluntary work can ensure this. A community contribution does not necessarily reflect the commitment of the community to the project and can be considered insufficient to ensure ownership and sustainability.³⁰³ To achieve real participation, organizing some (or only one) village meetings is not sufficient. Rather, activities to enable people to participate are necessary, for example when a considerable part of the population cannot read and understand the materials and documents provided. It is striking that the time required to raise public awareness is not considered in most projects, although there seems to be a consensus that a change of attitudes concerning water use is crucial.

As stated, a problem is a social construct, it is a reality perceived to be deviant from the ideal. The problem perception forms the starting point of a political process. If there is no problem perceived, there is no political action to be taken. As we have seen, at the local level, elite capture of institutions, lacking participation in decision making, and unequal water distribution are often not perceived as a problem. This, however, forms the basis for change to be fostered by the people themselves and not from the outside. Therefore, a long term perspective including awareness raising activities and not only short term incentives is necessary. Only when water users perceive water problems not merely as a result of technical deficiencies but of governance modes that they are able to change, water institutional reform can become effective.

³⁰³ For a critical discussion of this approach in general see Bliss 2005.

9 Conclusion

“Do not fix the pipes – fix the institutions that fix the pipes”. This quotation was used in the introduction to illustrate the focus on water institutional reforms by international development agencies. This focus is a consequence of the new ‘paradigm’ of water governance, which evolved around 2000. It reflects the insight that water is not only a natural and economic resource that can be managed technically. It is also a social good with various societal, cultural, and symbolic functions and meanings. As such, water is embedded in a setting of interdependent and sometimes conflicting governance structures at multiple levels and in different societal spheres.

The analysis of water governance in Kyrgyzstan and Tajikistan revealed these complex governance institutions. It showed that water institutional reforms are not simply about ‘designing’ or ‘fixing’ institutions, but rather are political processes characterized by conflicting interests, path dependent constraints, impacts of the institutional environment, and actors’ bricolage. This setting shapes the strategies and behavior of actors in the reform process. The study asked how water institutional reform processes are influenced by the political framework conditions. The question came about from the idea that political parameters are paramount if the task is no longer water *management* but water *governance*. This is even more the case as the internationally predefined objective of water institutional reform – good water governance encompasses highly normative perceptions on how politics should look like: participative, sustainable, responsive, and democratic. How can such objectives be achieved in an environment where these principles are not institutionalized?

With Kyrgyzstan and Tajikistan, two neopatrimonial regimes were analyzed in which politics is characterized by formal democratic institutions on the one side and patrimonial informal institutions such as clientelism, autocratic and personalistic leadership, and corruption on the other side. However, they differ within this regime type in the degree of formal democratic elements. Following the break up of the Soviet Union and independence, a civil war broke out in Tajikistan. In Kyrgyzstan, democratic structures were established with broad international support. Later, both systems converged in their authoritarian tendencies. However, these initial years created fundamentals that still impact politics. The question, however, is whether or not the formal democratic features are relevant opposite the patrimonial ones in water institutional reform. As was shown, they are so as they broaden the scope for action.

When becoming independent in 1991, both countries inherited similar water institutions from the Soviet Union: centralized and hierarchical state management, absence of payment mechanisms, wasteful usage patterns. In the subsequent years, both water sectors have been challenged by dramatic financial cut backs and deterioration of the technical infrastructure. Both started similar reforms: The development of a legal framework adequate to market economy; the formulation of a policy strategy that identifies priorities and fundamentals of water policy; the introduction of irrigation service fees; the establishment of water user associations; and partly also administrative restructuring. Thus, formally, new institutional arrangements were introduced in both states. At first glance, it could be assessed as a path change away from unsustainable, uncoordinated, and inefficient water usage. However, the analysis of the implementation processes showed that these reforms have not been successfully and effectively

implemented. In Kyrgyzstan, some even already got stuck in the decision making process. The study identified four variables wherein the impact of the neopatrimonial framework conditions on the water institutional reforms and their outcomes becomes effective:

(1) The *institutions of decision making* shape problem perception, agenda setting, and policy formulation. It was shown that, while broad public participation lacked in both countries, the processes are more democratic in Kyrgyzstan than in Tajikistan. However, due to administrative fragmentation, this also resulted in an inability to come to a compromise on fundamental policy decisions.

(2) The *institutional conditions of the agricultural sector* limit the feasibility of certain reforms as the necessary economic preconditions in both countries are not in place. In addition, informal patronage relations have an undermining effect on reforms that rest on independent farmers such as enhanced stakeholder participation through WUAs. In Tajikistan, where formal land reform and privatization hardly changed the realities, patronage relations remain stronger than in Kyrgyzstan.

(3) The *institutions of local governance* present the environment in which local water management is embedded. Of the informal ones, some are consistent with new water institutions; however, others undermine them. Also here, patrimonial informal rules were more evident in Tajikistan than in Kyrgyzstan, where dependency patterns relaxed through decentralization and privatization of the former state and collective farms. However, formal local government structures there tend to co-opt new water organizations. Local governance and institutions of the agricultural sector are closely interrelated and reinforce each other in their effects on the politics of water institutional reform.

(4) Through *water institutional linkages* within and between water policy, water law, and water administration, the particular institutional elements influence each other during the reform processes. Inconsistencies in reform programs lead to negative impacts, e.g. when new policies are implemented without necessary changes in law. Water administration is not as much an object of reform as law and policy and, consequently, preserves its old patrimonial institutional logic, which presents an obstacle to overall reform in both countries.

In addition to these four variables, an interfering variable was identified: international donor organizations as actors and as rule setters interact with the four variables and in some cases aggravate their aspects. They have a major impact on decision making through direct and indirect conditionalities they set. Furthermore, they tend to foster local patronage systems due to their project design. Especially in Tajikistan, they disregard the water administration in their projects while focusing on a one-sided reform of water policy and law, which leads to inter-institutional discrepancies that present an obstacle to WIR in general.

The process of institutional change, which is formally decided, is in its realization impeded by path dependencies. Power seeking actors try to preserve existing arrangements but also try to use newly established institutions for their interest and thereby re-interpret them. In practice, new and old rules are mixed in a process of institutional bricolage. This means that they do not exist next to each other and actors choose between them, but that they get a new meaning and their logics are interwoven. While the impacts of patrimonialism are similar in both countries, there is also an important difference: The political liberalization in Kyrgyzstan, albeit short in time, enhanced the institutional setting and strengthened the legal rational dimension, so that a broader choice for bricolage is available to social actors and also different incentive sets exist. In contrast, in Tajikistan path dependent factors have more weight in constraining options for institutional change.

This study presented an analytical approach for the study of water institutional reforms based on policy analysis, implementation research, and political anthropology. It used qualitative research and analysis methods instead of statistics or modeling exercises. By this, it is able to avoid a technocratic bias on water governance issues and to capture the politics of reform. As a result, it showed the impact of five variables on water institutional reform processes. Further studies can use this framework to apply it to other countries, reexamine its validity for other contexts, and improve its explanatory power.

To explain the frustrating difference between decision making and implementation and to get further insights on politics, another tool might be discourse analysis. Authors like Allan (1999) and Jägerskog (2002) have pointed to the usefulness of Foucaultian approaches in order to understand water politics and how it is shaped by the discourse. This discourse that restricts national actors might also be one reason why advice by foreign consultants often does not work.

While this study addressed international donor organizations as part of the explanatory set for the outcomes of water institutional reform, their role surely deserves a more in depth analysis. Also donors themselves fall short in translating their rhetoric into practice: Despite the prominence of the water issue, water is far from being a priority on the policy agendas of international donor organizations. On average, donors give 3 billion USD aid and 1.5 billion USD lending each year to the water sector. However, most of this money still is spent on large scale projects in water supply and sanitation. Only about 10% is dedicated to water policy development, planning, and programs (UNESCO 2006: 52). The discursive turn hence has yet to be met by a change in political practices.

A final, yet definitely important point for further research is the concept of good water governance itself. Like the good governance concept, it is, on the one hand, fuzzy and needs concretization. On the other hand, there is a danger that it is used as a label under which market economic and Western models are imposed without consideration of alternatives. It states probably too many objectives, which are difficult to achieve even in a functioning democratic state. As was shown, there can be trade offs between certain elements of good water governance, so priorities should be discussed.

Undoubtedly, the task to put the norms of good water governance into practice is tremendous. This study made a contribution to master this challenge by identifying factors that influence water reform process and therefore should be considered 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 country. It cannot succeed without sound sequencing of reforms, participation of stakeholders, renunciation of rigid adherence to blueprint models, and a long term and comprehensive approach.

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Annex

List of interviews in Kyrgyzstan, sorted by date

11-Sep-03	Senior official of the <i>DepVodKhoz</i> , Bishkek
12-Sep-03	NGO representative, Bishkek
15-Sep-03	Director of the Institute of Water Problems and Hydropower, Kyrgyz Academy of Sciences, Bishkek
15-Sep-03	University professor, Kyrgyz-Slavonic University, Bishkek
16-Sep-03	NGO representative and former senior official of the <i>MECBS</i> , Bishkek
16-Sep-03	Water expert, International Institute of Strategic Studies, Bishkek
17-Sep-03	Senior official, <i>MECBS</i> , Bishkek
17-Sep-03	Project implementation officer, international donor organization, Bishkek
19-Sep-03	Representative of an international donor agency, Bishkek
22-Sep-03	Director of the <i>ObiVodKhoz</i> , Osh
23-Sep-03	WUA director, Aravan district, Osh province
23-Sep-03	Two representatives of a <i>RaiVodKhoz</i> , Osh province
30-Sep-03	WUA chairwoman, Sokuluk district
01-Oct-03	University professor, Agrarian University, Bishkek
14-Oct-03	Representative of an international NGO
13-Sep-04	Director, Institute of Irrigation, Bishkek
13-Sep-04	Researcher, Institute of Irrigation, Bishkek
15-Sep-04	Vice-Director of the <i>DepVodKhoz</i> , Bishkek
15-Sep-04	WUA development specialist, WUA support department at the <i>DepVodKhoz</i> , Bishkek
18-Sep-04	Foreign consultant, Osh
20-Sep-04	Director of a <i>RaiVodKhoz</i> , Issyk-Kul oblast
23-Sep-04	Two WUA development specialists, Chuy province WUA support center and Sokuluk district WUA support center, Bishkek
27-Sep-04	Representative of international NGO, Bishkek
27-Sep-04	Director of the Center for Social Research, Kyrgyz Academy of Sciences, Bishkek
28-Sep-04	Independent water expert, Bishkek
29-Sep-04	Water law attorney, Bishkek
03-May-05	Director of the Institute of Water Problems and Hydropower, Kyrgyz Academy of Sciences, Bishkek (follow-up interview)
04-May-05	WUA development specialist, WUA support center, Sokuluk
10-May-05	Director of <i>RaiVodKhoz</i> , Sokuluk
10-May-05	WUA director, Sokuluk district
10-May-05	WUA director and WUA accountant, Sokuluk district
11-May-05	WUA director, Sokuluk district
12-May-05	WUA director, Sokuluk district
13-May-05	WUA council chairman, Sokuluk district
13-May-05	Head of an <i>aiyl okmotu</i> , Sokuluk district

13-May-05	Director of agricultural cooperative, Sokuluk district
16-May-05	WUA chair, Sokuluk district
16-May-05	WUA director, Sokuluk district
16-May-05	WUA accountant, Sokuluk district
18-May-05	Head of an <i>ajyl okmotu</i> , Sokuluk district
19-May-05	WUA council member, Sokuluk district
19-May-05	Member of a <i>sud aksakalov</i> , Sokuluk district
19-May-05	Director of drinking water organization, Sokuluk district
19-May-05	WUA council member, Sokuluk district
20-May-05	WUA council chair, Sokuluk district (follow-up interview)
23-May-05	Independent water expert, Bishkek (follow-up interview)
24-May-05	Representative of international donor agency, Bishkek
25-May-05	WUA director and WUA chair, Alamedin district, 05/25/2005
26-May-05	Two assistants of Parliamentarian Commission for the agro-industrial complex, Bishkek
03-Nov-05	Vice-Director of the <i>DepVodKhoz</i> , Bishkek (follow-up interview)

List of interviews in Tajikistan, sorted by date

07-Oct-03	Two senior officials, Ministry of Environmental Protection, Dushanbe
08-Oct-03	First vice-minister of Foreign Affairs, Dushanbe
09-Oct-03	Two representatives of the Center for Farm Privatization Support, Dushanbe
09-Oct-03	Vice-minister of Irrigation and Water Management, Dushanbe
10-Oct-03	Senior official at the <i>MinVodKhoz</i> , Dushanbe
13-Oct-03	Senior official of the Center for Farm Privatization Support, Dushanbe
14-Oct-03	Director of local NGO, Dushanbe
14-Oct-03	Representative of an international donor agency, Dushanbe
14-Oct-03	Representative of a WUA support office, RRS
15-Oct-03	Director of the Institute of Water Problems, Tajik Academy of Sciences, Dushanbe
16-Oct-03	WUA director, RRS
21-Oct-03	Representative to the EC-IFAS, Dushanbe
21-Oct-03	Representative of an international donor agency, Dushanbe,
19-Aug-04	Director of the Institute of Water Problems, Tajik Academy of Sciences, Dushanbe (follow-up interview)
20-Aug-04	Senior official at the <i>MinVodKhoz</i> , Dushanbe,
20-Aug-04	Senior official at the <i>MinVodKhoz</i> , Dushanbe,
23-Aug-04	Senior official at the <i>MinVodKhoz</i> , Dushanbe (follow-up interview)
24-Aug-04	Senior official of the Ministry of Energetics, Dushanbe
25-Aug-04	Director of local NGO, Dushanbe (follow-up interview)
26-Aug-04	Senior official of Center for Farm Privatization Support, Dushanbe (follow-up interview)
28-Aug-04	University professor, Agrarian University, Dushanbe
30-Aug-04	Director of the <i>RaiVodKhoz</i> , Aini
01-Sep-04	Senior official at a <i>RaiVodKhoz</i> , Sughd province
01-Sep-04	WUA director, Sughd province
01-Sep-04	Two representatives of a WUA support office, Sughd province

02-Sep-04	Director of the <i>OblVodKhoz</i> , Khudjand
03-Sep-04	Director of a local NGO, Khudjand
07-Sep-04	Director of the Tajik Institute of Hydraulic Engineering and Land Reclamation, Dushanbe
08-Sep-04	Two university professors, Pedagogical University, Dushanbe
27-Sep-05	WUA director, Iskodar
27-Sep-05	WUA development specialist, GAA, Aini
28-Sep-05	WUA development specialist, GAA, Aini (follow-up interview)
28-Sep-05	Agricultural specialist, GAA, Aini,
29-Sep-05	Four members of the WUA council, Iskodar
29-Sep-05	Community development specialist, GAA, Aini
30-Sep-05	Director of the <i>maballa</i> committee, Iskodar
01-Oct-05	Representative of the State Land Committee, Aini
03-Oct-05	Representative of an international NGO, Khudjand
03-Oct-05	Senior official of an international NGO, Khudjand
03-Oct-05	Community development specialist, international NGO, Khudjand
03-Oct-05	WUA development specialist, international NGO, Khudjand
04-Oct-05	Deputy regional director, international donor agency, Khudjand
05-Oct-05	Representative of a <i>jaomat</i> , Sughd province
05-Oct-05	Representative of water initiative group, Sughd province
07-Oct-05	Representative of a local NGO, Kudjand
11-Oct-05	Senior official of the <i>OblVodKhoz</i> , Khudjand
19-Oct-05	Two representatives of a local CBO, Khatlon province
19-Oct-05	Representative of a <i>jaomat</i> , Khatlon province
20-Oct-05	Director of a <i>RaiVodKhoz</i> , Khatlon province
28-Oct-05	Senior official of the <i>MinVodKhoz</i> , Dushanbe
31-Oct-05	Representative of an international NGO, Dushanbe
01-Nov-05	Senior official of the State Land Committee, Dushanbe

Manual for semi-structured expert-interviews

- Can you please give an overview over the work of your organization/department and how it is involved in general water management?
- What are the most important organizations in water management?
- With sovereignty, new laws had to be issued and the administration had to be reorganized. What changed and what stayed the same?
- Can you describe the typical way of a new regulation, who or which organization participates in the process?
- How is the distribution of tasks and competencies between local, regional and national authorities?
- How is the relationship between the water sector and other sectors?
- What is in your opinion the biggest difference of today's water policy to that of the Soviet Union?
- How would you describe the paramount objective of water management?
- What are in your opinion the greatest problems and challenges for water management?
- Are there any changes you would wish for the future?
- What is your personal prediction for the development of the next five years?

Manual for interviews at local case studies and field visits

Staff or council members of WUA

- What is your position?
- When and why was the WUA established?
- What has changed since its establishment?
- How functioned water distribution prior to the establishment of the WUA? Who was responsible for it?
- How does it work in neighboring villages without a WUA?
- Are there farmers who are not members of the WUA?
- What is the structure of the WUA? How many staff members? How were they chosen? Do they receive a salary?
- How often does the council meet?
- How is the financial situation? Did you receive a loan or grant?
- How do you inform the members about your decisions?
- Do you have copies of water laws?
- On which factors depends the success of a WUA?

Officials of the RaiVodKhoz

- What is your position, profession, since when are you working here?
- What is your main task?
- How many staff members has the RaiVodKhoz? Is it difficult to find adequate professionals?
- How do you get information of policy changes?
- Do you have copies of water laws?
- On which factors depends the success of your work?
- Does the population approach you? With which problems?
- How has your work changed since the end of the Soviet Union?
- If there are already WUAs, how has your work changed since their establishment?
- Have you participated in the process of WUA establishment?
- Do you think the work of WUAs is useful?
- What are the most serious problems and challenges in water management?
- What are your wishes for the future?

Water Users

- Where is your land plot? What are you cultivating?
- Since when are you cultivating it? What is your original profession?
- Is the water supply to your plot sufficient?
- Are you member of the WUA? Have you heard about the WUA? Do you know what the abbreviation means?

- Do you know somebody of the WUA council?
- Do you think the work of WUA is useful?
- What happens if there is not enough water?
- Do you pay fees for irrigation water? How much?
- Which organizations or persons in the village are important in your daily life, to whom do you turn in case of problems?
- What are your wishes for the future?

Codesystem

Code	Sub-code	Sub-code	Number of codings	
Local data	KG Aravan		3	
	KG Sokuluk		44	
	KG other		8	
	TJ Aini		46	
	TJ Sughd		11	
	TJ other		32	
Local institutions			110	
International examples			29	
International donors			158	
Corruption, nepotism, etc.			44	
Political process			85	
Problems, wishes, prospects	General		29	
	Prospects		16	
	Wishes		24	
	Problems and challenges		33	
Framework conditions	Cultural		43	
	Economic		19	
	Energy sector		14	
	Political		31	
	Argrarian sector		127	
Soviet Union			42	
Water fees			111	
Water law	International agreements		26	
	National laws		103	
Water usage			24	
Water policy	General		13	
	Shortcomings		27	
	Significance		32	
	General objective		14	
	Implementation		70	
	Interests		25	
	Strategy	General		17
		Regional		39
		Ecology		20
		Water as economic good		22
Irrigation			23	
Energy		36		
Water quality			20	
Water distribution and conflicts	General		14	
	International		54	
	Subnational		70	
Water administration	General		22	

Code	Sub-code	Sub-code	Number of codings
	Local		96
	Regional		9
	Capacities		27
	Finance		15
	Changes		63
	Functions		105
	WUA	Capacities	27
		General reform	184
		Functions	68
		Finance, equipment	119
		Internal relations	116
		External relations	147
Total			2706