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PROBLEMS OF DISTRIBUTION OF WATER RESOURCES BETWEEN IRAN AND AFGHANISTAN AND THEIR IMPACT ON CENTRAL ASIA

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ABSTRACT

Recently, there has been growing concern and speculation about the conflict between the Islamic Emirate of Afghanistan and Iran over the water issue. Water scarcity and its management are serious problems facing many countries of the world. In this article, we aim to shed light on the potential factors behind the water resource tensions between Afghanistan and Iran. It is essential to approach the subject with an open mind as we strive to gain a deeper understanding of the complexities surrounding the region's water challenges.

KEYWORDS

Kajaki and Kamolkhan dams, Helmand River, water shortage, water infrastructure, regional water resources, International Fund to Save the Island.

INTRODUCTION

Water scarcity and its management are causing serious problems for countries around the world. The water conflict between the Islamic Emirate of Afghanistan and Iran illustrates the complexities involved in sharing water resources, particularly in regions where water scarcity is a pressing issue. It is imperative that both countries engage in constructive dialogue in search of equitable solutions that meet the needs of their

populations and ensure sustainable management of shared water resources.

The main part

It has been a point of contention between Iran and Afghanistan, and water is an important resource for both countries. Iranian and Afghan farmers have historically depended on water flow from Helmand.

About 97 percent of the water taken from this river is used for agriculture in Afghanistan, and about 80 percent of the downstream is used for irrigation in Iran. Afghanistan and Iran have accused each other of stopping the flow of Helmand water. Iranian officials have repeatedly disputed Afghanistan's claims in the past year and criticized hydroelectric dams built across Helmand.

In 2020, Iran and Afghanistan diverted the flow of water, continuing to dig wells and build dams. Most of the dam construction projects are located near the Iranian border. These development projects include Salma Dam, Kamal Khan Dam and Bakhshabad Dam. As the construction of the Kamal Khan Dam nears completion in December 2020, former Iranian ambassador to Afghanistan, Abolfazl Zohrevand, has warned that the dam will affect the flow of water into Iran's wetlands. Such warnings have been issued by Iranian officials before, and some dam projects were attacked by the Taliban in 2020. In October last year, the Taliban killed six security personnel guarding the Kamal Khan hydroelectric and irrigation dam located in Chahar Burjak district of Nimroz region [1].

Iran's Special Envoy for Afghanistan, Hassan Kazemi-Komi, announced on June 16, 2023 that the Taliban-led interim government of Afghanistan had agreed to allow Iranian experts to assess water levels at Afghanistan's Kajaki Dam on the Helmand River. The decision comes amid heightened tensions over Iran's right to draw water from the river.

The Helmand River, which flows through Iran's drought-stricken Sistan and Baluchistan provinces, has been the subject of a long-standing agreement based on a 1973 treaty. This agreement is Iran's river to the year

It provides for the right to receive 820 million cubic meters of water.

In recent weeks, Iranian officials, including President Ibrahim Raisi and Foreign Minister Hossein Amir-Abdullah Khan, have demanded that the Taliban respect Iran's water rights. Iran's space agency has previously accused the Taliban of altering the course of the river, according to satellite images.

Despite calling Iran's frequent requests and comments "harmful," the Taliban declares its commitment to the 1973 accord. The Taliban's acting foreign minister, Amir Khan Muttaqi, confirmed in early May that the Taliban had recognized Iran's stake in water resources.

However, recent tensions along the Iran-Afghanistan border once again point to the weakness of the Taliban regime. While high-ranking officials are negotiating over water resources, militants are provoking and declaring jihad across the country.

In the conditions of the division of labor in Central Asia, the Soviet Union equipped Kyrgyzstan and Tajikistan with water dams to store water in the winter and to irrigate the cultivated fields of Uzbekistan, Turkmenistan and Kazakhstan during the farming seasons (spring and especially summer). In return, those three republics were supposed to supply Kyrgyzstan and Tajikistan with oil, natural gas and coal, especially in winter to meet their energy and heat needs. The independence of the Central Asian republics in 1991 called into question this system of joint management of water resources. Eager to develop their hydropower potential as a form of energy autonomy from their hydrocarbon-producing neighbors, Kyrgyzstan and Tajikistan, together responsible for 85% of Central Asia's water supply, have begun building dams (Kambarota in 2022 for Kyrgyzstan, Rogun in 2016 for Tajikistan), primarily for

their domestic put forward a water management strategy aimed at meeting their needs.

Dependent on water supplies from Kyrgyzstan and Tajikistan, the three downstream countries do not see themselves as exactly in the same situation. On the one hand, Uzbekistan (80 percent) and Turkmenistan (97 percent) are much more dependent on water than Kazakhstan, with only 40 percent of water coming from abroad. There are similarities between Kazakhstan and Turkmenistan, but both countries depend on non-Central Asian water suppliers. Before flowing into the part of the Caspian Sea under the sovereignty of Kazakhstan, the Ural River rises from the mountains of the same name in Russia, the Ili River rises in Xinjiang and flows into the Balkhash basin, where the development of hydropower projects is of concern to the Kazakh government. Turkmenistan, in turn, depends on the Harirud and Murgob rivers

(Afghanistan) and the Atrek river (Iran) [2]. On the other hand, low population density, high standard of living, and industrialization of the economy make Kazakhstan use water resources more responsibly than its neighbors in lower Central Asia. In Turkmenistan (20%) and Uzbekistan (26%) [90% of water consumed in Uzbekistan is used for agriculture [3]. It is worth noting that Uzbekistan alone occupies half of the irrigated land in Central Asia, or 4.2 million hectares] The importance of agriculture as a share of GDP means that the two countries with the highest water use in the region have high water consumption: for Turkmenistan, 112, 5% and 120.5% for Uzbekistan. Although their indicators of water use are quite reasonable, Kazakhstan (21.7%), Kyrgyzstan (32.6%) and Tajikistan (44.6%), according to the criteria set by the European Environment Agency (water use rate above 20%).

Annual water contribution of Syr Darya and Amudarya by countries (km³)

The country	Syrdarya	Amudarya
Kazakhstan	2.5	0
Uzbekistan	5.6	6.8
Turkmenistan	0	1.4
Kyrgyzstan	27.5	1.6
Tajikistan	1	58.8
Afghanistan and Iran	0	10.8
Total	36.6	79.4

In 40 years, the availability of water resources in Central Asia has decreased from 8400 m³ per capita to only 2500 m³. If annual population growth continues to see 1.5% – with a peak of 1.6% in 2023 – Central Asia risks falling below the water-stressed threshold from 2030 onwards. The inadequacy of the local water

infrastructure is mainly from the Soviet era [4]. Since 1991, it has not been adequately maintained by the new authorities and cannot effectively respond to the increased demand for water.

For example, in agriculture, 70 percent of water destined for irrigated land in lower Central Asia is lost en route, with additional explanatory factors, including drought and climate change, for which the region is already paying a high price [5]. Warming in Central Asia, which has been twice the global average since the 1970s, is causing glaciers to melt in Kyrgyzstan and Tajikistan, resulting in reduced river flows. In its most negative predictions, the World Bank predicts a 5% drop in the Syrdarya basin, and a 15% drop in the Amudarya.

Initiatives aimed at the comprehensive management of water resources at the regional level have failed since 1991, but the appointment of Shavkat Mirziyoyev as the President of Uzbekistan in 2016 gave new life to this issue. Uzbekistan, which opposed hydropower projects in upstream countries under Islam Karimov, is now making joint efforts in this regard: in 2018, it formed a working group on cooperative water management with Tajikistan, and even Qambar-He offered to finance the construction of Qambar-Qambar-Qambar. Ata project in Kyrgyzstan and Rogun HPP in Tajikistan.

In addition, on August 6, 2021, the third consultative meeting of the leaders of the Central Asian countries in Turkmenbashi (the next initiative of President Mirziyoyev) led to the adoption of a joint declaration on water-related issues. At that meeting, the five Central Asian leaders emphasized the importance of agreeing on common positions on glacier conservation, water purification and drinking water consumption, as well as the importance of supporting the actions of the International Fund for Saving the Island, an organization that Kyrgyzstan has turned away from. For its part, Kazakhstan is showing great interest in water management: after the establishment of the Water Council in March 2022, the government of

Astana is seeking to restart the canceled project of the Central Asian Hydropower Consortium [6].

Unlike Turkmenistan, which remains the largest consumer of water in Central Asia at the national level, Kazakhstan and Uzbekistan are fighting against the waste of this resource. Kazakhstan

It announced the renewal of 120 irrigation canals by 2025, with the goal of reducing water loss by 800 million m³ annually. Uzbekistan has chosen to build an infrastructure focused on intelligent water management: for example, it intends to make wider use of water-saving technologies (planned to be introduced on 2 million hectares of cultivated land) and micro-irrigation technologies (600,000 hectares). 53 The decline in Uzbekistan's cotton exports between 2000 (40%) and today (10%) shows how Uzbekistan has shifted its focus to other agricultural products. In this regard, it took a lead from Kazakhstan, which quickly switched from cotton to wheat, which uses half as much water. The restructuring of the agricultural industry allowed Kazakhstan to establish itself as a major grain producer, better positioned to overcome food insecurity caused by the war in Ukraine. The truth is that if Central Asian countries want to increase their water productivity, the main challenge they will have to face is to end the practice of extensive irrigation of arid and semi-arid areas inherited from the Soviet Union to redirect river flows.

"By 2050, the water level in the two largest rivers of our region - Syrdarya and Amudarya - will decrease by almost 15%. We call for more funding to support the International Fund for Save the Island in order to prevent ecological disaster in the region. Water problems and climate change are closely related. Central Asia is a region where water security can be achieved only through close cooperation and effectively selected joint measures," Tokayev said in his

speech at the Astana International Forum on June 8, 2023.

IN CONCLUSION

currently, the Koshtepa canal, which is planned to be 285 km long, 100 meters wide, and 8.5 meters deep, with a capacity of 650 cubic meters per second, may cause a big problem for Uzbekistan.

According to a 2012 report by the US Central Intelligence Agency, "The misallocation of water causes many conflicts. Water basins are widely used for political pressure worldwide, and there is a possibility of using water as a weapon.

This issue of water distribution is one of the important and priority tasks that require a solution. Untimely measures will inevitably have a negative impact on the relations between Central Asian countries in the near future, and may even cause armed conflicts.

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