Gender aspects in state-led water security discourses: A case study of the Syr Darya basin countries

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ABSTRACT

This postgraduate research project proposes to explore water security discourses in Central Asia, which is one of the global "climate hotspots" (Giorgi, 2006, p. 33). Recent increases in temperatures exceeding global historical averages are causing more frequent droughts and earlier snowmelt, which has a major influence on future water availability in an already water-stressed region (Bernauer and Siegfried, 2012; Sorg et al., 2013). These impacts affect individuals and segments of society differently and aggravate already existing gendered vulnerabilities and diverse capacities to face its consequences (Sultana, 2018, p. 19).

There is a growing consensus that water relations in societies are affected by social relationships related to gender (Fröhlich et al., 2018). Several case studies have indeed highlighted that water (in)securities are rooted in gendered water-related labour division and associated social norms, and could be worsened by climate change (Rao et al., 2019, Adams et al., 2018, Bacon et al., 2022). However, the geography of this literature body is uneven: existing studies are focused on Southeast Asia, Africa, and Middle East and North Africa (MENA) region.

While there is a growing research interest to gendered realities and insecurities in water sector, the academic literature in and on Central Asia rarely approach these topics in connection. Most research on water security in Central Asia has taken a state-centered approach, concentrated on the strategic interests of riparian nations' and power imbalances, or an economic approach, focused on benefit-sharing arrangements (Sehring, 2021, p. 7). Therefore, the aim of this dissertation is to offer a new perspective by assessing previously overlooked and silenced gendered realities in the Syr Darya river basin together with the state-produces water security discourses.

Keywords: Central Asia, water security, gender security, Syr Darya river basin, discourse analysis, feminist political ecology (FPE).

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ACRONYMS

ADB Asian Development Bank

RBO River basin Organization (Russian acronym: BVO - Basseinovye Vodokhoziaistvennye Ob'edineniie)

ICWC Interstate Commission for Water Coordination of Central Asia

IFAS International Fund for Saving the Aral Sea

IPCC Intergovernmental Panel on Climate Change

IWP Institute for Water Problems, Kyrgyz governmental organisation

IWRM Integrated Water Resources Management

NGO Non-governmental organisation

RBC River Basin Council

SIC-ICWC Scientific Information Center of the Interstate Commission for Water Coordination Research centre of ICWC

UN United Nations

UNESCO United Nations Educational, Scientific, and Cultural Organisation

WUA Water User Association

KG Kyrgyzstan

KZ Kazakhstan

TJ Tajikistan

UZ Uzbekistan

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INTRODUCTION

The strategic importance of water, combined with increasing pressures on its availability and connected social and political constrictions makes water security and securitisation research today more relevant than ever (Bréthaut et al., 2022, p. 466). The last Intergovernmental Panel on Climate Change (IPCC) report also highlighted "the centrality of water security in light of climate change" (IPCC, 2022, p. 8), which is exacerbated in Central Asia, one of the world's "climate hot-spots" (Giorgi, 2006, p. 33). Whereas the issue linkage between climate change and water availability occurred since the beginning of climate research, the concept of "water security" was not crystalized in academic literature until the 1980s–1990s (Wutich et al., 2022). The definition of water security acknowledged by the United Nations (UN) is "the capacity of a population to safeguard sustainable access to adequate quantities of and acceptable quality water for sustaining livelihoods, human well-being, and socioeconomic development, for ensuring protection against water-borne pollution and water-related disasters, and for preserving ecosystems in a climate of peace and political stability" (UN Water, 2013, p. 1 cited in IPCC, 2022, p. 621). At the risk of becoming porous, this definition attempts to encompass all water-related aspects of economic, political, societal, individual and environmental security and, as Lautze and Manthrithilake highlighted, make it relevant for national security and sovereignty calculations (Lautze & Manthrithilake, 2014, cited in Wegerich, 2015, p. 4660).

Nonetheless, what defines "sufficient" water security and the ways of its estimation are still contested, although several recent studies have made significant contributions (Young et al. 2021, cited in Wutich et al. 2022). Actors responsible for water governance, namely, states, might set different priorities in their water policies by instrumentalizing the water security discourse (Sayan et. al., 2020,

Bréthaut et al., 2021). This is peculiarly true in Central Asia[1], where water politics became entangled with national security calculations (Kraak, 2012a) shortly after gaining independence, when states started to use transboundary rivers for national economic growth (Roberts, 2022). In academic and policymaking literature, the Syr Darya river basin is depicted as a region where political tensions over water resources might occur due to the conflicting interests of surrounding states in a context of weak institutional settings (Kraak, 2012; Pingua, 2020; Roberts, 2022).

The extensive water securityscape literature on the Syr Darya basin focuses on socioeconomic, engineering, hydrogeologic, and ecologic aspects of water security (Assubaeva, 2021, Xenarios et al., 2021, p. 9-19), while the human dimension of water security remains largely overlooked (Wegerich, 2015, p. 4660). The concept of securityscape is understood as an enormously wide range of common perceptions and daily acts that everyone must engage in to meet the existential necessities of life that impose varied expressions of structure and identity on geographical and social stratification (Appadurai, 1990, also in Boemcken et al., 2016, p. 7). According to Sadoff et al. (2015, p. 119), when water security is the aim, the means to achieve it are "institutions, information, and infrastructure" (Sadoff et al., 2015, p. 119 cited in Wegerich et al., 2015, p. 4660). Individual and household water security is defined as “having physical and economic access to water that is sufficient and safe (in quantity and quality) for drinking, cooking, bathing, and cleaning needs” (Bacon et al., 2022, p. 17). However, the human dimension of water security, namely, the diversity and power disparities within different segments of water users (Boelens, 2013 cited in Wegerich et al., 2015, p. 4660), remains unrecognized. If we are to comprehend and alleviate all types of water-

[1] In this study, Kazakhstan, Kyrgyzstan, Tajikistan, and Uzbekistan, with the exclusion of Turkmenistan, all of which gained independence in the 1990s, will be collectively referred to as Central Asia (Xenarios et al., 2018).

related vulnerabilities, it is crucial to comprehend the many ways diverse groups of the population face water insecurity in the region. Therefore, this research aims to examine feminist political ecology (FPE) findings and determine the applicability of such an approach to water security in the Syr Darya basin countries.

In my research, I focus on the social aspects of water security in the Syr Darya Basin with an emphasis on the gender aspect. This distinction is explained by the following reasons.

There is a growing academic and policy-making consensus that water relations in societies are affected by gendered social relationships (Fröhlich et al., 2018). Case studies show that water (in)securities are rooted in gendered labour division and associated social norms and could be worsened by climate change impacts (Rao et al., 2019). Nevertheless, gendered nature-culture connections are defined by more than just material demands and control over resources, and their structurization transform over time (MacCormack & Strathern, 1980). However, whereas feminist political ecology (FPE) started untangling the complex relationships of gender, power, and the environment, the geography of this research is currently uneven: existing studies focus on Southeast Asia (Sultana, 2011), and the Middle East and North Africa (MENA) region (Harris, 2006; Adams et al., 2018).

In Central Asia, it is mainly women who carry water for domestic needs, cooking, and personal hygiene (Peshkova, 2021, p. 364). Rural women are also primarily responsible for fetching water and fuel and working in houses and vegetable gardens to provide food for the family. In many instances, social norms and traditions demand women to be obedient and maintain household responsibilities at the cost of their social and economic activity (Peshkova, 2021). Due to local demographic and gender hierarchies, Central Asia's most vulnerable social group is newly married young women, whose position is "subservient and marginalized"

(Zhussipbek & Nagayeva, 2021, p. 222). Water insecurity thus puts additional psychosocial stress on them (Wutich et al., 2022). It is especially pronounced in the socially conservative southern regions, where traditional norms wield greater power (Zhussipbek & Nagayeva, 2021). Previous water security studies should be expanded into these culturally and spatially specific localities (Hadley & Wutich 2009, Stevenson et al. 2016). Therefore, this thesis aims to describe state-level water security discourses and evaluate these critically with regard to the gender aspect.

1. 1 Aim of the research

Since security and insecurity are constantly placed, that is, fundamentally localized, as part of personal, human experiences which might take many different forms (Boemcken et al., 2021), this thesis is guided by the idea of studying gendered insecurities ignored by traditional security studies in Central Asia (Rowley and Weldes, 2012, p. 518).

I aim to examine to what extent states' water security discourses include gendered vulnerabilities in the Syr Darya river basin. The Syr Darya basin is illustrative and suitable for the analysis due to its significance for states as a transboundary water source and its comprehensive presence in the literature. It will allow me to analyse:

1. Water as a *resource* serving the monetary purposes of the states;

2. Water as a part of gendered livelihoods shared between communities in Kazakhstan, Tajikistan, and Uzbekistan.

The primary assumption is that in Central Asia, notions of "water security" become a continuation of "masculine" and realist, nation-state-centered rhetoric.

The chronological framework of my study will cover the period from 2016 to 2021. The year 2016 was chosen as a starting point due to the change of political leadership in Uzbekistan, which resulted in a significant transformation of the state's political course, including in water relations with neighboring countries.

1. 2 Case selection: a geographical and historical overview of the Syr Darya river basin

The Syr Darya originates in the Tian Shan and Pamir mountains, and flows across the borders of four countries: Kyrgyzstan, Tajikistan, Uzbekistan, and Kazakhstan (Suleimenova, 2020, p. 78).

Figure 1. A topography map of the Syr Darya river basin (Zoï Environment Network, 2015).

The water flow is formed by the melting of glaciers and snow and therefore, it varies greatly both seasonally and from year to year. About 90% of its average annual flow is regulated by reservoirs, which are used mainly for irrigation and flood prevention (UNECE, 2015, p. 2). However, the presence of dams and water storage reservoirs does not guarantee greater water security in the region. For

instance, in 2020, the water dam in Sardoba reservoir collapsed in Uzbekistan and provoked a flood in the Syr Darya region. The southern regions of Kazakhstan were also affected by the water flow: 30,000 residents of Kazakhstan were forced to leave their homes because of the flood (CAWater.info, 2020).

Land in the basin is used not only for crop production, but also, to a large extent, for livestock grazing. Land degradation (i.e., loss of humus, deterioration of soil quality, e.g., through salinization) is a common phenomenon in the basin that undermines the sustainability of agricultural activities. The most pressing issue is climate change, which is melting the high mountain glaciers and decline of long-term freshwater supplies: the surface of Central Asia's glaciers has shrunk by 30% in the previous 50-60 years and the glacier mass loss will continue over time (UZ Concept of Water Sector Development for 2020-2030, 2020, p. 5).

Since 1960, the ecological condition of the Syr Darya, one of the main tributaries of the Aral Sea basin, has gradually deteriorated. The reduction and seasonal changes in water flows have affected ecosystems (and fauna habitats) in many areas along the river and caused the disappearance of riparian forests (UNECE, 2015, p. 2). The Ferghana Valley's outdated water infrastructure, as well as outdated processes of water allocation are both contributing to other environmental concerns in the basin. In the short term, excessive water streams could appear to be beneficial, but receding permafrost induces landslides and flooding, and negatively affects future water availability. The agricultural untreated wastewater including fertilizers, ineptly managed urban waste, the oil content in water due to the Fergana refinery (Taltakov, 2015, p. 138) and the residues of uranium mining in the Syr Darya basin have polluted Central Asia's major river. Moreover, numerous waterways of the Syr Darya run near unsupervised radioactive waste disposal sites and uranium sludges (Roberts, 2022, p. 4), where disastrous, seasonal flooding risks are exacerbated by the seismic activity in the basin (Roberts, 2022,

p. 5). Considering that the region's population is increasing by an average one million people a year (Cabar.Asia, 2020), it will cause a growing demand over water consumption.

Until the Soviet Union's collapse, Moscow authorities closely monitored water distribution in the Syr Darya river basin, viewing water only as means to be invested in cotton production (Roberts, 2022, p. 2). Weinthal noted that in this period, cotton was not only the cash crop, but also played the role of "a system of social, political, and economic control" of Moscow over Central Asia (Weinthal, 2001, p. 54). Intrarepublican conflicts over Syr Darya waters have existed since the postwar decades, but they have remained hidden from public view due to Moscow's arbitration and control. Local chairmen from upstream countries warned of downstream droughts, as well as dire predictions of outstanding water shortages of the Aral Sea in the late 1980s, however, these concerns were silenced through administrative punishments (Robbins, 2022, p. 2-3). Documentary evidence clearly refutes the assumption that administrative borders were merely symbolic or irrelevant in the Soviet Union: border conflicts between republican leaders were common, and they were frequently exacerbated by the construction of massive water infrastructure projects (Bischel, 2011; Robbins, 2022).

After gaining independence, the Central Asian states sought the support from the international organizations to address environmental mismanagement (Weinthal, 2001, p. 51). The high level of involvement of international organizations, bilateral assistance organizations, and NGOs alternated bargaining sets and, in some cases, to widen the scope of the negotiations (Weinthal, 2001, p. 55). The involvement of the World Bank, the biggest donor in the Syr Darya basin, influenced the creation of the two main international organizations for the water management. Namely, the Interstate Coordinating Water Commission (ICWC), represented by senior officials (five Ministers of Water Resources, or their first deputies), was responsible for the

distribution, control and use of water (Kraak, 2012). Whereas in the first years of independence countries formally followed the former water division of the 1992 Almaty agreement on water utilisation and conservation, cooperation was close to non-existent due to unilateral actions over water allocation (Suleimenova, 2020, p. 82). The state leaders led by nation-building aspirations defined sovereignty over land as sovereignty over environmental assets, such as water. (Allouche, 2005 cited in Suleimenova, 2020, p. 84). Central Asian leaders aimed to preserve their power (Weintal, 2001, p. 56), therefore, resource nationalism was instrumentalized in pragmatic competition and cooperation stages throughout the period (Roberts, 2022, p. 7).

External donors and actors, who framed this as a potential conflict over water (Stucki & Sojamo, 2012), securitised this non-cooperation (Smith, 1995, p. 351). The initial set of the negotiation focused on water was extended to energy production, "to meet artificially twinned needs of irrigation and power generation" (Roberts, 2022, p. 5). Whereas it was clear from the beginning that the reforms are the most needed in the agriculture sector by moving the reliance from water-intensive cotton monocrops towards less water-intensive crops due to the severity of the environmental and health crises, Central Asia resisted these transformations due to short-term economic and political objectives (Weinthal, 2001, p. 73).

Seeing security as a zero-sum game and perceiving that security in one area will lead to insecurity in another sector led to uncoordinated policies in the economy, water governance and environment sectors (Zeitoun, 2011, p. 293). As a result, Central Asian authorities advocated an environmental conservation strategy that was short-term politically viable but long-term less effective. Unfortunately, IOs and other outside parties supported these tactics because they prioritized social and political stability over pursuing an alternative negotiation strategy (Weinthal, 2001, p. 73). Therefore, the environmental dimension of the Aral Sea restoration was

excluded from the very beginning of the negotiations (interview with environmental consultant Michael Boyd, March 11, 1997 cited in Weinthal, 2001, p. 64).

Mirziyoyev's ascension in 2016 in Uzbekistan eased water relations between Tajikistan and Kyrgyzstan to a greater extent (Roberts, 2022, p. 9). Because of the Syr Darya's extraordinary lack of longitudinal adaptability and the extent to which stream flow is regulated (the basin has 29 big dams), flooding is more of a concern for efficient transboundary water management than it is for actual environmental concerns (Taltakov, 2015, p. 138). As a result, annual water shortages and flooding incidents fueling local anxiety about water availability has continued to fuel conflict (Roberts, 2022, p. 9). Moreover, unresolved border issues between Tajikistan and Kyrgyzstan affecting water division in the Ferghana Valley are deepening local tensions in the Batken region (Glas, 2021).

Currently, livelihoods of the population of the Syr Darya river basin "depend on outdated infrastructure built for "a different political, economic, and climatic reality" (Roberts, 2022, p. 11). All of the countries of the Syr Darya river basin are low- and middle-income countries with poorly developed urban planning and land-use management (Pender et al., 2009). The population of the basin is vulnerable to poverty, food and water shortages due to the Aral Sea shrinkage (Pohl et al., 2017). Increased water intake and wastewater release back into the river result in extensive salinization and the spread of the various pathogens on the riverbanks (Taltakov, 2015, p. 138).

1. 3 Research question

To what extent is the gendered nature of water (in)securities reflected in state water security discourses in the Syr Darya river basin?

To answer this question, I will break down the study into several sub-questions:

1. What are water-related gendered insecurities in the Syr Darya basin countries?

2. What are the water security discourses of the states sharing the Syr Darya river basin? In particular, *what* or *whose* security do these discourses focus on?

3. To what extent are these gendered vulnerabilities included in the state-produced security policies on water?

1. 4 Theoretical framework

Constructivism as a theory of security studies, which developed after the end of the Cold War, offered its vision of the most important problems of the securitisation theory (Onuf, 1989). Constructivism argues that political institutions are not an a priori given for humans but a product of social interaction, and therefore, are *constructed.* Securitisation is the process of sustained reproduction of the state of threat in discourse, aimed at changing the political priorities of society. For the constructivist, the term "threat" gets its meaning not because that is the actual state of affairs, but because that is how the state of affairs is represented in speech or the text (Buzan et al., 1998, p. 24). Therefore, constructivism analyses social structures and their components: societal norms and rules, speech acts, and derived social roles of actors involved in policymaking. The most original version of the study of the problem of security is presented in the theory of securitisation, developed with the participation of a representative of the Copenhagen School, Wæver and Buzan (Buzan et al., 1998).

Securitisation is not only related to speech acts, but also to the principles that create networks of professionals related to security policy and the study of the conditions that allow the realization of their discursive power. Therefore, the proposed actions for the security of the referent object (the object under threat) demand urgency, and

therefore, are moved “above normal politics” (Wæver, 2008, p. 582 cited in Bogardi et al., 2016, p. 40). To put it another way, securitisation acts as a social construction of what is to be recognized (acceptable) threat in any given society and moment in time by focusing on threats and thresholds and relying on actor and audience dynamics (Taylor, 2000 cited in Fischhendler & Nathan, 2016, p. 79). ‘The form, content, and success’ of securitisation discourse is highly dependent from the “sociological setting” (Salter, 2008, p. 322-326) – the enabling environment, which defines who can make a securitizing speech act and on what themes. Therefore, “insecurity [and security] is not a fact of nature, *but always demands that "to be written and talked into existence*” (Huysmans 2006, p. 7).

Constructivists suggest that social structure influences or "constructs" actors' identities. Securitisation theory (Copenhagen school), developed by Wæver (Wæver, 1995, also in 2011), is a useful analytical tool for apprehend the logic of the securitisation of water. According to the theory, a securitizing move is made by a securitizing actor – an actor who brings a security issue to the audience’s attention by a 'speech act' (Buzan & Wæver, 2003, p. 48). However, in Central Asia, local populations may be increasingly isolated from voicing their security concerns due to the political leaders restricting the opportunities within the sanctioned discursive frameworks (Chernykh & Burnashev, 2005, Jackson, 2006, Wilkinson, 2007). Moreover, gender, together with other axes of social distinction has a significant role in defining an individual's level of vulnerability and, to some extent, marginality when it comes to being a securitizing actor. Vulnerability is “a dynamic situation resulting from existing imbalances in resource distribution and access, as well as an individual's choices and possibilities” (Kabeer, 2005; Meyiwa et al., 2014.; cited in Goodrich et al., 2019, p. 15).

Gender interactions as outcomes of socially and culturally generated structural positions relative to labor and nature are the subject of political ecology (Robbins,

2012, p. 64). According to FPE, women belong to vulnerable groups, which are frequently excluded when it comes to "speaking security" (Hansen, 2000), or governing natural resources because of underlying power dynamics (Dasgupta, 2012; Truelove, 2011). As a result, assumptions about gender and the environment as a homogenous group conceal inequities and overlook complicated environmental and gender dynamics (Chant, 2008 cited in Goodrich et al., 2019, p. 15).

Assessing gendered labour, and access to resources, either as natural and material or social/political (Rochaleau et al. 1996; Harris, 2017), FPE studies how meanings around gender and nature are constantly formed, altered, and co-produced (Nightingale, 2020). It examines how gender affects access to natural resources and criticizes the ways how policies affect women and other vulnerable groups (Elmhirst, 2011). FPE focuses on intricate, oblique relationships between culture, society, and subjectivity, which interlinkages cause gender inequality and unequal resource access (Elmhirst, 2006). FPE warns against limiting gender to a male-female division and re-conceptualizes gender as a broad and transformative category that involves class, culture, and ethnicity. This theoretical area, called the prism of unequal interactions, identifies injustices, exclusions, and inequalities related to natural resources and clarifies their underlying causes (Sultana & Loftus, 2012), as well as environmental governance, gender equity, and water security (Truelove 2011; Harris et al. 2017; Adams et al. 2018). Therefore, as a conceptual framework, I employ the FPE, a branch of political ecology focusing on gendered power dynamics in human-nature relations to understand the connection between water securitisation and water security (Rocheleau et al., 1996; Watts, 2000; Elmhirst, 2015; Sundberg, 2017; Burandt and Mölders, 2017).

1. 5 Research methods

To identify water security discourses, I plan to explore national legislation and policies dedicated to water, security, and health (National Water Codes and National Security Doctrines).

With this, I aim to examine how knowledge construction on water security of the states is reflected in regional security agenda setting and policymaking. I use interviews to assess the extent to which discourse is embodied by state actors or not; to determine whether the discourse is just discourse or has a performative power. Namely, in-depth interviews with the key informants (female water specialists from each country) helped me understand the gender-water interlinkage in the Syr Darya river basin from the perspective of each riparian state representative. The supervisor and the Ethics Forum of the Social Sciences School approved the content and the format of in-depth interviews, consent, protection of identities, and data proceeding and storage procedures. Four interviews were conducted online from 18 to 28 April 2022. The coded list of interviewees and their affiliations is in Annex 1.

Whereas the sample of four people is not representative enough for a comprehensive picture of gendered insecurities in the Syr Darya basin, it can be partly justified for the following reasons. First, the interviewing is only an additional method for verifying the conclusions made by the discourse analysis, second, the lived and professional experience of the invited experts brings credibility to their judgements.

1. 6 Scope of the research

Whereas this research focuses on the water security discourses of four Central Asian states, it is necessary to narrow the scope down for adequate analytical depth. As the analysis stretched between four countries might seem too broad, the basin approach is needed considering that transboundary water resources management

occurs within the hydrographic boundaries of river basins and not within state borders (Kraak, 2012b). For the analysis of discursive processes, basin case studies are appropriate since they reveal hydro-political linkages and the national discourse of each state participating in the governance of the water body. Therefore, the Syr Darya river basin countries are taken as an analytical unit (Kraak, 2012b, p. 13). I am using an inductive approach to the documents to analyse the formation of "water security" discourse.

There are two cautionary notes appropriate in defining the scope of my research. First, whereas "gender" as well as "gendered (in)security" are discourses, which are worth examining, I will not enlarge on their use in the countries of the Syr Darya river basin in the scope of this work. Second, the water security discourse I am examining is bounded in time (2016-2022), space (Kazakhstan, Kyrgyzstan, Tajikistan, and Uzbekistan), and scope (state-produced policy documents regarding water and security).

2. WATER SECURITY AND WATER SECURITISATION: A LITERATURE REVIEW & THEORETICAL FRAMEWORK

To explore the linkage between water security discourses and their relation to gender using the feminist political ecology lens (FPE), first, I will enlarge on the aspects of water security and water securitisation.

2. 1 The emergence of water security concept

The end of the Cold War opened an opportunity for widening the neorealist definition of security to cover a range of possible threats, from environmental to individual security and its components (Krause & Williams, 1996). This challenge has been accompanied by broadening the scope of security research by going from individual or human security to international or global security (Buzan 1991; Tickner 1992; Wæver et al. 1993). Therefore, the emergence of environmental security concept fitted perfectly in this newly opened discursive space: all-penetrating nature of human relations with environment combined with the security language brought "low-profile environmental issues into 'high politics'" (Hilgartner & Bosk, 1988, also in Levy, 1995) and expedites the mobilization of resources to address environmental security (Fischhendler & Nathan, 2016, p. 82).

Water fits in this broader notion of security, which includes political, socioeconomic, individual, and broader environmental considerations, and serves as a connecting point amongst them (UNESCO and UNESCO i-WSSM, 2019, p. 24). In this light, it is not surprising that in the last decades, the political and academic interest in water security crystalized across many disciplines (Waterbury, 1979; Turton, 2002; Cook & Bakker, 2012; Lautze & Manthrithilake, 2012). This interest was caused due to changes in global and local water availability, growing water demand in light of growth of demography and industrial advancements, and

alterations in water flows caused by climate change (Pahl-Wostl et al., 2014, p. 1). Water security takes on a new meaning, one that is wide, multidisciplinary in scope, and cross-sectoral in use (Zeitoun, 2011, p. 287). In addition, the water resource, acting as a precious factor in economic, environmental, societal well-being of the populations, evokes the greatest response from the audience (Garcia, 1998). The omnipresent nature of water makes it a perfect tool for securitizing moves: since water is so relevant among different water users and sectors (communities, agriculture, industry, transportation, hydropower, ecosystems, etc.) and the imagery of devastating water-related disasters are so powerful, it makes the securitizing move on water uncomplicated (Williams, 2003, Waever, 2008 cited in Bogardi et al., 2016, p. 38). The variety of referent objects vulnerable to the water insecurity: nation states, individuals, humanity as a whole has an additional potential to make the potential audience susceptible to securitisation of water (Bogardi et al., 2016, p. 45).

However, water securitisation, i.e. the increasing sense of urgency surrounding the water does not contribute to prioritizing the common solution of water-related issues. Instead, it might lead to hydro-hegemonic fixes to control resources exclusively for one group at the expense of others, or hydro-economic measures to control water through privatization and water pricing (Merme et al., 2014, cited in Pahl-Wostl et al., 2016, p. 14). Therefore, the first notion of water security in academic literature was linked to "conflicts over water between *nation states* in the Middle East" (Naff, 1994, p. 255) due to physical water scarcity. However, further research makes clear that water-related insecurities are not mono-causal, and physical unavailability of water is linked to water distribution governance (Zeitoun, 2011). The social aspects of water scarcity examine aspects of justice and ethics in human water use in order to evaluate challenges in water distribution (Mollinga, 2008; UNDP, 2006). Prioritizing research on the biophysical components of water

security without taking into account the complexities of its social dimensions would not result in a coherent policymaking (Zeitoun, 2011, p. 289).

Discourse analysis of UN documents from High-Level Water and Environment Meetings concluded that "water security" obtained a wider use in the water-related declarations in the last decade: until 2011, only the Dublin Declaration (1992) and Bonn Declaration utilized "water security" (2001). Whereas the Dublin Declaration focused on the water quantity threatened by the climate change, namely, water shortages than to drought or growing drylands, the concept of water security expanded to the human dimension. The Paris Declaration was the first statement calling for the inclusion of “people in poverty and the disadvantaged groups”, particularly indigenous peoples and youth, to be involved in water-related decision-making (Paris Declaration, 1998). The 2010 Dushanbe Declaration moderated eradication rhetoric by adding the adjective "vulnerable" alongside the word "poor," which, while it does not personify poverty, highlights the risk poor people face (Mount & Bielak, 2011, p. 20). When it comes to gender, the global statements address gender issues from female involvement in water and sanitation governance, and only starting from the New Delhi Declaration (1990) (Mount & Bielak, 2011, p. 21-22). The declarations made before, Stockholm (1972) and Mar del Plata (1977) do not mention “women” or “gender”, and use generic terms, such as “humankind” or “mankind” (Mount and Bielak, 2011, p. 22). New Delhi Declaration pushes women to "lead" and have “influential roles” in water governance through empowerment and gendered capacity-building. It also highlights that poor women and their children are "the major victims" of “disease, suffering, and millions of deaths” in the absence of “environmental sanitation”, however, it does not address the systemic cause of these events.

2. 2 Water from the securitisation theory perspective

Whereas academia uses water securitisation for highlighting urgency and increasing funding for adaptation measures (Deudney 1990; Levy 1995), moving water governance in high politics legitimizes extreme measures to prevent the existential threat (Balzacq, 2005, Schmitt, 1985; Williams 2003, p. 5 cited in Fischhelter, 2015). Fischhendler further outlines three mechanisms of water securitisation for pushing the urgency and extraordinary measures: structural, institutional and discursive mechanisms (Fischhendler, 2015, p. 248). Structural securitisation occurs in highlighting the vulnerability of existing physical water infrastructure and water supply, like water reservoirs and dams (Fischhendler, 2015, p. 248), which can be contaminated or damaged by adversaries (Gleick, 2006) and therefore, should be equipped with military monitoring. Institutional securitisation might occur around the practices of institutional governance of water resources. In the example given by Fischhendler, it might be the inclusion of military executives in transboundary watercourse councils, or including water governance in peace agreements (Fischhendler, 2015, p. 248). However, bringing water cooperation into a closed institutional setting and framing water negotiations as security matter feeds distrust and limits crucial data exchange between riparians exclude civil society, NGOs, and other public stakeholders from participation in water-related decision-making (Fischhendler, 2015, p. 248).

Discursive securitisation of water occurs through "metaphors, framings and narratives" of urgent, inevitable catastrophe (Balzacq 2005), and lately, also with the images of devastated dry lands or floods accompanied with the alarming messages (Sayan et al., 2020). Whereas the use of terms, such as "water wars" (Cooley, 1984, Gleick, 1993) and the growing number of climate refugees from "water-stressed regions" (Henry et al., 2004 are based on scientific knowledge they also contribute to the alarmist framing of water security around the globe. In transboundary settings, discursive securitisation might occur in transboundary

water sources due to power imbalances connected to geographical positions of the riparian states, fueled with the opposing narratives, such as "upstream vs. downstream", "water abundant vs. water scarce", as well as "irrigation vs. energy economy" (Stucki & Sojamo, 2012). However, the outcome of water securitisation is highly sensitive to the context (Floyd, 2007 cited in Fischhendler, 2015, p. 250), and therefore, different framings might be applied to as a tool for strategic communication for affecting the policy-making (Gerlak et al., 2013).

The substantial attention paid to water security is comforting from the first sight. However, the first case studies conducted by Zeitoun in the Nile and Ica Valley (Peru) show that the mainly disjointed water security policies do not fulfill their goals: "Where it is developed at all, water security policy is at best incoherent; at worst, it creates situations of *in*security for other natural resources that people and states have come to depend upon, or for the communities and nations themselves" (Zeitoun, 2011, p. 287). Narrow approaches to water security perceive water as unrelated to many of the other connected security areas (Zeitoun, 2011, p. 287).

Due to the variety of policy spheres linked to water, water security discourse coexist with other discourses, namely hydropolitics, integrated water resources management (IWRM), and emerging concept of water-energy-food nexus (WEF, in some cases WEFE, where the latter stands for environment dimension) paradigms. According to Bakker and Morinville, however, the main distinction between water security and IWRM is that while IWRM is preemptive and more practical in control and forecast, the water security embraces a broader margin of socio-ecological uncertainty and calls for "adaptive governance" (Bakker & Morinville, 2013, p. 4). IWRM and WEF approaches have been promoted globally as a "one-size-fits all" set of solutions all around the globe, while water security is "highly context specific" (Gerlak & Mukhtarov, 2015, p. 266).

In Central Asia, water security discourse is intertwined with IWRM paradigm: water security is perceived as the overarching aim, and IWRM is viewed as a means to achieving it (UN-Water 2013, p. viii, Stucki & Sojamo, 2012, cited in Gerlak & Mukhtarov, 2015, p. 259). The analysis on water security carried out by other researchers focused on the Syr Darya river (Kraak, 2012, Wegerich, 2015; Sherbadalova, 2015; Feaux de la Croix, 2021, Assubaeva, 2021, Xenarios et al., 2020) do not cover the gender dimension. Kraak (2012) analysed the state discourses of Uzbekistan and Kyrgyzstan on the Toktogul dam. He concluded that water governance was led by the geo-economic and geopolitical logic of states. On the Kyrgyz side, the Kambarata hydropower dam served as "the project of nationalism, patrimonialism, and providing a form of charismatic authority to the leadership", which "speaks to the population's feeling of national pride" (Kraak, 2012, p. 211). On the Uzbek side, the dam was preventing summertime irrigation and led to threatening statements to cut electricity supply to the southern Osh and Batken oblasts in Kyrgyzstan (Kraak, 2012, p. 219). In a similar vein, Menga studied the Tajik-Uzbek relations regarding the Rogun dam construction and stated that when both sides are operating with the categories of "national pride" and "national interests", there is much less room for negotiation and reconciliation (Menga, 2015). The decease of Uzbek president Islam Karimov in 2016, who had campaigned vehemently against the Rogun Dam construction, altered the geopolitical landscape (Allouche, 2020). This very masculine understanding of control and dominance and has transformed since 2016, and the latest memorandum of intent on the development of energy relations between the energy systems between Tajikistan and Uzbekistan signed in 2022 is the proof of the core transformation of the relations (Gazeta.uz, 2022). However, there were no recent studies covering the changes in rhetoric of the water governance between these states.

Xenarios and Assubaeva developed the first comprehensive “bibliometric review of the water security concept in Central Asia” (Xenarios at al., 2021, p. 13001) and indicated that the overreliance on technocratic solutions ignores political and environmental dimensions of water security (Xenarios at al., 2021). The authors assume that the desk research of the concept may be disconnected from the real policy discourse in the area (Xenarios at al., 2021). In further research of Assubaeva on expert apprehensions of water security in Central Asia, some experts emphasized how crucial is the urban and household dimensions are to enhancing water security in the area, however, it comes only the second, after economic dimension of water security (Assubaeva, 2021, p. 63). In this research, experts had a consensus that natural hazards, and environmental aspects are also crucial for water security in Central Asia (Assubaeva, 2021, p. 63).

Several studies on human-environmental relations in the region conducted by de la Croix from the environmental anthropology perspective are dedicated to the various ideas of water that coexist and how they relate to various stakeholder groups and modes of use (de la Croix, 2021, de la Croix et al., 2022). She identified two predominant narratives about the Syr Darya: first, as “managerial, top-down, and reductionist view” (de la Croix, 2021, p. 27) as a resource for energy or irrigation, and second, the water as a "cosmological medium" with the agency to be sacred and healing (de la Croix, 2021). Moreover, only few studies capture the changes on the state discourses on water security after 2016. Therefore, the discourse analysis on state-led discourses on water security fits neatly among these studies and fills the gap in the existing literature.

Whereas the literature on water governance of the Syr Darya river basin is diverse, it becomes apparent that most of the abovementioned studies are focused on the state or state political elites as the only legitimate actors speaking security. Due to the administrative resources available to dominant regimes, local populations

unable to be securitizing actors may be increasingly isolated from the security itself. By reframing and securitizing global threats, the states in Central Asia ensure the validity and legitimacy of their security speeches, allowing emergency politics to continue. Therefore, whereas the explanatory potential of the Copenhagen School regarding water securitisation is effective, it falls short of encompassing the phenomena lying outside the securitisation process, which shape water security in Central Asia. Namely, the human security dimension is not sufficiently covered in this kind of research, despite the fact that "security is done by everyone, not only academics and policy elites" (Rowley & Weldes, 2012, p. 526; also Jarvis & Lister, 2013, p. 162). Feminist security scholars also criticized traditional security studies for "its inherent male biases" (Hansen & Olsson, 2004, pp. 405-409, cited in Detraz, 2009, p. 348) and seeing parts of natural environment, such as fossils, water and soils as resources for human consumption (Detraz, 2009, p. 351-352).

Whereas the securitisation linked to environmental threats, such as securitisation of water, is often well intended, "the use and abuse" of security lexicon may lead to controversial consequences. First, as described above, structural and institutional water securitisation pressures the militarization of environmental protection activities (Levy, 1995), second, the attempts to picture complex interlinkages of water security with other sectors discourages the wider audience and makes it unreceptive to the call for urgent actions. Not least, the securitizing actors do not have equal opportunities in persuading audiences of the significance and urgency of their securitised issue (Buzan et al. 1998; Williams 2003), and power inequalities limit the possibility of actors to bring their concerns to the security agenda.

2. 3 Feminist political ecology and water security

Political ecology (PE) investigates how power disparities produce specific social and ecological consequences (Adams et al., 2018, p. 134). It is a comprehensive

theoretical, analytical and methodological approach that contends that the way environmental problems are understood influences the way solutions are implemented. This suggests that PE regards scientific and environmental knowledge as inherently political and inextricably tied to economic and social circumstances (Bryant, 1998).

Furthermore, PE is interested in understanding how local environmental change processes are linked to historical and present larger regulatory frameworks and market activities. Swyngedouw explains that to overcome “hydro-social research envisions the circulation of water as a combined *physical* and *social* process” (Swyngedouw, 2006, cited in Swyngedouw, 2009, p. 56). By drawing on a variety of disciplines to frame research on resource and management issues in development and sustainable environment governance, climate change, it is concerned with the processes of use, and contestation of environmental resources. Therefore, for PE, water (in)security “is not merely a question of management and technology, but … in the first instance, a question of social power” (Swyngedouw, 2004, p. 175). Budds et al. (developed the concept of “hydrosocial cycle”, which goes beyond hydrological cycle and concentrates on how water acquires certain meanings and how these meanings and representations of water are critical for understanding "who gets access to it and on what terms" (Linton, 2010, p. 69 cited in Hellberg, 2018, p. 3).

Gender refers to the contrasts between male and female social duties, as well as the emotional qualities that society assigns to individuals based on their sexual identities. Gender relations were socially built and perpetuated for generations in a hierarchical framework in which a man is the dominant component and a female is the submissive one (Sokolov, 2005, p. 4). As result, the world has been arranged along gender lines, allowing for a complicated and partially unconscious process of gender identification to emerge (Spring, 2009, p. 1161). Gendered relations are

infiltrating family's most private space, impacting labor, societal connections, and, most importantly, the ability to “exercise the power” (Spring, 2009, p. 1162). Gender theory allows finding social and cultural phenomena that contribute to gender disparities in traditional societies (Stulina et al., 2009, p. 320). This does not, however, imply that women are the only “victims” - men and women might equally suffer from conventional societal norms and stereotypes system: in a patriarchal and religious institutions, factors such as gender, ethnic background, class, seniority, and minority status nurture an insecure environment for certain groups of society. It is worth noting that gendered variations in knowledge, access, and activism have little to do with physical or psychosocial differences between men and women.

Zwarteveen, Ferguson and Mulwafu were among the first scholars stating that women are excluded from water governance despite carrying a significant share of its responsibility (Zwarteveen, 1997, Ferguson & Mulwafu, 2004). Numerous studies reveal that water-related policies have a bigger influence on women’s lives in terms of their life quality, health, and psychosocial conditions (Hawkins and Seager, 2010, Nightingale 2020, Sultana 2021). The FPE involvement with water governance was deepened in the last decades and focused on the extent how gender implications result from cultural expectations and community micropolitics, as well as uneven power dynamics (Poteete et al. 2010; O'Reilly, 2010; Truelove, 2011; Sultana, 2011, Adam et al., 2018, Bacon et al., 2022).

Globally, water resources management is perceived as a highly masculinized field, where “not only positions are mainly held by men, but also core norms and guiding principles are shaped by men and based on male experiences” (Sehring, 2021, p. 8). Water experts and engineers are primarily drawn from traditionally male-dominated technical areas for decisions about water supply, dam development, and water allocation, what shapes social views, discourse constructions, and water-

related response actions (Bakker, 2012, p. 617 cited in Hellberg, 2015, p. 9). For instance, at the transboundary level, men hold most leadership roles in river basin organizations. Such management created an environment where practices and discourses are shaped by masculinity (Zwarteveen, 2008; Zwarteveen, 2017 cited in Sehring, 2021, p. 8). This raises broader concerns regarding the issue of expertise, particularly male competence in water infrastructure. Strang contends that shifts toward expert-led technical management have altered the human-water interaction: "Technological advancement has... permitted the physical alienation of water not only from women, but also from local communities and, eventually, from the majority of the people..." (Strang, 2005, p. 33-34, cited in Detraz, 2009, p. 361). Nonetheless, there are few studies on women's role in water governance do exist (Earle & Bazilli 2013; Carmi et al. 2019; Von Lossow, 2015 cited in Sehring, 2021). Research on water from a gender perspective also reveals how water infrastructure helps to reproduce exclusionary and selective inclusionary systems in access to water (Wutich et al., 2022, p. 6).

2. 4 Gendered vulnerabilities in the countries of the Syr Darya basin

Since the Syr Darya is a glacier- and snow-fed river, the mountain communities of Tajikistan and Kyrgyzstan must be taken into account as a socially vulnerable population, whose livelihoods are connected to the river. These communities, which depend on rural agriculture and agro-pastoral culture, are currently facing difficulties that could be made worse by climate change (Xenarios et al., 2018). Since both the Kyrgyz and Tajik governments have hierarchical, centralized decision-making structures that are becoming more authoritarian, they fail to adequately take into account the unique requirements of outlying areas, such as mountainous regions, when formulating national policies (Xenarios et al., 2018, Pannier, 2022). Similar situation is faced by the population of Karakalpakstan, the autonomous region located in the closest proximity to the desiccated Aral Sea basin,

which is perceived to be the outlier of the Uzbek population (Eurasianet, 2022).

According to the Women, Peace, and Security Index (WPSI) calculated by Georgetown Peace, all Syr Darya river countries are placed in the second and third quantiles of the global index, which is associated with tremendous limitations in their outdoor opportunities, as well as exceptionally high levels of violence.

WPS Index Rank			**Inclusion**			**Justice**		**Security**
		Sex ratio at birth (male to female ratio)	Economic inclusion (%)	Employment (%)	Representation in parliament (%)	Exclusionary practices (%)	Domestic violence (%)	Perception of societal security (%)
59	KZ	1.06	60.3	60.3	24.5	16	6.0	44.1
74	UZ	1.06	36.0	48.7	28.7	32	7.3	85.7
85	TJ	1.07	42.1	30.2	23.4	29	14	86.8
97	KG	1.06	38.9	42.4	17.1	28	13.0	61.5

Table 1. Women, Peace, and Security Index 2021/2022. Data selection was made by the author. Source: Georgetown Institute of Women Peace and Security (GIWPS, 2022).

In the Soviet Union, gender order was was shaped by the organization of labor and socialization in public spaces (Peshkova, 2021, p. 367). The collectivism developed a panopticon, where the deviations were punishable through public reproaching (Foucault, 1977, quoted in Levitanus, 2020, p. 54), altering the concept of personal and social body in *women.* The state-supported prestige of motherhood (by

providing financial aid and favored custody) imposed a double burden on local women, who were already responsible for childbirth, housework, and extended family care (Ashwin, 2000, p. 10). As a result, “local gender order became completely disciplined and centered around the state” (Peshkova, 2021, p. 369). Introduction of gender as a concept happened in the 1990s, and first, was used as “a metric for the projects’ assessment” (Peshkova, 2021, p. 370) and without a local content, it was reduced to a word from the lexicon of the international development organizations and NGOs (Peshkova, 221, p. 370). As result, the concept of gender relations are negotiated by the large share of the population, rather than embraced taking into account family constraints and duties, moral standards, unique geographic and historical circumstances, and pragmatic factors.

After the dissolution of the USSR, the gendered structure in Central Asia remained entwined with shifting political regimes, unstable economic conditions, and quests for nation- and state building (Connell, 2014, p. 557). As part of the nation-building process, it is in the interests of Central Asian republics to culturally homogenize their populations (Bandiera et al. 2019). Overlapping "reinvention" of Islam and nation-building processes in Central Asia brought with them responsibilities and rights that aligned well with existing gender patterns (Kamp, 2016, p. 276 cited in Peshkova, 2021, p. 370). Central Asian states continued to incentivize biological reproduction through provision of “mother capital”, prolonged maternity leave and state-provided post-natal daycare (Roche, 2016 cited in Peshkova, 2021). As a result, childcare and family education remained predominantly feminine responsibility area, whereas the material provisioning for the family was done by men.

According to the GWSP Index, political representation of women in Central Asia is low. Women in Central Asia are reluctant to participate in policymaking, both at the local and state level, for various reasons. First, the Central Asian political space

has long been shaped by a prevalent narrative about the need of "strong-handed" leader (Omelicheva 2015, pp. 91-92) to manage concerns of the population placed in unfavorable geopolitical and spatial conditions. Second, participation in politics is associated with additional time commitments that women do not have due to household responsibilities. The physical distance factor also plays a major role in political representation opportunities: the communities most distant from administrative centers are considered vulnerable, as there are not many channels through which they could articulate their participation. These gender realities are affected by such variables as "ethnicity, age, socioeconomic status, access to education and knowledge, aptitude" (Peshkova, 2021, p. 371), considering them variables is helpful for having more nuanced and complicated regional gender structure (Peshkova, 2021, p. 365). Furthermore, men hold the majority of professional and technical posts in state water administrations in Central Asia, including ministries, agencies, and basin management (Sehring, 2021, p. 8). A feminist view on water security and governance must necessarily begin with revealing how men's domination has led to the supremacy of masculinized behaviors, that is, "practices that can be done by men or women but are founded on male experiences and ideas" (Sehring, 2021, p. 8).

Moreover, since cotton production in Uzbekistan and Turkmenistan Wis heavily reliant on government labour arrangements, the major economic activities of the population, such as fishing and muskrat farming in the Syr Darya river basin have been abandoned in favour of cotton cultivation, further marginalising the locals (Waltham & Sholji, 2001).

3. RESEARCH DESIGN AND METHODOLOGY

3. 1 Research strategy

Since relations over water are the physical manifestation of a set of power dynamics and beliefs, in this research I apply discourse analysis, since discourses are also an essential source of information for figuring out how water governance is socially produced and contested, as well as how it interacts with other relationships, such as gender.

Foucault defined the discourse as “the practice that systematically form the objects of which they speak” (Foucault, 1972, p. 49 cited in Boreus & Bergstrom, 2017, p. 197). By defining governmentality as the "creation of regimes of truth and their propagation through practices, discourses, and punitive measures", Foucault argued that power is signified via “knowledge and practices as much as through institutional forms” (Foucault, 1991, p. 102). Therefore, for power relations to be developed, they must be expanded, contested, or mobilized through discourse (Doherty, 2007, cited in Bréthaut et al., 2021, p. 467). Beyond the borders of the state, these truths are disseminated through social networks and entire societies.

Discourses inform social practices (Fairclough, 2001, p. 121), they shape how we see sexuality, gender, and gendered relations (Foucault, 1978), and may thus expose power dynamics that affect people's thinking (Waitt, 2005, p. 166). Discursive development of governmental objectives and normative practices, as well as the physical building of structures like dams and canals can make waters "governable" (Foucault, 1991 cited in Kraak, 2012, p. 37). We can understand how relations of power are mutually transforming through social systems and practices and through discursive framework construction (Zeitoun & Warner, 2006 cited in Bréthaut et al., 2021, p. 467-468). The politics of discourse include the creation and maintenance of storylines, positioning, and selective application of

broader discursive systems (Hajer, 2002, p. 275). The discourses are dynamic, as they are contested and transformed over time (Hajer, 2002, p. 264).

Due to this thesis' scope, I set the limits of the discourse-making actors by focusing on states as discursive elites – those in the positions of power inside bureaucratic organizations who have to power to establish a dominant discourse (Bréthaut et al., 2021, p. 473). Focusing on the state actors as "discourse-makers" and "discourse-carriers"(Bréthaut et al., 2021, p. 474) will allow me to use water security discourse as a unit of analysis (Hajer, 1995). However, through further investigation, it is necessary to acknowledge that the dominant discourses can be composed by several players who act at various levels. It is not just about the viewpoints expressed by national government officials, but also by academics, NGOs, media outlets, and look at the other possible ways that environmental activists can use to influence the water security discourse (Bréthaut et al., 2021, p. 470). It is also necessary to keep in mind that discourses alone cannot fully explain all facets of water governance and everyday security interactions around it, therefore, this research would also benefit from additional ethnographic fieldwork.

The research interest to impact of discourses on water governance is growing. The impact of politization and securitisation of water was conducted by analyzing the sanctioned discourses in the Southeast Asian river basins (Mirumachi, 2013, Saklani et al., 2020, Williams, 2020) and the MENA region (Wine, 2020; Hussein et al., 2020; Allouche, 2020; Sayan et al., 2020). Bréthaut draws the attention that despite these studies operate with water discourse concept, they rarely explicitly conceptualize it as they largely followed Hajer's definiton of discourse as "a specific ensemble of ideas, concepts, and categorizations that are produced, reproduced, and transformed in a particular set of practices and through which meaning is given to physical and social realities" (Hajer, 2002, p. 44, Williams, 2021, p. 727, cited in Bréthaut et al., 2021, p. 468). Therefore, whereas the

discourse studies of transboundary water sources are not new, there is still only few studies performing the discursive analysis systematically capturing the change of hydropolitics discourses in Central Asia after 2016.

Identifying and categorizing discourses requires a full understanding of factual reality that encompasses the composition of actors and political, organizational, and cultural settings. As a result, verifying a dominant discourse requires using multiple sources through triangulation (Baxter & Eyles, 1997; Flick, 2005; Bréthaut et al., 2021, p. 475). Therefore, this research is based on the existing literature, combined with qualitative and inductive methodology for identifying the discourses around water security. The inductive and inclusive approach to the discourse will allow me to remain open to the finding of unanticipated ways of framing water security in order to shed light on securitised sense-making in Syr Darya river basin countries.

3. 2 Methods selection

In this research, I will use the discourse analysis and the key informant interviews. The challenge of identifying water-related insecurities of women is, however, difficult due to the "ordinariness" of daily actions; it is challenging to query people about what they do every day, since those things seem trivial and taken for granted (Robbins, 2012, p. 211). This is coupled with the fact that the social order in Central Asia is often unstated, unwritten and largely embodied in the life in a way that it makes it difficult to articulate. Additionally, due to COVID-19 pandemic, it was impossible to conduct household interviews in the Syr Darya basin countries. Therefore, water-related gendered insecurities in the basin analysed from available academic and grey literature will be cross-examined with the key informant interviews.

Before starting the discourse analysis, it is necessary to outline its limitations as a qualitative study method. First, the discourse analysis is always partial and

subjective, and its results are open for reinterpretation and contestation (Crawford, 2004, p. 24 cited in Bréthaut et al., 2021, p. 469). Second, the discourses are predicated on the social and institutional contexts in which they exist and shaped by a wide range of actors. Studying the speeches, or, in this case, policy texts made by states – power institutions, do not reflect the complete picture produced by the discourses. As Schattschneider pointed out, "all forms of political organisation have a bias in favour of the exploitation of some kinds of conflict and the suppression of others. Some issues are organized into politics while others are organized out" (Schattschneider, 1960, p. 71). This focus on political acts is unable to capture other discursive interactions, and most importantly, discursive silences, which are crucial when considering gendered insecurities in authoritarian settings.

Discourses set the normative frame of what is seen to be acceptable or not; through normative mechanisms of exclusion, certain practices or knowledge undermining the dominant discourse, might be either omitted, or described as "as deviant or not deviant, is seen as a tradition or not a tradition, is viewed as right or wrong" (Boreus and Bergstrom, 2017, p. 197). This is especially true for gendered behavior and practices, which are difficult to investigate because they reflect the established order, unquestioned behaviour patterns, and 'common sense' (Chappell, Waylen 2013; Kronsell 2006; Sehring, 2021). To overcome these limitations and expose such hidden practices, I use key expert interviews to get additional insights about the basin's reality and repercussions of power. Key informant interviews will be also analysed from a discourse analysis perspective: how they reproduce official discourses or not, which elements they appropriate, which they leave out. Simply put, the interviews are aimed to shed a light from political discursive lens of "how it should be" to "how it is". Therefore, qualitative interviews with experts from Kazakhstan, Kyrgyzstan, Tajikistan, and Uzbekistan were conducted online.

3. 3 Operationalization of the discourse analysis

To identify official state water security discourses, I collect the national legislations and policies dedicated to water, security and gender: national Water Codes and National Security Doctrines, National Water Sector Development Policies. The list of selected documents in provided in the Annex 2. Including several groups of policies is important because one key issue of water security and governance might experience "bureaucratic practice of dividing reality into smaller component parts to make it controllable" (Hajer, 2002, p. 45). Whereas it was initially planned to include the healthcare policies of the Syr Darya river basin countries into the text corpus, after the first reading they were eliminated due to the lack of water, security and gender interlinkage in the texts.

When deciding on analysis categories, the terms chosen depicted key issues related to the water security, particularly those related to water, environment, and health, partly replicating the discourse analysis methodology outlined by Mount and Bielak's analysis of the UN water declarations (Mount and Bielak, 2011, p. 6). The selected key terms can be grouped as below:

Neighbouring countries and water security (national security)	Water security (physical dimension)	Water and human security	Water and gender security
• Transboundary waters • Cooperation • Water-related conflicts • National interests	• Water security • Water scarcity, water availability • Water quality • Water-related disasters (flooding, droughts, etc.) • Climate change impact	• Sanitation • Health • Diseases (including water-borne)	• Vulnerable/vulnerability • Elderly, young, children • Women (considering age categories)

Table 2. The grouping of key terms framing the water security discourse, made by the author.

These keywords were selected during the first round of reading of the policy

documents.

There are several context-specific adjustments, which are necessary to consider. First, the discourse analysis is conducted using official documents available in the Russian language – it is still the language of communication and policy-making, and the Russian official translation of the documents have legal value. However, it might somehow distort the results of the discourse analysis since Kazakh, Kyrgyz, Tajik and Uzbek languages are gender-neutral, and in direct translation to the Russian language, the masculine form of the words are used by default. Second, I use both water security and water safety wording interchangeably because in Russian language, the translation of "security" and "safety" is "безопасность", the literal translation of which is "the absence of threats" (Shelest, 2022).

Additionally, four interviews with key informants were conducted online, within the period from 18 to 28 of April, 2022. The supervisor and the Ethics Forum of the Social Sciences School approved the content and the format of in-depth interviews, as well as consenting, protection of identities and data proceeding and storage procedures. The coded list of interviewed experts and their affiliations can be found in Annex 2. Interviews were conducted in Russian or English language, depending on the preferences of the respondents, and were translated manually. The key experts were chosen based on their experience and knowledge on water management and state policies regarding gender and water policies, as well as transboundary water governance. I aimed especially to interview female experts discuss challenging subjects like social inequities and gendered experiences. Since all potential key informants are currently not employed by state, and some of them are living outside of the authoritarian countries, and their expressed views are personal, there is no space/leverage points, where the governments can exercise administrative or legal pressure on the respondents. Therefore, the potential risks associated with giving the sensitive or critical commentary on state policies were

resolved before the interviewing process.

The semi-structured interview questions were divided into three categories and aimed to deal with both gender and water security, such as knowledge on water availability and water use practices, gendered responsibilities and vulnerabilities, and the role of gendered social capital in community water governance (Annex 3). The dominant themes that emerged from the transcripts also shed a light how social power is exercised in water security-related context.

3. 4 Ethical concerns and limitations

There are several ethical concerns connected with the conducting the research, which will be outlined below.

The main ethical challenge in performing the discourse analysis could be the positionality and subjectivity due to my personal lived experience in Kazakhstan. Being aware of my position as a Kazakhstani citizen who worked in the regional water education sector, I realize that discourse analysis can be biased by my text interpretation, what may not get confirmation from interviews with other regional water experts. Second, several states included in the research, namely, Kazakhstan and Uzbekistan are currently developing new Water Codes, therefore the drafts or the concepts of the expected amendments into existing Water Codes were not available for the analysis. Therefore, this thesis could be extended after the new policies are made available for the public.

Third, the focus on the state-produced policies in the absence of first-hand ethnographic data could lead to the path-dependence in addressing: first, gender as women only, and second, women as a homogeneous group with the similar characteristics (Fröhlich et al., 2018). These concerns will also demand reflexivity from me as the researcher.

The interviews highlighted other ethical considerations, which are important to acknowledge. Namely, female water experts participated in three of four in-depth interviews. The interviews provided knowledge not only about the experts' professional experiences in the Syr Darya basin, but also touched upon their experiences as Central Asian woman who might face insecurity in water-related activities. Revealing vulnerability and discussing topics related to gender security, access to hygiene and sanitation could be uncomfortable in the Central Asian context (Kudaibergenova, 2019), therefore, being a young female from Kazakhstan myself, I could signal familiarity and demonstrate validation on some expressed standpoints during the interviews. Therefore, the trusting and openhearted communication was possible.

However, there are several ethical considerations that have arisen in the planning stage of the interviews. First, the gender bias in selecting interview respondents might be a significant omission, and the need to include male water experts in in-depth interviews to get the whole gender-blind picture is clear. Second, the fact that I am a citizen of one of the Central Asian countries does not make me completely impartial in the eyes of interview participants. From social-political perspective, for the interview participants, I was an insider, and some interviewees preferred not to describe certain things in detail, assuming I might know the events or phenomenon they are referring to. To avoid such gaps and silences in the obtained data, I had to tailor the interviews with the follow-up questions during the interviews.

Finally, this work remain limited in scope regarding intersectional analysis of water users and their formal and informal power relations in the Syr Darya river basin, and a future research could expand these limitations. Namely, formal (laws and legal acts, etc.) and informal (customary, relational, etc.) property rights and regulations, organizations and associations (religious, governmental structures, private cooperations, etc.) traditions, norms and practices might affect the gendered

power settings in the river basin (Poteete et al. 2010). After the interviews, it became clear that the results represent the views from only a share of the population: they all are young females with higher education obtained in one of the private international universities of Central Asia and their personal and regional experiences cannot and should not be applied to all Central Asia. Despite this positionality and subjectivity, I still consider interviews as a valuable source for verifying the results of the discourse analysis. This fact outlined an additional importance of ethnographic study in the Syr Darya basin and motivated me to develop this research further.

4. FINDINGS

Starting with brief revision of the main points of the discourse analysis, I will focus on the water-gender interactions in the region and link them with the material gained through expert interviews.

In analyzing discourses, I will rely on Hajer's discursive lens (Hajer, 2002) as an explanatory tool. Hajer argues that "publication of policies by governments can also be a discursive strategy in itself" (Hajer, 2002, p. 270). Since the policymaking process indicate the officials' efforts to govern the environmental realm by developing complex systems of symbols and practices, it creates the impression that governments had accepted their roles as responsible parties and positioned themselves as protectors of the environment (Hajer, 2002, p. 270). That happened the case in Kazakhstan and Uzbekistan, where the drafting of renewed Water Codes in working groups was widely covered by the local and official media.

4. 1 Water and national security

Coming to water-related policy documents, it is worth mentioning that currently, the Ministry of Ecology, Geology and Natural Resources is developing a new Water Code (Primeminister.kz, 2022), which is planned to be submitted to the parliament's consideration in 2023 and its concept is not publicly available for the analysis. In case of Uzbekistan, the available document for the analysis was the Water Code of 1993, with amendments on 2021, whereas the adoption of the renewed Water Code is planned to happen in 2023 (UzReport.news, 2022).

All analysed countries perceive water as the state property: in Kazakhstan, "the water fund of the Republic of Kazakhstan is in exclusive state property" (Article 8, KZ Water Code, 2003), in Kyrgyzstan; "water resources of the Kyrgyz Republic are the exclusive and inalienable property of the state" (Article 4, KG Water Code, 2021). In Tajikistan, "water is the exclusive property of the state, and the state

guarantees its effective use in the interests of the population" (Article 4 and 8, TJ Water Code, 2020); and in Uzbekistan, "water is a state property, the national wealth of the Republic of Uzbekistan, subject to rational use and protected by the state" (Article 3, Water Code of Republic of Uzbekistan, 2021)". It proves the assumption that the waters, as well as the ecosystems of the basin are seen as "a means of ensuring human security" (Detraz, 2009, p. 361) and economy growth.

Whereas all states declare the key importance of water in state security, only Uzbekistan includes the provisions dedicated to the restoration of the Aral Sea basin, whereas Kazakhstani National Security Strategy only includes the Caspian Sea waters in its area of national interests. Therefore, it means that the states define water security in terms of national interests, and have a protectionist attitude when it affects the key economy sectors.

The discourse analysis identified two common storylines that the states used. As Hajer wrote, storylines might appeal to collective fears or guilt and by this, they build particular conceptions of "responsibility" and "expected behavior" (Hajer, 2002, p. 64-65). The first storyline is connected with climate change, and it is used by all states of the Syr Darya basin. The second storyline of the Aral Sea disaster is used only by Uzbekistan as a "discursive cement" (Hajer, 2002, p. 62) for appealing to the regional cooperation in Central Asia. Namely, regarding transboundary relations, the Concept's wording stresses "development and promotion of mutually acceptable mechanisms for joint water management … [guaranteeing] the balance the interests of Central Asian countries" (UZ Water Sector Development Concept, 2020). Moreover, Uzbekistan strives to stabilize the water loss in the Aral Sea region and eliminate the negative aftermath of the desiccation of the Aral Sea considering environment, natural water basins and ecosystems requirements. This concept mention the improvement in relations between the Central Asian states on water management issues. However, the exact wording regarding the upstream dam

construction “development of new big hydropower facilities and reservoirs in the upper parts of the Amu Darya and Syr Darya rivers, and the operation of existing ones, may pose water supply concerns for states in the lower reaches of these rivers, including Uzbekistan” shows that downstream anxieties of Uzbekistan did not dissolve with the improvement of bilateral relations. In addition, it mentions that the extensive development of virgin lands in the coming years may have a negative impact on water allocation among the riparian states (UZ Water Sector Development Concept, 2020).

Despite all states of the Syr Darya basin mentioned their commitment to the transboundary river basin governance model, it is not supported by concrete measures in Water Code wording.

Kazakhstani Water Code foresees the joint management with neighbouring nations in usage and preservation of transboundary waters and coordinated development of water resources in key river basins of the country (Section 21, Article 37, KZ Water Code, 2003), nevertheless, the list of these water bodies is not outlined.

The TJ Water does not consider the need for consultation with the downstream countries in development of basin plans, other than their river basin organizations (Article 38, TJ Water Code, 2020). Regarding the water relations with the neighbouring states, Tajikistan highlights the interest in “*sustainable economic development*” in efficient, rational use and “protection of water resources based on international water law and mutually beneficial and friendly cooperation with foreign states” (Article 90, TJ Water Code, 2020) and sees economy as the basis for water relations (Article 91, TJ Water Code, 2020).

Regarding transboundary waters, unlike other national Water Codes, the Uzbekistani Code mentions the most relevant transboundary water bodies (Amu

Darya, Syr Darya, Zarafshan, Aral Sea) of the Aral Sea basin (Article 81, UZ Water Code, 2021). The UZ Defense Doctrine of 2018 includes "the need to resolve the issue of transboundary watercourse management … and ensuring environmental sustainability and taking effective measures to respond to natural and man-made emergencies and transborder threats" in its regional defense policy (Article 3, Defense Doctrine of the Republic of Uzbekistan, 2018). The fact that environmental concerns are listed among the key challenges including border demarcation, assistance in resolving the situation in Afghanistan let us assume that these issues are perceived as triggers for situations requiring potential military involvement. The Uzbek Water Sector Development Concept dedicates the subsection to the transboundary water relations in the Aral Sea basin, which include points on the joint use of water and facilities, improvement of joint control and water monitoring for Syr Darya, Amu Darya, and other transboundary rivers, open data sharing system, and encouraging development of regional states' *shared position on significant hydraulic structures*. Uzbekistan strives to maintain the joint financing of water projects with Central Asian countries *taking Uzbekistan's interests into account.*

The UZ Water Sector Development Concept is the first policy document for internal use that mentions the intent to develop joint plans with Central Asian states on regional water resources management and define future tasks, including climate change adaptation on a regional level and sharing experience in areas of mutual interest (Section 5.10., UZ Water Sector Development Concept, 2020). This proves that Uzbekistan's security reasoning softened with a change in political leadership, and there is the readiness to make further political concessions for better cooperation.

4. 2 Water security and economic interests

The wording of interconnectedness of water with the economy let me conclude that in the analysed countries, the principle of the use of water resources is dominating over its environmental protection. In wording, the Water Codes often put "reliable satisfaction of the needs of the individual, *economy*, society and the state in water resources" (TJ Water Code, 2021) as their main priority in ensuring water security.

The economic value of water is linked to the main economy sectors of the countries: for instance, in Kyrgyzstan, the water use is prioritized in light of "water-energy" interdependence and agriculture needs. Kyrgyzstan includes the threat of "competition for natural resources" in its national security concept, and sees the water as a resource for "sustainable development of the energy complex, ensuring energy security" (Sections 2, 14, 17-19, KG Concept of National Security, 2021). The Concept calls for additional hydroelectric, thermal, and renewable energy plants to provide energy security and self-sufficiency.

At the same time, by incorporating the "polluter pays" principle, Kyrgyzstan commodifies the water for the potential polluters: according to the Article 59, the Kyrgyz government shall establish a system of payment for discharge of wastes and pollutants into water as for nature use (Article 59, Water Code of the Kyrgyz Republic, 2021). Flow formation zones, namely mountainous areas are included to protected zones, among zones of sanitary and groundwater protection, and the Code states that the placement of tailing pits, landfills, cemeteries, burial grounds and other economic facilities that cause harm on the water resources quality (Article 12, KG Water Code, 2021). However, the glaciers Davydov and Lysiy are out of scope of environmental protection despite being the zones of runoff formation (Article 62 after the amendments, Water Code of the Kyrgyz Republic, 2021). It can be linked to the activity of Canadian gold mining company Centerra in close proximity to these glaciers, which is operating in Kyrgyzstan since 1992 and whose annual contribution to the state budget is around 10% of the state GDP (Kasymbekov,

2022). Whereas the legal framework of regulation of the environmental security and climate sustainability is still in the making, the state seeks economic mechanisms and investments in tackling with the climate change impact and offset the anthropogenic impact (KG Concept of National Security, 2021).

In Tajikistan, value of water is also converted into economic value (Article 4, TJ Water Code, 2020), and the State seeks provisioning of *economic* incentives for water saving, and applying "polluter pays" principle by implying the payment for compensation of expenditures related to damage caused to a water body and reimbursement of expenses for cleanup of polluted water body (Article 4, TJ Water Code, 2020). It also allows the pollution and wastewater discharge into the water bodies granting that it fits into the norms of admissible impact (Article 25, TJ Water Code, 2020). Tajikistan also incentivizes the small hydropower plant use and agriculture, stating that hydropower generation with the capacity of power generating facilities up to 30,000 kilowatt/hour and using water for agricultural irrigation and forestry is exempted from the fees for the special water use (Section 2. 2., Article 45, TJ Water Code, 2020).

The analysed policy documents foresee the water use other than drinking and household use. The Kazakhstani Water Code mentions the economic use of water resources but it does not specify which economic activities require large water intakes. It can be assumed that the environmental concerns arise only in relation to the oil and gas extraction: "interested state bodies shall conjunct for developing, defining, and coordinating environmental sensitivity map and oil spill index" (Section 20-1, Article 37, KZ Water Code, 2003).

In Kyrgyzstan, order of priorities for water use purposes include, first, water use for drinking and domestic needs, second, for irrigation and livestock watering, third, for power generation purposes (including renewable energy), fourth, for

industrial purposes, including mining and agriculture, fifth, for fishing and fish breeding purposes and for sports and recreational purposes (mainly, tourism).

In Tajikistan, the Water Code regulates the different use of water bodies, such as therapeutic, resort and recreational (tourism, sports) purposes in a more detailed way than other Central Asian states. The Code outlines special protection regime for water bodies or their parts having special ecological, scientific, cultural, scientific, aesthetic, recreational and health significance and the Tajik government can restrict or ban their usage (Article 39 and 85, TJ Water Code, 2020).

In Uzbekistan, the Water Code prioritizes drinking and household needs of population (Article 25, UZ Water Code, 2021), however, it explicitly mentions "protection of rights and legitimate interests of … farmers and dekhkan farms" (Article 20, UZ Water Code, 2021), therefore, the agriculture use of water is prioritized. According to intended use, water consumption is subdivided into drinking, domestic, medicinal, resort, recreational, fishery, industrial, energy, agricultural and others. State has the power to establish water withdrawal limits envisioning its priority for population and sectors of economy, including agriculture, and lastly, environmental protection and ensuring the ecological balance (Section 5.9, UZ Water Sector Development Concept, 2020).

4. 3 Physical dimension of water security

The water-related policies mention the anthropogenic effect and natural water-related disasters as the main threat to water security. Climate change impact on water availability is recognized by all states, and the natural vulnerability to the natural disasters including earthquakes, landslides and mudslides, floods and droughts, natural low water availability cycles and water scarcity. The anthropogenic impact on water include pollution from emissions, discharges and wastes, littering, silting, which can lead to erosion, destruction, siltation, swamping,

salinization of water bodies, as well as affecting aquatic biological resources and other objects of fauna and flora. Kyrgyzstan is the first among Central Asian republics, which included radiation safety in uranium mining and processing located in transboundary water runoff zones characterized by significant seismicity and landslide risks. The threat of the climate change is linked to the degradation of the environmental conditions, including the reduction of glaciers mass and water resources of the region, quality of drinking water, more extreme natural disasters, and the growing vulnerability to the outbreaks of pandemics, epidemics and epizootics.

Water security in the Kyrgyz Code has a narrow framing as it closely linked to infrastructure safety, namely, dams' control. Similarly, the state measures in Tajikistan dedicated to prevention of the negative impact of natural disasters on water involve shore protection and mudflow protection measures (Article 87, KG Water Code, 2021).

Water security in Uzbekistan is linked to the water scarcity and global climate change impact. Therefore, the UZ Water Sector Development Concept envisages "educating the young generation in the spirit of careful attitude to water through the introduction of educational programs to improve the culture of water use", and "raising awareness of mitigation and adaptation to climate change and establishing early warning systems in water resources planning". Priority in the Concept is given to water engineering and infrastructure development (Section 5. 11, UZ Water Sector Development Concept, 2020), whereas societal and ecological aspects of water management remain unacknowledged. There are also no specific steps aimed at providing training for improving water use in the households, as well as no measures aimed at attracting women in water sector.

4. 4 Water and human security

Most mentioned link between water and health security in the analysed documents is the threat of epidemics and epizootics. Except Kyrgyzstan, states do not include the concern about water-transmitted diseases or the illnesses induced by poor water quality in their water-related policies.

In Kyrgyzstan, the Concept of National Security relates the permanent environmental vulnerability of Kyrgyzstan to its geographic location and geological, anthropogenic, climatic threats and problems of global climate change. The anthropogenic impact is explained by "non-compliance of the population and organizations with safety standards and regulations, irrational planning and land use, deterioration of the general state of infrastructure", as well as "intensive growth of production and consumption" (KG Concept of National Security, 2021).

Further, the impact of climate change on water is securitised in connection to human security (Section 6.6.1, KG Concept of National Security, 2021), and the state successfully incorporates its international climate obligations with water sector. Kyrgyzstan also links water and sanitation issues together and acknowledges the lack of centralized sewerage systems and that public social service institutions have only public toilets with pit latrines. Since in Central Asia, the sanitation topic is largely tabooed and silenced, this is an important step for voicing the problem at the level of state policy. The Concept also incorporates the water quality aspect within hygiene and public health consideration, naming the lack of hygiene, including lack of water taps and hand basins in toilets in rural areas, poor water quality, causing diseases such as typhoid, paratyphoid fever and acute intestinal infections. This is illustrative as biopolitical aspect of water, as the state "seek to optimize both water resources and our individual water-use practices in order to secure the health and productivity of the population" (Bakker, 2010, p. 190 and Bakker, 2012, p. 619 cited in Hellberg, 2015, p. 11-12).

Water Codes of Uzbekistan and Kyrgyzstan additionally name the natural population growth as an additional factor that will increase water demand and put

additional pressure on the outdated water infrastructure. While it is not so apparent yet, the framing of the population increase as a cause for growing competition for natural resources, future water securitisation policies may potentially target women due to their position as childbearers (Detraz, 2009, p. 349).

4. 5 Water and gender security

The participatory approach is fully developed only in the Water Codes of Kyrgyzstan and Uzbekistan. The KG Concept of National Security makes the issue linkage between public healthcare, food security and environment. The access to water supply was recognized as an issue deteriorating the education system among broader socioeconomic concerns, such as disability, financial difficulties, the need to work, and family circumstances.

Program of Development of drinking water supply has a gender-sensitive approach: it states that enhancing access to drinking water would minimize the burden on females and children, who are responsible for carrying water home, particularly in impoverished homes. It aims to improve the population's health and well-being while empowering the most vulnerable groups (KG Program of Development of drinking water supply, 2020).

Since most municipal water and sanitation facilities in Kyrgyzstan is financed from external sources at the expense of international donors, its Program seeks to use the increase in "climate" financing at the global level for raising resources to enhance energy sustainability and environmental integrity of water supply and sanitation systems. The Program partially links the unreliability of drinking water supply and sanitation system to a lack of human resources, such as qualified engineering and management personnel, and aims to strengthen the system of training and professional development in the sector.

Recognizing the need to devote efforts to solving the issue of domestic violence,

violence against women and minor children, the Kyrgyz Concept of national security aims to fix the gaps in legislative regulation and imperfect law enforcement practices, address legal nihilism through sufficient educational and preventive work. The Concept acknowledges that children, adolescents, and women's nutritional needs are not met. Food security concerns focus on limited official assistance for farmers, but disregard informal female and child field employment. It asks for "a new sort of interaction between man and environment" and "ecologizing civil society," taking climate change's influence on the economy, population, and various social groups into consideration (Section 6.6., KG Concept of National Security, 2021). Remarkably, the Program include non-governmental organizations as one of the stakeholders, who can cooperate with the state and local authorities in organization of public consultations, awareness-rising, social mobilization of population and disseminate best practices, as well as to carry out public monitoring, public environmental expertise and public control over health determinants.

The Tajik Water Code makes the distinction between citizens and non-citizens regarding the access to water, by stating that “every citizen of the Republic of Tajikistan has the right of access to safe and clean drinking water as an integral component of realization of all human rights” (Article 63, TJ Water Code, 2020). It is unclear, however, if this distinction is made intentionally. Also, the provision on the stakeholder involvement in water-related decision-making in foreseen in the Water Code: “NGOs and individuals can assist state bodies in the implementation of measures for the rational use and protection of water bodies” (Article 28, TJ Water Code, 2020), and state bodies *shall be obliged* to consider their proposals when carrying out activities on sensible usage and preservation of natural water bodies (Article 29, TJ Water Code, 2020). In Uzbekistan, “WUAs, other non-governmental NGOs, and non-commercial organisations, and citizens *shall* aid

state entities with rational water usage and water body protection measures, whereas state entities *may* consider their ideas when implementing these policies (Article 10, UZ Water Code, 2021).

5. DISCUSSION OF RESULTS

5. 1 Discussion of results with the key informant interviews

All water strategies have state-centric perspective. Whereas there is no visible "public muscle-flexing" in the wording of the analysed documents, states display themselves as strong entities who are uncompromising on national water interests, and who know how to make water manageable by technocratic solutions. This limits the flexibility, inclusiveness and thus, innovativeness in ensuring water security in the Syr Darya river (Sehring, 2021, p. 11).

The performed discourse analysis revealed that the states use the national security strategies balance the "apocalyptic framing" of climate change with what is framed as plausible and practical solutions, such as "ensuring sustainable economic development" (TJ Water Code, 2020), or "developing a sensitivity map and an index of environmental sensitivity to oil spills" (Section 20-1, Article 37, KZ Water Code, 2003).

First, the states do not sufficiently describe the state of water-related issues: the disasters are perceived as hypothetical, and not present at the moment of creation of the strategic documents. The interviews with experts from all the countries from the basin proved that the water insecurities do exist for the wide share of the population in living in the close proximity in the Syr Darya basin:

> "My experience was mostly in the southern part of Kazakhstan, and I witnessed a big discrepancy between people living in rural areas and people from big cities. In the rural areas, in the basins where we are dependent from upstream countries, there are certain periods of year when the water shortages happen due to the intense irrigation water withdrawal periods in July and August. There is also natural water cycles, which lead to water shortages – these are the periods, where there is less water for the end users in Kyzylorda, in Turkestan district,

in Taraz. In rural areas, there are certain hours when water is brought by big water tanks and local people living in the villages can collect this water. Since the water supply is limited, people have to make compromises and trade-offs about the water use in the households. I find it heartbreaking and I think this does not make sense in economic conditions of Kazakhstan.

Water-related issues are connected to social-economic dimensions of water use and water mismanagement, in general. I think, this is also highly related to the governance of the country itself – we cannot expect perfectly functioning water supply system in a corrupted, non-democratic country, where other systems also do not work well. All issues are just tripled down to water sector and the state bureaucratic heavy machinery is not working well.

Also, water is not prioritized in the state agenda: now we have oil, gas, other extractive economy sector, and quickly emerging service sector – all other kinds of economies which generate more revenues for the state budget. The visibility of extraction sector, IT-sector and start-ups make it more attractive for young generation rather than work in water or agriculture sector. In that conditions the rural youth is more interested to work even as a taxi driver in a bigger city and earn more while sitting in the car comfortably, rather that working in the field as a farmer and deal with water shortages, and this is understandable.

Our highest level of state government – the former president and the current president – *do* emphasize the importance of water, transboundary water sources and water security but it does not bring any concrete results. For end users the water issue is quite difficult because of all these hiccups and problems at each stage of water management starting from a very high level. There is no state structure or organization that is dealing with water security in Kazakhstan.

(Interview with KZ1, 2022).

“Even if Kyrgyzstan is considered to be a water tower, there are plenty of water-related issues. The reason is the old infrastructure, which was built in the Soviet time and is being overexploited until now, as well as in other Central Asian countries. Second, the growth of the population and its migration to bigger cities causes the water supply system overloads – the water supply and sanitation systems which construction was estimated earlier according to the State Standard in the Soviet time, and for the number of the population living there before… We hear that low quality water affects the population health, especially in rural areas – this information is visible on international forums, it is present in statistical reports. The water supply systems are exhausted, and water drainage supplies are not provided everywhere or they are poorly planned, the septic tanks are not installed, - and these all is just the top of the iceberg of water-related issues,**”**

(Interview with KG1, 2022).

> **“**In general, the urban population has access to drinking water. With regard to rural population, since I am living in Ghafurov District – the water source is far and for 10 years, we were transferring water here by water tanks. As someone who lived in the southern rural area, I will share my lived experience: the water was transported in water containers, and only after 2000s the situation has improved. Until 1999, there was a civil war, it officially ended in 1997 but the post-effects lasted until 2000s. Only after 2000s we had an access to drinking water supply, since the state-provided water supply was not reliable. In other rural regions, water is available, but again, not everywhere, and it was not provided through a centralized supply, rather a private wells made by the governmental permission. At the point

> when we were buying water from the water tanks, there were mostly women who had to collect and carry it home. Males were there too, but the girls and young people were more. The standard is four to six hours a day divided between morning and evening. The water brought by water tankers can be muddy and it comes with sediments, and in two-three days after arrival, it filters naturally and the sediment settles at the bottom of the water tank",
>
> (from interview with TJ1, 2022).
>
> "In rural areas, 70% of water is transferred by water tanks. Only in big cities, there is a municipal water supply. People also use groundwater for drinking and irrigation. People pay for every litre (500 som, ~ 0,45 EUR for 10 liter). The tariff depends on the region",
>
> (from interview with UZ1, 2022).

None of the water policies make mention of the fact that the current policy of dividing up the collective farms of the Soviet era into smaller, fragmented farms and assigning responsibility to water user associations (WUAs) and farm clusters leads to an incompatibility between the irrigation systems, a shortage of materials and labour, and a gap in maintenance responsibilities (Peyrouse, 2022, p. 11). Second, despite available research data on the health issues caused by pesticides and defoliants used in agriculture in Central Asia, (Bekturganov et al., 2016), water programmes either do not thematize the problem or accommodate it as long as it falls within the parameters of "acceptable damage."

What becomes apparent from the wording of the analysed water-related state policies is the fact that the political authorities strive to concentrate control over environmental issues at every stage: from micro-controlling through water allocation plans with the local authorities to establishing norms of use to the state agenda-setting. Whereas official narratives declare the state commitment to international treaties and norms in water governance, in practice, the top-down

approach has undermined inclusion of gender dimension in water governance. All analysed Water Codes and policy papers incorporate the need to adhere to the IWRM paradigm in water governance, however, they are selective in choosing its main principles. While the States extensively include principles on water vulnerability, the need for participatory approach, and monetary value of water in the Water Codes (Principle I, II, and IV of the IWRM outlined in the GWP TAC, 2000), the recognition of women's role in water governance (Principle IV, Dublin Declaration, 1992) is not mentioned in any of them. Only in policy texts of Kyrgyzstan, the vulnerability of women and minors was considered in sufficient length.

In contrast, several measures on public safety in Tajikistan include "supporting natural population growth and ensuring timely measures to counteracting demographic crises and family planning, as well as "prevention of social factors that threaten the health and morals of the population and the gene pool of the people of Tajikistan" (Article 20, TJ Law on Security of Republic of Tajikistan, 2008). This points implicitly indicate that women are perceived as a means for ensuring the health of "gene pool" of the population, and the focus is moved to their reproductive function. In Kazakhstani and Tajikistani security strategies gender appears only in connection to their reproductive abilities. This demonstrates that motherhood is viewed as the pinnacle of female humanity in both Soviet and Central Asian gender regimes.

In Kazakhstan, the Code on Public Health and Healthcare System perceives population as a whole, whereas *socially vulnerable populations* (without further elaboration on who might belong to this group) and rural population are prioritized. Provision of the medical support makes the differentiation for women mostly regarding their reproductive health (Article 81 is dedicated to the rights and obligations of pregnant women), however, their needs in access to sanitation or age-

appropriate healthcare support are not acknowledged.

The most important outcome of the analysis is, however, the abundance of *silences* regarding the gendered realities in water security. Gallon and Latour called this discursive mechanism "a blackboxing", which is done by removing the issues "which no longer needs to be reconsidered, those things whose contents have become a matter of indifference" (Callon & Latour, 1981, p. 284 cited in Hajer, 2002, p. 272) from public discussion spaces. When the gendered vulnerabilities are put aside, the authorities frame issues as fixed, natural, or inherent part of the social order (Hajer, 2002, p. 272).

The analysed policies covering water management in the Syr Darya river basin do not address sexual discrimination and tangible offences against women and minors, as well as ignore non-tangible offences (such as power dynamics, local politics, and sociocultural norms) perpetuating the water sector in Central Asia.

As a water expert from Tajikistan noted,

> "There are no issues in big cities, or *I did not hear that anyone is complaining*. In rural areas nobody expects to have hot water in schools. The toilets are not in the main school building, they are in a close distance, for both girls and boys, in wintertime, it was so easy to catch a cold because of that. ***The access*** is always here, but I do not get like the word access – when, in fact, nobody will prohibit you to fetch some water, the water source and the sanitation facilities are located far, what creates inconveniences",
>
> (Interview with TJ1, 2022).

Whereas gender equality is officially acknowledged in all state-adopted legal instruments in Central Asia, the participation of women in public life is limited due to religious principles, centuries-old and newly reinvented traditions, which are

most conservative in rural areas (Stulina et al., 2009, p. 321). Despite declared commitments of the states to gender equality and human rights protection, Violence against women is "socially legitimised not only by offenders but also by wider populations, including women" (Dzardanova & bintu Saida, 2022). Women that suffer from gender inequality unintentionally raise their children in the same way that they were raised, based on established gender norms (Stulina et al., 2009, p. 322). Women lack political influence or representation in institutional and policy decisions, and thus, they are more susceptible to risks and hazards associated with water exacerbated with climate change impact (Goodrich et al., 2019, p. 14-15). Poverty is more prevalent in Central Asia's rural areas, particularly among female-headed rural households (Lerman 2021, p. 69). It must not be overlooked that women, particularly those from rural areas, are unaccustomed to dealing with official financial institutions and are easily intimidated. They are frequently unable to comply with the associated documentation, and it may be easier for them to give up rather than pursue a loan application (Lerman 2021, p. 69). Therefore, while the poor in urban areas are employed in low-wage employment sectors, the rural poor rely on natural resources for sustaining their lives, and thus, are prone to the negative climate change impacts.

While for both genders in Central Asia, literacy and basic education, as well as enrollment in vocational and higher education is quite high, there are significant variations in women's and men's choices of fields of study and areas of expertise after the high school graduation (Lerman 2021, p. 69), especially in traditional and rural areas (interviews with UZ1, TJ1). Whereas women account for around 70 percent of the employed citizens in selected states, their work is mostly in low-paying industries such as public health and education., transitory or unpaid jobs (Sokolov, 2005, p. 5-6). These professional choices in Central Asia are influenced by societal expectations and behavioural restrictions for women (Oestmann and

Korschinek, 2021, p. 119). Therefore, women in Central Asia prioritize self-fulfillment in family rather than in professional life due to the social expectations. Their participation in higher education has fallen as a result of declining educational prestige and the rapid resurgence of old customs like early marriage and co-living with their husbands' extended families. As a result, rural women are underrepresented in the region's high-skilled labor markets. Even worse difficulties occur in the agrarian and informal sectors, where women's labour is informal, and thus socially unprotected, making human rights violations and unjust exploitation of women's labor more likely (Lerman, 2021).

This point was confirmed by one of the water experts during the interview:

> "In some communities, now the girls enroll mostly to the following sectors: teaching, medicine, law, accounting, etc. but not everyone is attracted in agriculture. From my interviews, in Tajik Agrarian University, there is a decline of women enrollment and women graduation. If the girl enrolls, and marries during her studies, she leaves the university and starts living with her husband's family. She does not build any career perspectives. There are only one or two female graduates of the agrarian universities will continue her education at the postgraduate level. When I ask why people do not send their daughters in agriculture, they answer that a career as a hydrotechnician or agrarian specialist is not very "trendy" nowadays, and it is better to study medicine or pedagogy. Some even say that they would better invest in their sons, because "the boys will take care of the elderly parents, and girls will marry and leave the family". I do not know how to explain that – some see the marriage as a way of survival, meaning the women will not work and their partners will economically support them",
>
> (interview with TJ1, 2022).

Second, women see male-dominated environments as unsafe, and as a result, they limit their participation in technical, engineering, and management fields to avoid potential harassment and sexual violence (interviews with KZ1, UZ1). 'Seeking invisibility' is one of the many ways women in Central Asia ensure personal security: women strive to avoid sexual assaults by acting quietly, dressing subtly, or avoiding dangerous circumstances, like leaving home after dark (Oestmann and Korschinek, 2021, p. 125-148). At the local level, women are avoiding taking responsibilities in the WUAs because the irrigation shifts might be scheduled at night or the working environment is unsafe for their health or not compatible with childcare responsibilities:

> "The mirabs (a person in charge of the irrigation system and water use in Central Asia) do all water-related jobs: 96% of mirabs are males because the farming or work with the water requires a lot of physical labour, and it is quite nervous. Women also work in agriculture, as field cooks or they take care of the laundry, or as farmers' teachers. There is a need to do night-time irrigation – it is very difficult for women. There is a documentation to fill, buy diesel, chemicals [pesticides], to negotiate with the tractor drivers. At night, in the villages there can be wolves, foxes, bears, dogs – if the fields are far from the city, there is no mobile connection, it can be dangerous, for men as well. Working in water or agriculture sector is difficult – there is only a cold water for showers, and water is not always suitable to drink when you work in the field or in the farmers share, the shifts take up to twelve hours. There are no conditions for female hygiene and sanitation",
>
> (Interview with UZ1, 2022).

Another factor limiting wider participation of the women is the absence of social capital. Females accumulate their social capital over time; when they are newly

married, they are unable to participate in community life since they have moved in with the husband's relatives often in a new city, and overtaking caregiving for elderly (Zhussipbek, & Nagayeva, 2021). Young women do not have time resources and they are reluctant to participate in WUA meetings and getting additional responsibilities for moderate remuneration (interviews with TJ1 and KG1, 2022):

> "At the WUA level, women are not always present there – who needs water, will find a way to voice their concerns, however, these are mostly women in their fifties-sixties. Young people do not do there, because this mentality of obedience and subordination affects the social relations very much - only women with certain social capital are present there. The farther from the city, the more is the influence of traditions, there are some villages where you cannot even come with gender equality agenda and say that this is the state policy – they will not accept it",
>
> (Interview with TJ1, 2022).

Second, women seek employment in cases when they have to overtake the position of breadwinner, either when the one income is not enough, or when the males migrate for earnings. Being less connected socially, and without professional education, they do not have a choice other than taking low-paid positions not requiring a specialization. One of the informants explains such dire situations of women with the following example:

> "I saw many strawberry fields, where so many women were working. For woman, once she has children, if her man is not having enough money, she does not have any alternatives, she will have to work herself to support the family. Women in such disadvantaged situations in Kazakhstan or in

> Central Asia are the most vulnerable social group, who are being exploited quite heavily. They agree to work on the strawberry fields for a very moderate payment because they do not have any alternatives. After the marriage, women are usually moved in with their husbands, who, as the main inheritors, live with their elderly parents in distance from big cities, where women could earn more by work in service sector. In the villages, they have to work nearby because of the absence of established daycare opportunities for the children. Of course, she is forced to agree to work in the nearby locations. This is a good illustration of labour division related to gender",
>
> (Interview with KZ1, 2022).

As one of the respondents noted,

> "Women do not want to work there: despite the efforts to bring gender equality but it all remains on paper – women do not want to do this kind of job. I know some people in agriculture sector – women do participate in the events devoted to gender equality and women's empowerment but in fact, they rarely work in the field. In the Ministry, where I work, there are not so many women. We work on water distribution; we have many work trips. The husband or the brother [of a female] might not let her go to the business trip, so the women pick some stable jobs that do not involve much travels – like managers, designers, teachers"
>
> (Interview with UZ1, 2022).

The key informant from Uzbekistan was a male, and according to him,

> "Women are working in the ministry but our real work starts after 5-6 pm

> because at that moment we start receiving urgent tasks after the meetings in the ministry. They [women] leave at 6 pm, so they do not contribute to the work. They do not participate in the calculation of water use, preparing presentations – we [males] work until late evening. It is in every sector – agriculture, state fiscal system, diplomacy – our main workload starts in the afternoon. Their contribution is minimal because of their family duties. We stay at work late night to help because if we also leave at the end of the workday, the work will not be done. There were days when I had to stay until the morning – once I started doing a three-year report and worked until 4 am in the morning, to send it to the Administration of the President. We have many of such moments, it is only us [males] who is working".
>
> (Interview with UZ1, 2022).

This example shows that whereas at the state level, Central Asian countries are committed to gender equality and gender representation in state institutions, in fact, such institutional "tiny, every day and physical" micropractices of discipline (Foucault 1975, p. 222., in Hajer, 2002, p. 47) in combination with reinvented conservative social order limit real opportunities of women to fully bring their potential into realization. In addition, many women may not see verbal or other non-physical types of harassment as sexual assault (Jeenbaeva & Hamilova, 2013 cited in Oestmann & Korschinek, 2021, p. 119), but they do avoid the situations where it can occur.

> "It is a part of local mentality in patriarchal society, which implies that woman is always someone lower or less important, who can stand or undergo much more than men. There are many cultural, traditional aspects that come through social learning, which are rarely questioned, also in water sector. What is visible is that in many organizations you can see that the

director is a man who has few female deputies. Technical and engineering position there are men. In the organization where I worked, young women always prepared cooking, tea, washing dishes after men and we were not hired as someone whose job is to provide administrative support. I was working in the Secretariat [of the International Fund for Saving the Aral Sea], and there were men, who never washed their own dishes – it was me, because I was a young, newly employed woman.

This kind of discrimination is still there, and it is not even visible to people who are living and working there because it is so normalized and institutionalized. It is easier to grow professionally if you have no family, and you are motivated and strength to compete with the men for the leadership positions in the water sector, but you will not become a part of this gender-neutral professional society, you always will be a woman in a male-dominated sector. What could help is education and capacity building, which can change this generational dynamic, otherwise it will become a part of the institutional structures everywhere. ”

(Interview with KZ1, 2022).

The global research shows that whereas the establishment of WUAs aim at democratization of water governance and inclusion of all interested stakeholders into decision-making, such factors as socio-cultural barriers limit real participation of women (Agarwal, 2001; Tiessen, 2008; Sultana, 2009; Raha et al., 2013; Mandara et al., 2017; Adams et al., 2018). Since the experience with WUAs was replicated in Central Asia, similar conclusions were drawn by the study on WUAs performance in Kazakhstan, Uzbekistan, and Kyrgyzstan (Wegerich, 2008; Mukhamedova & Wegerich, 2014; Gunchinmaa et al., 2011). These studies conclude that regardless of the fact that agriculture and irrigation became more

feminized because of male outmigration, only few women become farm heads or obtain the WUA membership (Gunchinmaa et al., 2011, p. 214). Even if women were outnumbering males in the regions, they were not considered as dominant stakeholders in WUAs, and their self-exclusion of women that is based on power dynamics and gender-based norms:

> "The officials say that in Kazakhstan, WUAs are well-functioning, and anyone from the basin can participate in them and raise their concerns. But in fact, they are dominated by certain groups of people who are there for a long time or who knows each other well, and there are certain interests in their participation. When you are a woman, how to become a part of these groups, how to make your opinion count? Moreover, while formally all heads of WUAs should participate at the meetings or the RBCs. But look at the Aral Sea – Syr Darya basin map – it is an enormous territory and there are so many WUAs – the question is how to bring them together, and how to ensure that the head of the WUA knows all the problems of people whom they are representing",
>
> (Interview with KZ1, 2022).

The interviews revealed that in Tajikistan and Uzbekistan it is socially expected the men to make major decisions related to the water. For instance, the profession of mirab is passed down from father to son and it is unlikely that women will get the training for that (interview with UZ1, TJ1, 2022). Therefore, women are reluctant to challenge the social order of things and insist on participation in communal water governance due to low confidence and self-esteem.

The experts from Kazakhstan and Kyrgyzstan linked this to the social order in the countries:

> **"**You know, there are traditions in Central Asia that … Women cannot make major decisions about what to seed this year, what to pay for water, negotiate in the WUAs. Directors of the WUA are mostly males. In our reality, there is a shared understanding that women's area of responsibility is her home. It is not belittling, rather I see it as an established social order, which is not even questioned. Males make all these decisions faster, easier, better…".
>
> (Interview with KG1, 2022).

This is a clear example how women undervalue their own local expertise due to the absence of formal education "by privileging technical knowledge and expertise (that males have) over own local everyday experience", (Adams et al., 2018, p. 140) and thus, they perpetuate and normalize uneven social relations of power. However, the expert sees this gender order as flexible and dependent of the situation the women are in:

> "If she faces the issues in the household, she would try to solve this issue with the support of the family members. In comparison to males, who do not want to think locally, but rather on the macro-level: if the issues happen at the community level, women in Kyrgyzstan are more active, comparing them from my experience with the women in Tajikistan or Uzbekistan – she can act as a leader, they are very active, they raise the issue at the WUA meetings."
>
> (Interview with KG1, 2022).

The state-led discursive formations on water security as an urgent issue exacerbated by climate change and that it is the main actor to address it, hinder social repercussions and open debates on the possible measures for tackling the

consequences. By this top-down approach, the states, first, alienate the societies from the water as a platform for dialogue, second, the focus on "control, monitoring, issuing permissions" practices and technocratic solutions while not addressing the social requests for safety and improvement of socioeconomic conditions, make the big shares of the populations unsusceptible to these discourses. Moreover, the upstream countries (Kyrgyzstan and Tajikistan) reiterate the idea that the big-scale water infrastructure, such as hydropower plants and dams will contribute to economic prosperity and increase the water security of the countries (in terms of water accumulation in dry seasons and flood protection). As the respondent from Uzbekistan stated,

> "After the political changes in 2016, many things changed to better – the Rogun dam construction have continued in Tajikistan – before Uzbekistan was blocking this decision. Now it is agreed that Kyrgyzstan or Uzbekistan can purchase energy from Tajikistan. However, from the ecological viewpoint, it is still quite dangerous. Two years ago, on May 1, a dam break occurred at the Sardoba Reservoir in Uzbekistan – the water infrastructure is very vulnerable.
>
> (Interview with UZ1, 2022).

Whereas there is no causal link between big-scale water infrastructure and water safety (Zeitoun, 2011, p. 288), dams became a visual and tangible symbol of state power and energy independence. Such selective implementation of water security and silencing of its societal aspects, expectations for public participation while ignoring the hurdles for it cannot result in long-term, sustained water security (Zeitoun, 2011, p. 293). The neoliberalization of the water sector is also built into the water strategies: the improvements in water sector are brought not where they are most needed, but in the spheres that would bring more revenues. Potentially,

this can trigger an additional source of vulnerability of women, elderly and other vulnerable social groups. However, further study is required to better comprehend how these water-related policy papers evolve during the course of their application. Additionally, more investigation is required to see how this will manifest itself in gendered and vulnerable environments of the Syr Darya river basin.

5. 2 Research limitations and avenues for future research

One of the biggest challenge to conduct the analytical part of the research is breaking down discourses to the conventional units of analysis and fitting geographical and temporal dimensions of research (de la Croix et al., 2022, p. 182). Looking at the state as a monolithic political unit governing the water and not going in depth into embeddedness of water usage in social relations makes the research less nuanced and might be seen as a significant omission. Only the tip of an iceberg was addressed because the focus of this study was restricted down to particular parts. Future solutions should take into account the issue's complexity and be based on holistic methods. Whereas this research examines how water security discourse constructed in political processes, it does not sufficiently cover its social construction. The research touches upon many relevant aspects of gendered analysis of the water security in the Syr Darya river basin, and highlights the need and importance of further intersectional analysis rather than falling short to a male-female binary. Intersectionality entails the production of stress and material scarcity as a result of the interaction of existing social vulnerabilities and exposures to hazards functioning at several geographical, institutional, and temporal levels (Shinbrot et al., 2019). Therefore, the intersectional perspective can help us understand “water-related interactions between many social dimensions of power (Goodrich et al., 2019, p. 16). Since each concept of intersectionality, such as age, class, ethnicity, ability in the water security would merit a research in its own, this research could benefit from ethnographic qualitative research, namely, from in-

depth interviews with the basin population to see their perceptions of water security and study their lived experiences in the Syr Darya basin. However, within the limited scope of the postgraduate thesis, as well as logistical difficulties due to the COVID-19 pandemic, the ethnographic research within the fieldwork were not possible at the moment of writing the thesis.

Also, the research's geographic scope could be potentially enlarged by applying a basin approach to conduct a broader comparative study on water security discourses between all five Central Asian countries of the Aral Sea basin. Additionally, other aspects of security, such as food security (Bacon et al., 2022) could be further analysed together with the gender relations to further reveal the interconnection between water, gender and power.

The limitations of the research include the focus on the states as the only actors securitising water and water security. Moreover, the focus on *discourses* only deriving from the official documents on water security do not portray the complex interactions between state policies and practices. Another related aspect that was not fully elaborated is the role of intergovernmental organizations and the influence of the external donor organisations in the water management of the Syr Darya river basin.

One more aspect that could be considered as a limitation of the thesis is the fact that its results are valid at the current time, and once the new Water Codes of Kazakhstan and Uzbekistan are published, the research must be revisited. Since the water policies are always in the making, the research on the state discourses is a continuing inquiry, and for a bigger scope of research, such as one at the PhD level, the evolution of the state discourses on water throughout the time would be useful.

The third, most important limitation is the absence of the ethnographic research in

the basin. Due to this limitation, the research does not capture how the population, and its most vulnerable groups, including women, deal, resist, or adjust to the water discourses produced by the states. Water users are "not merely passive individuals who are effectively commanded to behave in specific ways" (Hellberg, 2018, p. 14), but they do produce one discourses, and there is a need to study these for fully capturing the governance in water sector. Therefore, the fact that gender does not mean women only, and the non-homogeneity of women as a social group might not be stressed enough. In order to address intersectionality in water governance, this study might be expanded. In conclusion, reflecting on the needs of various social groups will have an important impact for providing water security for all in the basin. Inclusion of contextual understanding of gender-based vulnerabilities and their reflection in the water-related policy level can increase the overall resilience towards climate change impacts and connected water security challenges.

6. CONCLUSION

The main question guiding this thesis was to what extent does the gendered nature of water (in)securities are reflected in state-led water security discourses in the Syr Darya river basin?

This dissertation studied the water security discourses deriving from the water-related documents of the states in the Syr Darya river basin. The thesis used an inductive method, and therefore, it was driven by an open research question, and made no hypotheses about the outcomes. This made it possible for the thesis to interact with theoretical flexibility and include constructivist theory and the FPE methodology. The inductive stance of the thesis guided qualitative methodology that brought together a literature research, semi-structured interviews, and the discourse analysis.

The research incorporated the feminist political ecology approach to assess inadequacies of present ways of addressing water security, which overly depend on technologically oriented and male approaches to water administration (Kosovac, 2021, p. 343). The FPE argues that access, usage, administration, and experience with water in various communities are all gender-differentiated. The gendered division of labour, where the use of agrochemicals and irrigation are decided by men (Bacon et al., 2021, p. 27), take place all over the world, which moves the women further down in the hierarchy of decision-making and does not contribute to their personal and economic security. Therefore, this theoretical approach was useful to develop comprehensive and contextualized analysis in indicating (the absence of) gender dimension in state-produced water security discourses. Whereas the research is not free from the scope limitations, it can be an illustration of the theoretical applicability of feminist political ecology in addressing gender and feminist security research.

The conclusion of the discourse analysis is that water is seen as a "state property" and the resource available for human consumption and economy, rather than being seen as a part of "total environment" (Detraz, 2009, p. 351-352). This idea reproduces the idea of exploitation of natural resources that was an inherent part of the governance in the Soviet period and continues the patriarchal and dominating interaction between people and environment and between men and women. The continuing mismanagement of water in the Syr Darya basin confirms the Ingram's statement that "(t)he worst errors in water policy are made when one set of water values and one way of knowing dominate and exclude other ways" (Ingram, 2013, p. 9, cited in Gerlak & Mukhtarov, 2015, p. 267-268). However, the example of Uzbekistan making a gradual extension of the water cooperation areas with the neighbouring countries, which was unthinkable a decade ago, proves that the modes of water governance transform over time.

The results from the discourse analysis and ground realities revealed through the interviews show that the gendered vulnerabilities are not sufficiently included in the national water security-related policy documents and show the interconnections and significance of gender analyses. This case study confirm that the water can be conceptualized as a specific space, where gendered contestations occur (Das, 2017; Hanson & Buechler, 2015). The analysis had illustrated that from four countries of the basin, only the security concept of Kyrgyzstan made the issue-linkage between gendered vulnerabilities and the provision of water security. Moreover, the interviews revealed that there are unspoken exclusionary factors that affect power relations, such as gendered subordination in the workplaces, or established institutional cultures in water sector in Central Asia, which do not contribute to the wider participation of women in water governance.

Unfortunately, while using the climate change-related water securitisation, decision-makers, however, have not been able to close the gap between their statements the lack of their implementation in reality. It fits well with the 'paradox of catastrophes' developed by von Prittwitz on the example of radiation contamination: “environmental consciousness and political engagement were always less substantial in areas where the [consequences of the disasters] was most intense” (von Prittwitz, 1990, cited in Hajer, 2002, p. 74). Also, even if storyline on climate change is perceived by the local population as a credible threat, the most vulnerable groups are not prepared to act upon it because of their vulnerability. For instance, while natural resources are necessary for pastoralists to survive economically, local populations that engage in intense livestock grazing cause deforestation, as it happened in Kyrgyzstan. While the states declare the need of ensuring environmental security from renewable sources, people in poverty often abuse natural resources like wood to make up for their lack of access to power or gas (Peyrouse, 2022, p. 15). Until the root causes of poverty and social vulnerability are not addressed, states of Central Asia will fall short in ensuring water security.

The literature review and the interviews with the key informants confirmed that the deep-seated geographical relationships, sociocultural norms, gender dynamics, and micropolitics of social control influence how people make decisions and participate in society. Women in Central Asia, and namely, in the Syr Darya basin countries, adhere to the social order: there are specified duties for males and not for women in water management starting from the communal levels, and these gendered differences are recognized as being an integral part of their existence. The historical socio-spatial relationships and deeply ingrained views in Central Asia imply that women refrain from certain activities for their personal security. Therefore, increasing water security for all requires more than simply the formal expansion of gendered possibilities, such as participation in communal water governance

through WUAs (Mandara et al., 2017), but also the transformation of the norms surrounding the gendered relations in the communities.

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Annex 1

List of Interviews

Code	Position and Affiliation	Type of Organisation	Gender	Country	Date
KZ1	Former Capacity Building projects coordinator and Senior Specialist of Socio-Economic Department, International Fund for Saving the Aral Sea (IFAS)	regional basin-wide organisation	Female	KZ	18.04.2022
KG1	Project specialist in Kyrgyzstan, USAID Regional Water and Vulnerable Environment Activity	international organisation	Female	KG	22.04.2022
TJ1	Senior Project Officer "Basin management", Helvetas Swiss Intercooperation Tajikistan, Head of Syr Dariya Basin Women Forum Tajikistan	International organisation	Female	TJ	24.04.2022
UZ1	Leading specialist of the Department of Information, Analytical and Resource Center, Ministry of Water Resources, Republic of Uzbekistan	Government	Male	UZ	24.04.2022

Annex 2

The text corpus for the discourse analysis

Kazakhstan

1. The Law on National Security with amendments on 27 December 2021;
2. The Water Code of the Republic of Kazakhstan dated 9 July, 2003;
3. Program for the development of water supply and sanitation "Ak Bulak" dated 9 November, 2010.

Kyrgyzstan

1. Concept of the National Security of the Kyrgyz Republic of December 20, 2021
2. Water Code of 2004 with amendments and additions as of 10.12.2021
3. Program of Development of drinking water supply and sanitation systems in settlements of the Kyrgyz Republic until 2026 of 12 June 2020.

Tajikistan

1. Tajikistan Water Sector Reform Program for 2016-2025 dated December 30, 2015;
2. The Water Code of the Republic of Tajikistan dated 19 March 2020;
3. Law on Security of Tajikistan dated November 27, 2014, with amendments made on August 3, 2018.

Uzbekistan

1. Defense Doctrine of the Republic of Uzbekistan, 2018;
2. Law Of The Republic Of Uzbekistan of May 6, 1993 No. 837-XII About water and water use (as amended on 30-11-2021);
3. The Concept of Water Sector Development of the Republic of Uzbekistan for 2020-2030, dated 10 July 2020.

Annex 3

Semi-structured interview questions

Water, sanitation, hygiene

1. From your knowledge, do people experience difficulties with the access to water in households for daily activities?

   (What can be the constraints to obtaining enough water to maintain the households? What constraints operate on an annual/seasonal basis? What constraints pertain in times of scarcity?)
2. Where do people get drinking water from? Is that affordable/costly?
3. What can you say about water availability? Is it increasing or decreasing over time?
4. How well people have access to water and sanitation services? To what extent have water, sanitation and hygiene issues (including solid waste issues) in the neighbourhood affected the following:
   - Health;
   - Expense for medical treatments;
   - Livelihood (e. g. ability to work);
   - Food security;
   - Conflict issues (e. g. conflict at home, clashes with other community members, conflicts with the government), etc.?
5. Do you know if people in the communities have ever suffered from waterborne diseases (diarrhea, dysentery, malaria, chikungunya fever, dengue, or any other)? Please provide details. Have it affected the hygiene habits since? Has something in the environment changed since?
6. Do people have trouble with the access to water in public buildings (schools, healthcare facilities, etc.)?

7. Do people have any mechanisms for getting knowledge about potential water-related hazards (flooding, low water availability, droughts, etc.)? Are these mechanisms formal or informal?
8. Have people in the river basin ever suffered from flooding? Does the creek/canal nearby overflow sometimes? What happens / what happened?
9. I would be interested in hearing your opinions about water-related issues. How do you feel about the water-related issues in your region? Why do think the situation is like that? What do you think should be done to improve the situation? Who could do it? How?
10. What do you think are the strengths and weaknesses of current water-related policies
11. Have you ever had to deal with politicians or party members? Please provide as many details as possible. Have you ever had to deal with any other state representative? Have you ever had to deal with any local or international NGO representative?

Gendered occupations related to water sector

1. Are there any employment patterns in agriculture in the river basin (secure jobs or seasonal employment, the level of payments, etc.)?
2. Do women have opportunities for participation in community decision-making? Are these structures formal/informal?
3. Are there any traditions that could affect women's employability?

General gendered insecurities

1. How would you describe the qualities of a man/woman in local communities?

2. Do people feel secure to live in villages with a close proximity to the river? Could you please list main potential risks you perceive to be threatening local households or communities?
3. Have you heard about any incidences of violence/insecurity in your everyday routine/professional activity?
4. If people/women have experienced insecurities/violence, whom they can contact for support? (an individual, family, a government organisation, an NGO, social media, etc.)
5. Are there any traditions that could affect women's security?
6. What kind of social security support could people rely on (state support, incl. healthcare, nursery schools, social services for veterans and pensioners, etc.)?
7. What kind of informal support people could get in their villages?
8. Are there any NGOs active in villages/communities? What is their target audience?