



# The impact of water factor on security issues between Afghanistan and Pakistan

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## OPEN ACCESS

SUBMITTED 21 December 2024  
ACCEPTED 25 January 2025  
PUBLISHED 27 February 2025  
VOLUME Vol.07 Issue02 2025

## CITATION

Sardor Rakhimov. (2025). The impact of water factor on security issues between Afghanistan and Pakistan. *The American Journal of Political Science Law and Criminology*, 7(02), 16–21.  
<https://doi.org/10.37547/tajpslc/Volume07Issue02-04>

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**Abstract:** This article examines the importance of the water factor in the relations between the two countries, including the impact of the ongoing projects and planned dams in the Kabul River basin, which flow through the territories of Afghanistan and Pakistan. The article also discusses in detail the hydropower potential of these rivers and their strategic importance for Afghanistan and Pakistan.

**Keywords:** Water factor, water security, transboundary waters, hydropolitics, hydrogeography, Kabul River, Shahtoot Dam.

**Introduction:** The 21st century is considered by many analysts to be the century of water problems. This is because the availability of this important resource is decreasing worldwide due to population growth and climate change [1]. Indeed, water is not only an essential component of sustainable development, socio-economic progress and dynamic ecosystems, but also a vital need for humanity. It is crucial for human health, well-being and productivity. Therefore, water security is a key element of sustainable development. This means that countries must have sufficient and good quality water to carry out various productive activities. Water security enables a state to eliminate poverty and improve the living standards of its population [2]. Consequently, Ismail Serageldin, former Vice President of the World Bank, warned in 1995: "If the wars of the 20th century were fought over oil, the wars of the 21st century will be fought over water" [3].

According to the UN, 60 percent of the world's freshwater flows are transboundary. 153 countries share part of their territory in at least one of 286 transboundary river and lake basins and 592 transboundary groundwater systems [4]. Of the 153 countries that share transboundary waters, only 43 have practical agreements covering 90 percent or more

of their shared rivers, lakes, and groundwater.[5] It is worth noting that Afghanistan is home to four major river systems: the Amu Darya, the Harirud-Murghab, the Helmand, and the Kabul Rivers [3]. These rivers cross international borders and flow into Tajikistan, Uzbekistan, and Turkmenistan in the north, Iran and Turkmenistan in the northwest, Iran in the southwest, and Pakistan in the southeast and east. These rivers have been the foundation of human development in Asia for thousands of years. It is of great importance to study and research the water supply of Afghanistan and its neighboring countries - Pakistan, Iran, Turkmenistan, Uzbekistan, and Tajikistan. This will help prevent any future conflicts with neighboring countries over the use of Afghanistan's water resources.[1]

**METHODS**

A number of scholars have conducted scientific research on the impact of the “water factor” on relations and security issues between states, and the importance of transboundary rivers, in particular, the role of the “water factor” in Afghanistan-Pakistan relations. In particular, the book “Transboundary Water Resources in Afghanistan: Implications of Climate Change and Land Use [1]”, co-authored by John Schroeder and Sher Jan Ahmadzai, of the Center for Afghan Studies at the University of Nebraska, served as an important source in covering this topic. Indeed, this book provides detailed information on the

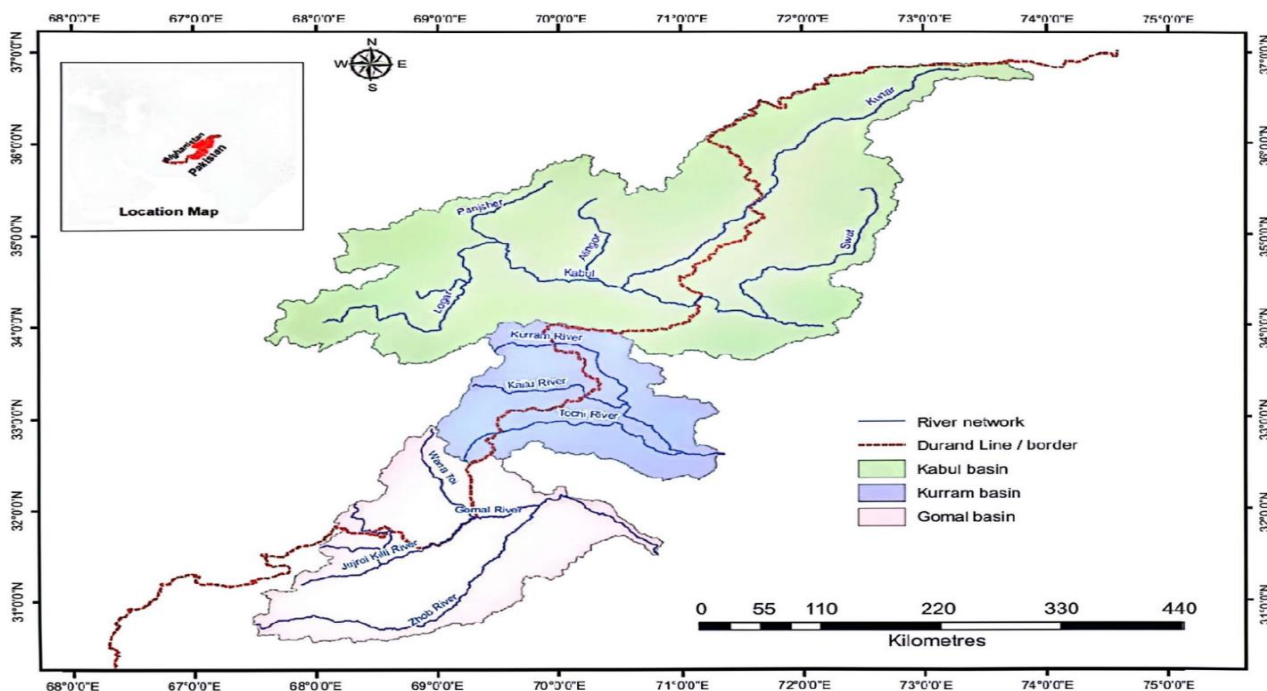
hydrogeography (water basins and rivers) of Afghanistan and its neighboring countries, the groundwater geology of Afghanistan, the development of water resources in the Kabul River Basin, dams in Afghanistan, an analysis of Afghanistan's water treaties and relevant international water legislation, the hydrogeopolitics of Afghan waters and its future, and the prospects for water management in Afghanistan: capacity development, risk assessment, cooperation, and rational water management.

A collection of articles entitled "Afghanistan-Pakistan Water Sharing: The State of the Basins"[6] also explores a number of issues related to the topic. In particular, it contains the authors' analytical opinions on cooperation in the basins of rivers crossing the border between Afghanistan and Pakistan. In addition, Taslim Malik's "The Pak-Afghan Water Issue: A Case for Benefit-Sharing, Policy Perspectives"[3], Sajjad Ali Memon's "The Kabul River: Hydrogeopolitics of Pakistan-Afghanistan"[7], Ravichandran Murthy and Sumayya Bibi's "Water Security and Cross-Border Water Management in the Kabul River Basin"[2], and Fawad Ali's "Decades on, Pakistan is still seeking a Kabul River agreement"[8], elaborate on the impact of the "water factor" on security issues between Afghanistan and Pakistan.

**RESULTS**

*Figure 1*

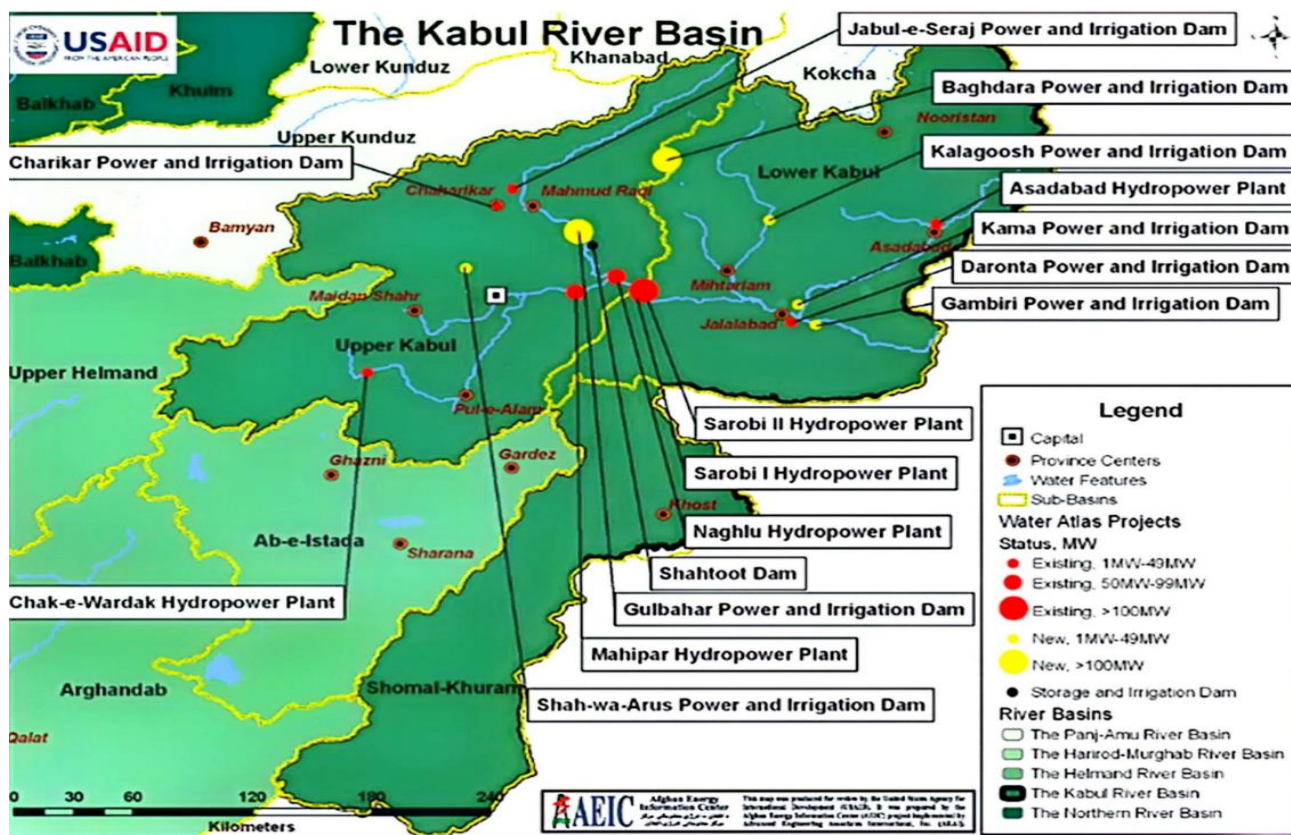
**River basin crossing the Durand Line [6]**



**Fig. 9.3.** Durand Line. (Adapted from International Water Management Institute)

Figure 2

The Kabul River Basin and the dams built on it [9]



DISCUSSION

It is known that Afghanistan and Pakistan also share the waters of a total of 9 rivers, but they have not signed a single agreement on the joint management and control of common water resources.[3] In addition to the historical and political problems between these countries, modern problems such as population growth and climate change are also complicating the situation. Due to climate change, both countries are facing water shortages, which in turn is increasing competition for common water resources.[7]

The importance of the Kabul River

The Kabul River is used not only as a source of drinking water, but also for agriculture, industry and electricity generation. The Kabul River, which is an important source of hydropower for both countries, has a large hydropower potential, but this potential has not yet been fully exploited. The Afghan government is currently planning dozens of hydropower projects. These projects will undoubtedly affect Pakistan's water rights and traditional uses.[3]

The Kabul River originates mainly from melting glaciers and snow in the Hindu Kush Mountains. It is later joined by the Kunar River.[10] Notably, this river is also known as the Chitral and discharges approximately 8 million acre feet of water into the Kabul River. The

Kabul River flows east from the Sanglakh Range northwest of Kabul, passing through the cities of Kabul and Jalalabad, before crossing the Durand Line near Lal Pur in Nangarhar Province, Afghanistan. The Kabul River enters Pakistan from the northwestern border and is joined by smaller rivers before flowing into the Indus River and then into the Arabian Sea.[11]

It should be noted that the Kabul River Basin is a transboundary water system between Afghanistan and Pakistan. It is an important part of regional water security for both countries. The Kabul River has a total length of 700 kilometers, of which 460 kilometers flow through Afghanistan and 240 kilometers through Pakistan [2]. The river basin covers 11 percent of the territory of Afghanistan [10]. In other words, this basin covers 53 thousand square kilometers of Afghanistan and 14 thousand square kilometers of Pakistan [11]. According to statistics from 2023, the Kabul River provides about 21 billion cubic meters of water per year [2]. However, the volume of the river is given differently in different sources. For example, an article published in 2024 states that it produces 6.9 billion cubic meters of water in Afghanistan and 1.9 billion cubic meters in Pakistan [10]. Afghanistan uses the Kabul River water to irrigate 12,000 hectares of land [11], while Pakistan uses canals to irrigate 80 percent of Peshawar, 85 percent of Charsadda, and 47.5 percent of Nowshera.[3] This in

itself shows how important the river is to both countries.

It is a vital resource for the agriculture-based economy of Pakistan's Khyber Pakhtunkhwa province in particular. In fact, the river is the main source of drinking water for millions of people living on the Pakistani side of the Durand Line [3]. Water is one of the most important tools for the development of the economies of Afghanistan and Pakistan. Therefore, its free flow must be managed through a specific water management system.[2]

According to Faiz Zaland, a professor at Kabul University and a water expert, the lack of a centralized government in Afghanistan over the past 40 years has hindered the process of concluding a treaty. Muhammad Iqbal, a researcher at the University of Punjab in Lahore, writes in his dissertation: "From 2001 to 2014, Pakistan made numerous diplomatic efforts, both bilaterally and through the World Bank and the international community, to develop a mechanism for exchanging information and concluding a treaty on the Kabul River. Afghanistan, however, refused to engage in dialogue, citing a lack of information, poor negotiating skills, and an imperfect water policy." [8]

Of particular note is the lack of a bilateral treaty between Pakistan and Afghanistan governing the use of water resources, which is at the root of the dispute. Such an agreement could have prevented the current disruptions in water management. For example, Afghanistan's refusal to participate in a World Bank-sponsored water cooperation conference in 2006 has hindered developments that could have eased tensions. Another historical factor contributing to the conflict is the 1921 Kabul Treaty, signed between Afghanistan and British India. This treaty granted British officials and tribes in what is now Pakistan the right to use the Kabul River for irrigation and navigation. However, Afghanistan later denied Pakistan's legal succession to these rights, arguing that these rights were not inherited after the partition of British India. This objection became the main basis of Afghanistan's claims over the river.[7]

There is no mechanism for cooperation between Afghanistan and Pakistan on tributaries of the Indus River Basin. However, Afghanistan, Pakistan and the international community have made efforts to formalize water sharing between the two neighboring countries. At least six attempts have been made since 2003[6], but these attempts have failed. This is mainly due to the instability of the Afghan government, terrorism and security problems. No general agreement has been signed to improve relations between the two countries, and no joint projects have

been launched in cooperation between the two sides.[2] Regarding the Taliban's water policy in Afghanistan, and in particular its relations with Pakistan, Ikramuddin Kamil, Special Assistant to the Minister of Foreign Affairs for Water and Energy, told the Third Pole: "In the current situation, Afghanistan is not ready to sign an agreement with Pakistan, because the international convention on transboundary rivers serves the interests of the countries that developed it." [8].

The Taliban continues to work on several projects supported by former Afghan President Ashraf Ghani and his predecessors. These include the Kajaki Dam in Helmand Province, the Kamal Khan Dam in Nimroz Province, and the Namak Ob Canal in Takhar Province. Construction is also underway on the Turi Dam in Zabul Province. The Taliban government, on the other hand, is demanding the completion of the Shah and Arus Dam on the Kabul River.[12]

Pakistan is concerned about the overall damming activity on the Kabul River, particularly the Indian-sponsored Shahtoot Dam. The memorandum on this dam was signed in February 2021. Pakistan's concerns stem from the lack of a bilateral agreement or mechanism for cooperation on the Kabul and Chitral rivers, and India's support and involvement. Although Pakistan has adopted a unilateral strategy to build reservoirs in Chitral without informing Afghanistan, it is concerned that India will use its position to pressure Pakistan from both sides.[13]

According to the statement of Ikramuddin Kamil, the Special Assistant to the Minister of Foreign Affairs for Water and Energy of the Taliban government: "Any construction work carried out in the Kabul River basin has always had a negative impact on bilateral relations with Pakistan. In the future, Kabul may implement joint hydropower projects. Under these projects, Afghanistan will supply water to Pakistan for irrigation and in return will reach agreements on transit trade and services. Afghanistan has proposed 12 projects on the Kabul River and its tributaries, and five dams - Chak, Mahipar, Sarawbi, Naghalao and Dronaq dams - have been completed and are currently operational." He added that Afghanistan has identified 12 more water storage sites on the Kabul River and its tributaries, with a total water storage capacity of 4.7 million acre feet (approximately 5.8 cubic kilometers) [8].

The situation has become more tense as Afghanistan continues to build 12 dams on the Kabul River, with a total capacity of 1,177 megawatts of electricity. The Salma Dam on the Harirud River and the Shahtut Dam on the Kabul River are being supported by India. These initiatives are expected to significantly reduce the flow of water to Pakistan. Estimates suggest that the flow

could decrease by 16-17 percent. This will have a serious impact on the water supply of Pakistan, especially in the Khyber Pakhtunkhwa province. Already experiencing water scarcity, per capita water availability in Pakistan has fallen from 5,000 cubic meters in the 1960s to less than 1,000 cubic meters today. This is severely affecting the agrarian economy, which relies on 63 percent of its agricultural land for water.[7]

Afghanistan plans to build 13 dams and reservoirs on the upper reaches of the Kabul River. Once these structures are completed, the flow of water to Pakistan will be sharply reduced. This poses a serious food and security crisis in northwestern Pakistan, as millions of people living in the Peshawar Valley depend on the waters of the Kabul River for their livelihoods. In addition to the dam construction, urbanization, climate change, deforestation, reduced rainfall, and inadequate conservation measures are also negatively affecting irrigation, wastewater treatment, and drinking water supply in the Peshawar Valley.[11]

This situation could become a serious problem in the future. Any water diversion in the Chitral River on the Pakistani side of the Kabul River basin could negatively affect the population living on the Afghan side of the basin. As a result, in the absence of a regulatory framework between the two riparian states, shared waters could cause serious disputes.[3]

This is a serious threat for a country like Pakistan, which is heavily dependent on agriculture. According to a report by the World Resources Institute, even without taking into account the potential decline in water flow from the Kabul River, Pakistan could become the most water-scarce country in the region by 2040.[14]

## CONCLUSION

In general, the water factor is of decisive importance today for countries to develop long-term strategies and conduct their foreign policy on this basis. Consequently, in international relations, there are cases of the use of water diplomacy between countries to ensure water security. Relations between Afghanistan and Pakistan, in particular, the impact of the water factor on the security issues of the two countries, is considered one of the most priority areas of the policy of these countries. Afghanistan and Pakistan, which share the waters of 9 rivers in total, still do not have a single legal basis for control over these rivers, that is, they have not signed a bilateral document-agreement regulating the use of water resources. This, of course, can cause conflicts in the use of river water for various purposes. In particular, the projects being built and planned on the Kabul River;

The lack of an agreement on dams and reservoirs could further strain relations between the two neighbors and lead to the emergence of acute problems. The situation is likely to threaten the security of not only Afghanistan and Pakistan, but also neighboring countries.

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