



HAL
open science

Beyond Transboundary Water Cooperation

Andrea Zinzani

► **To cite this version:**

Andrea Zinzani. Beyond Transboundary Water Cooperation: Rescaling Processes and the Hydrosocial Cycle Reconfiguration in the Talas Waterscape (Kyrgyzstan-Kazakhstan). 2017. halshs-01455463v3

HAL Id: halshs-01455463

<https://shs.hal.science/halshs-01455463v3>

Preprint submitted on 22 Mar 2017

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

Beyond Transboundary Water Cooperation: Rescaling Processes and the Hydrosocial Cycle Reconfiguration in the Talas Waterscape (Kyrgyzstan-Kazakhstan)

Andrea Zinzani

N°123 | février 2017

In the framework of the political ecology of water, and specifically of international development policies and hydrosocial relations interfaces, this contribution aims to analyze how the establishment of the Chu-Talas Interstate Commission has influenced rescaling processes and reconfigured the hydrosocial cycle and power relations in the Talas waterscape (Kyrgyzstan-Kazakhstan) at the borderland level. Through the hydrosocial cycle analysis and the focus on the role of water institutions and linked political discourses, on water users practices, and transboundary infrastructures management, data were collected through semi-structured interviews and informal talks in six villages of the waterscape. The evidence shows that whereas the establishment of the Chu-Talas Commission led to a complex multi-level rescaling process, in contrast, the hydrosocial cycle has been slightly reconfigured by the formalization of the development initiative, but rather by recent internal political transformations (in contrast between the two states) and informal practices.

Working Papers Series

Beyond Transboundary Water Cooperation: Rescaling Processes and the Hydrosocial Cycle Reconfiguration in the Talas Waterscape (Kyrgyzstan-Kazakhstan)

Andrea Zinzani

février 2017

The author

Andrea Zinzani, PhD in Human / Political Geography at the University of Fribourg/Freiburg and at the University of Verona, held a post-doctoral fellowship at the University of Fribourg/Freiburg in 2014, the FMSH-Fernand Braudel scholarship at the CNRS, UMR 7528 Mondes Iranien et Indien in 2015 and a DAAD grant, based at the Leibniz Center for Tropical Marine Ecology in Bremen in 2016. Currently, he is a post-doctoral researcher at the Global Development Institute, University of Manchester. His research interests range from Political Geography to Political Ecology and Water Politics, with a regional focus on Central and Southeast Asia. He published his monograph *The Logics of Water Policies in Central Asia: the IWRM implementation in Uzbekistan and Kazakhstan*, (Lit Verlag, 2015), together with articles in international journals spanning the geography of water to development politics in Central Asia.

The text

Ce texte a été rédigé dans le cadre d'une bourse Fernand Braudel IFER, du 1^{er} avril au 31 décembre 2015, au sein du laboratoire UMR 7528 Mondes iranien et indien, CNRS.

Citing this document

Andrea Zinzani, *Beyond Transboundary Water Cooperation: Rescaling Processes and the Hydrosocial Cycle Reconfiguration in the Talas Waterscape (Kyrgyzstan-Kazakhstan)*, FMSH-WP-2017-123, février 2017.

© Fondation Maison des sciences de l'homme - 2015

Informations et soumission des textes :

wpfmsh@msh-paris.fr

Fondation Maison des sciences de l'homme
190-196 avenue de France
75013 Paris - France

<http://www.fmsch.fr>

<http://halshs.archives-ouvertes.fr/FMSH-WP>

<http://wpfmsh.hypotheses.org>

Les Working Papers et les Position Papers de la Fondation Maison des sciences de l'homme ont pour objectif la diffusion ouverte des travaux en train de se faire dans le cadre des diverses activités scientifiques de la Fondation : Le Collège d'études mondiales, Bourses Fernand Braudel-IFER, Programmes scientifiques, hébergement à la Maison Suger, Séminaires et Centres associés, Directeurs d'études associés...

Les opinions exprimées dans cet article n'engagent que leur auteur et ne reflètent pas nécessairement les positions institutionnelles de la Fondation MSH.

The Working Papers and Position Papers of the FMSH are produced in the course of the scientific activities of the FMSH: the chairs of the Institute for Global Studies, Fernand Braudel-IFER grants, the Foundation's scientific programmes, or the scholars hosted at the Maison Suger or as associate research directors. Working Papers may also be produced in partnership with affiliated institutions.

The views expressed in this paper are the author's own and do not necessarily reflect institutional positions from the Foundation MSH.

Abstract

In the framework of the political ecology of water, and specifically of international development policies and hydrosocial relations interfaces, this contribution aims to analyze how the establishment of the Chu-Talas Interstate Commission has influenced rescaling processes and reconfigured the hydrosocial cycle and power relations in the Talas waterscape (Kyrgyzstan-Kazakhstan) at the borderland level. Through the hydrosocial cycle analysis and the focus on the role of water institutions and linked political discourses, on water users practices, and transboundary infrastructures management, data were collected through semi-structured interviews and informal talks in six villages of the waterscape. The evidence shows that whereas the establishment of the Chu-Talas Commission led to a complex multi-level rescaling process, in contrast, the hydrosocial cycle has been slightly reconfigured by the formalization of the development initiative, but rather by recent internal political transformations (in contrast between the two states) and informal practices.

Keywords

Political Ecology, Transboundary water politics, international development, hydrosocial cycle, borderlands, Talas waterscape, Kazakhstan, Kyrgyzstan

Repenser la coopération transfrontalière de l'eau. Changement d'échelle et reconfiguration du cycle hydrosocial dans le bassin du Talas, (Kazakhstan - Kirghizstan)

Résumé

Cette contribution, qui s'inscrit dans une démarche d'écologie politique de l'eau, s'intéresse aux interactions entre les politiques de l'eau menées par les organismes de développement et les relations hydro-sociales en Asie centrale. Elle vise à analyser comment la création de la Commission transfrontalière Chu-Talas a influencé les changements d'échelle, et reconfiguré le cycle hydro-social et les dynamiques de pouvoir dans le bassin du Talas au niveau de la zone frontalière (Kirghizistan-Kazakhstan). Ce travail se fonde sur des données recueillies au cours d'entretiens semi-directifs et de discussions informelles dans six villages qui portent sur le rôle des institutions de l'eau, sur la gestion des infrastructures transfrontières de même que sur les discours politiques, les usagers de l'eau et leurs pratiques liées. Les résultats ont démontré que le cycle hydro-social a été moins influencé par la mise en place de la commission transfrontalière Chu-Talas, qui a été créée conformément aux modèles internationaux de gestion, que par la redéfinition récente des politiques nationales (qui diffèrent entre les deux États) et par des pratiques informelles.

Mots-clefs

Écologie politique, gestion de l'eau transfrontalière, développement international, cycle hydrosocial, régions frontalières, Kazakhstan, Kirghizstan, bassin du Talas

Sommaire

Introduction	5
The Political Ecology of Water and Development: Rescaling Processes and the Hydrosocial Cycle	6
Water Development Policies and Rescaling Processes	7
The Hydrosocial Cycle	8
Water and Development in Central Asia: Reconfiguring National and Transboundary Water Policies	9
Reconfiguring The Talas Waterscape: The Formalization of the Chu-Talas Commission	10
The establishment of the Chu-Talas Commission	11
The Impact of the Chu-Talas Commission and the Reconfiguration of the Hydrosocial Cycle: Evidence from Borderlands	13
Water institutions and their role in border level water allocation	13
The Political discourse	16
Borderlands transboundary infrastructures and formal & informal practices	17
Discussion and Conclusions	19
References	21

Introduction

In the framework of society-environment interactions, water resources have played a relevant role in shaping these processes, particularly in arid and semi-arid regions as well as in rural and urban areas affected by water scarcity. Whereas for decades water resources management has been considered a technical and hydrologic concern, since the 1970s, in the framework of social sciences, geographers, ecologists, environmental and political scientists have started debating its social and political nature. They have argued that water management processes cannot be exclusively analyzed adopting a technical approach since their dynamics are significantly shaped by socio-political logics and rationales. Furthering this argument, over the last two decades, interactions between water management, politics, power, and institutions and social practices have been central in the Political Ecology and the Geography of Water and Development.

In the current context of globalization and environmental-climate changes, political ecologists and human geographers have made advances in conceptualizing and theorizing interactions between water resources, socio-political power, state and development actors policies, developing new frameworks and approaches to analyze complex interactions between water(s) and society. Some scholars have conceptualized the hydrosocial cycle, combining the physical and social natures of water, and debating the spatial scales for water management to understand current global reconfigurations of water governance (Budds and Sultana 2013; Loftus 2009; Swyngedouw 2004, 2009). Specifically in the “Global South”, since the 1990s diverse development organizations and donors (World Bank, Asian Development Bank, UN agencies) have started promoting policies and projects aimed to improve water resources management and reduce poverty and inequalities adopting a multi-perspective sustainability (environmental, social and economic) approach. However, these interventions have been debated and criticized by several scholars due to the neglect of considering specific national and local socio-political contexts, and to the depoliticized nature of these projects.

Starting from these assumptions and advancing the debate, this contribution aims to explore and understand how hydrosocial and power relations

have been produced and reconfigured by the formalization of an international development initiative, specifically in a Central Asian transboundary waterscape shared by Kyrgyzstan and Kazakhstan. Over the last two decades, in transboundary waterscapes development organizations (World Bank, Asian Development Bank, UNECE) have supported the establishment of interstate agreements - based on the UNECE Transboundary Water Convention (2010) - to strengthen water riparian states cooperation and promote equal water sharing and provision. In Central Asia, transboundary water management has been considered a relevant interstate environmental and political issue since the collapse of the Soviet Union, when independent states, diversifying national economic paths and water policies, started to claim different water demands. In the region, since the 2000s international organizations have initiated to support and guide governments to the implementation of policies to prevent water disputes and enhance interstate cooperation. However, these measures have often involved exclusively governments and formal state level institutions, downplaying specific local water institutional settings, and the complexity of fluid socio-political borderlands and environmental concerns.

Focusing on the Talas transboundary waterscape, shared by Kyrgyzstan’s upstream section and Kazakhstan’s downstream section, this contribution analyzes how the recent establishment of the Chu-Talas Interstate Commission - supported by the UNECE, ADB and other donors - has impacted and reconfigured hydrosocial and power relations in the borderlands between Kazakhstan and Kyrgyzstan. Adopting the hydrosocial cycle conceptual framework, research has focused on the three following aspects: local level water institutions and related roles, the supported political discourse, and the context of formal and informal water users interactions with transboundary water infrastructures. Adopting a qualitative approach, data was collected through semi-structured interviews and informal talks to state and district institutions, associations and water users, and fields& canals surveys. The fieldwork was conducted in six villages of Kazakh and Kyrgyz borderlands between August and September 2015.

This contribution continues with a background on water politics and the interfaces of development

interventions. Moreover the paper engages with concepts of politics of scale and rescaling processes, and the hydrosocial cycle that are hitherto presented and debated. This first section is followed by an overview of water resources development interventions in the Central Asian region. The second part focuses on the Talas transboundary waterscape, the institutional structure of the Chu-Talas Interstate Commission. Thus, the following section analyzes the hydrosocial cycle reconfiguration in the Kazakh and Kyrgyz borderlands, by seeking to understand these processes driven by local, national and interstate dynamics. In this context, scant attention had been paid to the role of water institutions, on their supported political discourses and narratives, and on borderlands transboundary infrastructures management practices across the six villages analyzed. This contribution subsequently continues with a discussion on the impact of the rescaling process and linked hydrosocial cycle reconfiguration in the transboundary waterscape, and with some conclusions.

The Political Ecology of Water and Development: Rescaling Processes and the Hydrosocial Cycle

Over the last two decades, against the backdrop of global environmental political debates, a growing body of literature has emerged on the Political Ecology of Resources (Swyngedouw, 1997, 2009; Bryant, 1998; Loftus, 2006; Kaika, 2006). Introducing the research framework, political ecology departs from the assumption that nature and environmental issues cannot be understood in isolation from the socio-political and economic contexts within which they are produced. As underlined by Swyngedouw (1997), Budds (2004) and Castree (2003), political ecology focuses on power structures and politics which are embodied in environmental change processes, and on sociopolitical implications of resources allocation and management reconfiguration processes.

Inspired by a neo-Marxist epistemological tradition reflecting on resources, capital and social power interfaces, in these socio-environmental processes particular emphasis has been given to social inequalities, injustice, political conflict, and to the role of social and political actors in

shaping their historic and contemporary dynamics (Castree, 2003; Swyngedouw, 2004; Blanchon and Graefe, 2012). Bryant (1998) argued that a Neo-Marxist approach offers a means to link social oppression and environmental degradation to wider political and economic concerns related to the capital and resources commodification. Reflecting on environmental processes, Warner et al. (2008) claim that the political dimension of ecologic and climate change has often been ignored by experts and donors, who have supported the depoliticization of these processes. Therefore, the urgency and salience of shedding light on the political rationale of actors who formulate environmental and development narratives clearly emerges. Thus Political Ecology puts politics in a prominent position to disentangle the complexities of society-environment interactions. As Budds (2004) and Loftus (2005) point out, the Political Ecology approach moves towards the questions on who produces specific environments (actors, logics, and competing interests) and with what social and ecologic aims, stressing the need for a political, rather than, a pure technical solution.

Focusing on socio-cultural water(s), this approach reconfigured the way to disentangle water governance, politics and linked socio-power transformations. According to Linton (2010), political, economic and sociological perspectives have contributed to the development of a novel approach in analyzing the nature of water(s) and a new conceptualization of water processes as socio-nature dynamics. Therefore, within the framework of Political Ecology, research on water focuses on the multiplicity of politics that permeate social relations of water resources control in a diverse contexts. Furthermore, this contribution reflects on how water management processes are politically driven, both according to a material and a discursive perspective, in opposition to a pure hydrologic question of allocation (Swyngedouw, 1997; Bakker, 2000; Kaika, 2006). The reconceptualization of water as socio-nature, enabled scholars within this tradition to support the idea that social and power relations are not external to water resources but they are embedded (Swyngedouw, 2004; Loftus, 2005; Budds, 2009). Swyngedouw (2006), transcending the modernist idea of nature-society as separate entities, envisions water circulation as a combined physical and social process, as a hybridized socio-natural flows that merge together nature

and society in inseparable ways. He adds that water is a hybrid entity that embodies processes that are simultaneously material, discursive and symbolic. According to this vision, socio-political relations, played out through institutions, policies, regulatory frameworks, and hydraulic infrastructures strongly shape how water flows and how it is allocated throughout waterscapes.

Over the last three decades, on the wave of global political and economic transformations in different regions, in particular in the Western countries, water resources management has shifted from a state centralized control, to decentralized control shared by the state, public-private actors and private enterprises. This reconfiguration has been ideologically inspired by neo-liberalism, which promoted state withdrawal, the commodification of water resources, combined by the financialization and privatization of management and infrastructural property regimes (Molle, 2008; Molle et al., 2009). According to these political and economic processes, since mid-1990s diverse international organizations and development banks have initiated to spread this approach in the “Global South” through the design of development projects. These initiatives, driven by the World Bank, United Nations agencies, the United States Agency for International Development (USAID), the Global Water Partnership and the Asian Development Bank among others, have been characterized by a multi-perspective nature, oriented to guide national water sector reforms, institutional changes, the implementation of international water policies, and the design of interstate treaties.

Over the last two decades, the international support to the Irrigation Management Transfer (IMT) and linked Water Users Associations (WUAs) - initiative oriented to liberalize and decentralize water management-, and to the Integrated Water Resources Management (IWRM), the global paradigm aimed to promote integration, good governance and sustainability, have led to complex and heterogeneous political, economic and social reconfigurations in the “Global South” (Allan, 2003; Bakker, 2003; Molle, 2008; Zinzani, 2014, 2015). Therefore, it is relevant to analyze how these development interventions have produced and transformed hydrosocial relations and linked power reconfigurations at multiple scales. As argued by Loftus (2009), Swyngedouw (2009) and Budds and Sultana (2013),

the analysis of the impact of development interventions in different socio-political and environmental context enables us the disentanglement of water and power interactions and linked specific socio-political outcomes. Furthermore, Ekers and Loftus (2008) posit that this research approach enables us also to understand how power is pursued and consolidated by reworking hydrosocial relations. This approach is in part driven by the fact that the majority of water development interventions in the “Global South” have been addressed in a technical manner with insufficient regard for the political processes which characterize and shape their implementation. Furthering the debate, Budds (2009) explains that this technical manner reflects the desocialized and depoliticized nature of these interventions and justifies problem-solving measures based on scientific and technological expertise rather than socio-political. Moreover, Bakker (2013) points out and criticizes development policies and narratives that do not sufficiently consider mechanisms of power, control and inequalities in regions characterized by diverse water issues. In sum, the naturalized and depoliticized development policies and narratives, as for instance the IWRM or initiatives oriented to water security and poverty alleviation, have in certain cases reproduced the deficiencies and the inequalities that they were designed to address pursuing new forms of power and control (Swyngedouw, 2007; Budds, 2009; Zinzani, 2015).

Water Development Policies and Rescaling Processes

A relevant concept, deconstructed and recently debated by political ecologists and geographers, is the politics of “scale” and linked rescaling processes at interstate, national and sub-national level. This concept discusses the spatial extent of water resources management, and related reconfigurations, advocated by development interventions and narratives. Historicizing the concept, in the 1990s Smith (1992) introduced the notion of “politics of scale”, defined as the complex socio-spatial practices, state regulations and politics, power interactions and social struggles which characterize the configurations of scales. Subsequently, further research provided a new means to politicize spatial units and related hierarchies, in terms of reflecting on inner socio-political interactions: Brenner (2001) and Marston (2000)

argue that politics of scale redefine conventional spatial hierarchies (national – regional – local) from fixed containers of space which organize social processes, to categories produced by human efforts to interpret such processes. Neumann (2009) contends that the politics of scale have to question the scalar practices of social actors, inquiring the power asymmetries, to understand the relations between and within different scales. Swyngedouw (2004; 2010) shows how the deconstruction and reconstruction of spatial scales, as for instance water management units in Spain or urban water allocation schemes in Chile, strongly reshuffled spatial perceptions and political and social geometries. In this perspective, scales and boundaries have been repositioned as products of economic and political reconfigurations. Brown and Purcell (2005) add that scales are essentially “fluid”, as no scale has any inherent or eternal qualities that make it properly suited to a specific social or ecologic process. Instead, scalar configurations and linked shifts are strategies used by political actors to pursue a specific project. These socio-political and spatial reconfigurations, conducted both by the state and, in this discussion, by development organizations and linked policies, have been defined in rescaling processes. With the aim of disentangling and deconstructing these processes, Daniell and Barretau (2014) have recently discussed the interactions between scales and levels of organizations by focusing on how conflicts among competing scales are managed, on the political and social mechanisms involved in bridging scales, and on which scales are more appropriate to effectively manage water resources. Concerning water development initiatives and rescaling processes, different issues and processes have been discussed over the last years, such as the suitable spatial scale and the boundaries for water management - debating administrative and hydrographic units - (Warner et al., 2008; Molle, 2009, 2012; Cohen and Davidson, 2011, Houdret et al., 2014), the consequences of advocated decentralization and deregulations (Swyngedouw, 2003, 2010), and the logics of development policies implementation (Zinzani, 2015). In relation with research presented in this contribution, processes of scale reconfiguration advocated by development organizations have occurred since the mid-1990s in transboundary waterscapes, changing their institutional agreements and governance units. In the framework of the UNECE Convention on the Protection and Use of

Transboundary Watercourses and International Lakes (1992), and the United Nations Convention on the Law of the Non-Navigational Uses of International Watercourses (1997), development projects and policies have supported the establishment of interstate commissions, national river basin authorities and councils, and interstate river basin councils to strengthen cooperation between the international counterparts.

The Hydrosocial Cycle

The concept of the hydrosocial cycle as emerged from research on the political ecology of water by different scholars such as Swyngedouw (2004; 2006), Budds (2009), and Linton (2010), among others. As briefly discussed in the introduction, these authors have deeply criticized the concept of the hydrologic cycle and its analytical framework, due to its neglect of social and political process analysis in disentangling water management issues. Starting from this assumption and the hybrid nature of water resources (Swyngedouw, 2004), the hydrosocial cycle internalizes social relations, political power and technology. The concept focuses the attention on social relations, power structures and technology interventions that produce and reproduce water in any given contexts (Linton and Budds, 2014). Swyngedouw (2006) - considered as the conceptual pioneer in the articulation and structuring of the framework - initiated the reflection on the relevancy of linking the transformation of, and in the hydrologic cycle at global, regional and local level on the one hand, and the relations of political, economic, social and cultural power on the other. He defines the hydrosocial cycle as a hybridized socio-natural flow that fuses together nature and society in inseparable manners. Based on evidence from research conducted on the waterscapes of Chile and Peru, Budds (2009) argues that the hydrosocial cycle can better navigate between the material and the socio-political dimensions of environmental change in order to reveal power relations that intersect with bio-physical dynamics in order to produce and reproduce political ecologies. Linton (2010) adds that the utilization of the concept as an analytical framework enables us to inquire on the socio-ecologic nature of water, the progressive politics of the hydro-social changes, and on dialectical relations between water and society.

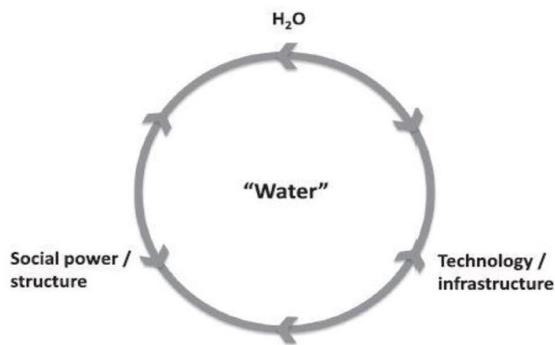


FIG. 1: A representation of the hydrosocial cycle (Linton and Budds, 2014)

Reflecting on the different contributions to the hydrosocial cycle, its dynamic nature clearly emerges. It embodies geographical and historical processes, meaning that the assemblage which gives rise to a particular kind of water and a particular socio-political configuration, is always changing (Linton and Budds, 2014). Thus, it is relevant to question who or which actors have capacities and power to rework hydrosocial relations, according to what strategies and objectives, and for the benefit of whom. As underlined by recent studies conducted in different regions by Bakker (2003), Loftus (2006), Molle (2008), Bourblanc and Blanchon (2014), the hydrosocial cycle can be reworked, reproduced and reordered by national or local political and economic transformations, rescaling processes, socio-environmental changes and development initiatives. Therefore, over the last two decades development interventions and policies in the “Global South”, advocated by heterogeneous political logics and rationales, have seemingly reworked and reconfigured national and local hydro-social interactions. Referring to the discussion presented in the previous sub-chapter, the relevancy of disentangling rescaling process, supported by development organizations, together with hydrosocial cycle reconfiguration interfaces emerge. In particular, the political nature that characterizes rescaling processes and their supported institutional, power and social reconfigurations, will enable us to understand how these processes impacted and reworked the hydrosocial cycle.

Water and Development in Central Asia: Reconfiguring National and Transboundary Water Policies

Introducing the water management context in the Central Asian region, the collapse of the Soviet Union and the subsequent independence of five national states (Kazakhstan, Kyrgyzstan, Uzbekistan, Tajikistan and Turkmenistan) led to diverse and complex socio-political and economic challenges. The Soviet state-centralized system and its institutional hierarchy ceased to manage the republican water sectors, and to guarantee the respect of inter-republican water treaties and related barter agreements of economic exchanges (crops, energy, resources) (Wegerich, 2006; Dukhovny et al., 2009; Zinzani, 2015). Therefore, in the framework of the post-Soviet transition, the newly independent states initiated a complex reorganization of the state structure - and linked institutional land and water reforms processes-inspired and oriented towards a state decentralization, economic liberalization and principles of market economies.

Reflecting on the regional context of water resources, the shift from one administrative unit under the Soviet Union to five independent states led to diverse challenges regarding the Aral Sea basin’s transboundary water management and allocation. At the beginning of the 1990s, the institutional water framework inherited from the Soviet Union was at risk, and the Central Asian region was considered, by different development organizations, an area of potential crisis in terms of water resources sharing. Nevertheless, soon after independence (achieved in 1991), the governments of the Central Asian republics agreed to maintain the Soviet inter-republican water framework for the two transboundary main rivers, Syr-Darja and Amu-Darja, formalized in the 1980s. Hence, interstate basin agencies BVO SyrDarja and BVO Amu Darja continued their operations. In order to strengthen the international framework, in 1992 five Central Asian states signed an agreement to ensure cooperation in joint management, use, and protection of interstate water resources and established the joint authority named “Interstate Commission for Water Coordination (ICWC) (Wegerich, 2006; Jozan, 2008). In parallel, the International

Fund for the Aral Sea (IFAS) was established in 1993 to try to develop interstate policies to face Aral Sea environmental and social challenges. However, in the framework of the two initiatives national interests, rather than an effective cooperation prevailed, with no common guidelines in place to reform national water sectors which were formulated.

With regard to the national level, Central Asian states during the 1990s have started supporting and conducting water sector reforms, linked to the decollectivization of state agriculture, characterized by diverse paths and visions. Despite being formally oriented to market economy principles, institutional water reforms processes were mostly assessed as gradual and state-centric. In some of the independent states, taking for example Turkmenistan, Uzbekistan and Tajikistan, water resources management remains more or less state-owned or state-managed at all levels. Differently, in Kyrgyzstan and partly in Kazakhstan, the state directed these transition processes through trajectories of decentralization and liberalization, supporting market economy principles (Wegerich, 2006; Sehring, 2007; Abdullaev, 2010; Hornidge et al., 2011; Zinzani, 2011). These different paths of reform-making were strongly determined by political interests and economic strategies of the state apparatus, and by the rising influence of development organizations. In fact, with the aim to balancing and guiding heterogeneous reform paths, since the mid-1990s different development organizations such as the World Bank (WB) the Asian Development Bank (ADB), the International Monetary Fund (IMF), the United Nation Development Program (UNDP), the Swiss Development Cooperation (SDC) among others, have initiated to promote development projects to reconfigure national water policies. These initiatives mainly supported the Integrated Water Resources Management (IWRM), the global water paradigm inspired by institutional integration and a multi-perspective sustainability, and the Irrigation Management Transfer (IMT) concept, through the design of Water Users Associations (WUAs) (Sehring, 2007; Wegerich, 2009; Zinzani, 2015). According to Molle et al. (2009), and as argued by Mollinga and Gondhalekar (2012), the main aim of development organizations in Central Asia was a structural adjustment of the institutional context through the support of neoliberal policies, such as market deregulation, liberalization,

commodification and privatization, leading to a roll-back of the state and its power. However, these policies were mostly hindered behind the concepts of multi-perspective sustainability, water security and good “water” governance, adopting a narrative of depoliticization and naturalization of development interventions (Allan, 2003; Biswas, 2008).

The supported implementation of both IWRM and IMT initiatives in the Central Asian states over the last two decades has rather been characterized by its influential political nature, leading to relevant institutional, political and social reconfiguration processes. These processes implied the creation of new institutions, the dismantlement of existent authorities and power relations. Therefore, moving back to the key concepts and the analytical framework presented in the previous chapter - the rescaling processes and the hydrosocial cycle -, the implementation of development policies at a national level led to significant consequences in terms of rescaling and hydrosocial relations changes. Since the 2000s, development organizations initiatives have focused also on the transboundary level through the promotion of agreements and the establishment of commissions to strengthen interstate cooperation on transboundary rivers management.

Reconfiguring The Talas Waterscape: The Formalization of the Chu-Talas Commission

The waterscape and geographical background of the Talas basin

The concept of waterscape has increasingly emerged in the last decade in research that discusses the interactions between water, power and infrastructures (Swyngedouw, 1999, 2004; Bakker, 2003; Budds, 2008). Adopting a novel perspective, the waterscape is not merely the territory within water flows, but a produced “socio-natural entity” in which social power is embedded in, and shaped by water’s material flow, and which becomes embodied in a wide array of physical objectives (Swyngedouw, 1999; Loftus, 2009; Budds and Hinojosa, 2012). Thus, it represents a socio-spatial product, a materialized entity featured by power, socio-political interactions and environmental dynamics. Furthermore,

waterscapes comprise the assemblage of a wide range of water flows, water infrastructures, internal and external institutions and authorities, everyday formal and informal practices, political discourses and narratives which produce, and are produced, by power dynamics. Taking into account diverse spatial scales, waterscapes could represent states, regions, river basins, as well as neighbourhoods and urban areas, produced and materialized by heterogeneous processes (Swynedouw, 2006; Budds, 2009; Blanchon and Graefe, 2012). In Central Asia the concept of waterscape can be employed to analyze the entire Aral Sea basin, river basins, or irrigated areas characterized by a complex network of canals and water infrastructures, surrounded by steppes and deserts. This hydraulic infrastructural development has been conducted since ancient times by different empires and political orders, and transformed until nowadays. In modern times the material reification of these waterscapes has occurred during the Soviet hydraulic mission from the 1950s to the end of the 1980s (Bensidoun, 1979; Lewis, 1992; Micklin, 1997; Bichsel, 2009; Zinzani, 2011). According to this process, the Talas transboundary waterscape has been configured during the Soviet hydraulic mission since the 1970s. Shared by Kyrgyzstan upstream and Kazakhstan downstream, Talas river originates in Kyrgyz central Tian-shan mountains, flows towards Kazakhstan and vanishes, due to water diversion and irrigation uses in the Moinkum Steppe. The waterscape development, specifically its central and downstream part, has occurred during 1973-1975 through the construction of the Kirov reservoir, located in Kyrgyzstan approximately 15 kilometres upstream of the Kazakh border. Commissioned by Soviet water authorities, the reservoir was built to control and regulate the Talas river flow to supply the Kyrgyz and Kazakh central and downstream parts of the waterscape (Krutov and Spoor, 2006; Wegerich, 2008). Since the mid-1970s other canals, Kozh, Tyute, Kederali, Novi Kederali and Imankul, connected to the reservoir and the river, have been designed to enlarge the waterscape and enable the development of state and collective farms.



FIG.2: GIS Elaboration of a satellite image (Google Earth TM) representing the Talas river waterscape, shared by the border between Kazakhstan and Kyrgyzstan (black line), and the specific area where field-research was conducted (black-yellow shape).

The establishment of the Chu-Talas Commission

Concerning water sharing and hydraulic infrastructural regulations between the two republics, in 1983, in the framework of the Soviet inter-republican water agreements, a protocol was signed between Kyrgyz and Kazakh SSRs formalizing the Talas flow sharing (50% to each republic) (Wegerich, 2008; personal communication with the head of Chu-Talas Basin Agency, Taraz, August 2015). After the collapse of the Soviet Union and the development of different agricultural and economic plans between the two states some issues on water amount division emerged: according to members of the Kazakh Chu-Talas Basin Agency, Kyrgyz authorities released less water from the Kirov reservoir (personal communication, Taraz, August 2015). In order to face these disputes and develop mutually beneficial cooperation between the two states, an agreement "On the use and management of water facilities in the Chu and Talas river basins" was signed in 2000. The parties decided to keep the water amount division decided during the Soviet Union, and that water infrastructures' operation and maintenance of intergovernmental status (Kirov reservoir) should be shared by Kyrgyzstan and Kazakhstan. Despite the agreement came into force in 2002, uncertainties emerged regarding its effective implementation and respect. Therefore, due to this context and to the necessity of strengthening interstate cooperation, since 2002 international development organizations have decided to be actively involved in supporting

transboundary water cooperation between Kyrgyzstan and Kazakhstan. UNECE, UNESCAP and OSCE initiated to support, in partnership with Kyrgyz and Kazakh water authorities, the project “Support for the Creation of a Commission on the Chu and Talas Rivers” aimed to establish an interstate basin commission and to define its procedures and costs for exploitation and maintenance of water infrastructures (Libert, 2014). Although a water sharing agreement was already in place, development organizations decided upon the need of an active intervention in the interstate political and economic context. In 2006 the project was successfully implemented, as underlined by Lipponen and Libert (2012), and the Interstate Chu-Talas Commission established. According to the UNECE (2008), the main activities of the Commission focus on the approval of water resources allocation, on the determination of measures to maintain interstate water facilities, and on the approval of a financing plan for the above measures. Since 2005, these activities have also been supported by the active involvement of the Asian Development Bank, through its aid in strengthening transboundary cooperation and the creation of Commission’s working groups (ADB, 2005). The institutional structure of the Commission, its heads and the Secretariat, have been jointly shared by Kazakh and Kyrgyz national authorities. Questioned on the institutional rescaling process, the head of Kazakh Chu-Talas River Basin Agency (Chu-Talas BWO, basin branch of the National Committee of Water Resources) stated that the process has not led to significant power reconfigurations. He argued that while the chairman of the Commission is represented by the head of the Committee of Water Resources, the Secretariat is a member of the Chu-Talas BWO or of the water republican state enterprise Kazvodkhoz (personal communication with the head of the Kazakh Chu-Talas River Basin Agency, Taraz, August 2015). Currently, this position is represented by a former member of the Chu-Talas BWO. Questioned on the same issues, the Kazakh head of the Secretariat pointed out that the rescaling process has not led to any problems, in terms of disputes between the two Kazakh water authorities, due to the alternation of heads of the secretariat and the shared vision and objectives of -water- cooperation in the framework of the Commission (personal communication with the secretariat of the Chu-Talas Commission, Taraz, August 2015).

Since 2008, with the aim of strengthening cooperation and creating the conditions to develop participatory approaches and good governance, UNECE and OSCE have renewed their involvement through the establishment of a new project, “Developing Cooperation on the Chu and Talas river basins” (UNECE, 2008, Lipponen and Libert, 2012). The new project, developed in parallel with the ADB and the SDC, aimed to include some water infrastructures in the agreement – the Kozh canal among others - and to introduce IWRM principles in the framework of the Commission. In order to develop this initiative, international organizations supported the establishment of a transboundary basin council with the aim to involve, in addition to state actors, NGOs and water users (UNECE 2010). This initiative, which occurred in the framework of the international support to IWRM in Central Asia, represented a significant challenge in terms of a real strengthening of participatory interstate cooperation, and of a complex rescaling process and linked hydrosocial cycle reconfiguration at the basin / local level involving two states. The interviewed head of the Kazakh Chu-Talas BWO and the secretariat of the Chu-Talas Commission, questioned on the Transboundary Basin Council, highlighted the complex institutional and political issues related to its establishment, and stressed the priority of strengthening joint operation & maintenance of water facilities rather than focusing on IWRM principles and participatory approaches. This position was remarked by the head of the Kyrgyz Talas River Basin Authority, who expressed doubts on the intended success of this initiative (personal communication with the head of the Kyrgyz Talas River Basin Authority, Talas, September 2015). Questioned on the impact of the Commission and its activities at the local level, the Secretariat and the members of the Kyrgyz and Kazakh BWO argued that this institutional reconfiguration led to benefits to farmers and water users during the last years, in terms of water allocation, and strengthened interactions among them.



FIG.3: GIS Elaboration of a satellite image representing the case-study area, shared by Kyrgyzstan and Kazakhstan.

The Impact of the Chu-Talas Commission and the Reconfiguration of the Hydrosocial Cycle: Evidence from Borderlands

Adopting the analytical framework of the hydrosocial cycle, this chapter analyzes and discusses how the formalization of the Chu-Talas Commission reconfigured hydrosocial relations in the borderlands of the Talas waterscape. Empirical research findings are analyzed through three main domains: the role of water institutions in relation with water users, political discourses, and formal/informal practices in relation to transboundary infrastructures management. The fieldwork was conducted in six villages located in the Kazakh/Kyrgyz borderlands included Grodikovo, Kyzylkainar and Besagash in Kazakhstan (Dzhambul district, Dzhambul province) and Uckurgan, Maiska and Talas aul in Kyrgyzstan (Manas district, Talas province).

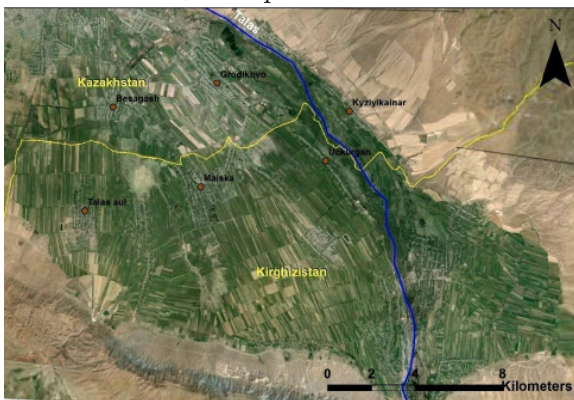


FIG.4: GIS elaboration of a satellite image (Google Earth TM) representing the Talas waterscape borderlands and the six selected villages.

Water institutions and their role in border level water allocation

Since the 1990s, Kazakh water institutional structure at meso-local level has been affected by significant changes. According to the Water Code, enacted in 2003 and based on IWRM principles, basin/province water sector is managed by two main institutions, River Basin Agencies, basin branches of the National Committee of Water Resources (part of the Ministry of Agriculture) and Republican State Enterprises Kazvodkhoz, based on province boundaries. A differentiation of functions between the two authorities was formalized in 1996. The first is responsible of water resources monitoring and water quality and pollution overseeing, while the second of primary level water infrastructures O&M, and water allocation to district level water organizations. At the district / local level, water allocation is managed by district water departments (Komunalnivoedkhoz) and water users associations (WUAs), established with the law on WUAs in 2004. However, after a wave of liberalization initiated since the 2000s, over the last years the institutional structure has been changing, influenced by both national and local socio-political and economic dynamics (Zinzani, 2015). In the Talas waterscape since 2006, as discussed in the previous chapter, the Chu-Talas Commission has initiated to operate.

In order to shed light on the impact of the establishment of this institution at the borderlands level, farmers and water users were questioned on the evolution of water management and allocation over the last years, and on potential benefits linked to the Commission, underlined by the Secretariat and the members of the Chu-Talas River Basin Agency. The evidence from the three villages showed that many of the farmers and water users were not aware of the existence of the Commission, even ten years after its establishment. Farmers questioned on water availability in Grodikovo argued that over the last ten years no significant changes occurred. They stated that on the one hand it is strictly related to natural conditions, as winter precipitations, while on the other to the mood of Kyrgyz authorities concerning water release from Kirov reservoir. They added that although the Talas river water sharing agreement was signed in 2000, according to them for several years Kyrgyz water authorities have released less water than agreed. Whereas

on the one hand the head of Grodikovo municipality argued that, although a rescaling process occurred, he heard about the establishment of the Commission only in 2007, and in the following years no changes occurred. On the other hand, a farmer once stated that these dynamics exclusively involved members of national and basin water authorities, excluding members of local administration and water users (personal communication with farmers, Grodikovo, August 2015).

However, the majority of individuals interviewed were in agreement that since 2012–2013 a national institutional reconfiguration had significantly impacted district institutional water structure and related power and social relations. Whereas on the one hand the Taraz *Kazvodkhoz* has strengthened its role since 2010, when its control and financial support shifted from the province directly to the state, on the other over the last year this authority has been designed, by the Minister, the only national institution to manage water allocation in the province. Questioned on this significant reconfiguration process, members of Taraz *Kazvodkhoz* stated that since 2014 the Dzhambul province (in parallel with Almaty and South-Kazakhstan provinces), supported by the national water authorities, has required the dismantlement of the *Kommunalnivodkhoz*, and the recentralization of district water allocation and irrigation infrastructures under the supervision of *Kazvodkhoz*. In fact, over the last year Dzhambul district *Kommunalnivodkhoz* had been dismantled, and the secondary canals property, currently under the district, will move under state control. Furthermore, a district branch of Taraz *Kazvodkhoz* will soon replace Dzhambul district *Kommunalnivodkhoz*. Both members of Taraz *Kazvodkhoz* and Talas River basin agency claimed that this management reconfiguration process has been motivated by economic and technical concerns. Whereas on the one hand district government was not able to financially support *Kommunalnivodkhoz* anymore, on the other the decrease of funds led to a lack of infrastructures maintenance and control, reduction of the whole irrigated land, and allocation issues. Concerning the property of secondary canals, 21 will shift from district to state control, Kozh canal among them. Differently, the Tyute canal, privatized in 2004 and managed by a private enterprise, will be renationalized, while Imankul canal, currently property of Kyzilkainar

municipality, will be considered for state control in the forthcoming years. Therefore, considering next future water allocation procedures, after the dismantlement of Dzhambul *kommunalnivodkhoz*, state water authorities will be directly in relation, regarding demand and allocation, with water users. This procedure will occur due to the fact that currently no water users associations operate in the Kazakh part of the Talas waterscape, despite their formalization in 2004. As stressed by an employee of Grodikovo municipality and a farmer of Besagash, until 2012 two WUAs operated in the district, but they failed in bankruptcy, and other two planned WUAs were not designed due to administrative and bureaucratic issues. They also added that the *kommunalnivodkhoz* hampered this process, due to the unwillingness to lease infrastructures and to place a private intermediary entity between the authority and farmers. Regarding hydrosocial and power reconfigurations, interviewed *Kazvodkhoz* members affirmed that employees of *Kommunalnivodkhoz*, local water masters in particular, are currently in the process of being employed by the Dzhambul district branch of *Kazvodkhoz*, due to their local expertise in managing canals and water allocation. However, a former *Kommunalnivodkhoz* water master of Besagash, who has been working on Besagash and Mergalik canals for twenty years, affirmed that he was recently replaced by a new employee of the state water authority, but differently, others will be integrated. However, water masters of *Kazvodkhoz* already held a prominent and more powerful positions in comparison with those of former *Kommunalnivodkhoz*. According to interviewed Grodikovo and Besagash farmers, canal infrastructures and water allocation managed by the state authority were already providing better conditions of their operation and management, and that water charges were lower due to the absence of intermediaries among them and *Kazvodkhoz*. They also expressed the hope that new state funds would cover expenses for infrastructural reparation. In Kyzylkainar questioned farmers argued that they were yet to receive any informations regarding the potential control of Imankul canal by *Kazvodkhoz*.

In Kyrgyzstan, water institutional structure at meso-local level has also evolved over the last two decades, despite the reconfiguration has mostly involved the local level. Water resources at province level are managed by River Basin Authorities, branches of the Department of Water

Economy and Melioration (Ministry of Agriculture). Whereas these authorities are responsible of water amount regulations and operation & maintenance (O&M) of trans-districts canals, at district level district water departments (*Rayvod-khoz*) are in charge of district main canals O&M, and water allocation to WUAs, supported since the 2000 by the WB. In parallel, the development bank promoted the formalization of a national department for WUAs support, with branches at province and district levels. Furthermore, since 2008 in some areas Federations of WUAs have been established by water users to manage part of main canals. District water departments, after the approval of the National Department of Water Economy, have the possibility to lease these infrastructures to Federations for a period of four years. The director of the Talas Basin Authority, questioned on the status of the Chu-Talas Commission, argued that over the last ten years two members of the authority have held the position of Secretariat of the Commission, but recently and nowadays a member of the National Department is responsible of this role.

Focusing on the Kyrgyz Talas waterscape borderlands, the head and the main engineer of the Manas District Water Department, (responsible for the O&M of three main canals connected to the Kirov reservoir), stated that they had heard about the establishment of the Commission and the involvement of the Ministry and some members of the Talas Basin Authority, but their institution was not involved in the process. Furthermore, they added that the Talas river water sharing, formalized in Soviet times and renovated in the 2000, was not influenced by the establishment of the Commission. Reflecting on its impact at the borderlands level, the majority of farmers interviewed in Uckurgan, Maiska and Talas aul are even not aware of the existence of the Commission; only two water users, one former head of Talas aul municipality, and the other former worker of Kirov reservoir, have been informed of its establishment almost a decade ago. They added that this process did not led to significant changes concerning water amount availability, neither on water allocation procedures. Hence, the hydrosocial cycle does not seem influenced by the formalization of the Commission. In contrast, reflecting on what underlined by farmers and water users of the Manas district, two institutional reconfigurations led to significant changes in Kyrgyz Talas waterscape. The first is the World

Bank development projects, initiated since 2002 and oriented to design WUAs on the one hand, and to configure a national authority to support their development on the other. The second is the claim of WUAs heads to manage main canals, replacing Manas District Water Authority, and establish federations of WUAs. In fact since 2002, eleven WUAs have been established in the Manas district due to the initial financial and organizational support of the World Bank, and afterwards to those of Manas district department of WUAs support. Its director, former member of Manas district water department, stated that the creation of WUAs, despite different organizational, economic and technical challenges, gave farmers the possibility of maintaining their canals (secondary and tertiary) and organizing water allocation by themselves. A member of Dikhan WUA board argued that the WUA initiative enabled farmers participation in water decision-making procedures, and their self-accountability regarding water use, payment and saving procedures. However, despite this institutional water context, evidence showed that Dikhan, Maksat A (based in Uckurgan) and Manas C (based in TalasAul) WUAs are directed by former heads of state and collective farms and former members of municipalities, and that participatory processes depend on local dynamics and practices. Furthermore, as stressed by the Maksat A WUA Director and by some farmers of Dikhan WUA, WUAs will not be financially sustainable without the vital support of municipalities. Concerning recent hydrosocial relations and roles reconfigurations, since 2008 four WUAs of the district have created the Saza-Baisu WUAs Federation, headed by the director of Mamatbaisu WUA. As underlined by him, the Federation has been designed after the request of water users and the heads of other WUAs to face lack of canals maintenance and water allocation efficiency of the Manas district water department. Two main canals, Saiza and Baisu were rented from the department for a period of four years. Interviewed water users stated that after the creation of SaizaBaisu Federation the maintenance of both canals and water allocation procedures improved. Questioned about relations between WUAs and potential issues of inequalities, they state that beside some occasional disputes of water allocation, relations between water users and with their governing boards are not problematic. Considering the reconfiguration of roles and powers in water control, the design of the

SazaBaisu Federation has reduced the role and available funds -delivered by the Ministry - of the Manas district water department. Questioned on the potential establishment of other federations in the district, SazaBaisu Director argued that the creation of new federations would be a serious institutional challenge, since this move would significantly decrease district water department's role, the unique state water institution involved in water control in Manas district. He added that the current context allows an equilibrium of decentralization and liberalization.

The Political discourse

Political discourse is fundamental to achieving power reconfigurations or the support of politics and the implementation of specific reforms. As argued by Foucault (1980), political discourse represents a way to exercise power, the *discursive power*, and to convey forms of knowledge and truth. The formalization of the Chu-Talas Commission has been characterized by depoliticized narratives, supported by the UNECE, the ADB and other organizations promoting the principles of development, multilevel cooperation, good governance and sustainability. Whereas on the one hand this discourse has been narrated by development organizations to Kazakh and Kyrgyz governments, on the other, national water authorities have not reproduced and spread these narratives to local level administrations and actors.

On the contrary, the Kazakh government and meso-level water authorities have spread a specific political discourse related to institutional and power reconfigurations analyzed in the previous paragraph. Reflecting on the nature and the strategy of these processes, Kazakh water authorities - Chu-Talas River Basin Agency and Taraz *Kazvodkhoz* - supported the idea of a rethinking of water liberalization occurred over the last decade, and the strategy of water management recentralization. Questioned on the dismantlement of the *Kommunalnivodkhoz* and on the hydraulic infrastructural property regime change, members of the Taraz *Kazvodkhoz* argued that canals and water allocation procedures are strategic objectives that should be managed exclusively by the state, underlying that the decentralization of secondary canals control failed, both financially and technically. In addition, they argued that cases of infrastructures privatization, as for

instance the Tyute canal, led to unfair commodification of water resources, capital accumulation and inequalities among users. The Director of Chu-Talas River Basin Agency argued that nowadays the state has financial availability to take back control of water infrastructures, and that the dismantlement of authorities operating between the state and water users will lead to a decrease of water charges and the increase of subsidies to farmers. He added that water- decentralization failed. The political discourse which accompanied institutional reconfiguration did not lead to tensions and neither did they result in disputes between water users. Farmers in Grodikovo, questioned on this process, argued that decentralization did not lead to benefits and improvements, and that the WUAs experience failed. Other water users in Besagash and a former water master of *Kommunalnivodkhoz* agreed that hydraulic infrastructures should be managed by state authorities and that allocation, directly controlled by these institutions without any intermediaries, would be more efficient, while the maintenance of canals and their control would be rendered easier. Therefore, it clearly emerges how the political discourse supported by state water authorities permeated water users ideas and rationalities, still implicitly influenced outcomes of the liberalization phase.

Conversely, Kyrgyz water authorities reinterpreted narratives supported by the UNECE, ADB and in particular those of the World Bank. In fact, since 2002, when the WB initiated to promote the WUAs establishment and the creation of a national authority supporting this initiative, the political discourse of Kyrgyz water authorities purported the logic of decentralization, liberalization and participatory approaches to water management. Kyrgyzstan is the unique state in Central Asia which supports, through a national authority, international water policies, and where state authorities, included members of hydraulic bureaucracies, claim decentralization. However, this position did not contribute to donors promoted establishment of the Talas Transboundary Basin Council. The Director of Manas district water department remarked agreements between the government and the World Bank, and underlined their organizational and technical support to the district department of WUAs support. Questioned on current water policies and the orientation for the next future, he and a couple of other members argued that, with the exception of

main infrastructures, secondary canals and small waterlines belong to the people and not to the state, and people, through the WUAs, should be accountable of their infrastructures. Concerning the creation of SaizaBaisu WUAs Federation, they advocated that the request was accepted, in line with the belief in decentralization, and with the idea that state and private institutions can operate together without conflicts of interests. In parallel, farmers members of the Saiza-Baisu WUAs Federation stated that this initiative, emerged according to bottom-up practices, could be an interesting governance example for the future. Others members of Dikhan WUA argued that this decentralized management enabled their active involvement in decision-making procedures. However, the former head of Dikhan WUA claimed that governing boards and heads of Manas district WUAs, despite councils and elections, are deeply influenced by powers and individuals of municipalities, and in certain cases, by members and former members of Manas District Water Department. Moreover, he explained that the financial support of municipalities is essential for WUAs operation, and without their support, it would be challenging for WUAs not to fail under charges of bankruptcy. Therefore, despite political discourses focused on decentralization, liberalization and participatory approaches, local level Kyrgyz authorities and village municipalities still significantly influence policies, power relations, practices and water resources management.

Borderlands transboundary infrastructures and formal & informal practices

Due to its physical characteristics and the materialization of Post-Soviet borderlines, the Central Asian region is characterized by different transboundary streams and hydraulic infrastructures (Megoran, 2004; Lam, 2008; Wegerich et al. 2012). This specific physical and political context led to diversely heterogeneous forms of tensions, disputes, and cooperation practices. Megoran (2004) and Lam (2008) argued that in different contexts borderlands cooperate more than central states, and that in Central Asia borderlands villages forms of informal and formal cooperation characterize social dynamics since decades. Wegerich et al. (2012) reported forms of meso-level cooperation at the Kyrgyz-Uzbek border in the Fergana valley. The Talas waterscape is

characterized by different canals, partly connected to the Kirov reservoir system and partly to the Talas river, built during the 1970s on the wave of the Soviet hydraulic mission, as discussed in chapter 3. Among them, Kozh and Tyute canals have a transboundary nature, while other small streams, Besagash, Mergalik and Imankul, originate from natural springs located in Kyrgyzstan less than 1 kilometer upstream of Kazakh border. Due to these physical characteristics, these waters are mostly used by Kazakhstan. Differently, Kairma stream, originating in Kyrgyzstan, a few hundred meters upstream of the border, flows parallel to the borderline, yet these waters are used to irrigate only Kazakh fields. Their waterscape characteristics, combined with heterogeneous political, social and management dynamics led to different transboundary issues, in terms of water amount sharing, water use and management of infrastructures. However, the evidence from borderlands showed that management of these infrastructures is not included in the framework of the Chu-Talas Commission. As underlined in the previous chapter, the Commission is in charge of the O&M of the Kirov reservoir, of the Talas flow water sharing (50%-50% for Kazakhstan and Kyrgyzstan), but not of transboundary canals and streams, except Kozh canal, at least according to recent reports. This specific physical and institutional context led to the arise of borderlands level tensions and disputes on the one hand, and of formal and informal practices of cooperation between institutions and actors on the other. Kozh canal represents an interesting case to shed light on hydro socio-power relations and infrastructural management dynamics of the Talas waterscape borderlands. The canal is linked to the river in Kyrgyz territory and measures approximately ten kilometers; three are in Kyrgyzstan and the remaining seven in Kazakhstan. Its ownership and management reflect the different water political rationale of the two states: the Kyrgyz part is controlled by Maksat A WUA, while the Kazakh one by the Taraz *Kazvodkhoz* since 2014, after the dismantlement of Dzhambul district *Kommunalnivodkhoz*.

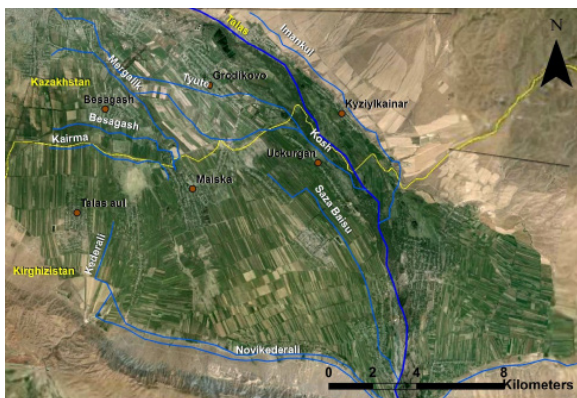


FIG.5: GIS elaboration of a satellite image (Google Earth TM) representing the canals network of Talas waterscape.

Hence, the canal belongs on the one hand to a private association, while on the other to a state authority, and therefore this institutional configuration makes the canal management a complex challenge. A water master of the Taraz *Kazvodkhoz*, operating on the Kozh canal, stated that technical maintenance and water allocation issues are frequent, and that water masters are in contact with the director of Maksat A WUA. In cases of issues in the Kyrgyz part of the canal, they can pass the border and meet each other. However, due to the canal property regime, private and state owned, an international agreement is not possible. Questioned on this context, the director of Maksat A WUA affirmed that different issues are at stake; the first 1.6 kilometers of the canal are lined, while the following 1.2 are grounded. This technical condition leads often to flooding issues in the farmers' fields close to the border, but the WUA's financial condition does not allow structural renovation, neither its maintenance close to the border. He stated that at the beginning of the vegetation season water masters of *Kazvodkhoz* cooperate with WUAs members for canal's maintenance. In addition, Maksat A WUA director argued that, since the end of Kyrgyz part of Kozh canal provides irrigation exclusively for Kazakh lands, Kazakhstan should be in charge for this section. However, Kazakh authorities argued that it lies in the Kyrgyz territory, and they already financially support joined infrastructures in the framework of the Commission. In parallel, the Manas district water department, despite the flooding issues and the requests of Maksat A WUA, is not intentioned to take back the canal control. The WUA director, claiming that Kozh canal should be included in the interstate strategic infrastructures in the framework of the Commission, communicated the heterogeneous

issues both to Talas River Basin Authority and the Commission without receiving any feedback. According to a report of the Commission and the UNECE, Kozh canal should have been included in the list of interstate strategic infrastructures since 2011, but the evidence showed a different reality.

A similar transboundary infrastructural property regime issue will be possible on the Tyute canal in the next future, considering the state plan for its renationalization, and management by *Kazvodkhoz*. According to the Maksat A WUA director, the same issue of Kozh canal will emerge. Nowadays, since Tyute canal arises from Talas river in the WUA territory, informal cooperation between the director and the Tyute private company, based in Grodikovo, Kazakhstan has emerged. The private nature of the two organizations makes relations and cooperation less challenging in comparison with those on the Kozh. Different is the context of the Imankul canal. Since it does not irrigate land in Kyrgyzstan, Kazakh water master has just an informal agreement with border guards to pass the border and be responsible of technical devices. Similar practices and informal cooperation dynamics are at stake regarding the transboundary streams originating in the Kyrgyz village of Maiska, approximately two kilometers upstream of the border. Besagash canal originates in this area, crosses the border and irrigates the land of the Besagash village. Since the canal does not irrigate Kyrgyz lands, Dikhan WUA, based in Maiska, is not responsible of its management while in Kazakhstan, Besagash canal is still property of the district but it is already managed by *Kazvodkhoz*. Questioned on its management practices and on forms of cooperation with Kyrgyzstan, two water masters operating along the canal argued that since years they have had informal agreements with border guards. Although the materialization of the border through the construction of the hedge made operations more complicated, they were allowed to pass the borderline to operate and clean the Kyrgyz section of the canal.

Diversely, the Kairma stream represents a unique example for its management practices and forms of cooperation. After the construction of the border hedge in 2012, the stream, originating close to the border, flows in Kyrgyzstan parallel to the borderline for approximately five kilometers. According to the head of a farmers cooperative

located in the Kazakh Besagash village, since 2012 they linked Kairma stream to their land through transboundary underground pipes while before the construction of the hedge water allocation was easier. Questioned on potential interactions with Kyrgyz water authorities, he stated that he does not have contacts with members of Dikhan WUA, neither with those of the Manas district water department. However, informal cooperation between the Kazakh cooperative and Maiska municipality emerged. According to the head of the cooperative, since some years he has stipulated an informal agreement with members of the municipality, through a regular payment for water use. In order to inquire on this practice, in Maiska members of the municipally were questioned on this exchange with the Kazakh cooperative and they wholly denied both contacts and any kind of agreement with Kazakh people.

However, heads of Kyrgyz WUAs and farmers claimed unequal water use and total amount in relation with Kazakhstan. They argue that Kazakh authorities should financially contribute and pay for water flowing from Kyrgyz springs to their territories (Besagash, Kairma), and for flooding issues along Kozh canal and in parts of Maiska village. The head of Manas C WUA argued that Kazakhstan receives water for free, and in addition their authorities immediately complain in case of flow decreases. According to him, these issues should be regulated at governmental level. Moreover, the deputy of Maiska, former head of the Dikhan WUA, stated that he contacted the Talas River Basin Authority to put pressure on the Ministry, in order to discuss and solve these issues in the framework of the Chu-Talas Commission. However, any feedback came out.

Discussion and Conclusions

The evidences from the Talas waterscape showed that the establishment of the Chu-Talas Commission has slightly impacted and reworked hydrosocial relations at the Kyrgyz-Kazakh borderlands level. Briefly reflecting on the national level, the creation of Commission led to a relevant rescaling process, due to its formalization, promoted by the UNECE, UNESCAP and ADB, of a new interstate institution in the Kazakh and Kyrgyz institutional water frameworks. This rescaling process exclusively involved, in both states, national and basin water authorities without leading to significant power

reconfigurations and linked contestations. In Kazakhstan, Chu-Talas River Basin Agency and Taraz *Kazvodkhoz* were both involved, despite the role of the first results more relevant in terms of power in the Commission institutional structure, decision-making processes, and interactions with the Kyrgyz counterpart. In Kyrgyzstan, roles in the Commission are exclusively played by the Department of Water Economy (Ministry of Agriculture) and its basin branch, Talas River Basin Authority.

Reflecting on the level of local borderlands, the findings illustrate that local/district level water authorities were excluded by the process and neither informed by national and basin state authorities. It emerged that the majority of their members were not aware of the existence of the Commission, even ten years later its establishment. Since WUAs heads, members and farmers were unsurprisingly not aware too. A number of questions and doubts on its potential benefits at local level in terms of water amount and allocation, underlined by Kazakh basin authorities emerged. Furthermore, the strategy of supporting knowledge sharing, information access, participatory approaches and IWRM principles, developed by donors projects linked to the Commission since 2008, were almost ignored by governments, by the Kazakh in particular. In parallel, also the establishment of the Talas Basin Council, promoted by the UNECE and ADB since 2011 and oriented towards a significant borderlands level rescaling process, was not even considered by both the Commission and Kazakh and Kyrgyz national water authorities. Its potential establishment would have significantly and deeply reconfigured borderlands power and hydrosocial relations, making political relations challenging between the two states, reflecting in particular on different and conflicting water politics paths undertaken by the two countries over the last few years. Hence, Kazakh and Kyrgyz water authorities were able to reconfigure and adapt logics and principles promoted by development organizations to their own objectives and political strategies. Moreover, whereas in the framework of the Chu-Talas Commission interstate cooperation among the two states at national level was strengthened, these dynamics did not involve local/border level, excluding interactions between different scales of institutional organization.

In fact, the evidence showed that the borderlands level hydrosocial cycle, instead of being reconfigured by the establishment of the Commission, was reworked by national, or even province, political strategies. The analysis of institutional roles, and their political discourses enabled the understanding of these reconfiguration processes. In Kazakhstan, a sub-national or even local initiative led to a rescaling process - the dismantlement of the Dzhambul *Kommunalnivodkhoz* and linked reconfiguration of the role of Taraz *Kazvodkhoz* - oriented to a state recentralization of local level water management, and characterized by a significant shift of power. The rescaling process was strengthened by a political discourse based on the mistrust on decentralization, and on the failure of liberalization, underlying the organizational and technical incapacities of district level authorities, common consequences of privatization, and the bankruptcy of certain WUAs.

Furthermore, state water authorities underlined the importance and the strategic role of national water infrastructures, combined by the imperative that they should be owned and controlled by the state. This order was narrated to water users as a socio-political legacy based on certainties, equalities and lower charges, despite inequalities and loss of power affected former members of the Dzhambul *Kommunalnivodkhoz*. Water users, given up the idea of creating WUAs, initiative in contrast with the state rescaling process, are today directly linked to state authorities. Reflecting on borderlands level water management and linked practices with Kyrgyz authorities, a state management of water and infrastructures enables Kazakhstan to keep a stronger position in terms of borderlands cooperation and Kyrgyz claims. In parallel formal and informal practices between water users, associations and other individuals emerged.

On the other hand, over the last decade Kyrgyzstan developed a rescaling process, which led to the establishment of WUAs and Federations of WUAs, wholly influenced by World Bank principles and linked political rationales, which processually shaped the borderlands hydrosocial cycle. Since 2002, Kyrgyz government has been supported projects and initiatives promoted by the World Bank, establishing a new state department - Department for WUAs support - at national, province and district level, in order to formalize the process of rescaling. Kyrgyz water

authorities, in contrast with those of Kazakhstan, claimed a narrative oriented to decentralization, liberalization, democratization and participatory approaches. Through the discourse of "*canals belong to the people and the people should be responsible of their properties*", Kyrgyz water authorities supported the legacy that water and infrastructures should be managed according to a public-private partnership. Through the perspective of water users, the rescaling process enabled them to be part of associations, while being involved in decision-making procedures. The creation of the WUAs Federation showed their power in terms of decision-making, capacities of influencing state policies and reduction of state roles. However, despite this context, members of municipalities, bureaucrats of district water authorities and former members of collective farms still play a relevant role in influencing decisions and power dynamics of WUAs. Hence, this apparent decentralized and liberalized water context is in place due to the political and financial support of local state authorities. Regarding transboundary borderlands relations with Kazakhstan, the evidence displays weaker capacities of negotiations and claims-making. It also reflects on the fact that borderlands demands have been apparently ignored by Kyrgyz authorities and the Commission.

This discussion, and the analysis of the rescaling process, enables us to state that the Talas waterscape hydrosocial cycle has been reworked, in terms of flow control, socio-power reconfigurations and infrastructural regimes, by sub-national specific politics, rather than by international or interstate policies and narratives. These dynamics are in contrast and in conflict regarding the political rationale, resources management politics, state-private actors relations and infrastructural property regimes. Therefore, reflecting on the nature of the Talas waterscape hydrosocial cycle, it emerges that the international development strategy of shaping it and (re)making it homogeneous through developmentalist visions and good governance principles failed. Rather, it is possible to state that currently the Talas waterscape borderlands hydrosocial cycle shows a complex heterogeneous and contrasting nature, characterized by contradictory and conflicting political logics and discourses. Therefore, although the development organizations promoted establishment of the Chu-Talas Commission strengthened national level cooperation between Kazakhstan and

Kyrgyzstan, and was streamlined as a “success story and model for cooperation in Central Asia” (Libert, 2014), it was not able to shape national water politics, particularly in the case of Kazakhstan. In addition, the formalization of this development initiative rather strengthened the Central Asian state rule, national and local powers, and related development paths.

References

- Abdullaev Iskandar, Mollinga Peter. 2010. The Socio-Technical Aspects of Water Management: Emerging Trends at Grass Roots Level in Uzbekistan. *Water* 2: 85-100.
- Allan, Tony. 2003. IWRM/IWRAM: A new sanctioned discourse? Occasional paper 50, SOAS/King's college University, London, 1-27.
- Bakker, Karen. 2003. A Political Ecology of Water Privatization, *Studies in Political Economy* 70: 35-58.
- Bensidoun, Sylvain. 1979. *Samarcande et la Vallée du Zeravchan*, Anthropos, Paris.
- Bichsel, Christine. 2009. *Conflicts Transformation in Central Asia: Irrigation Disputes in the Fergana Valley*, Routledge, London & New York.
- Biswas, Asit K. 2008. Integrated Water Resources Management: Is it working? *Water Resources Development*, 24 (1): 5-22.
- Blanchon, David, Graefe, Olivier. 2012. Radical Political Ecology and Water in Khartoum; a Theoretical Approach that goes beyond the case study. *L'Espace Géographique* 41: 38-60.
- Bourblanc, Magalie, Blanchon, David. 2014. The challenges of rescaling South-African water management: Catchment Management Agencies and interbasin transfer. *Journal of Hydrology* 519: 2381-2391.
- Brenner, Neil. 2001. The limits to scale? Methodological reflections on scalar structuration. *Progress in Human Geography* 25 (4): 591-614.
- Bryant, Raymond. 1998. Power, knowledge and political ecology in the third world: a review. *Progress in Physical Geography* 22 (1): 79-94.
- Brown, Cristopher J., Purcell, Mark. 2005. There's nothing inherent about scale: political ecology, the local trap and the politics of development in the Brazilian Amazon. *GeoForum* 36: 607-624.
- Budds, Jessica. 2004. Power, Nature and Liberalism: the Political Ecology of Water in Chile, *Singapore Journal of Tropical Geography*, 25 (3): 322-342.
- Budds, Jessica. 2009. Contested H2O: Science, Policy and Politics in water resources management in Chile. *GeoForum* 40: 418-430.
- Budds, Jessica, Hinojosa, Leonith. 2012. Restructuring and Rescaling Water Governance in Mining Contexts: the Coproduction of Water-scapes in Peru. *Water Alternatives* (5) 1: 119-137.
- Budds, Jessica, Sultana, Farhada. 2013. Editorial: Exploring Political Ecologies of Water & Development. *Environment & Planning D*: 275-279.
- Castree, Noel. 2003. Environmental Issues: Relational Ontologies and Hybrid Politics. *Progress in Human Geography* 27 (2): 203-211.
- Cohen, Alice, Davidson, Seanna. 2011. The Watershed Approach : Challenges, Antecedents, and the Transition from Technical Tool to Governance Unit. *Water Alternatives* 4(1): 1-14.
- Dukhovny, Victor et al. 2009. *Integrated Water Resources Management: Putting Good Theory into Real Practice*. Central Asian Experience. SIC ICWC, GWP CACENA, Tashkent.
- Dukhovny, Victor , De Schutter, Joob. 2011. *Water in Central Asia: Past, Present and Future*. CRC press.
- Ekers, Micheal, Loftus, Alex. 2008. The Power of Water: Developing Dialogues between Gramsci and Foucault. *Environment & Planning D* 26 (4): 698-718.
- Foucault, Michel. 1980. *Power/Knowledge*. Brighton, Harvester.
- Hornidge, Anna-Katharina et al. 2011. Reconceptualising water management in Khorezm, Uzbekistan. *Natural Resources Forum*. 35(4): 251-268.
- Houdret, Annabelle et al. 2013. The institutionalization of River Basin Management as politics of scale – insights from Mongolia. *Journal of Hydrology* 519.
- Kaika, Maria. 2006. Dams as Symbols of Modernization: the Urbanization of Nature between Geographical Imagination and Materiality. *Annals of the Association of the American Geographers* 96 (2): 276-301.

- Lewis, Robert. 1992. *The Geographical Perspectives on Soviet Central Asia*. Routledge, London
- Lam, Stephen. 2008. *Cooperation in the Fergana Valley borderlands: habitus, affinity, networks, conditions*, PhD Thesis, Department of Geography, King's College London (unpublished).
- Libert, Bo. 2014. The UNECE Water Convention and the development of transboundary water cooperation in the Chu-Talas, Kura, Drin and Dniester River Basins. *Water International*.40(1): 168-182.
- Libert, Bo, Lipponen, Annukka. 2012. Challenges and Opportunities for Transboundary Water Cooperation in Central Asia: Findings from UNECE's Regional Assessment and Project Work. *International Journal of Water Resources Development*. 28(3): 565-573.
- Linton, Jamie. 2011. *The Hydrologic Cycle and the Hydrosocial cycle: Bridging Hydrosystems and Hydropolitics*. Hydrosystems & Hydropolitics seminar, University of Paris Ouest, Nanterre.
- Linton, Jamie, Budds, Jessica, 2014a. The hydro-social cycle : Defining and mobilizing a relational-dialectal approach to water. *GeoForum* 57: 170-180.
- Linton, Jamie, Budds, Jessica 2014b. Editorial – the hydrosocial cycle. *GeoForum* 167-169.
- Loftus, Alex. 2006. Reification and the Dictatorship of Water Meter. *Editorial Board of Antipode*, 1023-1045.
- Loftus, Alex. 2009. Rethinking Political Ecology of Water. *Third World Quarterly* 30(5): 953-968.
- Megoran, Nick. 2004. The critical geopolitics of the Uzbekistan-Kyrgyzstan Fergana Valley dispute 1999-2000. *Political Geography* 23: 731-764.
- Marston, Sally. 2000. The Social Construction of Scale. *Progress in Human Geography* 24(2): 219-242.
- Molle, Francois. 2008. Nirvana Concept, Narratives and Policy Models: Insights from the Water Sector. *Water Alternatives* 1(1): 131-156.
- Molle, Francois et al. 2009. Hydraulic Bureaucracies and the Hydraulic Mission: Flows of Water, Flows of Power. *Water Alternatives* 2(3): 328-349.
- Mollinga, Peter, Gondhalekar, Daphe 2012. Theorising Structured Diversity. An approach to comparative research in water resources management. ICCWaDS, working paper 1: 1-64.
- Neumann, Roderick. 2009. Political Ecology: Theorizing Scale. *Progress in Human Geography* 33 (3): 398-406.
- Norman, Emma, Bakker, Karen. 2009. Transgressing scale: Water Governance across the Canada-U.S. Borderland. *Annals of the Association of American Geographers* 30(2): 100-117.
- Sehring, Jenniver 2007. Irrigation Reforms in Kyrgyzstan and Tajikistan. *Irrigation Drainage Systems* 21: 277-290.
- Swyngedouw, Erik. 1997. Exploring Human Geography- A Reader, *Transactions of the Institute of British Geographers* 22(4): 237-254.
- Swyngedouw, Erik. 2004. *Social Power and the Urbanization of Water*. Oxford University Press.
- Swyngedouw, Erik. 2009. The Political Economy and the Political Ecology of the Hydro-social Cycle. *Journal of Contemporary Water Research & Education* 131: 56-60.
- Swyngedouw, Erik. 2011. The Non-Political Politics of Climate Change. *International E-Journal for Critical Geographies*. 12 (1): 1-8.
- Thorez, Julien . 2005. *Flux et dynamiques spatiales en Asie Centrale. Géographie de la transformation post-soviétique*, Ph.D. Thesis, University of Paris Ouest Nanterre.
- Unec. 2011. *Strengthening Water Management and Transboundary Water Cooperation in Central Asia. The Role of UNECE Environmental Conventions*. Working Paper 3: 1-81.
- Unec. 2011. *Development of Cooperation in the Chu-Talas rivers (Chu-Talas II)*. Project Report: 1-9.
- Warner, Jeroen et al. 2008. Going with the flow : river basins as the natural units for water management?, *Water Policy* 10: 121-138.
- Wegerich, Kai. 2006. "Handing over the sunset"- External factors influencing the establishment of Water Users Associations in Uzbekistan: Evidences from Khorezm Province, Ph.D. thesis, Humboldt Universitet zu Berlin.
- Wegerich, Kai. 2008. "Passing Over the Conflict: the Chu Talas Basin Agreement as a Model for Central Asia", in Rahaman M.M. and Varris O. (Eds.), *Central Asian Waters*. Water &

Development publications, Helsinki University of Technology.

Wegerich, Kai et al. 2012. Meso-Level Cooperation on Transboundary Tributaries and Infrastructures in the Fergana Valley. *International Journal of Water Resources Development* 28 (3): 525-543.

Zinzani, Andrea. 2011. Tra Irriguo e Seccagno: le Trasformazioni Recenti nella Media Valle dello Zeravshan, Uzbekistan. *Rivista Geografica Italiana* 118 (3): 461-488.

Zinzani, Andrea. 2014. Irrigation Management Transfer and the Dynamics of WUAs: Evidence from South-Kazakhstan Province. *Environmental Earth Sciences* 73 (2): 765-777.

Zinzani, Andrea. 2015. *The Logics of Water Policies in Central Asia: the IWRM Implementation in Uzbekistan and Kazakhstan*. LIT VERLAG - Series Geographie, Zurich, Berlin.

Working Papers parus en 2015 et en 2016

Mathias Grote, *What could the 'longue durée' mean for the history of modern sciences?*, FMSH-WP-2015-98, june 2015.

Philippe Steiner, *Comte, Altruism and the Critique of Political Economy*, FMSH-WP-2015-99, GeWoP-8, june 2015.

Pierre Salama, *Argentine, Brésil, Mexique entrent dans la tourmente. Quo vadis Amérique latine ?*, FMSH-WP-2015-100, juin 2015.

Ayşe Yuva, *Die Historisierung der Philosophie in Deutschland und Frankreich nach Kant*, FMSH-WP-2015-101, octobre 2015.

Elisa Brilli, *Mettre en image les deux cités augustiniennes (ms. Florence, BML, Plut. 12.17)*, FMSH-WP-2015-102, octobre 2015.

Julie Patrier, *Les dépôts alimentaires dans les tombes d'Anatolie centrale au II^e millénaire av. J.-C.*, FMSH-WP-2015-103, octobre 2015.

Matthieu Renault, *Préface à la révolution. C.L.R. James, lecteur de Melville*, FMSH-WP-2015-104, juillet 2015.

Yang Dongping, *Enseignement supérieur, équité et société*, FMSH-WP-2015-105, octobre 2015.

Olivier Galland, *Un pacte implicite entre les générations*

pour le statu quo, FMSH-WP-2015-106/GeWoP-9, novembre 2015.

Anaïs Albert, *Consommation de masse et consommation de classe à Paris des années 1880 aux années 1920 : bilan d'une recherche*, FMSH-WP-2016-107, janvier 2016.

Philippe Rousselot, *Les forces spéciales américaines : vers une refondation?*, FMSH-WP-2016-108, mars 2016.

Priscilla Claeys, *The Right to Land and Territory : New Human Right and Collective Action Frame*, FMSH-WP-2016-109, mars 2016

Matias E. Margulis and Priscilla Claeys, *Peasants, Smallholders and Post-Global Food Crisis Agriculture Investment Programs*, FMSH-WP-2016-110, avril 2016

Antoine Kernén et Antoine Guex, *Partir étudier en Chine pour faire carrière en Afrique*, FMSH-WP-2016-111, avril 2016.

Stefania Tarantino, *La liberté et l'expérience politique des femmes face à la crise : les féminismes italiens et leurs prolongements au XXI^e siècle*, FMSH-WP-2016-112, avril 2016.

Camille Devineau, *Bwëni, un mot pour dire ce qu'implique être griot chez les Bwaba*,

FMSH-WP-2016-114, septembre 2016.

Anne Marie Moulin, *La « vérité » en médecine selon son histoire*, FMSH-WP-2016-115, octobre 2016.

Priya Ange, *Ethnographie des bijoux de Franco-pondichérien-ne-s. Au cœur d'une production des relations de genre et parenté*, FMSH-WP-2016-116, décembre 2016.

Dirk Rose, « *L'époque polémique* », FMSH-WP -2016-117, 2016.

Pierre Salama, *L'Argentine marginalisée*, FMSH-WP-2016-118, décembre 2016.

Marie-Paule Hille, *Le dicible et l'indicible. Enquête sur les conditions d'écriture d'une histoire religieuse au sein d'une communauté musulmane chinoise*, FMSH-WP-2016-119, décembre 2016.

Reinaldo José Bernal Velasquez, *An Emergentist Argument for the Impossibility of Zombie Duplicates*, FMSH-WP-2016-120, décembre 2016.

Karolina Krawczak, *Contrasting languages and cultures. A multifactorial profile-based account of SHAME in English, Polish, and French*, FMSH-WP-2017-121, janvier 2017.

Hylarie Kochiras, *Newton's General Scholium and the Mechanical Philosophy*, FMSH-WP-2017-122, janvier 2017.

Retrouvez tous les working papers et les position papers sur notre site, sur hypotheses.org et sur les archives ouvertes halshs

<http://www.fmsch.fr/fr/ressources/working-papers>

<http://halshs.archives-ouvertes.fr/FMSH-WP>

<http://wpfmsch.hypotheses.org>