Unraveling Path Dependency in the development of Kyrgyzstan's irrigation infrastructure

By
Jack Lambert Strosser

Submitted to
Central European University
Department of International Relations

In partial fulfillment of the requirements for the degree of
Master of Arts

Supervisor: Professor Dora Piroska

Vienna, Austria
2023

Table of Contents

i. Abstract

Water is a crucial resource in landlocked Central Asia. Until the USSR's collapse, water distribution depended on Moscow's decisions, so recent decades have challenged Central Asian Republics (CARs) on the question of distribution. Climate change has already reared its ugly head. Western Multilateral Development Banks (MDBs) have operated there for decades, water being one sector of focus. Climate change water politics, and security, dominate water-governance, geography, and natural sciences literature, but not institutionalist literature. MDBs in Central Asia's water sector do not attract much academic attention yet remain crucial actors in the region's water sector. Seeing this contradiction, an interesting case arises. The Kyrgyz Republic liberalized the fastest after 1991, controls one of the region's main waterways, and struggles with irrigation infrastructure. The EBRD, a unique MDB for its private sector focus and explicit political mandate, has entered the Kyrgyz irrigation investment space recently. This work asks: if Kyrgyz irrigation infrastructure still struggles after thirty years, why does EBRD promote the same policy platforms as decades ago? Historical institutionalism offers a robust framework to understand institutions through history and helps to create a narrative arc (using primary and secondary sources) of both Kyrgyz water institutions and MDB projects on the ground. It finds that EBRD and Kyrgyzstan suffer from path dependency for differing reasons, a potentially tragic fact given encroaching climate change.

ii. Acknowledgements

Firstly, I'd like to thank my supervisor, Professor Piroska, for pushing me, believing that my research is worth working on and interesting (somewhat), and for being a fantastic and active thesis advisor.

Thanks to my loving partner Polina for putting up with me through this.

I'd like to thank Professor Rakhat Sabyrbekov for meeting with Angelo and I in July of 2022, and offering first guidance on the original Kyrgyzstan water research project. Of those who we spoke to in July 2022, many cannot be named but I thank them greatly as well.

Thanks to Professors Thiemann and Benoît at the Center for European Studies at Sciences Po, Paris, for their valuable insights in the very beginning stages of the drafting process (on my birthday, nonetheless).

For their feedback and support, I'd also like to thank Janneke Boonstra, Florian Ney, and Angelo Kruger (for pushing me to co-author a paper with him, that somehow sparked the OSUN project and then this thesis). Many thanks as well to Matthew Winkler for the eleventh-hour editing session. Lastly, thanks to Erlan Osmangaziev for being our Bishkek guide. Noemi Piolat, Duarte Amaro, thanks for your feedback on the structure.

Thanks as well to Justin Burke at the Harriman Institute for mentoring me from afar through the years and helping to spark the original interest in the post-Soviet space (for lack of a better word).

It seems weird to thank an institution, but thanks to Central European University for the institutional support, as well as to Erasmus+ and Sciences Po, Paris. I would also like to thank The American University of Central Asia, Bishkek, for hosting me in July 2022 while I conducted research which would influence this paper.

iii. List of Figures

iv. List of Tables

v. Abbreviations & Terms

ADB – Asian Development Bank
BVO – Basseynovoe Vodnoe Ob'yedinenie (Water Basin Association)
CAR – Central Asian Republic
EBRD – European Bank for Reconstruction and Development
ESAP – Environmental and Social Action Plan
FSU – Former Soviet Union
HI– Historical Institutionalism
IO – International Development Organization
IPE – International Political Economy
IR – International Relations
IWCI – Irrigation Water Conveyance Infrastructure (IWCI)
IWMI – International Water Management Institute
IWRM – Integrated Water Resources Management
MOEF – Ministry of Economy and Finance
MVK – Ministry of Reclamation and Water Management (*MinVodKhoz*)
O&M – Operation and Management
PFM – Public Finance Management
RCI – Rational Choice Institutionalism
SDC – Swiss Agency for Development and Cooperation
SDG – Sustainable Development Goal
SSR – Soviet Socialist Republic (ex. Kyrgyz Soviet Socialist Republic, aka *Kyrgyz SSR*)
SVR – Sluzhba Vodnykh Resoursov (Water Resources Service AKA Kyrgyz Water Ministry)
TA – Technical Assistance
WB – World Bank
WC – Water Code
WUA – Water Users Association
ZK – Zhogor Kenesh (Kyrgyz Republic Parliament)

Note: Transliterations from Russian to English are done in the BGN/PCGN format.

Kolkhozes – Soviet collective farm managed by collective members.
Sovkhozes – Soviet collective farm managed by the State (often, the two functioned identically).
Perestroika – Soviet economic restructuring taking place under Gorbachev (1985-1991), this included market-oriented reforms, among others.
Hydrographic approach – An approach to water management wherein responsibilities are delineated by the hydrographic boundaries of bodies of water, rather than by administrative division.

Introduction

The climate crisis will affect life's every aspect, not least humanity's access to water for irrigation, drinking, waste management and more. Sustainable Development Goal (SDG) 6, reflects this urgency, calling for ensuring the availability and sustainable management of water for all (Ahlers and Merme 2016; Salleh 2016). To this end, international development organizations prefer to price water and let the market shape its – hopefully efficient – use. Water pricing as a policy mechanism began before the Washington Consensus spread like wildfire to newly independent, post-Communist countries. It became hegemonic through integrated water resources management (IWRM), a major pillar of international hydro-development (Benson 2015), which with the help of international development institutions like the European Bank for Reconstruction and Development (EBRD), with a mandate towards private sector investment, would now take place in the post-Communist space. Founded in the 1990s, the EBRD holds a clear mission to foster democracy, facilitate the establishment of market economies (Shields 2020). This aligned with the prevailing neo-liberal Washington Consensus (Babb 2013; Schindler, Alami, and Nicholas Jepson 2022).

Nevertheless, the EBRD had to operate in many countries lacking institutional capacity to carry out certain reforms. One such country, Kyrgyzstan, presents a hydro-conundrum. As the source country for one of Central Asia's two major rivers, the Syr Darya (the other being the Amu Darya, which originates in Tajikistan), Kyrgyzstan's water is a vital resource. The potential negative impacts of climate change in Central Asia are horrific (Bernauer and Siegfried 2012; Khakimov 2019; Nordhaus 2018; Paterson 2021; Reyer et al. 2017). Kyrgyzstan has attempted IWRM's implementation since the 2000s but has yet failed, and its infrastructure remains lacking (Beisebaev 2017; Imanalieva 2014; Sokolov 2006; Rost, Ratfelder, and Topbaev 2015). MDBs have helped, but Kyrgyzstan's historical disadvantage in accessing water resources and tensions arising from imposed practices complicate the situation.

This Thesis analyses EBRD investment in Kyrgyzstan's irrigation water from a historical institutionalist perspective. It asks why Western MDBs, in this case EBRD, persist on tariff-based water management despite evidence suggesting its ineffectiveness. It finds ultimately that based on the historical record, EBRD finds itself in a policy path dependency, influenced by other Western MDB policy frameworks. Kyrgyzstan also finds itself path dependent, but for different reasons, namely its fundamental need for development aid.

1: Literature Review

The following literature review investigates the literature on the IPE of water and the IPE of Kyrgyz water, thematically and chronologically.

1.1 The International Political Economy of Water

The political economy of water's management, and governance, harbors crucial debate on the normative policy role of said issues, even down to water's basic economic definition. Is it a public good where society benefits from a sufficient and safe supply? Is it a private good, exclusive, and contested (Bayliss 2014)? Is it an *economic* good, as the 1992 Dublin Principles proposed, whose price the market determines the price, with economic efficiency paramount (Moriarty et al. 2000)? According to Savenije and Van Der Zaag (2002), there are two schools of thought: the neo-classical, which prefers a *laissez-faire* approach to water pricing; and the alternative, a scheme prioritizing stakeholder integration to manage scarce water. Water access depends on spatial and temporal, inspiring to deem it an "uncooperative commodity" (Bakker 2007, 442). Enforcing basic water property rights (whether public or private) within and across borders becomes challenging, so of course, the policy interpretation of these classifications affects millions if not billions.

Western development policy regimes see water as an *economic* good, in line with private investors' conceptions. Take, for instance, the pricing rationale underpinning Integrated Water Resources Management (IWRM), a term crucial to this study. Private finance historically avoided water, adverse to lower profit rates and requisite long-term thinking. Yet, in 1990 it amounted to half of official development assistance for water, but by 2000 it overshadowed public by 500% (Schmidt and Matthews 2018). States dominated water investment until the 1980s, when "state failure" arguments sprung and first sparked a shift towards the private (Bakker 2013). Private sector hydro-actors now understand SDG 6 is impossible without its support (Ahlers and Merme 2016). Many scholars understand the privatization of water markets as a component of UN Kyoto

Protocol sponsored "market environmentalism," (Bakker 2007) which holds that parts of the environment are better allocated based on market logic, often referred to as the "neo-liberalization of nature" (Mansfield 2004; McCarthy 2004; McCarthy and Prudham 2004).

Water's privatization and commodification developed concomitantly with the neo-liberal turn, with questionable outcomes, which drew immediate ridicule (Moore 1989). Its global financialization process, like any other *commodity*, has garnered much scholarly attention (Ahlers and Merme 2016; Alaerts 2019; Bakker 2003; 2013; Bayliss 2017; Reis 2017; 2022). Berbel and Exposito (2020) looked at the implementation of water service cost recovery through pricing mechanisms, a crucial element of environmental and resource costs proposed in neo-liberal policy regimes, finding limitations in water pricing and a need to integrate pricing and non-pricing policy instruments better. Likewise, Molle and Berkoff (2007) wrote on the concept of 'water pricing' and found few examples of such mechanisms enhancing allocation and efficiency, as it was created to do (2007). Reis (2022) found that cost-recovery mechanisms implemented by Germany's KfW in Latin America failed to help the relevant communities get on track for SDG6.

Water's financialization represents an emerging trend in development practice (Mawdsley 2018, 2). Given the climate crisis, significant issues remain which much be addressed before private finance comes and exacerbates the already undemocratic process of financialization (Ahlers and Merme 2016). Likewise, though developing countries may receive evermore development aid, their ability to absorb said capital and utilize it properly, thereby making projects "*bankabl*e," remains a great challenge (Alaerts 2019). Neo-liberal water management, while it can improve livelihoods in absolute terms, may also further entrench pre-existing socio-economic structures vis-à-vis water access (Ioris 2013), and capital's profit-drive may overpower social benefit (Powell and Yurchenko 2020). Currently, water management across the globe sees dueling interests: a renewed and strengthened interest in municipalization of water sources, concurrent with ever deepening privatization and financialization of water sources (Loftus, March, and Purcell 2019). Critical scholars continuously argue that the financialization of water has, and will, lead to further

mismatches between the market and the needs of the population (Bakker 2013; Bayliss 2014; Loftus, March, and Purcell 2019).

Water governance literature often utilizes institutionalist theories. Scholarship on water management notes four main frameworks, which critical scholars deem insufficient (Gerlak et al. 2018). There is the efficiency-based analysis (maximizing the economic benefits of water use while minimizing the costs); institutional analysis and development (focusing on formal and informal rules, norms, and procedures that shape water governance); physically based watershed and river basin approaches (emphasizing topography, geology, and hydrology); and discursive policy analysis (whose methods include discourse analysis, frame analysis, and interpretative policy analysis). However, scholars have criticized these approaches for a lack of prioritization of equity and public participation in decision making. Instead, critics believe, such analyses should consider and prioritize the perspectives and values of all stakeholders, specifically marginalized communities (ibid). Water governance studies tend to focus on questions of coordination and integration between institutional orders at multiple hierarchical levels from the transnational to the local, while neo-institutionalist literature has only recently begun to grapple with this, as following sections will discuss. This Thesis aims to add to this conversation.

International development assistance to water remains lacking, and MDBs have an outsized influence in this matter. Official Development Assistance (ODA) statistics put Water Supply & Sanitation at 21st compared to other sectors (OECD.stat n.d.). Currently, developing nations require two to four times the amount of financing to meet their SDGs (Alaerts 2019, 1). Most prospective water projects, ranging from $10-50 million and for countries with BB credit ratings or lower, face water security risk of some kind (Schmidt & Matthews, 2018, 154). International development actors have a crucial role in water governance, but their water policy prescriptions, mostly based in the Washington Consensus neo-liberal framework (Babb 2013), have not always gotten the desired outcome (Bakker 2013; Reis 2022; Ambrosio, Hall, and Obydenkova 2021; Reyer et al. 2017; Bossuyt, n.d.; Ahlers and Merme 2016). The Asian

Development Bank (ADB) and World Bank (WB) are active in Central Asian water investment (Okano-Heijmans 2015; Punkari et al. 2014; Khasanova 2014), and the World Bank until recently has been a leader on policy in Central Asian water (Victor A. Dukhovny, Sokolov, and Ziganshina 2016). The World Bank, crucially, greatly influences international development policy regimes (Heldt and Schmidtke 2019), and EBRD, ADB, and WB often run along the same policy lines (Skalamera Groce and Köstem 2021, 5). The EBRD is an interesting institution because it is one part MDB, one part merchant bank and market maker (Shields 2020), founded originally with an explicit political mandate to help post-Communist countries transition (Shields 2021; Park 2021; Park and Strand 2015).

The role of these MDBs remain ever pertinent given the destructive potential of climate change on water systems in Central Asia (Bernauer and Siegfried 2012; Khakimov 2019; Nordhaus 2018; Paterson 2021; Reyer et al. 2017), in countries which rely greatly on development aid, which also carries with it influential norms (Tskhay 2020, 125; 2021). Understanding development's current policy frameworks, which they translate to private capital, is crucial. Analyzing its recent foray into irrigation, trailing after WB and ADB, would help to enrich our understanding of EBRD as a Western MDB in a sector that is at once crucial yet lacking in proper academic attention, a major gap in the literature.

1.2 The IPE of Kyrgyzstan and its water

1.2.1 IPE of Kyrgyz Water

One country which has garnered deserved attention in the water literature is Kyrgyzstan (Zinzani and Menga 2017; Rost, Ratfelder, and Topbaev 2015; Pradhan 2022; CABAR, n.d.)[1], which controls one of Central Asia's crucial waterways, the Syr Darya river. And while much literature exists on the role of public banks and development banks in water infrastructure,

[1] This is only scratching the surface of the literature available.

especially in Europe (Tskhay 2021; 2020, 125), little has been written on the role of development banks, specifically European development banks, in Kyrgyz water infrastructure (Imanalieva 2014; Pradhan 2022; Rost, Ratfelder, and Topbaev 2015). This thesis uses theorization and empirical substantiation to understand how EBRD interacts with irrigation water infrastructure, as it presents such an outsized problem in the region's climate conversation.

After the collapse of the USSR, 1990's Kyrgyzstan pursued agriculture as a primary sector – of which a major input is water – and did so into the 2010s, despite little evidence of this sector's comparative advantage even on a regional level (Lee and Mah 2020). While currently only 19% of the Kyrgyz working population work in the agriculture sector, as compared to 34% in 2007, which dropped from a height of 53% in 2003 (World Bank n.d.), this does not mean there is any less importance or impetus to the question of irrigation in agriculture. The historic emphasis on agriculture highlights the interwoven issues of (1) access to water resources, and (2) the still influential legacy of Soviet agriculture and water management practices, policies, legal and bureaucratic infrastructure.

A significant factor in the regional and state-level usage of water remains the detritus of the Soviet hydro-administrative system. Before the Russian Empire (and then the Soviets) controlled Central Asia, water management was generally local, becoming scaled up as a part of Soviet state building, "conquest of nature" effort but the post-Soviet era has seen a reduction in the influence of water-bureaucrats and a reduction in water sector financing, which is attributed to financial crises in the region, but most importantly, the management of inter-state water is understood through transnational relations rather than a more nuanced web of policies based on the water itself (Abdullaev and Atabaeva 2012). Abdullaev and Atabaeva (2012, 111) note that "agricultural reforms, irrigation policies, regional cooperation and other policies of riparian states," are the guiding forces of this inter-regional water politics. The most significant difference between now and the Soviet era is the increased potential inputs that citizens may have, through Water User

Associations, which may influence local policy (Abdullaev and Rakhmatullaev 2015), but have been found to have little effect on policy (Horinkova & Abdullaev, 2003; Sokolov, 2006).

Newly created (CARs) had to graft a new legal framework onto the detritus of Soviet legal and physical infrastructure. Intra-Central Asian water management remains lacking not merely due to technical issues, but because of stifled integration of regional regulations (Janusz-Pawletta and Gubaidullina 2015). Kyrgyzstan, like other members of the Eurasian Economic Union (EAEU), does not precisely follow United Nations legal water frameworks. As such, the region (and the EAEU) would benefit greatly from a strengthening of its transboundary water regulatory framework along the lines of environmental protection and economic development. The interconnectedness of Central Asian waterways, however, has been a factor in regional disputes and even low-level military conflict, particularly in the Ferghana Valley, where Uzbekistan, Tajikistan, and Kyrgyzstan all have territory (Toktomushev 2018; Abdullaev et al. 2009; Matveeva, Faizullaev, and Bader 2017; Murthy and Mendikulova 2018). The Ferghana Valley is also where some of the first water management development projects began, with the help of international organizations (Abdullaev et al. 2009). But successes and failures in transnational water cooperation are blamed usually on the Central Asian states, rather than international donors, without taking into account the legacies of their material, legal, and ideological infrastructures that they inherited from the USSR (Libert 2015).

1.2.2 IPE of Kyrgyzstan

Kyrgyzstan sped out of collapse into market liberalism, aiming to attract foreign aid, which has had less of an impact than anticipated. After the USSR collapsed, Kyrgyzstan sped towards marketization and neo-liberal reform, precipitating both the country's relative openness, its political contestation and democratic norms, and its political volatility in this period (Imanalieva 2014; Beisebaev 2017; Sokolov 2006). It deregulated its public sector and labor market, instituted price liberalization, large scale privatization, and updated its banking and financial infrastructure, and crafted laws to ease private sector development, but it could not escape dependence on the

Russian ruble as an anchor currency. Kyrgyzstan suffered a severe depression and hyperinflation. From 1993-95, the annual growth rate was negative 13.7%. It began to recover in the late 1990s, finally reaching its 1992 GDP level in 2004 (Lee and Mah 2020). Self-administered economic shock therapy achieved several objectives: it aided the liberal government in consolidating its authority and quelling opposition; Kyrgyzstan maintained Soviet-era bureaucratic and institutional systems while rejecting Soviet ideology, smoothing the economy's operation but enabling bribery and corruption; it created significant social instability and an uneven power dynamic among certain political players; and finally, a lack of confidence in local institutions resulted in a loss of private investment funds, diminishing Kyrgyzstan's appeal to foreign direct investment, although the country did become more open and committed to international cooperation (Abazov, 1999). Kyrgyzstan received backing and support from the IMF and World Bank, among others, which pushed for privatization (Bichsel et al. 2010). Contemporary literature has found that EU development assistance towards Central Asia lacks a significant impact, despite the EU having spent much on development funding in the past twenty years (Bossuyt 2018; Bossuyt and Dessein 2021).

The novelty of Kyrgyzstan's state – never before had a "Kyrgyzstan" it existed except as a Soviet Republic (Cummings et al. 2013) -- influences its rollercoaster road towards democracy. Kyrgyzstan stands out amongst other Central Asian states due to its open political system, the only Central Asian state to transfer presidential power in competitive elections, as the others installed new authoritarian regimes (Batsaikhan and Dabrowski 2017; Marat 2012). Since 2000, Kyrgyzstan has undergone three revolutions – one in 2005 against then president Askar Akaev, another in 2010 which ousted Kurmanbek Bakiev, and a third in 2020 (Goldstone, Grinin, and Korotayev 2022). In 2010 a new constitution was written, one which allowed neo-patrimonial linkage networks -- which largely operate on an axis of North-South ethnic ties (Ryabkov 2008) -- to self-regulate the system so that no one group gains too much power. Neo-patrimonial networks remain

relatively fluid, and competing regional elites control various economic resources, and alliances form to reduce threats to the business interests of a given patrimonial network.

The rapid transition to a less-regulated market economy allowed these groups to take on an entrepreneurial character. Future Presidential administrations faced these economic actors in standoffs, and scholars understand the 2005 and 2010 revolutions as the results of said elite groups over political power and natural resources (Marat 2012). The 2020 Revolution saw Kyrgyz protestors ousting their government and bringing in President Sadyr Japarov, known by scholars as a "populist" against the corrupt business elites, which informs today's policy situation (Nokhrin 2021). Japarov must contend with Kyrgyzstan's relative position in the Central Asian economy: one which is relatively resource poor (Vanderhill, Joireman, and Tulepbayeva 2019), its main export being gold, exported to Europe (Mogilevskii 2012), and tending to trade access to its water resources (e.g. hydroelectric energy) to other Central Asian states (Saidmamatov et al. 2020).

In the early 2000s the academic and policy community on water saw irrigation management through a technocratic lens, but literature quickly shifted from an emphasis on water *management,* mainly a technical issue, to a framework of water *governance*. The concurrent academic milieu in which most research was written following institutional economics with Rational Choice models, or through collective action frames with water conceived as a common pool resource (Sehring 2007). Sehring, who pointed this out, introduced historical institutionalism to the Kyrgyz water *problematique* (Sehring 2007; 2008; 2009), inspiring this thesis' framework.

2: Theory: Historical Institutionalism

2.1 Historical Institutionalism and its Relevance to Kyrgyzstan's Water

Neo-institutionalism, divides into: Rational-Choice Institutionalism (RCI), Sociological Institutionalism (SI), and Historical Institutionalism (HI), each with conceptual (dis)advantages for this case. General institutionalist approaches explain political outcomes through institutions and actors within them, as opposed to mere *structure* (as seen in neo-Gramscian and neo-Marxist work) or *agency* (fields emphasizing agency can be some sub-fields of History, as well as Micro-economics, for instance). It is rather someplace in the middle (Streeck 2011). To understand social outcomes, one must consider behavior guiding rules and norms, i.e., *institutions*, which can be conceptualized in a variety of ways.

Sehring (2007) cites Saleth and Dinar (1999, 2004) who specify water institutions as water *law* (the legal status, rights, conflict resolution mechanisms, legal pluralism, administrative regulations, and implementation mechanisms), *policy* (usage priorities, water tariffs, decentralization or centralization of competencies, participation, and cross-policy coordination), and *administration* (organizational structure of water management, including funding, staff, capacities, and fee collection). Institutions could also be things such as regulatory oversight, policy rules coordinating market competition, "state systems of interest aggregation and mediation," and regulatory regimes (K. O. Fioretos, Falleti, and Sheingate 2016; Farrell and Newman 2016, 616). Sehring says so herself that water institutions are not merely formal institutions, but include norms, traditions, and symbolic meanings, forged out of perpetual social movement (Sehring 2009). This paper draws inspiration from Sehring's use of HI, reviving it as a frame through which to investigate this problem.

2.2 Historical institutionalism versus other "new" institutionalisms

HI distinguishes itself in its emphasis on framing research questions through "empirical puzzles," inspired by historical events and comparisons thereof, as well as its emphasis on institutional emergence as the natural outcome of "concrete temporal processes," which themselves arise from political struggles (Thelen, 1999, 373, 384; Fioretos, 2016). It centers history and emphasizes sunk costs as a path dependency driver.

Its scholars understand the relationship between actors and institutions in broad terms. Policy makers, and political actors, are themselves relational actors – that is, they operate within and due to their historical and immediate context – their actions cannot be explained without understanding multiple variable dimensions within which they are embedded. It also understands the state less as a "neutral broker among competing interests" but rather a web of institutions with capabilities to influence on its own, asymmetries abound (Hall and Taylor, 938). These environments are crafted by "institutional practices, shared cognitive frameworks, and network relations" (Mahoney, Mohamedali, and Nguyen 2016, 1:6). This structuralist understanding conflicts with the understanding of other theories that institutions function as settings of and the glue of historical processes, rather than an agent *of* and *by* said processes, as HI understands them.

HI sees institutional development mainly through the lenses of path dependency and unintentional consequences, while analytical potential remains for the role of ideational embedding within institutional contexts, rather than the other way around, as sociological institutionalists prefer to see it (O. Fioretos, 2011, 9). Institutions allow actors to see *relatively* stable paths, thereby forming their expectations in the actor's process of attaining their given goals (called by Hall and Taylor the *calculus approach).* The *cultural approach,* on the other hand, which sees institutions as suppliers of "cognitive templates" for impulsive or planned action – not denying, of course, that people are sometimes rational and sometimes not! – as institutions are themselves part of what constitutes the woven fabric of one's worldview. Working backwards, a *calculus* approach would posit that institutions persist over time because deviation could make an actor worse off, while a

cultural approach emphasizes how some norms are so engrained, they are taken for granted, are so deeply embedded that they overdetermine the decision-making process.

Thus, HI remains a more nuanced analytical framework than RCI Most fundamentally, RCI sees actors' choices as deriving from strategic action calculated in reference to expectations of other actors' responses. These take place within the institutional context, wherein institution arise out of value-realization by actors (a functionalist account).

The last, SI, remains useful for its emphasis on institutions beyond mere formal rules, that conceptions of institutions arise from the underlying social structure – meaning a *rational policy* is in the eye of the beholder, pointing directly at the issue of cultural authority and legitimacy. Hall and Taylor note that these processes also occur on transnational scales.

2.3 "Makers and Takers"

Streeck's HI accounts for "makers" and "takers" of regulation and rules through transference of policies based on a normative order's legitimacy (Streeck 2011). "Takers" do not have to fully comply with "makers," and as institutions and their orders require reification ad infinitum – there is room for maneuvering which becomes long term change. Streeck, to this idea, offers specifications which exemplify a (broadly) capitalist economy – this is a taxonomy lending context to the transition from Communism which Kyrgyzstan both underwent and self-imposed. These include, in no order:

Contractual exchanges, towards the maximization of profit and material possession, overwatched by a non-predatory state and lubricated by voluntarism – the point at which *voluntarism*, however, turns to *force* is up to definition and regulation by the self-same state;

An expectation that *takers* act in a rational-egoistic manner, that makers cannot expect takers *not* to act in bad faith – which leads over time to institutions adapting to anticipate bad-faith action;

Market actors would, if given the opportunity, destroy the commons they rely on;

An attitude towards institutions that anything not explicitly forbidden is allowed, leading to a deliberate stretching and testing of laws;

Better access to social mechanisms and legal aid, information services, for those closer to the capitalist class;

Lastly, dichotomous institutions fall into two categories – *moral* in nature, those that seek to regulate rational-egoistic profit pursuits, and *economic*, explicitly designed by interested parties to increase returns – but Streeck says rule makers and takers are identical in these institutions.

The Kyrgyz case clearly, does not resemble this. The rule makers, and international donors, are not the same as the rule takers – the Kyrgyz Republic, its lawmakers, regulators, and citizens. This points to another gap in historical institutionalist literature focusing on domestic processes. This also highlights the importance of power dynamics in the institutional framework.

The "makers" and "takers" framework is an excellent way to understand how the regulatory regime manifests. The transnational nature of regulation and rule overlap means that firms, citizens, and NGOs alike must deal with international demands; all the while, globalization allows these same actors to form policy alliances (Farrell and Newman, 2016, 716). Regulatory regimes will become attractive to states in need as they aim to gain benefits offered by said regime (Mahoney, Mohamedali, and Nguyen 2016, 1:15). Drezner (2007) argues that international regulatory regimes often favor the US and the EU.

Jumping from the transnational question, some have argued that historical institutionalist literature can help to understand international relations better (Farrell and Newman 2010; K. O. Fioretos, Falleti, and Sheingate 2016; O. Fioretos 2011). However, historical institutionalism also fills a gap in international relations theory: describing how actors respond to an altered environment. When historical institutionalism began in the 1970s, the literature focused mainly on explaining national processes and historically developed national phenomena. Furthermore, after many decades, historical institutionalist scholars are finally starting to figure out how to incorporate

the international, as it has mainly focused on Western institutions and polities. This is a significant ga

2.4 Historical Institutionalism's Toolkit – Concepts & Tools

2.4.1 Concepts

One of the most crucial is path dependence. Historical institutionalism seeks to explain the reproduction of institutions through path dependence, to understand how policies are chosen, how they might break down and change (O. Fioretos, 2011). Policy processes become path dependent during and after critical junctures, wherein multiple potential pathways present themselves and the process eventually falls into place. Importantly, critical junctures (to be defined hereafter) can both forge and break path dependencies (Capoccia and Kelemen 2007).

There are four possible reasons that path dependence occurs. The first concerns policy paradigms, which Hall understands as the framework of ideas which contextualize and clarify the bounds of an actor's *potential* thinking within a given context, specifically towards the goal of formulating policy. What are the conceivable goals? What are the instruments used to meet these goals? How does one even understand the problem at hand? All of these questions are taken for granted and therefore considered, according to Hall, a policy paradigm (Hall et al. 1993, 279). Balances of power and/or policy paradigms may undergo "lock in" from institutions, allowing a hedging of power by interested groups. This "lock in" effect was prominent in the first wave of historical institutionalism. Come the second wave, scholars began to assert that institutions could create *new* stakeholders through crafting positive externalities. There are also feedback effects, which are defined as a "steady increase in returns relative to once-feasible alternatives." And lastly, the institution can enhance its own value with the help of "self-reinforcing qualities" (Fioretos, 2011, 11). However, Pierson (2004) noted that we can assume neither path dependence nor the "stickiness" of institutions – both must be proven.

Yet another crucial concept is that of the critical juncture, which Collier and Collier defined as "as a period of significant change, which typically occurs in distinct ways in different countries (or in other units of analysis) and which is hypothesized to produce distinct legacies" (Collier and Collier, 1991, 29). These junctures are the context in which historical legacies are borne out, but policies are also formed. They stressed that the timing and the length of the juncture plays a great role in the actual formation of policies afterwards. Critical junctures may have critical antecedents: factors and conditions existing before a critical juncture which combine causally with factors *within the juncture* to create a divergent outcome (Slater & Simmons, 2010). It follows that critical junctures seldom occur in a "blank slate" situation (Hogan, 2019; Thelen, 1999). During these junctures, policy entrepreneurs and political actors may more easily influence events, causing increasing returns and inertia. According to Capoccia & Kelemen (2007), a good amount of historical institutionalist literature, while relying on critical junctures as crucial elements of the policy timeline, at the time of their writing, preferred to emphasize the " 'reproductive' phase launched after a path-dependent process is initiated," instead of junctures themselves (Capoccia & Kelemen, 2007). They argue that greater attention must be paid to actor agency, as during critical junctures, "relatively free agency" can arise, allowing for institutions to "exert their causal force" (O. Fioretos, Falleti, and Sheingate 2016, 1:10). Despite a previous conceptual underdevelopment, literature on critical junctures has, according to Hogan (2019), matured to a point where it helps to differentiate between "radical changes and other forms of transformation – driven both by exogenous and endogenous forces." However, in recent years, critical junctures literature has benefitted greatly from an influx of literature on "ideas, discourse, and agency," complemented by the introduction of constructivist and discursive institutionalism, wherein the "prime position of [historical] contingency has been supplanted by the role of ideas and agency" (Hogan 2019).

Within historical institutionalism broadly, Greener (2006) notes, "patterns of behavior come to resemble 'punctuated equilibria' ... where substantial change is only possible in 'critical junctures' " after which institutions and policies will settle into inertia. The definition Greener here

references proved too unspecific for some scholars, and since then, many have sought to clarify path dependency's definition and function, so to avoid "concept stretching," which Pierson (2000a; 2000b; 2000a) warned against. In the same vein, Howlett and Rayner (2006) critique path dependency for its lack of understanding of the "collective nature of politics," a refusal to acknowledge that power asymmetries can unilaterally undo phases of policy lock-in. This critique is quite effective. Restricting the definition of "lock-in" to include only processes where policies were implemented, rather than allowing for reversals, would run the risk of the "lock-in" concept becoming tautological, therefore undercutting the model itself. They, along with Greener, argue the best type of historical sequencing is punctuated equilibrium, as this allows for trajectory reversals. Critical junctures, I contend, should be understood as *punctuating* points in a sequence of policy events.

Returning to Sehring (2007, 2008, 2009), who was one of, if not the first, to apply a new-institutionalist toolkit to the Kyrgyz water question, one must remember the concept of *institutional bricolage*. Neither a continuation of old norms (*path dependency*), nor a complete rupture from the past (*critical juncture*), but an improvisation with the available institutional frameworks. In her analysis of water institutions, Sehring utilizes historical institutionalism and its toolkit – path dependency and critical junctures but argues that the institutional change which occurred was neither of those two, but rather a third: *institutional bricolage*, a term for when institutional actors create new institutions with the tools they are offered, based on various (and sometimes contradictory or competing) policy logics. Sehring's research was based on expert interviews and a case study of one Water User's Association.

2.4.2 Tools

Further methods of historical institutionalism include process tracing and comparative case studies, among others, which help to better understand relationships not evident from quantitative

data. They have been known also to use statistical, formal, and interpretive methods (Fioretos, 2016).

Two tools of high interest are *layering* and *conversion*. Historical institutionalism does not claim to account for all the international system's major patterns, but by highlighting historical legacy as a conditioning factor to interests and options of states, helping to explain why "layering" has become a common feature, and "institutional conversion," has become a defining practice (Fioretos, 2011, 25). Layering occurs when new institutional elements or rules are placed on top of, or included alongside, previous rules, in instances where reformers find themselves unable to alter the core tenets of an institutional rule-scheme, or if they want to bolster their preferred policy (Hanrieder 2014; Moschella 2016, 805). *Conversion* occurs in the repurposing of old institutions for new or altered aims. Fioretos is careful to name *layering* as a "dominant feature," and *conversion* as a "defining practice" of international institutions (O. Fioretos 2011, 391).

Most of HI's attempts at breaching IR come from questions of national bureaucracies managing international issues – the Kyrgyz case fits exactly this model. More specifically, non-functionalist arguments in this vein tend to argue that localities and states will interact with, and copy institutional rules from those that exert influence, making *conversion* and *layering* useful tools to specify characteristics, timing, and the nature of policy diffusion (K. O. Fioretos, Falleti, and Sheingate 2016).

The puzzle remains why EBRD, in its first major foray into irrigation infrastructure in Kyrgyzstan, promotes tariff-based water management, despite this policy's shaky history in Kyrgyzstan but also in other countries as well. To answer this question, we must examine what the EBRD is doing now, what historically has happened in Kyrgyzstan, and figure out how historical institutionalism can help us understand this situation. As detailed in the case study, Kyrgyzstan is an example of a setting where the EBRD overlooks regional, national, and local institutional history and practice, leading to a mismatch between stated goals and climate-based priorities, and the efficacy of measures on the ground.

2.5 Methodology

Parsons et al. (2019) utilized HI path dependency as a lens into Maori irrigation practice. They analyzed historical primary documents to draw a *narrative arc* – that is, to process trace. Their framework, based on HI, assumes as a given the unrelenting self-reinforcement of institutions (Greener 2006), bar a countervailing event (*critical juncture).* This Thesis therefore will craft a narrative arc centered on relevant institutions, then discuss their layering and/or conversion, to understand the role of MDBs in this sector. Further, taking inspiration from Gerring (2012), who argues the importance of *descriptive* academic work as its own standard, this Thesis seeks to examine the history of the relevant institutions, often in relation to each other but always in relation to water, without making any claims to causality.

The following section will synthesize previous literature to craft a narrative arc of irrigation institutions, but also use primary source policy documents (from WB, ADB, and EBRD). It understands these firstly as "sources," to understand the facts of the policy process as IDOs understand it, and then to understand them as "texts," whose real meaning may change contextualized using some HI tools (Karppinen and Moe 2012). The primary sources in question include MDB policy documents (grey literature), Kyrgyz legal documents, relevant news articles, and more. Secondary sources are academic in nature, from both Western, Kyrgyz, and other Russo-phone academia.

3: The case – Kyrgyz irrigation: History, MDBs, and Issues

3.1 Introduction

Until the USSR's collapse, water management decisions ran through Moscow, which oversaw an incredibly elaborate network of transboundary waterways and physical infrastructure shared amongst the Soviet central Asian republics -- all of which depended on funding from the Soviet government, which disappeared alongside the USSR. Between the Soviet CARs, Moscow established energy and water quotas prioritizing cash crop agriculture, mainly cotton. Kyrgyzstan, which controls the Syr Darya's source, was underserved even in access to its own water. Bishkek carried this disadvantage with them when the newly created independent Central Asian Republics signed legal agreements in the 1990s that effectively upheld the legacy Soviet distribution system.

At the same time, in the 1990s, the EBRD formed with the explicit mandate to promote democracy, establish market economies, and push implement Washington Consensus policies. and to help formally communist states make the transition from state Socialism to market capitalist economies, with the hegemonic policy platform, the Washington Consensus. Compared to Central and Eastern Europe, the EBRD just like any other international organization or Western national governments pay Central Asia less attention.

A third dynamic begins as well in the 1990s among water experts of IOs: the linking up of neo-liberal development policy and new international frameworks of understanding water governance – underpinning this all is the idea that pricing water, something which did not occur in the USSR – would lead to greater efficiency and less waste.

Kyrgyzstan, a country which has sped towards neo-liberal reform with only minimal interference from IOs, introduces tariffs for irrigation and drinking water in the late 1990s, which also lent to their larger strategy of attracting development aid and investment. At this time, water remained a risky and un-appealing investment to private capital, but by the end of the 1990s, investment sees a major flush of private money. But still Kyrgyz water infrastructure remained

wasteful, underfunded, and often undermaintained. By the new millennium, international development agencies are helping Kyrgyzstan develop its water infrastructure system under the IWRM framework, which water tariffs are a crucial element of. End users should pay for access to water running through state owned infrastructure. The results are mixed. While no doubt more and more people have enjoyed improved water conditions, Kyrgyzstan has yet to implement IWRM and the same general infrastructural issues remain. There is yet road left towards IWRM and SDG 6.

Fast forward twenty years, and both scholarship and MDBs themselves find that cost recovery through water pricing rarely works worldwide, and specifically ISFs are not implementable to MDB standards. This echoes a broader trend in literature on the political economy of water – cost recovery through price signaling often does not work as intended. Moreover, despite passing a law in 2005 to implement IWRM, Kyrgyzstan has yet to do so. But the EBRD just started its first major irrigation investment in Kyrgyzstan just a couple of years ago, taking the cue from the World Bank and ADB who have been in Kyrgyzstan for longer on irrigation. Yet they still prescribe tariffs where they have historically struggled, in a country whose state capacity is often rocked by revolution (they have had three in the past twenty years). This demonstrates a case of path dependency with unpredictable consequences as the climate crisis worsens access to water.

3.1.1 Why Kyrgyzstan? Why irrigation?

It is sensible to understand MDB influence (specifically EBRD) in the water sector through irrigation, firstly because Herrfahrdt et al. (2006) and Sehring (2007, 2008)) analyzed it, utilizing HI frameworks. Preliminary IMF staff findings name agriculture (at "exceptionally high levels") as a contributing sector in the country's 7% growth in real GDP over 2022, counter to predictions that the Russian invasion of Ukraine would wreck Kyrgyzstan's economy, so its economic importance is clear (IMF COMMUNICATIONS n.d.). Regionally, Kyrgyzstan is responsible for

25% of the entire Aral Sea Basin's annual river flow (CABAR, n.d.), but deterioration of irrigation canals, high evaporation due to an already arid climate, and drought, contribute in kind to inefficient water use, alongside salinization, which frequently impacts flooded arable land, worsening the situation (Saidmamatov et al. 2020). Climate change will weaken regional agricultural outputs, while Central Asia's population is set to grow to 74.6 million by 2030 from around 61.5 million in 2011 (Rakhmatullaev and Abdullaev 2014, 342). This presents a daunting challenge to policy makers and a potentially fatal change to Central Asia and Kyrgyzstan's poorest.

Irrigation will also help to understand the implementation of IWRM, which elevates economic tools above all others as the solution to water issues. Some developing nations even complained that IWRM was more about integrating developing countries into the globalizing economy than actually focusing on water (Schmidt and Matthews 2018).

3.2 Geography

Kyrgyzstan and its waterways sit in the Aral Sea Basin, which hosts two large river basins, the Syr Darya and the Amu Darya – the Syr Darya being of interest to this paper. As of 2020, 54.1% of Kyrgyzstan's land area was for agricultural purposes (103,678 sq. km, or 10,367,800

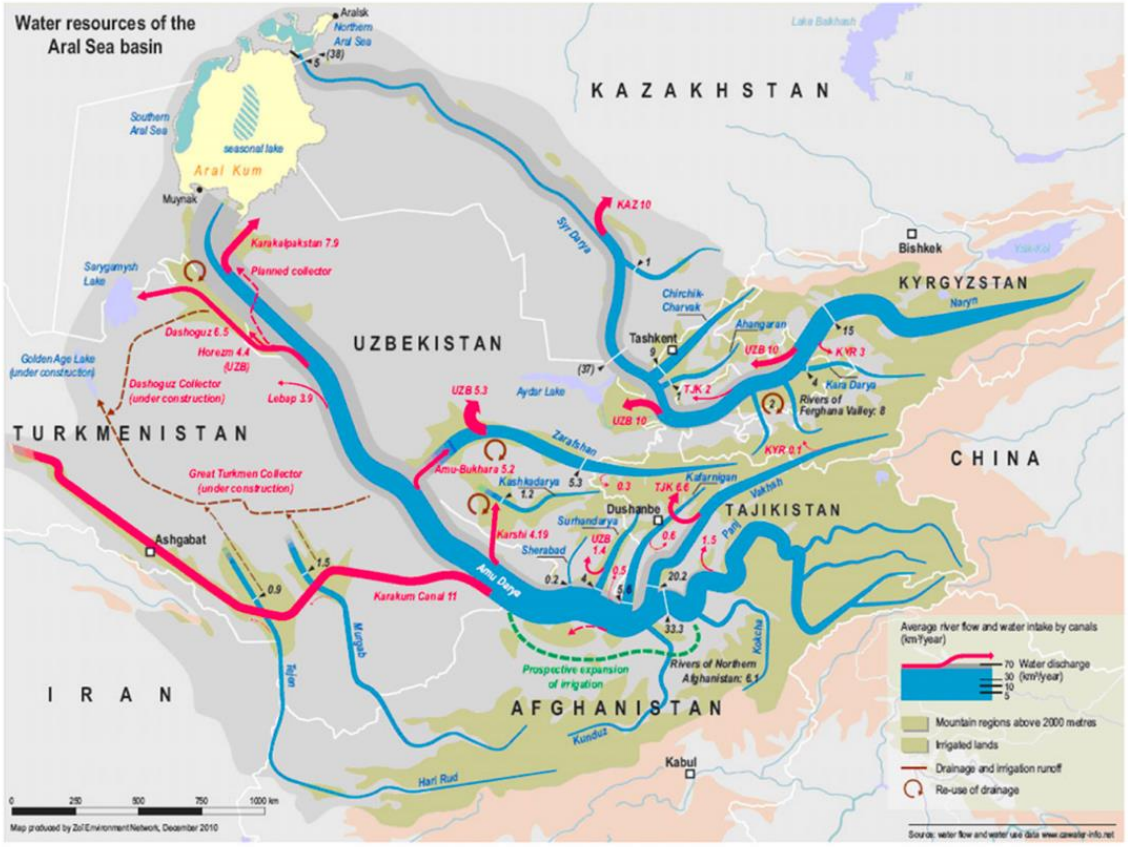

Figure 1 *- Central Asia's waterways. From Dukhovny et al. 2013.*

hectares) (World Bank n.d.; Abuduwaili, Issanova, and Saparov 2019). Water resources spring from precipitation river runoff, melted glacial water and underground feeding, and underground waters pumped by wells (Abuduwaili, Issanova, and Saparov 2019).

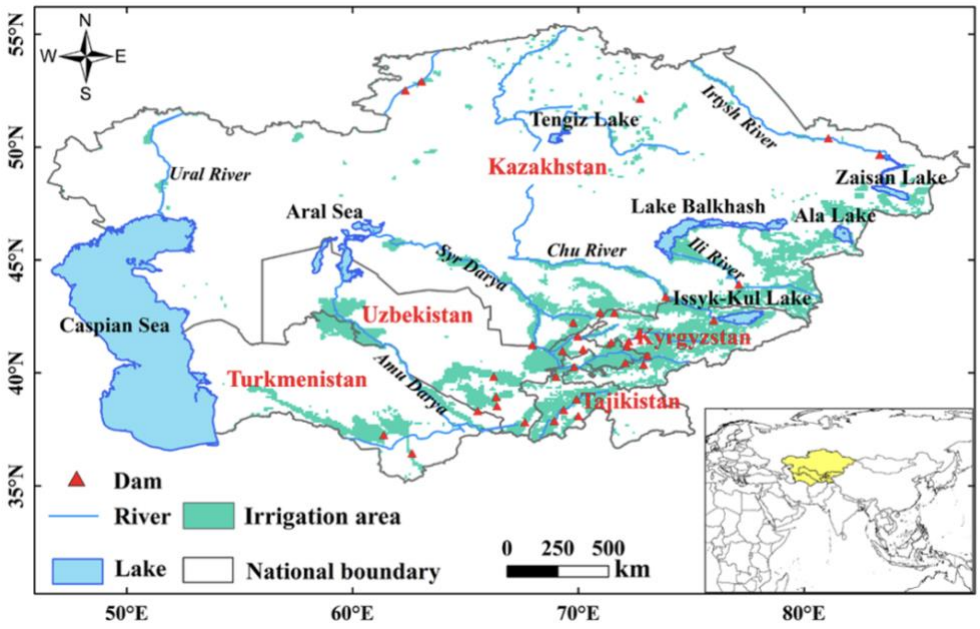

Figure 2 *- Central Asia's irrigation, from (Wang et al. 2021).*

3.3 The Historical Context

3.3.1 The Soviet Period

The Kyrgyz SSR did not have much control over its water. Regional irrigation projects began under Stalin (1927-1953), forging today's infrastructural and trans-Republic landscape of Soviet water management practices (Khalid 2021, 306). Under Stalin, Moscow delineated borders between the CARs to foment resource-based tension between upstream (Tajikistan and Kyrgyzstan) and downstream (Uzbekistan, Turkmenistan, Kazakhstan) Republics – this was done both through border drawing but also in the construction of dams and canals which put Moscow in the position of dispute-settler. At this time the Soviet Ministry of Water Management (*U.S.S.R. Minvodkhoz*) regulated water distribution quotas per season. The Tajik and Kyrgyz SSRs received oil and gas from the other CARs, while they got to keep their reservoirs full in the winter. However, the *Minvodkhoz* prioritized crops such as cotton, fodder, fruits and vegetables (Menga 2017; O'Hara 2000). In the 1980s, the *Minvodkhoz* also wrote and implemented Protocol 413, which distributed the Syr Darya basin water outputs: 44% to Kazakhstan, 2% to Kyrgyzstan, 8% to Tajikistsan, 46%

to Uzbekistan, and seemingly 0% to Turkmenistan (the value is null in Figure 3.1 in Menga, 2017, 108).

Large scale irrigation normalized in the 1970s, triggering a switch to a state-centric irrigation management model, wherein *kolkhozes* and *sovkhozes* specialized in certain agro-products and irrigation central management included engineers, agronomists, and other trained professionals (Abdullaev and Rakhmatullaev 2015, 850, 857). Water decisions normally went through Moscow (Akchurina 2022, 87). Yet Soviet rationale could not erase local water customs. Soviet law lacked a consultation mechanism for disputes over resource access, water was property of the USSR, not the Republic where the water was located. On a local level, the Soviets, for all their attempts to erase local water customs – institutions in and of themselves – could not stamp them out, especially those related to Zoroastrianism and Islam, both lenses through which populations understood water (Menga, 2017).

Irrigation management was neither economically *nor* ecologically rational – often farmers, with open access to free water, would often *over-irrigate* their crops, a practice which continues today (Aleksandrova et al. 2014, 81; Rakhmatullaev and Abdullaev 2014).

The 1980s proved a crucial decade in the story of Soviet water management. Despite pleas from researchers at the Tajik SSR's Institute of Economics had argued for more labor-intensive modern industry to raise living standards and broaden the economy for the next generation. Moscow chose instead to boost cotton development, the region's main agricultural output, putting further economic importance on irrigation infrastructure and its maintenance (Kalinovsky 2016). The decade also saw tensions rise between CARs because the Syr Darya River's volume began decreasing due to massive water offtake (Baitursunov 2020).

Crucially, as a part of perestroika's larger shift towards market mechanisms, Soviet scholars published arguments for introducing water pricing for irrigation, and even ran a test in Tajikistan and Kyrgyzstan, finding that water abstraction for irrigation halved, while yields *increased*. This policy change was rejected, however, by the Ministry of Reclamation and Water Management

(*MinVodKhoz*) (Micklin 1988, 25) and was ignored in *MinVodKhoz* journal publications, so they did not even consider it worthy of assessing.

3.3.2 The (Post)Transition

The advent of a new capitalist order in the former Soviet Union (FSU) signaled to state managers in administrative and planning organs to get wise to the new neo-liberal world (Sedaitis 1997). And neo-liberal policy prescriptions dominated the policy sphere in many of the newly created countries, arriving both from abroad and within post-Soviet policy circles (Brown 2000; Appel and Orenstein 2016). Land and asset privatization, market liberalization and deregulation would nip contraction and bring a quick recovery, or so the wisdom went (Spoor and Visser 2001). The mantra was that if a market does not work, it has not been properly tried (Collier 2011). At the time the World Bank believed that private family run farms would prove more efficient than the Soviet institutions, the enterprises of the *sovkhozy* and *kolkhozy* (Spoor and Visser 2001). Central Asian republics wanted to extend the water quotas, but international donors favor trying to use water sources more efficiently (Sehring 2007; 2008). The WB and ADB also promote a de-centralized water management system (Akchurina 2022, 102).

Kyrgyzstan's water reforms centered around giving responsibility for local irrigation management to WUAs, the introduction of pricing mechanisms, and hydrographic management principles, meaning the delegation of responsibilities in accordance to sections divided along hydrographic river basin and canal system morphology (Sehring 2009). Yet Sehring noted crucially that the technical advice given through donor driven reforms such as water use associations (WUAs) and the ISF (ISFs) proved un-successful for three main reasons. Regarding ISF, Sehring cited the following: officials claimed claim that a "Soviet mentality" is to blame; water users quote Islam (water as a gift of God); and the last reason is the general inability to pay ISF. It was also perceived as an illegitimate policy mechanism by users and farmers alike (Sehring 2008). Given the historical relationship of Kyrgyzstan to water as a resource -- that during the Soviet period

water was free – it is understood that historically Kyrgyzstan has struggled with water infrastructure maintenance in part because of a general struggle for Kyrgyz populations to make payments as required.

Kyrgyzstan's land use practices shifted notably towards privatization by 2000 (Shigaeva et al. 2007). Bichsel et al. (2010) recount that since 1991, two trends occurred: the gradual privatization of land – the basis of democratic politics and stable market economics, according to the Washington Consensus – and a gradual de-centralization of resource management. Kyrgyzstan underwent a land reform which meant a distribution of land and assets from state-owned to private entities, and the government created land markets to host experimental auctions of land (Bloch 2002), specifically following the World Bank's transition blueprint for collective farm privatization (Akchurina 2022; Spoor and Visser 2001). With the land reform also naturally came the redistribution of productive assets upwards to wealthier households (Shigaeva et al. 2007), tilting the playing field against small holder farmers who under the new development regime, would be responsible for irrigation infrastructure.

Not only did the USSR's collapse cause water sector funding to evaporate (Abdullaev and Rakhmatullaev 2015, 857) but Central Asian states were left to pick up the bureaucratic and institutional pieces, forging new institutions out of the old. This collection of institutional detritus is what Sehring (2007, 2008) considered institutional *bricolage,* as introduced in the literature review.

Given their previous reliance on centralized measures for implementing policy and deciding resource quotas, Central Asian states struggled to organize their water relations and eventually decided to prolong the Soviet water distribution system which left upstream countries disadvantaged in water allocation. They relied on unilateral legal agreements (Zhiltsov and Zonn 2019), quickly signing the 1992 Almaty Agreement (Kyrgyz Republic 1992), which represented a crucial milestone in cooperative management Aral Sea basin water. It established the Interstate Commission for Water Coordination (ICWC), which includes all five CARs. The ICWC serves as a regulatory body to determine regional water management policies in addition to transboundary

water resources. In addition, the ICWC administers Basin Management Organizations and aided with water allocation based on the percentage of flow from the Amu Darya (Protocol 566), Syr Darya (Protocol 413), and Aral Sea (Decree 1110). The Almaty Agreement also contains a "no harm" clause, as well as lays the groundwork for information sharing during extremely dry years and promotes joint research and efforts to resolve the Aral Sea issue. Now, however, Kyrgyzstan had to pay market prices for fossil fuels imported regionally – this gave them incentive to store water in the summer to produce cheaper winter hydroelectricity, causing water shortages in downstream countries come summer, and winter floods.

Yet still there remains a perplexing question as to why the EBRD, in its initial significant venture into irrigation infrastructure in Kyrgyzstan, advocates for tariff-based water management, despite the unstable track record of this policy in both Kyrgyzstan and other countries. To address this, one must analyze the current actions of the EBRD, delve into the historical events in Kyrgyzstan, while utilizing HI concepts and tools. The case study reveals that Kyrgyzstan serves as an example where the EBRD disregards the regional, national, and local institutional history and practices, resulting in a discrepancy between stated objectives and climate-related priorities, as well as the effectiveness of implemented measures.

3.4 Institutions: The Law, Organizations, Ministries, and The Local

The following section will (re)introduce the institutions within this space. Descending from the inter-/transnational, through the national and to the local, while not ignoring the political- and socio-economic, these are: (i) international and transnational water law and management standards; (ii) multilateral development banks (MDBs) and their policy regime; (iii) ministries of the Kyrgyz SSR and its successor state, the Kyrgyz Republic; (iv) Kyrgyz Republic water and land legislation; (v) the Kyrgyz Presidency; (vi) the Kyrgyz Parliament (Zhogor Kenesh); (vii) Water Users Associations; and (viii) local village water administrations (*aiyl ökmötü).*

On the level of management of irrigation sources, Water User Associations and village councils are the most crucial, as they implement infrastructure management and collect ISFs (ISF). They take cues from the water resource service (SVR), which implements the policies laid out by the Ministry of Agriculture, which gets its legitimacy and power from the Zhogor Kenesh (The Kyrgyz Parliament). The Zhogor Kenesh has written the relevant legislation for water, which is inspired by international water development standards, which MDBs not only strongly suggest, but help to implement.

3.4.1 International Law

International law relevant to this specific case remains the improvised trans-CAR water frameworks that they introduced after the fall of the USSR. These include the 1992 Almaty Agreement and the 1998 Syr Darya Agreement, which mainly focuses on hydro-energy. Though U.N. Conventions on Water should apply, Kyrgyzstan is not a signatory (Janusz-Pawletta 2015; Janusz-Pawletta and Gubaidullina 2015).

3.4.2 MDBs and the IWRM development regime

Returning to the question of water as *what type* of economic good, IWRM's understanding is based on the Dublin Principles (1992), developed at the International Conference on Water and the Environment, which aimed to provide a framework for sustainable management and use of water resources worldwide. Dublin most importantly asserted water as an *economic good* to hold economic *and* social value, the economic efficiency of which managers would prioritize (Moriarty et al. 2000). *Economic good* invited two interpretations. First, the neo-classical interpretation, which prefers letting markets handle water pricing; and the alternative which pushes institutions to manage its pricing and allocation with an eye towards avoiding market asymmetries (Savenije and Van Der Zaag 2002). As the following sections will discuss, the Zhogor Kenesh sets irrigation

water prices as per the second interpretation, but nonetheless for a former Soviet Republic, the concept of irrigation water as a commodity remains confounding, nonetheless.

After being first discussed worldwide in the 1990s by the WB, ADB, the Swiss Development Cooperation (SDC), IWRM remains Central Asia's fundamental water management framework (Benson 2015; Schmidt and Matthews 2018; Xenarios 2020). The same organizations proposed Kyrgyzstan implement IWRM as a response to general disagreements over water allocation, triggered by the Soviet collapse. Development institutions often stick to the definition provided by the Global Water Partnership, that "IWRM is a process which promotes the coordinated development and management of water, land and related resources, in order to maximize the resultant economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems" (UN n.d.)

For Kyrgyzstan specifically, IWRM principles include paid water use, the establishment of democratic institutions to manage water (National Water Council and Basin Councils), the establishment of Water User Associations (WUAs), hydrographic management principles, and the increase of public participation in water decision making (Dukhovny et al. 2013; Imanalieva 2014; Karimov et al. 2012; Leong and Mukhtarov 2018; Sokolov 2006).

Many aspects of this IWRM had already been in place since the Soviet era. Its development in the late 1970s – in part a product of the International Hydrological Decade (Schmidt & Matthews, 2018, 153) – meant that both capitalist and communist industrialized nations needed to view water as both finite and variable, a context which needed integration into economic frameworks. For instance, hydrographic institutions, coordination amongst water users across different decision making levels, resource conservation, and the strict recording of water records had been in place in Central Asian water management since the period of the 1953 Virgin Lands campaign (V.A. Dukhovny, Sokolov, and Ziganshina 2013). Despite aiming to implement it since the early 2000s, Kyrgyzstan so far has lacked the systematic political strength to undergo proper IWRM implementation (Abdullaev and Rakhmatullaev 2015, 858).

3.4.3 Ministries of the Kyrgyz SSR and the Kyrgyz Republic

The Water Resources Service (SVR) manages all water intakes, pumping stations, main and secondary canals, owned by the state. Yet during the transition, Kyrgyzstan's water bureaucracy stood out during the transition in its support of decentralization policies, specifcally arguing that while the state should maintain infrastructures, Water Users Associations should maintain secondary canals and small waterlines, as they belong to the people.

3.4.4 Kyrgyz Republic water and land legislation

There are four main pieces of legislation on Kyrgyz (irrigation) water: the Water Code (No. 8 of 2005), the Law of the Republic of Kyrgyzstan on Water (1994), the Law on Water Users Associations (2002), and the Law on the Establishment of Tariffs for Irrigation Water Supply Services (1999). It is crucial to note that policy and legal Kyrgyz institutions remain a mélange of: a legislative system succeeding Soviet law but with inspiration from Russian post-socialist legal science and norms, mixed with Western legal concepts, but with more "traditional" (read: pre-Soviet) concepts such as elder's courts which can influence decision making on water (Bichsel et al. 2010).

3.4.4.1 The Law on Water

The Law of the Republic of Kyrgyzstan on Water (henceforth "The Law") established the general legal framework around water, upon which the Water Codex (henceforth "The Codex") then builds. Article 4 of The Law established the Governmental Water Fund (*Gosudarstvennyy vodnyy fond),* controlled by the Zhogor Kenesh (the Parliament, the successor of the Supreme Soviet of the Kyrgyz SSR). Article 11 lays out the responsibilities of the "Government" (*pravitel'stvo)* of the Kyrgyz Republic, which is comprised of the Prime Minister, the first Vice-Prime Minister, the other Vice-Prime Ministers, other ministers, and the sitting Chairs of government ministries. This

is separate from the Zhogor Kenesh – the Parliament (Kenesh n.d.), which *guides* the activities of the Government (Kenesh 2012 Article 4:1).

3.4.4.2 The Water Codex

The development of a new water code began in Kyrgyzstan in 2000, but it was not approved until 2005. Main alterations compared to the old "On Water" law include administration based on the basin principle (§5 and others), legal regulations for water delivery contracts and the right to water for a period of 15 years (§ 34 and others), the creation of a national water council (*Natsional'nyy Sovet po Vode*) to coordinate all water-related activities, develop a national water strategy, and formulate laws, policy recommendations, and implementation mechanisms (§9), the establishment of a state water administration responsible for water management, irrigation, and drainage activities (§11), and the participation of stakeholders in basin councils (§10) (Sehring 2009). The Codex also clarifies that Kyrgyz water management operates under a Basin principle, and within each main Basin there exists both a Water Administration and a Water Council.

The other two, on WUAs (Kenesh 2002) and tariffs (Kenesh 1999), simply set out WUAs and that ZK sets tariffs.

3.4.5 The Kyrgyz Presidency, Government, and Zhogor Kenesh

The Law on Water gives the President authority to initiate states of emergency related to environmental and water resource problems (Kenesh 1994).

The Law on Water assigns to the Government the: development of government agricultural programs, including the protection of their financial interests; the coordination of government and administrative organs towards these ends; the organization of water administration along a regional basis, and most importantly to this study, the formation of base rates of pricing for water use (Kenesh 1994, Article 11).

The ZHOGOR KENESH, on the other hand, is responsible for the Water Fund (Article 5) and has competencies in: the formation of relevant water legislation and legal frameworks, as well as the establishment of basic rates of payments for water use (Article 10). According to the Water Code, the *Zhogor Kenesh* approves annual subsidies for irrigation and drainage (Article 7). As I understand, the Kyrgyz government *suggests* prices to the *Zhogor Kenesh*, which then officially chooses the rates.

3.4.6 Water Users Associations

There are currently 486 WUAs in Kyrgyzstan (Akchurina 2022). The first after the transition were a continuation of Soviet style top-down centralized decision making, and eventually led to an institutional change of WUAs to divide along hydraulic boundaries instead of administrative (ibid, 104). Irrigation management authority goes to Water User Associations (WUAs), voluntary associations funded by member donations for water service delivery and are organized along boundaries of former collective farms. WUA's are responsible, in addition, for operation, maintenance, rehabilitation of water systems, as well as the delivery, purchase of water and the collection of water fees, a program for which they received strong support from the World Bank and the Asian Development Bank (Bichsel et al., 2010, 258-9). The WUA's place in the water hierarchy is noted in Figure 3.

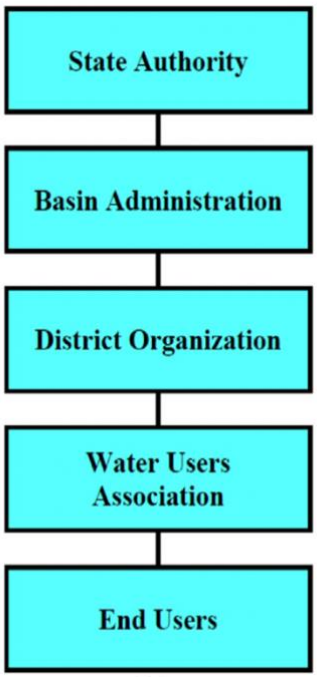

Figure 3 *- Water hierarchy, from Dukhovny et al. 2013.*

Spurred by the transition, the WB and ADB helped Kyrgyzstan implement a WUA program in the mid 1990s. WUA pricing and cost-recovery practices vary, including volumetric (based on the amount of water used) and flat rates (based on the total area irrigated), while ome WUAs combine both (Whittle 2004, 2). To actually access irrigation water, independent users resort to a variety of means: power, money, technology, and resistance (Abdullaev and Atabaeva

2012, 7), leading to contestation over water resources at a farm-to-farm level taking place in a formerly collective context.

Often these administrations reproduce historical neo-patrimonial practices, and are comprised of people who have had historical influence in a community (Sehring 2007; 2008). Though their stated goal is to improve and manage water infrastructure in an economically rational way, WUAs have historically fallen victim to graft and corruption (Horinkova and Abdullaev 2003; Zinzani 2015).

3.4.7 Aiyl ökmötü (rural settlements)

According to Bichsel et al. (2010), the most important Kyrgyz institutions related to irrigation water management are the village administration (*aiyl ökmötü),* or "End Users" from Figure 3. This brings together several villages, which then has the right to hold property and oversees managing municipal infrastructure and land in the Redistribution Fund. These institutions are an example of local customs being make or break for the implementation of service fees.

3.4.8 Summary

Water User Associations and village councils play a vital role in managing irrigation sources. They oversee infrastructure and collect ISFs, following guidelines from the SVR. The SVR implements policies outlined by the Ministry of Agriculture, which derives its authority from the Zhogor Kenesh (The Kyrgyz Parliament). The Zhogor Kenesh has enacted water legislation based on international standards supported by MDBs for water development.

3.5 The Irrigation Case

In 2001, the SDC, alongside the multiple Interstate Commissions for Water Coordination (ICWC, founded by all five CARs), and The International Water Management Institute (IWMI) co-wrote a new IWRM framework to be tested in the Ferghana Valley, one aspect of which touched irrigation (V.A. Dukhovny, Sokolov, and Ziganshina 2013; Victor A. Dukhovny, Sokolov, and Ziganshina 2016). Ten years after the pilot, the Swiss again conducted a research survey on Kyrgyzstan's water IWRM-based management practices. Having analyzed Water Code "draft enactments," legal documents on the establishment of WUA federations, Basin Administration regulation, and agreements on infrastructure transfer (3), it argued that full integration of the IWRM standards would require Kyrgyzstan complete 18 steps of a work plan laid out by the institutions. Couched in between recommendations to integrate IWRM principles into regulation, law and management structures, sat the policy mechanism which has drawn ire from critical political economists of water – tariffs and fees for water use (Mamataliev, Koshmatov, and Drugalyova 2011).

The following case study will demonstrate how the EBRD has made tariffs a major plank of the policy proposal despite ISF implementation being incredibly difficult, not being neither in Kyrgyzstan nor in other countries for their cost recovery contexts (Reis 2017; 2022; Sehring 2008).

3.5.1 ISF

Kyrgyzstan finally implemented ISFs in 1999, designed to *aid* in service cost recovery, but concurrently reduced its funding to a mere 50% of local water department expenditures. It placed the burden of the next 50% on locals to cover with ISF – but this fee was mainly symbolic, covering only around 20% of actual O&M costs Sehring (2009). According to Sehring (2008), experience has shown that ISF has rarely been successfully implemented (Sehring 2008). Yet in the early 2000s, the technical advice given through donor driven reforms such as water use associations (WUAs)

and the ISF (ISFs) proved un-successful for three main reasons. Regarding ISF, Sehring cited the following: officials claimed claim that a "Soviet mentality" is to blame; water users quote Islam (water as a gift of God); and the last reason is the general inability to pay ISF. It was also perceived as an illegitimate policy mechanism by users and farmers alike (Sehring 2008).

3.5.2 MDBs

While the focus of the thesis remains EBRD's new irrigation project, its first major one, In 2016, these MDBs partook in a tri-partite Joint MDB Mission for the Policy Program for Climate Resilience, whose meetings were attended by representatives of all three MDBs and representatives from the Ministry of Agriculture and Land Reclamation of the Kyrgyz Republic, and the State Agency of Architecture, Construction and Housing and Communal Economy under the Government of the Kyrgyz Republic, which includes the Department of Drinking Water Supply and Sanitation Development (ADB, WB, and EBRD 2016). The EBRD took the lead on the project. According to the PPCR's *aide memoir*, KGZ beat out "fierce" competition to gain entrance to the PPCR program, showing their desire or improving their waterways. It won better access to financing with concessional terms (ADB and WB 2016). This mission's aim was to improve Kyrgyz institutions. Contradictorily, around 2015 WB ceased leading regional water coordination, creating a vacuum (Victor A. Dukhovny, Sokolov, and Ziganshina 2016, 82). If the EBRD follows a hegemonic policy, pushed by WB, without WB acting in the same coordinating role as before, this is even more evidence towards EBRD's path dependency. The WB and ADB also promote a de-centralized water management system (Akchurina 2022, 102).

3.5.3 The World Bank and ISF

Since 1999, WB has approved and implemented five projects involving irrigation at some level (World Bank 2006; 2016; 2022; 2015; Meerbach 2016) one of which specifically focuses on ISF: the still ongoing "National Water Resources Management Project."

The project targets improving irrigation service delivery to WUAs and (2) irrigation management by WUAs, calling for a ubiquitous increase in local service fees. This was implemented in a pilot program throughout six systems in 2-3 river basins, with the aim of uncovering necessary ISF levels needed for irrigation service delivery. The project found that farmers would be willing to pay ISF if services were adequate (Burton et al. 2022, 12). WB says ISFs are not high enough to properly fund maintenance, and top-down funding from the Ministry of Finance leads to a disconnect with events on the ground (Burton et al. 2022, 24). Yet the onus still falls on the end user. Without more money, the government cannot fund infrastructure improvement – and without more infrastructure improvement, how can peasant farmer economic outputs improve?

3.5.4 The ADB and ISF

The ADB has supported irrigation projects throughout Kyrgyzstan, all of which include ISF. One document of note from ADB is "Study on Pricing Systems and Cost-Recovery Mechanisms for Irrigation," a Technical Assistance project conducted 2004-2008. While rated as "Successful," (Whittle 2008) it found the following. First, that the SVR was unable to comprehensively manage water because mainly due to limited budgeting (plus substantial dependence on budget support from the EU Food Security Program), and that ISF only accounting for 30% of O&M requirements (Whittle 2004). However, the Technical Assistance document merely lays out the relevant consultant's gameplan. The Final Report notes major methodological and practical difficulties. It also states that the TA was closed before dissemination of the Report, though the Author states that it would have been greatly beneficial. ADB's findings on the efficacy of the ISF is unavailable, and ADB did not conduct any similar studies afterwards.

A search for a similar document was conducted on the World Bank's Open Knowledge Repository Beta ("OKR :: Search" n.d.). The relevant document is the "Kyrgyz Republic Agricultural Policy Update" which mentions ISF only to make two points: it is critical for the Z.K.

to release control over ISF fee levels to WUAs (as farm budgets showed that this is affordable to farmers); and secondly, that the "economic and social rationale for subsidizing pump irrigation schemes deserves further analysis" (Goodman 2011, 11) No EBRD studies are available.

According to another ADB TA document, collection rates must hit high marks (90%) lest debt accumulate for this WUA, which over time whether it becomes out of control debt, or failure to maintain infrastructure, it represents a drag on the Government (Mills 2006, 155). If a WUA chooses not to pay the ISF, it is up to the State Development Fund of the MOEF to enforce payment (Mills 2006, 169).

3.6 The EBRD's Climate Resilience Water Project

The EBRD's project in question is the recently signed Climate Resilience Water Project. The regions targeted are the Osh, Jalal-Abad, and Naryn provinces (Osh and Jalal-Abad are in the Ferghana Valley, where the original Swiss-led IWRM pilot project took place).[2] The investment is additional, meaning it is specifically designed to "trigger a change in the policy, sector, institutional or regulatory framework" (EBRD 2022, 11). Made up of a €50mn sovereign loan granted to improve irrigation water conveyance infrastructure (IWCI), divided into three parts. Tranche 1 holds a maximum €14.13 million, Tranche 2 €26.93 million, and Tranche 3 €8.94 million. EBRD expects Tranche 1 to receive co-financing from the

Figure 4 *- Administrative Map of Kyrgyzstan, from https://www.nationsonline.org/oneworld/map/kyrgyzstan-administrative-map.htm*

[2] See Figure 4.

EBRD Shareholder Special Fund ("SSF") through a capital grant of up to €5 million. It includes an Environmental and Social Action Plan (ESAP) to guide the recipient towards meeting the EBRD's Performance Requirements (EBRD 2022).

The EBRD will communicate with the following institutional actors. Firstly, Basin Water Management Units, under the Department of Water Resources and Land Improvement of the Kyrgyz Republic (SVR/SWRA), a subsidiary of the Ministry of Agriculture and Land Improvement. Second, with heads of district and village administrations. Third, with representatives of the relevant WUAs. And lastly, through focus-groups with local communities. Regarding implementation, the EBRD is clear that there is a risk, based on previous project experiences that implementation does not go so smoothly.

Table 1 *- EBRD's Climate Resilience Water Project*

Tranche	Use of Proceeds
Tranche 1 (EUR 14.13 million)	(i) IWCI rehabilitation (water intakes, pumping stations, main canals, and a distribution network in the Osh region (Aravan-Ak-Buura irrigation scheme) and (ii) front-end fee in respect of this tranche. Tranche 1 is proposed to be co-financed by a capital grant of EUR 3.74 million from the SSF Work Plan 2021-2022.
Tranche 2 (EUR 26.93 million)	(i)rehabilitating IWCI, incl. water intakes, pumping stations, main canals, and a distribution network in the Jalalabad (Nichke-Sai and Verkhney Ak-kup irrigation schemes) and Naryn (Ala- Buga irrigation scheme) regions, and (ii) front-end fee in respect of this tranche. Tranche 2 would seek an additional EUR 11.03 million worth of grant co-financing from the IFCA, subject to funding availability

	during 2022. Availability of Tranche 2 (by way of entry into supplemental loan documentation) is subject to the IFCA approving the capital grant. It is proposed that the Board delegate the decision on making Tranche 2 available to Management.
Tranche 3 (EUR 8.94 million)	(i) rehabilitating IWCI, including water intakes, pumping stations, main canals, and a distribution network in the Osh (Shor-Talaa irrigation scheme) region, and (ii) front-end fee in respect of this tranche. Tranche 3 would seek an additional EUR 3.97 million grant co-financing from the IFCA, subject to funding availability during 2022. Availability of Tranche 3 (by way of entry into supplemental loan documentation) is subject to (i) the IFCA approving the capital grant and (ii) Board approval upon completion of the ESIA disclosure for the Shor-Talaa irrigation scheme, as further explained in Section 6.1.

In accordance with the Municipal and Environmental Infrastructure Sector Strategy and the Strategy for Kyrgyz Republic of the Bank, the proposed Project advocates for the efficient use of water, but this is not in line with local practices. Moreover, the Project is in complete alignment with the Bank's Green Economy Transition ("GET") Approach. However, the historical inefficacy of the ISF mechanism calls into question the robustness of the GET approach, and the overall strategy.

While the Tariffs are not connected to the conditionality of the loan, EBRD admits that while formally, according to the institution of national legislation, tariffs are supposed to be set at 0.03 KGS/m^3 (EUR 0.0004), they know that tariffs are often "social in nature" and as ADB struggled with so many years before, there is "no statutorily approved methodology for tariff

calculation." They made tariffs a major plank of the policy proposal despite ISF implementation being incredibly difficult, not being neither in Kyrgyzstan nor in other countries for their cost recovery contexts (Reis 2017; 2022; Sehring 2008).

4: Discussion

This section briefly highlights important findings and applies HI concepts and tools to the narrative arc and case study established in Chapter 3. It will also address the Thesis' limitations and give concluding remarks on EBRD's role in Kyrgyz irrigation infrastructure and the implications of this.

Breaking down the narrative using HI's concepts of critical junctures, path dependency, and bricolage, plus the tools of institutional layering, one finds that both EBRD and the Kyrgyz Republic find themselves in path dependency on the question of water pricing – that water pricing initiatives have not lived up to expectations after twenty years, yet both sides want to continue with it, demonstrate this. IWRM's faults have been known for decades. For instance, the technocratic elements overshadowed those more community-centric, to the point where in 2004 the World Bank changed tact and sought "more pragmatic" integration frameworks (Schmidt & Matthews, 2018, 154). Yet, it has been known at least since Winpenny and Camdesuss (2003), as cited in Schmidt & Matthews (154), that the delegation of these responsibilities is mismatched to a sub-national actors' financing capacities. Sehring (2009) noted that Kyrgyzstan was path dependent on this question as well, and their further pushes to retain this policy framework shows they too are married to the idea (Citation). As HI literature asserts, the state is seldom a neutral broker – they must and do seek out development aid to help their ailing infrastructure.

HI posits that the real story lies in the grayzone between *structure* and *agency* – in the same way, we see Kyrgyzstan taking it upon itself to act, bring other institutions in, to deal with the *structural* legacy they have been dealt. This however ties into the *takers* and *makers* framework, where it is clear that Kyrgyzstan does not have anywhere to turn but to IWRM, the hegemonic policy regime (Karimov et al. 2012; Leong and Mukhtarov 2018; Mukhtarov et al. 2015; Squires, Milner, and Daniell 2014).

The critical juncture which set in path dependency for Kyrgyzstan was the breakup of the USSR, and out of this sprung many instances of institutional *conversion* and institutional *layering*. Regarding Kyrgyzstan's path dependency, one must remember that Kyrgyzstan lacks alternatives to development aid, highlighting a power asymmetry which, as Howlett and Rayner (2006) argued about path dependency, may go un-addressed in the literature. During this critical juncture, the following examples of institutional *conversion* occurred on the Kyrgyz government level: *MinVodKhoz* was erased and renamed the Department of Water Management (*DepVodKhoz*) under the Ministry of Agriculture, which compounded management issues (Sehring 2009, 67); the Kyrgyz Supreme Soviet became the Zhogor Kenesh (Parliament); Water Users Associations, until the switch to a hydraulic model, inherited the same local power asymmetries as existed under the USSR; the return of international legal agreements to pursue Soviet-era distribution standards was an example of conversion as well. The introduction as well of the Law on Water in 1994 was one part act of institutional *conversion,* in that it sought to convert legal institutions towards a new neo-liberal framework, but it was also one of *layering*, in the sense that these laws were grafted on-*top* of an inherited Soviet-legacy administrative an legal apparatus, while the laws themselves borrowed from Russian legal tradition, Western legal tradition, and also gave reference to older Kyrgyz water practices. The introduction of tariffs in 1999, the delegation of responsibilities to WUAs, and the Water Code of 2005 towards implementing IWRM were also instances of institutional *layering* and *conversion*. But HI also reminds us that policy incoherence is not necessarily purposeful, so it is not to say that the Kyrgyz government or the EBRD *intend* for Kyrgyzstan's infrastructure to stay caught in the catch-22: that the local is asked to take measures which it does not have the capacity for. What complicates this story is of course, that these very mechanisms were proposed and rejected by *MinVodKhoz* during the economic opening of *perestroika*, only to be adopted and implemented after the transition.

The EBRD itself was created during the time of Kyrgyzstan's critical juncture, and the Bank's critical junctures are not the focus of this paper. Because the EBRD's role in this story only

starts in recent years, questions of *conversion* and *layering* pertaining to irrigation infrastructure are not pertinent. However, there is a chance that, given the EBRD's historical role as a merchant bank which aims to create markets, there is conversion going on at least in EBRD's role in the sector. EBRD is not strictly a development bank, but rather a merchant bank – a market maker. As development banks, WB and ADB meant to help shore up resources in the irrigation sector in large part because there was little commercial and private capital to back these projects, so they were filling a gap in the market because irrigation was unattractive due to low returns, riskiness of investment, etc. And the EBRD's mandate means that it prioritizes lending to private entities. And given the long-term goal of EBRD's project in question, to generate enough start-up capital and infrastructure so that ISFs *can* carry Kyrgyz irrigation infrastructure in the future, the commercial logic of investing in this project is not necessarily apparent *prima facie*. This is not an argument that conversion is occurring, but rather to highlight a further potential avenue for research on the EBRD's role and whether this represents a shift in the larger EBRD strategy. So, while EBRD *is* path dependent on its prescription of water tariffs (contrary to historical evidence of their efficacy), perhaps it is straying from the path in another, unforeseen way.

This leads to the limitations of the Thesis. One limitation is the time scale – it is very difficult to pack all this information from a 30-year period into one MA thesis. Further research could quantitatively establish a relationship between ISF implementation and crop output, for instance, to concretely demonstrate efficacy or lack thereof. Moreover, more work could have been done to include stakeholders from Ministries and MDBs to add richness to the investigation.

The implications of this micro-study are that in the face of the climate emergency, MDBs must reconsider their strategies and start working with local actors and experts to develop sustainable solutions. While this remains largely a re-iteration of what others have said (for instance, Gerlak and Mukhtarov 2015; Gerlak et al. 2018; Bayliss 2014; Reis 2017), it remains useful to emphasize this case and update it for the 2020s.

Conclusion

This Thesis has analyzed the case of EBRD investment in Kyrgyzstan's irrigation infrastructure through a historical institutionalist lens, highlighting the various institutional changes and legacies of the case. It has found that EBRD finds itself on a path dependent policy trajectory, as does Kyrgyzstan, in the face of the climate crisis. It aimed to fill a gap in historical institutionalist literature, which under focuses on Central Asia as a region, but also aimed to synthesize the rich water governance literature which exists on Kyrgyzstan, with the international political economy of water and historical institutionalist literature.

The thesis asked, why does the EBRD stick to tariff-based policy prescriptions in Kyrgyzstan despite their historical questionability? It argued that EBRD and Kyrgyzstan both fell into path dependent policy pathways since the collapse of the USSR, due to a litany of structural legacies that affected the new Kyrgyz Republic, and an inability for the EBRD to escape policy inertia. Historical institutionalism, due to its focus on historical processes and institutional legacies, was a fitting framework to apply to this case study. Based on the concepts and tools of historical institutionalism, new questions and interesting pathways have appeared that warrant further research, specifically whether EBRD's investment in irrigation infrastructure represents some sort of institutional conversion, but that is beyond the scope of this paper.

The relevance of this thesis is clear given the major stresses which will occur in Kyrgyz and Central Asian communities due to deteriorating conditions for water and water infrastructure.

Bibliography

Abazov, Rafis. 1999. "Policy of Economic Transition in Kyrgyzstan." *Central Asian Survey* 18 (2): 197–223. https://doi.org/10.1080/02634939995687.

Abdullaev, Iskandar, and Shahlo Atabaeva. 2012. "Water Sector in Central Asia: Slow Transformation and Potential for Cooperation." *International Journal of Sustainable Society* 4 (1/2): 103. https://doi.org/10.1504/IJSSOC.2012.044668.

Abdullaev, Iskandar, Jusipbek Kazbekov, Kahramon Jumaboev, and Herath Manthritilake. 2009. "Adoption of Integrated Water Resources Management Principles and Its Impacts: Lessons from Ferghana Valley." *Water International* 34 (2): 230–41. https://doi.org/10.1080/02508060902843710.

Abdullaev, Iskandar, and Shavkat Rakhmatullaev. 2015. "Transformation of Water Management in Central Asia: From State-Centric, Hydraulic Mission to Socio-Political Control." *Environmental Earth Sciences* 73 (2): 849–61. https://doi.org/10.1007/s12665-013-2879-9.

Abuduwaili, Jilili, Gulnura Issanova, and Galymzhan Saparov. 2019. *Hydrology and Limnology of Central Asia*. Water Resources Development and Management. Singapore: Springer Singapore. https://doi.org/10.1007/978-981-13-0929-8.

ADB, and WB. 2016. "Kyrgyz Republic Pilot Program for Climate Resilience Development of the Strategic Programme for Climate Resilience 1st Joint MDB Mission (18 – 22 April 2016) Aide Memoire." https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=2ahUKEwiq9PaByov_AhXfUaQEHUxIAVQQFnoECAwQAQ&url=https%3A%2F%2Fwww.cif.org%2Fsites%2Fcif_enc%2Ffiles%2Fmeeting-documents%2Fkyrgyz_republic_-ppcr-joint_mission_-_april_18-22_2016_-tor.pdf&usg=AOvVaw3kiJ2GtS8bgkvm_TAu7Ylw.

ADB, WB, and EBRD. 2016. "Kyrgyz Republic: Pilot Program for Climate Resilience TERMS OF REFERENCE FOR THE 1st JOINT MDB MISSION Preparation of a Strategic Pilot Program for Climate Resilience (PPCR Phase I) 18 – 22 April 2016, Bishkek." ADB, WB, EBRD.

Ahlers, Rhodante, and Vincent Merme. 2016. "Financialization, Water Governance, and Uneven Development." *WIREs Water* 3 (6): 766–74. https://doi.org/10.1002/wat2.1166.

Akchurina, Viktoria. 2022. *Incomplete State-Building in Central Asia: The State as Social Practice*. Cham: Springer International Publishing. https://doi.org/10.1007/978-3-031-14182-9.

Alaerts, Guy. 2019. "Financing for Water—Water for Financing: A Global Review of Policy and Practice." *Sustainability* 11 (3): 821. https://doi.org/10.3390/su11030821.

Aleksandrova, Mariya, John P.A. Lamers, Christopher Martius, and Bernhard Tischbein. 2014. "Rural Vulnerability to Environmental Change in the Irrigated Lowlands of Central Asia and Options for Policy-Makers: A Review." *Environmental Science & Policy* 41 (August): 77–88. https://doi.org/10.1016/j.envsci.2014.03.001.

Ambrosio, Thomas, Stephen G. F. Hall, and Anastassia Obydenkova. 2021. "Sustainable Development Agendas of Regional International Organizations: The European Bank of Reconstruction and Development and the Eurasian Development Bank." *Problems of Post-Communism*, October, 1–13. https://doi.org/10.1080/10758216.2021.1979412.

Appel, Hilary, and Mitchell A. Orenstein. 2016. "Why Did Neoliberalism Triumph and Endure in the Post-Communist World?" *Comparative Politics* 48 (3): 313–31. https://doi.org/10.5129/001041516818254419.

Babb, Sarah. 2013. "The Washington Consensus as Transnational Policy Paradigm: Its Origins, Trajectory and Likely Successor." *Review of International Political Economy* 20 (2): 268–97. https://doi.org/10.1080/09692290.2011.640435.

Baitursunov, Daler. 2020. "Is Post-Soviet Water Management Transformation Successful in Kyrgyz Republic? Mapping of Perceived Problems by Water Experts." *Central Asian Journal of Water Research* 5 (1): 71–84. https://doi.org/10.29258/CAJWR/2019-R1.v5-1/71-84.eng.

Bakker, Karen. 2003. "Archipelagos and Networks: Urbanization and Water Privatization in the South." *The Geographical Journal* 169 (4): 328–41. https://doi.org/10.1111/j.0016-7398.2003.00097.x.

———. 2007. "The 'Commons' Versus the 'Commodity': Alter-globalization, Anti-privatization and the Human Right to Water in the Global South." *Antipode* 39 (3): 430–55. https://doi.org/10.1111/j.1467-8330.2007.00534.x.

———. 2013. "Constructing 'Public' Water: The World Bank, Urban Water Supply, and the Biopolitics of Development:" *Environment and Planning D-Society & Space* 31 (2): 280–300. https://doi.org/10.1068/d5111.

Batsaikhan, Uuriintuya, and Marek Dabrowski. 2017. "Central Asia — Twenty-Five Years after the Breakup of the USSR." *Russian Journal of Economics* 3 (3): 296–320. https://doi.org/10.1016/j.ruje.2017.09.005.

Bayliss, Kate. 2014. "The Financialization of Water." *Review of Radical Political Economics* 46 (3): 292–307. https://doi.org/10.1177/0486613413506076.

———. 2017. "Material Cultures of Water Financialisation in England and Wales." *New Political Economy* 22 (4): 383–97. https://doi.org/10.1080/13563467.2017.1259300.

Beisebaev, R.S. 2017. "Energeticheskaya politika Kyrgyzskoy Respubliki: itogi i problemy." *Institute for Russian and Altaic Studies Chungbuk University* 15 (August): 185–204. https://doi.org/10.24958/rh.2017.15.185.

Benson, David. 2015. "Water Governance in a Comparative Perspective: From IWRM to a 'Nexus' Approach?" 8 (1).

Berbel, Julio, and Alfonso Expósito. 2020. "The Theory and Practice of Water Pricing and Cost Recovery in the Water Framework Directive" 13 (3).

Bernauer, Thomas, and Tobias Siegfried. 2012. "Climate Change and International Water Conflict in Central Asia." *Journal of Peace Research* 49 (1): 227–39. https://doi.org/10.1177/0022343311425843.

Bichsel, C., G. Fokou, A. Ibraimova, U. Kasymov, B. Steimann, and S. Thieme. 2010. "Natural Resource Institutions in Transformation: The Tragedy and Glory of the Private." https://doi.org/10.5167/UZH-32758.

Bloch, Peter C. 2002. "Kyrgyzstan: *Almost Done, What Next?*" *Problems of Post-Communism* 49 (1): 53–62. https://doi.org/10.1080/10758216.2002.11655970.

Bossuyt, Fabienne. 2018. "The EU's and China's Development Assistance towards Central Asia: Low versus Contested Impact." *Eurasian Geography and Economics* 59 (5–6): 606–31. https://doi.org/10.1080/15387216.2019.1581635.

———. n.d. "The EU's and China's Development Assistance towards Central Asia: Low versus Contested Impact." *EURASIAN GEOGRAPHY AND ECONOMICS*, 27.

Bossuyt, Fabienne, and Bart Dessein. 2021. *The European Union, China and Central Asia: Global and Regional Cooperation in a New Era*. 1st ed. London: Routledge. https://doi.org/10.4324/9781003022336.

Brown, Archie. 2000. "Transnational Influences in the Transition from Communism." *Post-Soviet Affairs* 16 (2): 177–200. https://doi.org/10.1080/1060586X.2000.10641485.

Burton, Martin, Rimma Dankova, Alan Clark, Maher Salman, and Eva Pek. 2022. *Modernizing Irrigation in Central Asia*. FAO; World Bank; https://doi.org/10.4060/cb8230en.

Butzbach, Olivier, and Susan Spronk. 2022. "Public Banks and the Remunicipalization of Water Services in Paris." *Water International* 47 (5): 751–70. https://doi.org/10.1080/02508060.2022.2101085.

CABAR. n.d. "Transboundary Waters of Central Asia: The Role of Kyrgyzstan in Saving the Aral Sea." *Central Asian Bureau for Analytical Reporting*. https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwjPoO_vgoz_AhUjVaQEHQUfBQUQFnoECAkQAw&url=https%3A%2F%2Fcabar.asia%2Fen%2Ftransboundary-waters-of-central-asia-the-role-of-kyrgyzstan-in-saving-the-aral-sea%3Fpdf%3D35601&usg=AOvVaw3I1CmjNyRFFuKcNiZQwETF.

Capoccia, Giovanni, and R. Daniel Kelemen. 2007. "The Study of Critical Junctures: Theory, Narrative, and Counterfactuals in Historical Institutionalism." *World Politics* 59 (3): 341–69. https://doi.org/10.1017/s0043887100020852.

Clifton, Judith, Daniel Díaz-Fuentes, and Helen Kavvadia. 2022. "The European Investment Bank and Its Role in Financing Public Water." *Water International* 47 (5): 837–55. https://doi.org/10.1080/02508060.2022.2103775.

Collier, Stephen J. 2011. *Post-Soviet Social: Neoliberalism, Social Modernity, Biopolitics*. Princeton [N.J.]: Princeton University Press.

Cummings, Sally N., Shairbek Juraev, Alexander Pugachev, Azamat Temirkulov, Medet Tiulegenov, and Bermet Tursunkulova. 2013. "State, Regime, and Government in the Kyrgyz Republic (1991–2010): Disaggregating a Relationship." *East European Politics* 29 (4): 443–60. https://doi.org/10.1080/21599165.2013.831347.

Drezner, Daniel W. 2007. "All Politics Is Global: Explaining International Regulatory Regimes," January.

Dukhovny, V.A., V.I. Sokolov, and D.R. Ziganshina. 2013. "Integrated Water Resources Management in Central Asia, as a Way of Survival in Conditions of Water Scarcity." *Quaternary International* 311 (October): 181–88. https://doi.org/10.1016/j.quaint.2013.07.003.

Dukhovny, Victor A., Vadim I. Sokolov, and Dinara R. Ziganshina. 2016. "The Role of Donors in Addressing Water Problems in Central Asia: Role of Donors in Addressing Water Problems in Central Asia." *Irrigation and Drainage* 65 (October): 79–85. https://doi.org/10.1002/ird.1913.

EBRD. 2022. "KYRGYZ REPUBLIC KYRGYZSTAN CLIMATE RESILIENCE WATER SUPPLY PROJECT." EBRD Board of Directors.

Farrell, Henry, and Abraham Newman. 2016. "The New Interdependence Approach: Theoretical Development and Empirical Demonstration." *Review of International Political Economy* 23 (5): 713–36. https://doi.org/10.1080/09692290.2016.1247009.

Farrell, Henry, and Abraham L. Newman. 2010. "Making Global Markets: Historical Institutionalism in International Political Economy." *Review of International Political Economy* 17 (4): 609–38. https://doi.org/10.1080/09692291003723672.

Fioretos, Karl Orfeo, Tulia Gabriela Falleti, and Adam D. Sheingate, eds. 2016. *The Oxford Handbook of Historical Institutionalism*. First edition. Oxford, United Kingdom: Oxford University Press.

Fioretos, Orfeo. 2011. "Historical Institutionalism in International Relations." *International Organization* 65 (2): 367–99. https://doi.org/10.1017/s0020818311000002.

Fioretos, Orfeo, Tulia G. Falleti, and Adam Sheingate. 2016. *Historical Institutionalism in Political Science*. Edited by Orfeo Fioretos, Tulia G. Falleti, and Adam Sheingate. Vol. 1. Oxford University Press. https://doi.org/10.1093/oxfordhb/9780199662814.013.1.

Gerlak, Andrea K., Andrea K. Gerlak, Helen Ingram, and Helen Ingram. 2018. "De-Politicized Policy Analysis: How the Prevailing Frameworks of Analysis Slight Equity in Water Governance," March, 71–88. https://doi.org/10.1017/9781316831847.005.

Gerlak, Andrea K., and Farhad Mukhtarov. 2015. "'Ways of Knowing' Water: Integrated Water Resources Management and Water Security as Complementary Discourses." *International Environmental Agreements: Politics, Law and Economics* 15 (3): 257–72. https://doi.org/10.1007/s10784-015-9278-5.

Gerring, John. 2012. "Mere Description." *British Journal of Political Science* 42 (4): 721–46. https://doi.org/10.1017/S0007123412000130.

Goldstone, Jack A., Leonid Grinin, and Andrey Korotayev, eds. 2022. *Handbook of Revolutions in the 21st Century: The New Waves of Revolutions, and the Causes and Effects of Disruptive Political Change*. Societies and Political Orders in Transition. Cham: Springer International Publishing. https://doi.org/10.1007/978-3-030-86468-2.

Goodman, Peter. 2011. "Kyrgyz Republic Agricultural Policy Update -- Overview." World Bank, ECSSD.

Greener, Ian. 2006. "Path Dependence, Realism and the NHS." *British Politics* 1 (3): 319–43. https://doi.org/10.1057/palgrave.bp.4200021.

Hall, Peter A., Peter A. Hall, Peter A. Hall, and Peter Hall. 1993. "Policy Paradigms, Social Learning, and the State: The Case of Economic Policymaking in Britain." *Comparative Politics* 25 (3): 275–96. https://doi.org/10.2307/422246.

Hanrieder, Tine. 2014. "Gradual Change in International Organisations: Agency Theory and Historical Institutionalism." *Politics* 34 (4): 324–33. https://doi.org/10.1111/1467-9256.12050.

Heldt, Eugénia C., and Henning Schmidtke. 2019. "Explaining Coherence in International Regime Complexes: How the World Bank Shapes the Field of Multilateral Development Finance." *Review of International Political Economy* 26 (6): 1160–86. https://doi.org/10.1080/09692290.2019.1631205.

Herrfahrdt, Elke, Martin Kipping, Tanya Pickardt, Mathias Polak, Caroline Rohrer, and Carl Felix Wolff. 2006. "Ssoar-2006-Herrfahrdt_et_al-Water_governance_in_the_kyrgyz.Pdf." German Development Institute.

Hogan, John. 2019. "The Critical Juncture Concept's Evolving Capacity to Explain Policy Change" 5 (2): 170–89. https://doi.org/10.1002/epa2.1057.

Horinkova, Vilma, and Iskandar Abdullaev. 2003. "Institutional Aspects of Water Management in Central Asia *Water Users Associations*." *Water International* 28 (2): 237–45. https://doi.org/10.1080/02508060308691689.

Howlett, Michael, and Jeremy Rayner. 2006. "Understanding the Historical Turn in the Policy Sciences: A Critique of Stochastic, Narrative, Path Dependency and Process-Sequencing Models of Policy-Making over Time." *Policy Sciences* 39 (1): 1–18. https://doi.org/10.1007/s11077-005-9004-1.

Imanalieva, Jibek. 2014. "EXPLORING WATER GOVERNANCE IN KYRGYZSTAN THROUGH THE PRISM OF IWRM," 48.

IMF COMMUNICATIONS. n.d. "Kyrgyz Republic: Staff Concluding Statement of the 2022 Article IV Consultation Mission." IMF. Accessed April 25, 2023. https://www.imf.org/en/News/Articles/2022/12/02/kyrgyz-republic-staff-concluding-statement-of-the-2022-article-iv-consultation-mission.

Ioris, Antonio Augusto Rossotto. 2013. "The Adaptive Nature of the Neoliberal State and the State-Led Neoliberalisation of Nature: Unpacking the Political Economy of Water in Lima, Peru." *New Political Economy* 18 (6): 912–38. https://doi.org/10.1080/13563467.2013.768609.

Janusz-Pawletta, Barbara. 2015. "Current Legal Challenges to Institutional Governance of Transboundary Water Resources in Central Asia and Joint Management Arrangements." *Environmental Earth Sciences* 73 (2): 887–96. https://doi.org/10.1007/s12665-014-3471-7.

Janusz-Pawletta, Barbara, and Maria Gubaidullina. 2015. *Transboundary Water Management in Central Asia: Legal Framework to Strengthen Interstate Cooperation and Increase Regional Security*. Cahies d'Asie centrale, no 25. Bichkek Paris: Ifeac.

Kalinovsky, Artemy M. 2016. "Central Planning, Local Knowledge?: Labor, Population, and the 'Tajik School of Economics.'" *Kritika: Explorations in Russian and Eurasian History* 17 (3): 585–620. https://doi.org/10.1353/kri.2016.0036.

Karimov, Akmal, Mark Giordano, Aditi Mukherji, Vecheslav Borisov, and Jamol Djumanov. 2012. "Of Transboundary Basins, Integrated Water Resources Management (IWRM) and Second Best Solutions: The Case of Groundwater Banking in Central Asia." *Water Policy* 14 (1): 99–111. https://doi.org/10.2166/wp.2011.149.

Karppinen, Kari, and Hallvard Moe. 2012. "What We Talk about When We Talk about Document Analysis." In *Trends in Communication Policy Research: New Theories, Methods and Subjects*, edited by Natascha Just and Manuel Puppis, 1st ed. Intellect Books. https://doi.org/10.2307/j.ctv36xvj36.

Kenesh, Zhogor. 1994. "ZAKON KYRGYZSKOY RESPUBLIKI O Vode."

———. 2002. "LAW OF THE KYRGYZ REPUBLIC On Water User Associations." Zhogor Kenesh.

———. 2012. "Konstitutsionnyy Zakon Kyrgyzskoy Respubliki 'O Pravitel'stve Kyrgyzskoy Respubliki' - Ministerstvo Yustitsii Kyrgyzskoy Respubliki." Ministerstvo Yustitsii Kyrgyzskoy Respubliki. http://minjust.gov.kg/ru/content/627.

———. n.d. "Reglament Zhogorku Kenesha Kyrgyzskoy Respubliki | Zhogorku Kenesh Kyrgyzskoy Respubliki." Accessed May 14, 2023. http://www.kenesh.kg/.

Khakimov, Parviz. 2019. "Climate Change in Afghanistan, Kyrgyzstan, and Tajikistan: Trends and Adaptation Policies Conducive to Innovation." *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.3806243.

Khalid, Adeeb. 2021. *Central Asia: A New History from the Imperial Conquests to the Present*. 1st ed. Princeton: Princeton University Press.

Khasanova, Nariya. 2014. "Revisiting Water Issues in Central Asia: Shifting from Regional Approach to National Solutions," no. 6.

Kyrgyz Republic. 1992. "Agreement Between the Republic of Kazakhstan , the Republic of Kirgyzstan, the Republic of Uzbekistan, the Republic of Tajikistan and Turkmenistan On Cooperation in the Field of Joint Water Resources Management and Conservation of Interstate Sources."

Lee, Euna, and Jai S. Mah. 2020. "Industrial Policy, Industrialization and Economic Development of Kyrgyzstan." *Asian Social Science* 16 (9): 41. https://doi.org/10.5539/ass.v16n9p41.

Leong, Ching, and Farhad Mukhtarov. 2018. "Global IWRM Ideas and Local Context: Studying Narratives in Rural Cambodia." *Water* 10 (11): 1643. https://doi.org/10.3390/w10111643.

Libert, Bo. 2015. "The UNECE Water Convention and the Development of Transboundary Cooperation in the Chu-Talas, Kura, Drin and Dniester River Basins." *Water International* 40 (1): 168–82. https://doi.org/10.1080/02508060.2014.990202.

Liebe, Moritz, and David Howarth. 2020. "The European Investment Bank as Policy Entrepreneur and the Promotion of Public-Private Partnerships." *New Political Economy* 25 (2): 195–212. https://doi.org/10.1080/13563467.2019.1586862.

Loftus, Alex, Hug March, and Thomas F. Purcell. 2019. "The Political Economy of Water Infrastructure: An Introduction to Financialization." *WIREs Water* 6 (1). https://doi.org/10.1002/wat2.1326.

Mahoney, James. 2000. "Path Dependence in Historical Sociology," 43.

Mahoney, James, Khairunnisa Mohamedali, and Christoph Nguyen. 2016. *Causality and Time in Historical Institutionalism*. Edited by Orfeo Fioretos, Tulia G. Falleti, and Adam Sheingate. Vol. 1. Oxford University Press. https://doi.org/10.1093/oxfordhb/9780199662814.013.4.

Mamataliev, N.P., B.T Koshmatov, and Ye.E. Drugalyova. 2011. "Vision of National IWRM in the Kyrgyz Republic." International Water Management Institute.

Mansfield, Becky. 2004. "Neoliberalism in the Oceans: 'Rationalization,' Property Rights, and the Commons Question." *Geoforum* 35 (3): 313–26. https://doi.org/10.1016/j.geoforum.2003.05.002.

Marat, Erica. 2012. "Kyrgyzstan: A Parliamentary System Based on Inter-Elite Consensus." *Demokratizatsiya The Journal of Post-Soviet Democratization*, no. September 2012 (September): 21.

Marois, Thomas, and David A. McDonald. 2022. "Public Banks, Public Water: Exploring the Links in Europe." *Water International* 47 (5): 673–90. https://doi.org/10.1080/02508060.2022.2098629.

Matveeva, Anna, Alisher Faizullaev, and Max Bader. 2017. "Divided We Fall … or Rise? Tajikistan–Kyrgyzstan Border Dilemma." *Cambridge Journal of Eurasian Studies* 1 (February): 1–20. https://doi.org/10.22261/94D4RC.

McCarthy, James. 2004. "Privatizing Conditions of Production: Trade Agreements as Neoliberal Environmental Governance." *Geoforum* 35 (3): 327–41. https://doi.org/10.1016/j.geoforum.2003.07.002.

McCarthy, James, and Scott Prudham. 2004. "Neoliberal Nature and the Nature of Neoliberalism." *Geoforum* 35 (3): 275–83. https://doi.org/10.1016/j.geoforum.2003.07.003.

Meerbach, David. 2016. "Kyrgyz Republic - AGRICULTURE PRODUCTIVITY AND NUTRITION IMPROVEMENT PROJECT : P132754 - Implementation Status Results Report : Sequence 02." Text/HTML. World Bank. 2016. https://documents.banquemondiale.org/fr/publication/documents-reports/documentdetail/970911475516412114/Kyrgyz-Republic-AGRICULTURE-PRODUCTIVITY-AND-NUTRITION-IMPROVEMENT-PROJECT-P132754-Implementation-Status-Results-Report-Sequence-02.

Menga, Filippo. 2017. *Power and Water in Central Asia*. 1st ed. Routledge. https://doi.org/10.4324/9781315559179.

Micklin, Philip P. 1988. "Irrigation and Its Future in Soviet Central Asia." *Western Michigan University*. https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwiW3Mbi14v_AhUaVaQEHRknDYwQFnoECA0QAQ&url=https%3A%2F%2Fwww.ucis.pitt.edu%2Fnceeer%2F1988-802-09-Micklin.pdf&usg=AOvVaw0kTb3ieH9iov5SS7fvVuTz.

Mills, Landell (Development Consultants). 2006. "Second Agriculture Area Development Project (Financed by the Japan Special Fund)." Asian Development Bank.

Mogilevskii, Roman. 2012. "Trends and Patterns in Foreign Trade of Central Asian Countries." *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.3023165.

Molle, F., and J. Berkoff, eds. 2007. *Irrigation Water Pricing: The Gap between Theory and Practice*. 1st ed. UK: CABI. https://doi.org/10.1079/9781845932923.0000.

Moore, Mick. 1989. "The Fruits and Fallacies of Neoliberalism: The Case of Irrigation Policy." *World Development* 17 (11): 1733–50. https://doi.org/10.1016/0305-750X(89)90197-6.

Moriarty, Patrick B, Jan Teun Visscher, Peter Bury, and Leonie Postma. 2000. "The Dublin Principles Revisited for WSS." In , 392–95. Dhaka, Bangladesh.

Moschella, Manuela. 2016. "Negotiating Greece. Layering, Insulation, and the Design of Adjustment Programs in the Eurozone." *Review of International Political Economy* 23 (5): 799–824. https://doi.org/10.1080/09692290.2016.1224770.

Mukhtarov, Farhad, Svenja Fox, Nozilakhon Mukhamedova, and Kai Wegerich. 2015. "Interactive Institutional Design and Contextual Relevance: Water User Groups in Turkey, Azerbaijan and Uzbekistan." *Environmental Science & Policy* 53 (November): 206–14. https://doi.org/10.1016/j.envsci.2014.10.006.

Murthy, Sharmila L, and Fatima Mendikulova. 2018. "WATER, CONFLICT, AND COOPERATION IN CENTRAL ASIA: THE ROLE OF INTERNATIONAL LAW AND DIPLOMACY," 56.

Nokhrin, I.M. 2021. "REVOLUTION IN KYRGYZSTAN OF 2020 AND THE SADYR JAPAROV's POPULIST PROJECT." *Вестник Удмуртского Университета. Социология.*

Политология. Международные Отношения 5 (3): 335–50. https://doi.org/10.35634/2587-9030-2021-5-3-335-350.

Nordhaus, William. 2018. "Projections and Uncertainties about Climate Change in an Era of Minimal Climate Policies." *American Economic Journal: Economic Policy* 10 (3): 333–60. https://doi.org/10.1257/pol.20170046.

OECD.stat. n.d. "Aid (ODA) by Sector and Donor [DAC5]." Accessed May 22, 2023. https://stats.oecd.org/Index.aspx?DataSetCode=Table5.

O'Hara, S. 2000. "Lessons from the Past: Water Management in Central Asia." *Water Policy* 2 (4–5): 365–84. https://doi.org/10.1016/S1366-7017(00)00010-6.

Okano-Heijmans, Maaike. 2015. "Untapped Potential: Time to Rethink European Engagement with the Asian Development Bank." *Asia Europe Journal* 13 (2): 211–21. https://doi.org/10.1007/s10308-014-0395-5.

"OKR :: Search." n.d. Accessed May 23, 2023. https://openknowledge.worldbank.org/search?spc.page=1&query=irrigation%20Kyrgyzstan&spc.sf=score&spc.sd=DESC.

Park, Susan. 2021. "Policy Norms, the Development Finance Regime Complex, and Holding the European Bank for Reconstruction and Development to Account." *Global Policy* 12 (S4): 90–100. https://doi.org/10.1111/1758-5899.12881.

Park, Susan, and Jonathan R. Strand. 2015. "Global Economic Governance and the Development Practices of the Multilateral Development Banks," August, 27–44. https://doi.org/10.4324/9781315736938-12.

Parsons, Meg, Johanna Nalau, Karen Fisher, and Cilla Brown. 2019. "Disrupting Path Dependency: Making Room for Indigenous Knowledge in River Management." *Global Environmental Change* 56 (May): 95–113. https://doi.org/10.1016/j.gloenvcha.2019.03.008.

Paterson, Matthew. 2021. "Climate Change and International Political Economy: Between Collapse and Transformation." *Review of International Political Economy* 28 (2): 394–405. https://doi.org/10.1080/09692290.2020.1830829.

Pierson, Paul. 2000a. "Increasing Returns, Path Dependence, and the Study of Politics." *American Political Science Review* 94 (2): 251–67. https://doi.org/10.2307/2586011.

———. 2000b. "The Limits of Design: Explaining Institutional Origins and Change." *Governance* 13 (4): 475–99. https://doi.org/10.1111/0952-1895.00142.

———. 2004. *Politics in Time: History, Institutions, and Social Analysis*. Princeton: Princeton University Press.

Powell, Jeff, and Yuliya Yurchenko. 2020. "The Evolution of Private Provision in Urban Drinking Water: New Geographies, Institutional Ambiguity and the Need for Political Economy." *New Political Economy* 25 (1): 91–106. https://doi.org/10.1080/13563467.2018.1562432.

Pradhan, Ramakrushna. 2022. "Natural Resources and Violent Conflicts: Water and Energy in Kyrgyzstan." *Journal of Asian and African Studies* 57 (4): 650–66. https://doi.org/10.1177/00219096211035166.

Punkari, Mikko, Peter Droogers, Walter Immerzeel, Natalia Korhonen, Arthur Lutz, and Ari Venäläinen. 2014. "Climate Change and Sustainable Water Management in Central Asia." Asian Development Bank.

Rakhmatullaev, Shavkat, and Iskandar Abdullaev. 2014. "Central Asian Irrigation Sector in a Climate Change Context: Some Reflections." *Journal of Water and Climate Change* 5 (3): 341–56. https://doi.org/10.2166/wcc.2014.120.

Reis, Nadine. 2017. "Finance Capital and the Water Crisis: Insights from Mexico." *Globalizations* 14 (6): 976–90. https://doi.org/10.1080/14747731.2017.1315118.

———. 2022. "Between *Development* and *Banking*: The KfW Development Bank in Latin America's Water Sector." *Water International* 47 (5): 810–36. https://doi.org/10.1080/02508060.2022.2105533.

Reyer, Christopher P.O, Ilona M. Otto, Sophie Adams, Torsten Albrecht, Florent Baarsch, Matti Cartsburg, Dim Coumou, et al. 2017. "Climate Change Impacts in Central Asia and Their Implications for Development." *Regional Environmental Change* 17 (6): 1639–50. https://doi.org/10.1007/s10113-015-0893-z.

Rost, Karl Tilman, Gesine Ratfelder, and Oktiabr Topbaev. 2015. "Problems of Rural Drinking Water Supply Management in Central Kyrgyzstan: A Case Study from Kara-Suu Village, Naryn Oblast." *Environmental Earth Sciences* 73 (2): 863–72. https://doi.org/10.1007/s12665-014-3299-1.

Ryabkov, Maxim. 2008. "The North–South Cleavage and Political Support in Kyrgyzstan." *Central Asian Survey* 27 (3–4): 301–16. https://doi.org/10.1080/02634930802536688.

Saidmamatov, Olimjon, Inna Rudenko, Stephan Pfister, and Jacek Koziel. 2020. "Water–Energy–Food Nexus Framework for Promoting Regional Integration in Central Asia." *Water* 12 (7): 1896. https://doi.org/10.3390/w12071896.

Salleh, Ariel. 2016. "Climate, Water, and Livelihood Skills: A Post-Development Reading of the SDGs." *Globalizations* 13 (6): 952–59. https://doi.org/10.1080/14747731.2016.1173375.

Savenije, Hubert H.G., and Pieter Van Der Zaag. 2002. "Water as an Economic Good and Demand Management *Paradigms with Pitfalls*." *Water International* 27 (1): 98–104. https://doi.org/10.1080/02508060208686982.

Schindler, Seth, Ilias Alami, and Nicholas Jepson. 2022. "Goodbye *Washington Confusion*, Hello *Wall Street Consensus*: Contemporary State Capitalism and the Spatialisation of Industrial Strategy." *New Political Economy*, June, 1–18. https://doi.org/10.1080/13563467.2022.2091534.

Schmidt, Jeremy J., and Nathanial Matthews. 2018. "From State to System: Financialization and the Water-Energy-Food-Climate Nexus." *Geoforum* 91 (May): 151–59. https://doi.org/10.1016/j.geoforum.2018.03.001.

Sedaitis, Judith B. 1997. "Networks in Market Transitions: Managerial Constraints in Post-Soviet Commodity Markets." *International Studies of Management & Organization* 27 (1): 61–83. https://doi.org/10.1080/00208825.1997.11656702.

Sehring, Jenniver. 2007. "Irrigation Reform in Kyrgyzstan and Tajikistan." *Irrigation and Drainage Systems* 21 (3–4): 277–90. https://doi.org/10.1007/s10795-007-9036-0.

———. 2008. "The Pitfalls of Irrigation Water Pricing in Kyrgyzstan and Tajikistan." *Development* 51 (1): 130–34. https://doi.org/10.1057/palgrave.development.1100452.

———. 2009. "Path Dependencies and Institutional Bricolage in Post-Soviet Water Governance" 2 (1).

Shields, Stuart. 2020. "The EBRD, Fail Forward Neoliberalism and the Construction of the European Periphery." *The Economic and Labour Relations Review* 31 (2): 230–48. https://doi.org/10.1177/1035304620916652.

———. 2021. "The European Bank for Reconstruction and Development: Constructing the Periphery of the European Political Economy." In *Regional Development Banks in the World Economy*, by Stuart Shields, 168–93. Oxford University Press. https://doi.org/10.1093/oso/9780198861089.003.0008.

Shigaeva, Jyldyz, Michael Kollmair, Peter Niederer, and Daniel Maselli. 2007. "Livelihoods in Transition: Changing Land Use Strategies and Ecological Implications in a Post-Soviet Setting (Kyrgyzstan)." *Central Asian Survey* 26 (3): 389–406. https://doi.org/10.1080/02634930701702696.

Skalamera Groce, Morena, and Seçkin Köstem. 2021. "The Dual Transformation in Development Finance: Western Multilateral Development Banks and China in Post-Soviet Energy." *Review of International Political Economy*, September, 1–25. https://doi.org/10.1080/09692290.2021.1974522.

Sokolov, Vadim. 2006. "Experiences with IWRM in the Central Asia and Caucasus Regions." *Water International* 31 (1): 59–70. https://doi.org/10.1080/02508060608691915.

Spoor, Max, and Oane Visser. 2001. "The State of Agrarian Reform in the Former Soviet Union." *Europe-Asia Studies* 53 (6): 885–901. https://doi.org/10.1080/09668130120078540.

Squires, Victor R., Hugh M. Milner, and Katherine A. *1981-* Daniell, eds. 2014. *River Basin Management in the Twenty-First Century: Understanding People and Place*. A Science Publishers Book. Boca Raton, Fla.: CRC Press, Taylor and Francis Group.

Streeck, W. 2011. "Taking Capitalism Seriously: Towards an Institutionalist Approach to Contemporary Political Economy." *Socio-Economic Review* 9 (1): 137–67. https://doi.org/10.1093/ser/mwq028.

Toktomushev, Kemel. 2018. "Understanding Cross-Border Conflict in Post-Soviet Central Asia: The Case of Kyrgyzstan and Tajikistan." *Connections: The Quarterly Journal* 17 (1): 21–41. https://doi.org/10.11610/Connections.17.1.02.

Tskhay, Aliya. 2020. *Global Norm Compliance: A Study on the Implementation of the Extractive Industries Transparency Initiative*. Norm Research in International Relations. Cham: Springer International Publishing. https://doi.org/10.1007/978-3-030-41452-8.

———. 2021. "The Power of Norms in Central Asia: Interaction between Normative Frameworks and Political Regimes." *Problems of Post-Communism* 68 (2): 113–23. https://doi.org/10.1080/10758216.2020.1785316.

UN. n.d. "International Decade for Action 'Water for Life' 2005-2015. Focus Areas: Integrated Water Resources Management (IWRM)." Accessed May 23, 2023. https://www.un.org/waterforlifedecade/iwrm.shtml.

Vanderhill, Rachel, Sandra F. Joireman, and Roza Tulepbayeva. 2019. "Do Economic Linkages through FDI Lead to Institutional Change? Assessing Outcomes in Kazakhstan, Azerbaijan and Kyrgyzstan." *Europe-Asia Studies* 71 (4): 648–70. https://doi.org/10.1080/09668136.2019.1597019.

Whittle, J. 2004. "Technical Assistance to the Kyrgyz Republic for The Study on Pricing Systems and Cost-Recovery Mechanisms for Irrigation." Asian Development Bank, Poverty Reduction Cooperation Fund.

———. 2008. "Technical Assistance Completion Report." Asian Development Bank, Poverty Reduction Cooperation Fund.

Winpenny, James, and M. Camdesuss. 2003. "Financing Water For All: Report of the World Panel on Financing Water Infraestructure." World Water Council, Marseille.

World Bank. 2006. "Kyrgyz Republic - Second Village Investment Project." Text/HTML. World Bank. 2006. https://documents.worldbank.org/en/publication/documents-reports/documentdetail/245461468276858941/Kyrgyz-Republic-Second-Village-Investment-Project.

———. 2015. "Kyrgyz Republic - First Phase of the National Water Resources Management Project." Text/HTML. World Bank. 2015. https://documents.worldbank.org/en/publication/documents-reports/documentdetail/724481467991987377/Kyrgyz-Republic-First-Phase-of-the-National-Water-Resources-Management-Project.

———. 2016. "Kyrgyz Republic - Bishkek and Osh Urban Infrastructure Project." Text/HTML. World Bank. 2016. https://documents.worldbank.org/en/publication/documents-reports/documentdetail/748491468194946514/Kyrgyz-Republic-Bishkek-and-Osh-Urban-Infrastructure-Project.

———. 2022. "Development Projects : Climate Resilient Water Services Project - P173734." Text/HTML. World Bank. 2022. https://projects.worldbank.org/en/projects-operations/project-detail/P173734.

———. n.d. "Agricultural Land (% of Land Area) - Kyrgyz Republic." World Bank Open Data. Accessed May 23, 2023a. https://data.worldbank.org/indicator/AG.LND.AGRI.ZS?locations=KG.

———. n.d. “Employment in Agriculture (% of Total Population).” World Bank Open Data. Accessed May 22, 2023b. https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwjCzsfS5Yv_AhVzT6QEHYDXCLwQFnoECA4QAQ&url=https%3A%2F%2Fdata.worldbank.org%2Findicator%2FSL.AGR.EMPL.ZS%3Flocations%3DKG&usg=AOvVaw3KZkfpQ6OVet8kNYdrwooB.

Xenarios, Stefanos, ed. 2020. *The Aral Sea Basin: Water for Sustainable Development in Central Asia*. Earthscan Series on Major River Basins of the World. Abingdon, Oxon ; New York, NY: Routledge.

Zhiltsov, S. S., and I. S. Zonn. 2019. “Rol’ vodnykh resursov v Tsentral’noy Azii.” *Post-Soviet Issues* 6 (3): 228–37. https://doi.org/10.24975/2313-8920-2019-6-3-228-237.

Zinzani, Andrea. 2015. “Irrigation Management Transfer and WUAs’ Dynamics: Evidence from the South-Kazakhstan Province.” *Environmental Earth Sciences* 73 (2): 765–77. https://doi.org/10.1007/s12665-014-3209-6.

Zinzani, Andrea, and Filippo Menga. 2017. “The Circle of Hydro-Hegemony between Riparian States, Development Policies and Borderlands: Evidence from the Talas Waterscape (Kyrgyzstan-Kazakhstan).” *Geoforum* 85 (October): 112–21. https://doi.org/10.1016/j.geoforum.2017.07.019.