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Contemporary issues of transboundary water utilisation in Central Asia: political and legal analysis

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Abstract

This article examines the formation and development of the organisational and legal framework governing the joint use of transboundary water resources in Central Asia. The evolution of international legal instruments in transboundary water management, along with the ecological issues that accompany it, was analysed systematically using political-legal approaches and comparative historical studies. Contemporary sources and historical chronicles of the last three decades required in this study include publications of domestic and international organisations. Special focus is given to the legal regulation surrounding the construction of the controversial Kushtepa Canal. In conclusion, reaching a consensus among regional states is key to maintaining regional stability and security. The article also proposes the establishment of regional cooperation mechanisms and increasing data transparency as solutions to the challenges of water management in Central Asia.

INTRODUCTION

Transboundary water governance in Central Asia represents a complex web of interstate relationships. Since ancient times, the authority over water resources has played a crucial role in shaping the region's socio-political landscape. Historically, control over water sources granted significant leverage to those managing them,

influencing the interactions between various stakeholders. As a result, the issue of ownership and governance of shared water bodies remains an essential element in the system of regional cooperation in Central Asia. During the Soviet era, the governance of cross-border water resources in the region was centralised under Moscow's authority. At that time, rivers such as the Amu Darya, Syr Darya, Zarafshan, and the Aral Sea were treated as internal Soviet waters, meaning that the Central Asian republics were not required to sign agreements on transboundary water governance. However, the collapse of the Soviet Union in 1991 marked a turning point. The newly independent Central Asian states were compelled to establish a legal framework to regulate their interactions regarding shared water resources. This shift gave rise to a new policy approach in the region, commonly referred to as "hydrodiplomacy," which led to the formulation and signing of several bilateral and multilateral agreements on water governance during the late 1990s. Despite these efforts, current circumstances indicate a growing need to reassess and enhance the existing water-sharing agreements. For example, Kazakhstan has outlined in its national programs an initiative to revise the Syr Darya agreement, originally signed by Kyrgyzstan and Uzbekistan in the late 1990s, by the end of 2023.

Currently, there are 276 rivers worldwide that cross the territories of multiple countries, nine of which include the Amu Darya, Syr Darya, Zarafshan, Chu, Ili, Talas, and others, located in Central Asia (Narzullaev & Bekov, 2024). According to the World Bank, over 37 million people, approximately 49 per cent of the region's population, live in areas experiencing severe water scarcity. Of this group, 65 per cent live below the poverty line, surviving on less than $6.85 per day. World Bank experts estimate that by 2050, around 75 million people in Central Asia will be at risk of water shortages (World bank, 2023).

Another critical issue affecting water security in the region is the melting of ancient glaciers atop the mountains. This problem remains a major concern for leading international organisations and Central Asian heads of state. For instance, at the 27th Conference of the Parties to the UN Framework Convention on Climate Change in November 2022, President E. Rahmon of Tajikistan highlighted that out of 13,000 glaciers within Tajikistan, over a thousand have completely vanished, and the volume of the largest glacier, Fedchenko, has significantly diminished (Sharman, 2022). It should be noted that glaciers in Tajikistan account for approximately 60 per cent of the region's freshwater reserves. Also, in September 2023, Kassym-Jomart Tokayev, the President of the Republic of Kazakhstan, stated during a meeting of the Council of Heads of State, founders of the International Fund for Saving the Aral Sea, that the glacier area in the Aral Sea basin has shrunk by 30 per cent over the past 50 years (Dushanbe, 2023). According to some scientists, glacier melting may initially lead to an increase in the flow of transboundary rivers in Central Asia over the next 10 to 20 years. However, beyond that period, river flows are predicted to decline significantly

due to a drastic reduction in the total glacier area, resulting in a decrease in the natural water volume in these transboundary rivers (Subkhonkulzoda, 2019).

The initiation of the Kushtepa Canal construction by Afghanistan on the Amu Darya River in 2022 marked a significant new development in the sphere of transboundary water utilisation in Central Asia. This situation is particularly complex for several reasons. First, Afghanistan has no agreements on transboundary water governance with any of the Central Asian states. Second, the interim Afghan government, led by the Taliban, lacks official recognition from the international community, including all Central Asian countries, rendering it extremely difficult to negotiate and formalise any new agreements on shared water resources. Third, due to its unrecognised status, the interim government of Afghanistan cannot be held internationally accountable if it violates the water rights of other stakeholders involved in transboundary water governance. In this regard, the commissioning of the Kushtepa Canal on the Amu Darya River will significantly alter the water regime and balance in Central Asia, and will also reduce Uzbekistan's annual water allocation on the Amu Darya River by 15 per cent (Uzbekistan, 2023). How can the decrease in water levels in the Amu Darya harm Uzbekistan or other countries? The following provides a simple example: Uzbekistan's GDP for 2024 was approximately $ 115 billion, of which about 20 per cent came from agriculture (Agentligi, 2024). Taking this figure into account, it can be said that the reduction in water volume in transboundary watercourses can lead to serious socio-economic consequences in Uzbekistan (Omonov et al., 2024). All these factors highlight the necessity of revising existing agreements and establishing new ones concerning transboundary water utilisation in Central Asia, thereby underscoring the significance and timeliness of the topic.

Unlike other scientific studies, this research aims to uncover the core issues surrounding transboundary water governance in Central Asia, assess the effectiveness of current political and legal mechanisms in preventing water conflicts among the region’s countries, and evaluate the potential for enhancing the legal framework for joint water governance and strengthening hydrodiplomacy. The scientific works of scholars (Valentinin, Orolbaev, Abylgazieva, Zhiltsov, Yunusov, Mamatova) on transboundary water utilisation in Central Asia address this issue from the perspective of irrigation or ecological features, and to a minimal extent, the legal and economic costs (Saidamirov & Toropygin, Kukushkina & Sodikov, Ziganshina) of water utilisation governance within countries. The main novelty of this study, unlike existing scientific works, is that it attempts to precisely reveal the political aspects of transboundary water utilisation and water security in Central Asia, as well as how issues of water scarcity affect the nature of ongoing interstate relations in the region and regional security. In addition, this study reveals the essence of the concept of 'hydrodiplomacy'—a new trend in contemporary science.

METHODS

This study provides a political and legal analysis based on international water law and interstate agreements between Central Asian states regarding transboundary water utilisation. By employing political and legal analytical methods, the article examines the relevance and effectiveness of interstate agreements on transboundary water governance signed between 1991 and 1999. It emphasises evaluating the efficiency of existing political and legal mechanisms for coordinating shared water utilisation in Central Asia and explores opportunities for their improvement in response to contemporary water security challenges.

The issues surrounding the ownership and legal status of transboundary water sources in Central Asia have been the subject of extensive analysis by numerous scholars and experts. In his work "Uzbekistan: Re-examining the Potential for Cooperation in Central Asia", Khaydarov addresses topics related to regional integration and water-energy cooperation, with particular attention to the development of the Kushtepa Canal (Akhatovich, 2023). He contends that the lack of coordinated water governance between Afghanistan and the Central Asian states may trigger a series of geopolitical, economic, and international legal issues.

Juraev provided a comprehensive historical and structural review of agreements on transboundary water governance in the region in his analytical report "New Trends in Addressing Systemic Challenges in Central Asia" (Juraev, 2022).

In her seminal work, "Promoting Transboundary Water Security in the Aral Sea Basin through International Law," D. Ziganshina examines the impact of international water law on water security in Central Asia. She argues that the vast yet ineffective collection of interstate agreements on transboundary water governance actually exacerbates water security threats in the region (Ziganshina, 2015).

B. Saidamirov and A. Toropygin analyse the challenges of managing water resources in Central Asia in their publication “Water Issues in Central Asia: Mechanisms for Addressing Them at Different Levels of Political Governance” (Vladimirovich, 2018), focusing on the international legal framework for transboundary waters and the use of various political instruments Additionally, a detailed examination of interstate disputes over shared water resources in the post-Soviet period is presented in the study "The Problem of the International Legal Status of Water Resources in Central Asia" by V. Kukushkina and Sh. Sodikov. Their research delves into the legal dimensions of water utilisation, including the national legislation of individual Central Asian countries. The authors conclude that ensuring long-term, peaceful cooperation over transboundary water resources requires ongoing enhancement of the international legal framework. Furthermore, the study analyses legal instruments related to transboundary water governance signed before and after 1991 (Valentinin K.L., Orolbaev E.E., 2004). It notes that pre-1991 agreements include clauses prohibiting the construction of hydraulic infrastructure along transboundary watercourses without the consent of all parties sharing the water. The article incorporates findings based on historical documentation, foreign media sources, event

chronologies from the past decade, and firsthand observations made by the authors during their work in the region.

The methodology of this research is grounded in political-legal approaches and comparative historical analysis, guided by the principles of historicism, reliability, and scientific objectivity. It systematically draws on contemporary sources and historical records from the past thirty years, including publications by domestic and international organisations. These methods have enabled an exploration of the political dimensions of international water law, illustrated by examples such as the Convention on the Protection and Use of Transboundary Watercourses and International Lakes (Collection, 1992) and the Convention on the Law of the Non-navigational Uses of International Watercourses (General Assembly of the United Nations, 1997). Additionally, through historical and comparative analysis, existing interstate agreements on transboundary water governance in Central Asia from 1991 to 1997 were examined, revealing legal conflicts that pose political risks to regional security.

RESULTS AND DISCUSSION

Development of water issues in Central Asia

Water has long been a scarce resource in Central Asia, making it a vital resource in the region. The ownership of freshwater resources has been a significant issue in relations between water users in the area, as it has represented the ability to exert power in social and international interactions within Central Asia since ancient times. During the Middle Ages and the modern era, due to the insufficient development of state institutions and frequent changes in state boundaries in international relations within the region, there was no clear definition of the right of any specific state to water resources in specific regulations. However, with the advancement of state institutions and the establishment of elements of modern statehood in Central Asian countries (beginning in 1924 with the formation of republican entities within the USSR), a need arose for regulatory and institutional mechanisms to govern interstate relations concerning the utilisation of transboundary water. Following the establishment of Soviet control in Central Asia, early efforts were made to create regulatory and institutional structures for managing transboundary water resources in the area. For instance, in May 1918, the Soviet leadership issued a directive allocating 50 million rubles for irrigation projects in Turkestan. This plan was intended to develop irrigation systems in the Fergana, Chu, and Zarafshan valleys, as well as the Hungry and Dalverzin steppes.

It is essential to highlight that disagreements over the governance of transboundary water resources among Central Asian states began to surface toward the end of the 20th century. However, these disputes remained relatively moderate and were addressed through intervention by the central authorities of the time. In this context, the Scientific and Technical Council of the USSR Ministry of Land Reclamation and Water Resources adopted two protocols in 1984, Protocol No. 413

for the Syr Darya River and Protocol No. 566 for the Amu Darya, which regulated inter-republican relations regarding water allocation limits (see Table 1). According to Russian scholar S.S. Zhiltsov, these legal instruments established annual quotas for distributing water among the countries of the Aral Sea basin, but they did not account for seasonal variations in water flow and largely ignored the interests of upstream states, namely Kyrgyzstan and Tajikistan, where the main transboundary rivers originate (Zhiltsov, 2016). Following the collapse of the Soviet Union and the subsequent independence of the Central Asian republics in 1991, the centralised system of transboundary water governance effectively disintegrated (Mamatova, 2015). As a result, the newly sovereign states, no longer bound by mutual obligations, faced the need to create new agreements and institutional frameworks to govern shared water resources. The first step in this direction occurred in October 1991, when the ministers of the five Central Asian republics convened in Tashkent to address potential conflicts, prevent major disruptions in water governance, and discuss principles of water allocation, regulation, and accounting. The outcome of this meeting was the adoption of a Joint Statement, which emphasised that only unified and coordinated action could effectively address water-related challenges in the face of growing environmental and social pressures (Interstate Commission for Water Coordination of Central Asia, 1991b). This declaration laid the legal foundation and became the first international legal document jointly signed by the newly independent Central Asian republics in the field of transboundary water cooperation (Guo et al., 2024).

Table 1. Water withdrawal limits between countries in the region*

State	Billion Cubic Metre	Per Cent
Amu Darya river		
Kyrgyzstan	0.4	0.6
Tajikistan	9.5	15.4
Turkmenistan	22.0	35.8
Uzbekistan	29.6	48.2
Syrdarya river		
Kazakhstan	10.0	44.1
Kyrgyzstan	0.4	1.7
Tajikistan	1.8	8.0

Uzbekistan	10.5	46.2

Note: **water withdrawal limits (from the main river channels) are set based on a low-flow year with 90% probability of occurrence. Below the Kerki gauging station, the flow of the Amu Darya River is equally shared between Uzbekistan and Turkmenistan, with each receiving 22 km³.*
Source: Mukhabbatov, 2021

Creation of a new system of transboundary water utilisation

To enhance the international legal framework governing transboundary water utilisation and to establish institutional mechanisms for its oversight, the water resource ministers of the five Central Asian republics signed the "Agreement on Cooperation in the Joint Management, Use, and Protection of Water Resources from Interstate Sources" on February 18, 1992, in Almaty (Interstate Commission for Water Coordination of Central Asia, 1991a). A key outcome of this agreement was the creation of the Interstate Commission for Water Coordination (ICWC), tasked with managing the utilisation of shared water resources in the region. The ICWC was designed to address the pressing needs of regulation, efficient usage, and protection of interstate water sources.

This 1992 agreement was further reinforced by a subsequent high-level legal instrument signed by the Central Asian heads of state: the "Agreement on Joint Actions to Address the Aral Sea Crisis and Surrounding Area, Improve the Environment, and Ensure the Socio-Economic Development of the Aral Sea Region," signed in Kzyl-Orda on March 26, 1993 (Interstate Commission for Water Coordination of Central Asia, 1992).

Later, on April 9, 1999, the Central Asian heads of state signed another important treaty – "The Agreement on the Status of the International Fund for Saving the Aral Sea (IFAS) and Its Institutions." This agreement redefined IFAS, expanding its mandate from solely environmental concerns to a broader political role in managing transboundary water utilisation, with the ICWC operating under its framework. Within IFAS, the Council of Heads of the Founding States is the highest governing authority, and its meetings are held at the discretion of the participating heads of state.

In the years that followed, further bilateral and trilateral agreements were signed among Central Asian countries regarding the use of specific transboundary water bodies. Notably, on March 17, 1998, Kazakhstan, Kyrgyzstan, and Uzbekistan signed "The Agreement on the use of water and energy resources of the Syr Darya River basin between the Governments of the Republic of Kazakhstan, the Kyrgyz Republic, and the Republic of Uzbekistan" (Bishkek, 1998). Also, on January 21, 2000, Kazakhstan and Kyrgyzstan concluded "The Agreement between the Government of the Republic of Kazakhstan and the Government of the Kyrgyz Republic on the use of interstate water facilities on the Chu and Talas rivers" (e Government of the Kazakh Republic, 2000).

The formation of water or hydrodiplomacy in Central Asia

It is widely understood that diplomatic relations between countries cannot function without a legal framework. In this context, hydrodiplomacy, an emerging form of traditional diplomacy, began to develop in Central Asia following the signing of interstate agreements on transboundary water governance from 1991 to 1999. The effectiveness of hydrodiplomacy in the region largely depends on how thoroughly the provisions of these agreements are implemented. Today, scholars offer various definitions of the term 'hydrodiplomacy' (Ziganshina, 2023). Some describe hydrodiplomacy as a form of 'soft power' used to address critical political challenges related to transboundary water governance through negotiations and treaty-making (Warner & de Man, 2020). Others view it as a developing framework in which legal instruments, informed by technical data and scientific knowledge, help facilitate mutually accepted solutions to water disputes among riparian states (Skoulikaris, 2023). Certain researchers argue that hydrodiplomacy combines water diplomacy with scientific diplomacy to identify the most effective peaceful methods for managing shared water resources (Aamer, 2021). Additionally, some studies highlight that hydrodiplomacy reduces regional conflicts by establishing institutional foundations for the governance of transboundary waters and promoting the signing of interstate agreements (International Hydrological Programme of the United Nations Educational, 2016). Hydrodiplomacy is also seen as a joint effort between representatives of the political elite, as well as staff from diplomatic agencies and experts (Dadabaev et al., 2023).

Over the last three decades, hydrodiplomacy has become a vital component of regional security in Central Asia, since it plays a crucial role in ensuring water security, which now serves as a key factor in maintaining stability and peace in the region. Hydrodiplomacy addresses disputes and conflicts over the sustainable use of transboundary water resources by employing preventive measures and fostering stronger interstate cooperation (Kenjayev, 2024a). Consequently, in recent years, the Central Asian countries have significantly increased their negotiations and dialogue aimed at peacefully resolving all water security challenges in the region.

The case of the Kushtepa canal

Currently, the establishment of an international legal framework for the shared transboundary utilisation of water between Central Asian countries and Afghanistan remains a pressing issue. Notably, the start of construction on the Kushtepa Canal by Afghanistan's interim government on the Amu Darya River has introduced new geopolitical challenges and raised significant concerns under international law. A historical review of agreements between the Soviet Union and Afghanistan shows that Afghanistan once had interstate accords regarding the joint governance of the Amu Darya's water resources (United Nations, 1958).

In 1958, the USSR Government and the Royal Government of Afghanistan signed an agreement aimed at coordinating their activities during the construction of

hydraulic structures on the Amu Darya River ("On the regime of the Soviet-Afghan state border," signed January 18, 1958) (Government of the Islamic Republic of Afghanistan, 2010). Articles 19, paragraphs 2 and 3, specify: "The construction of bridges, dams, and other similar new structures on border waters that impede navigation or affect water regimes can only be carried out with the consent of both Parties," and "the construction of new dams on border waters that may influence water flow and bank conditions, or cause damage is permissible only by mutual agreement." This clause stipulated that neither the USSR nor Afghanistan could construct new hydraulic infrastructure on the Amu Darya without the prior approval of the other. However, this agreement has effectively become obsolete due to the dissolution of the signatory states.

Since the collapse of the Soviet Union, agreements have been established between the Republic of Tajikistan and the Islamic Republic of Afghanistan regarding the shared use of the Pyanj and Amu Darya rivers. Of particular importance is the October 25, 2010, agreement that took place between the governments of Tajikistan and Afghanistan on cooperation in the development and governance of water resources of these river (Mukhabbatov, 2021). This agreement was created to form an international legal basis for joint transboundary water utilisation, which includes provisions (in its preamble and Articles 1 and 2) emphasising the principle of respecting the national interests of both countries in the shared governance of the Pyanj and Amu Darya rivers.

Following the withdrawal of US forces from Afghanistan in 2021, the Islamic Republic of Afghanistan (IRA) collapsed and was replaced by an interim government led by the Taliban. Afghanistan transformed into an Islamic emirate, radically altering its political system and governance structure. As a result, the international agreements previously signed by the former Islamic Republic of Afghanistan concerning transboundary water utilisation became effectively obsolete.

Transboundary water governance remains a potential source of international tension with significant geopolitical implications, not only for Afghanistan but also for its neighbouring countries. A notable example is the water scarcity, driven border conflict between Afghanistan and Iran in May 2023, which led to several military casualties and the temporary closure of the shared border (Sorvenkov, 2022). This confrontation starkly illustrates the serious interstate consequences that can arise from water shortages. Interestingly, both parties referenced the provisions of the 1973 Iran-Afghan Water Treaty during the dispute. However, the governments that originally signed the treaty no longer exist, having been replaced by new regimes that do not recognise the previous administrations. Iran accused Afghanistan of breaching the treaty's terms, while Afghanistan attributed the water scarcity to climatic factors, highlighting the complex nature of such conflicts and the challenges of relying on outdated agreements.

The current water and energy systems in Central Asia largely originated during the Soviet era and have effectively disintegrated following the collapse of the USSR. After gaining independence in 1991, the Central Asian states quickly began developing an international legal framework to govern their shared use of transboundary water resources. However, it is essential to note that the agreements signed in the 1990s were primarily negotiated to prevent interstate conflicts over water. Consequently, these legal instruments contain certain shortcomings and gaps (Horsman, 2018).

Kukushkina and Sodikov point out that the water agreements signed among Central Asian states in the 1990s were primarily designed to quickly resolve water disputes and were largely declaratory, lacking enforceable sanctions for breaches of their terms (Sodikov, 2018).

Khaydarov, who analysed ongoing geopolitical developments in Central Asia, observed that following independence and the establishment of state borders between the Central Asian republics, water resources, once considered internal waters of the Soviet Union, gained the status of transboundary water bodies. He argues that water-related issues in the region represent a significant factor that can directly affect regional security (Akhatovich, 2023).

The water agreements signed among Central Asian countries in the 1990s established the legal foundation for transboundary water governance in the region. In recent years, these countries have reached historic compromises on key issues related to shared water utilisation. Notable agreements include those concerning hydroelectric power plants such as Rogun and Yavan (between Uzbekistan and Tajikistan, 2018–2022), Kemripabad (Uzbekistan and Kyrgyzstan, 2022), and Toktogul and Kambarata (involving Uzbekistan, Kazakhstan, and Kyrgyzstan, 2021–2023) (see Table 2). These agreements reflect the willingness of the countries to collaborate and find mutually beneficial solutions to regional challenges.

Nevertheless, there remains an urgent need to update and strengthen the international legal framework for transboundary water cooperation in Central Asia, as several decades have passed since the current multilateral agreements were signed. During this period, new precedents in shared water utilisation have emerged, while climate change and population growth have increased pressure on water security.

One significant recent development is Afghanistan's involvement in transboundary water relations with Central Asian states. Although Afghanistan is a riparian country, its interim government has not joined any existing water agreements among Central Asian states, nor does it participate in the activities of the International Fund for Saving the Aral Sea or the Interstate Commission for Water Coordination. However, the construction of the Kushtepa Canal by Afghanistan, which diverts water from the Amu Darya River, effectively makes Afghanistan a participant in regional transboundary water utilisation.

Therefore, there is a clear need for an international legal agreement between Central Asian countries and Afghanistan to coordinate actions regarding the Kushtepa Canal and the diversion of the Amu Darya's waters. However, the lack of international recognition of the Taliban government poses a significant barrier to such cooperation, as no country or international organisation has officially recognised the Taliban regime to date.

Despite this, the dialogue following the May 2023 water conflict between Afghanistan and Iran suggests that previous water agreements remain relevant for Afghanistan and could serve as a foundation for enhanced cooperation. From this perspective, it is possible that Central Asian countries might hypothetically continue to work with Afghanistan on transboundary water issues, based on treaties signed between the USSR and Afghanistan in the 20th century.

However, in May 2025, following three political consultations between Uzbekistan and the interim government of Afghanistan, Uzbekistan and the interim government of Afghanistan signed an agreement on the joint governance of the Amu Darya water basin (National Information Agency of Uzbekistan, 2025). At first glance, it may seem that this agreement is a step forward in the peaceful resolution of issues related to the construction and further operation of the Kushtapa canal. However, it should be noted that this is not entirely the case.

Currently, a system for allocating transboundary water resources has been established in Central Asia, whereby the water ministers of Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan, excluding Afghanistan, sign interstate agreements twice yearly to set water quotas for each country (Prniyazova et al., 2025). However, the commencement of the Kushtepa Canal construction on the Amu Darya River has sparked a new legal challenge. The aforementioned countries continue to formalise agreements on water quotas that do not account for the water diverted by the Kushtepa Canal (Orazaliev et al., 2024). Meanwhile, Afghanistan has effectively become a user of the Amu Darya's water resources. As a result, downstream states such as Uzbekistan and Turkmenistan are receiving less water than stipulated in the interstate agreements. Therefore, it is evident that Afghanistan should seek to negotiate and sign a joint water utilisation agreement not only with Uzbekistan but with all Central Asian countries.

Table 2. Large water bodies and water users in Central Asia

Water bodies	Water users
The Rogun HPP *(agreements in the process of signing)*	Tajikistan Uzbekistan
The Yavan HPP	Tajikistan

(agreements signed in 2022)	Uzbekistan
The Kambarata HPP	Kazakhstan
(agreements in the process of signing)	Kyrgyzstan
	Uzbekistan
The Toktogul HPP	Kazakhstan
(agreements signed in 2021)	Kyrgyzstan
	Uzbekistan
The Kemripabad HPP	Kyrgyzstan
(agreements signed in 2022)	Uzbekistan
The Amu Darya river	Tajikistan
(agreements signed in 1992)	Uzbekistan
	Turkmenistan
	Afghanistan*
The Syrdarya river	Kazakhstan
(agreements signed in 1992)	Kyrgyzstan
	Tajikistan
	Uzbekistan

Note: **Afghanistan is a de facto user of water from the Amu Darya River, without having any agreements with other users of water along the river.*
Source: Authors, 2025

Regarding the enhancement of the international legal framework for transboundary water governance in Central Asia, the meeting of the Council of Heads of the Founding States of the International Fund for Saving the Aral Sea, held on September 15, 2023, is particularly significant. At this meeting, all the state-founders of the Fund unanimously declared the need to review and further improve existing agreements in the field of transboundary water utilisation. In addition, this meeting differed from previous ones in that all issues of joint water utilisation were systematically analysed, and comprehensive proposals were made for their solution. During this meeting, the heads of state also discussed establishing a legal framework for Afghanistan's participation in transboundary water utilisation in the region. The President of Uzbekistan, Shavkat Mirziyoyev, proposed considering the inclusion of Afghan representatives in the regional dialogue on water resource sharing (Official website of the President of the Republic of Uzbekistan, 2023b).

When considering ways to improve existing mechanisms for transboundary water utilisation in Central Asia, it is particularly interesting to study international experience in this area. Today, there are several regional institutions for transboundary water governance around the world, such as the Mekong, Indus, Danube and Amazon River Commissions. Our study will primarily focus on the activities of the Mekong River Commission, as the geographical environment of the Mekong River and the geopolitical situation in the Southeast Asian region are similar to those in Central Asia.

The case of the transboundary water utilisation in the Mekong River

The Mekong River, situated on the Indochina Peninsula, is one of the world's largest transboundary rivers, flowing across multiple countries. Originating in the Tibetan Plateau, it travels through China, Myanmar, Laos, Thailand, Cambodia, and Vietnam before emptying into the South China Sea. Stretching 4,500 kilometres, the Mekong discharges approximately 15,000 cubic meters of water annually. It ranks 10th globally in terms of length and discharge volume and 25th in terms of basin size, covering roughly 800,000 square kilometres. According to expert projections, the population living within the Mekong River basin is expected to grow to between 100 and 145 million by 2050 (Hecht et al., 2019). Given these projections, the river's resources may soon be insufficient to meet the needs of all riparian states. This has long underscored the necessity for cooperative regional frameworks for water allocation along the Mekong. Notable parallels are evident between the challenges facing the Mekong basin in Southeast Asia and those of the Amu Darya and Syr Darya basins in Central Asia. For instance, the construction of hydraulic infrastructure along both river systems disrupts the natural flow of water, contributing to food insecurity in downstream regions. In Southeast Asia, fish stocks will decline, and in Central Asia, agricultural products will decline (Sridhar et al., 2024). Additionally, as scientists note, the benefits of building hydraulic structures have not yet been fully proven. If the construction of hydraulic structures on the Mekong River generates profits of $ 6 to $ 32 billion for countries in the region, then the potential damage from these structures ranges from $ 2 to $ 13 billion (Intralawan et al., 2018). By the end of 2023, it was reported that water loss in Central Asia had cost Uzbekistan's economy around $5 billion (Official website of the President of the Republic of Uzbekistan, 2023a). Beyond the economic repercussions, there are significant political complexities associated with shared water governance in both regions. In the case of the Mekong, China and Myanmar, despite being riparian states, maintain a limited role in regional water dialogue. A similar pattern is observed in Central Asia, where Afghanistan, despite constructing the Kushtepa Canal and drawing water from the Amu Darya, has not entered into any formal agreements or initiated collaborative water initiatives with the Central Asian states. China, which sits upstream on the Mekong and contributes significantly to the river's flow, currently operates 11 dams, giving it considerable control over the downstream water supply (Fan et al., 2015). As previously mentioned,

transboundary water governance in Central Asia is also marked by longstanding and emerging political challenges. While the Central Asian states have demonstrated a growing willingness to resolve shared water issues diplomatically in recent years, the emergence of new disputes, such as Afghanistan's unilateral use of Amu Darya water, highlights the evolving nature of these challenges. Recognising the complexity of governing shared waters, countries like Cambodia, Laos, Thailand, and Vietnam began establishing intergovernmental institutions for Mekong water governance as early as the late 1990s. In both the Mekong and Amu Darya contexts, sustainable and peaceful solutions to transboundary water issues depend on the application of water diplomacy and adherence to international water law, particularly the 1992 and 1997 UN water conventions (Kinna & Rieu-Clarke, 2017).

The Mekong River Sustainable Development Commission is a regional intergovernmental body dedicated to water diplomacy and the sustainable governance of water resources. Cambodia, Laos, Thailand, and Vietnam signed the Agreement on Cooperation in the Field of Sustainable Development of the Mekong River Basin of 1995 (Mekong River Commission, 1995), which serves as the international legal basis for the activities of this commission. A study of the provisions of this Agreement reveals that "preventing wasteful use of the waters of the Mekong River basin" is one of the main objectives of cooperation and means to prevent the irrational use of water resources. The agreement establishes the principle of sovereign equality and territorial integrity in the use and protection of water resources in the Mekong River basin, and also that if harmful impact of one state on other countries in the Mekong River basin related to the use of water resources is proven, the state causing harmful impact must cease its negative actions, and all disagreements must be resolved peacefully on the basis of international law. One of the main functions of the Commission Council is defined as "consideration and resolution of questions, disagreements and disputes referred to it by any participating state or the Joint Committee", which is clearly lacking in the activities of the Interstate Commission for Co-Coordination on Water Management (ICWC) in Central Asia. Additionally, the Agreement stipulates that in the event of the Commission's inability to resolve disagreements and disputes between member states, the Commission shall transfer the resolution of the problematic situation to the member states themselves, based on international law and diplomatic means. The introduction of a similar mechanism into the activities of the ICWC would serve as an effective mechanism in preventing potential political disagreements over issues of governance and the use of water resources in transboundary rivers. It should be noted that the Mekong River Sustainable Development Commission is not limited to the provisions of the 1995 Agreement in its activities, but also develops strategic plans for the water basin's development. Today, the Strategic Plan for 2021-2025 is in effect (Commission, 2021), which defines 95 specific tasks, 86 expected results and the achievement of 11 results of the long-term Strategic Plan for the development of the

region for 2021-2030. The total budget for this Strategic Plan, covering the period 2021-2025, is approximately US$60 million, with an average of US$12 million per year. Forty per cent of this budget is generated by annual contributions from founding states, and 60 per cent by donations from cooperation partners. In general, it can be said that the Mekong River Sustainable Development Commission is a full-fledged intergovernmental organisation that not only solves technical issues of the watershed, but also conducts "water diplomacy", thereby preventing the emergence of political disagreements between participating states.

In this regard, new mechanisms and approaches should be introduced into the activities of the ICWC as a regional body that forms a unified regional policy for the governance and use of water resources of transboundary rivers (Xenarios et al., 2022). It should be noted that improving the activities of the ICWC will require the creation of a single headquarters of the ICWC and a clear definition of the powers of the executive bodies of the ICWC within the framework of the Regulation "On the ICWC" (Kenjayev, 2024a). In our view, it is essential to adopt a new Regulation "On the ICWC" to address the shortcomings of the current version. Drawing on international experience in governing transboundary rivers, such as the Mekong, Indus, Danube, and Amazon, the revised Regulation should define the Commission's role not only in promoting the rational use of shared water resources but also in establishing mechanisms to prevent their inefficient or wasteful use. Moreover, the new Regulation should enshrine key principles, including sovereign equality and territorial integrity in the utilisation and protection of transboundary watercourses, equal and non-discriminatory access to these waters for all state-founders, and mandatory ICWC involvement in the negotiation and signing of interstate agreements concerning the construction of hydropower or water governance infrastructure on shared rivers. The updated Regulation should also introduce a clear and structured mechanism for addressing disagreements and disputes related to water consumption from shared sources. In particular, it should specify which executive body is responsible for dispute resolution, outline the procedures to be followed, and define the nature and legal force of decisions resulting from such proceedings. Also, the new Regulation should include mechanisms for resolving disagreements and disputes in the event of the insolvency of the ICWC, that is, a bilateral format for the peaceful resolution of interstate disputes through the use of diplomatic means, and the transfer of the case to the International Court. Moreover, the new Regulation should provide for the creation of a council of foreign ministers of the founding states, which will be responsible for coordinating a unified water policy, developing and adopting political decisions, as well as mechanisms for cooperation on issues of joint water utilisation in Central Asia with states that are not members of the ICWC (Kenjayev, 2024b).

CONCLUSION

In summary, after gaining independence, the Central Asian countries successfully established an international legal framework for the joint governance of their shared transboundary water resources. However, given the increasing challenges posed by climate change and the shrinking glaciers that feed the region's major rivers, there is a fundamental need to strengthen and improve the institutional mechanisms governing these water agreements. Additionally, Afghanistan's role as a riparian state, currently without formal international legal agreements with its Central Asian neighbours (apart from Uzbekistan), highlights the necessity to focus on developing transboundary water agreements that include Afghanistan. The international community's refusal to officially recognise the Taliban government currently prevents Central Asian states from entering into formal treaties with Afghanistan's interim authorities. Nonetheless, the dialogue that has emerged following the recent water dispute between Afghanistan and Iran may present an opportunity for Central Asian countries to maintain cooperation with Afghanistan on transboundary water issues, building upon agreements signed between the USSR and Afghanistan in the 20th century.

In the long term, there is a need for an improvement of the institutional mechanisms and legal framework for transboundary water utilisation in Central Asia. It is necessary to introduce real mechanisms into the system of joint water utilisation between the countries of the region to prevent the emergence of new challenges and threats to water security. First of all, it is necessary to review and improve existing interstate agreements in the field of transboundary water utilisation, taking into account the potential reduction in freshwater reserves in the future. Second, it is important to review the institutional framework for transboundary water utilisation, particularly improving the activities and structure of the International Fund for Saving the Aral Sea. Third, it is essential to establish legal mechanisms for Afghanistan's participation in transboundary water utilisation and regional dialogue in Central Asia, particularly in the activities of the ICWC. Fourth, based on the experience of the Mekong River Commission, countries in Central Asia should develop unified strategies for the region's development and the governance and utilisation of water resources of transboundary rivers for decades to come.

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