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MP-IDSA
Issue Brief

Afghanistan's Qosh Tepa Canal: Potential Impact on Uzbekistan and Turkmenistan

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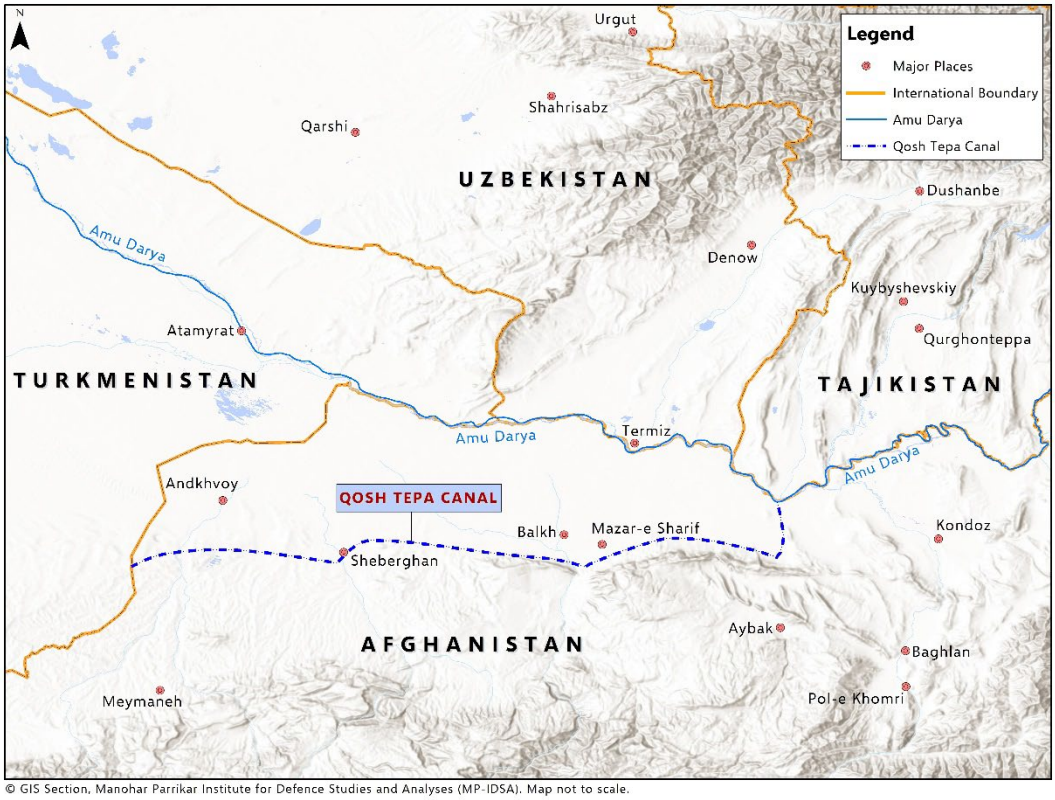
Summary

The Qosh Tepa Canal project in Northern Afghanistan aims to divert water from the Amu Darya, potentially impacting Uzbekistan and Turkmenistan by reducing water flow in their shared river system. This could strain regional water resources, affecting agriculture and local economies in both countries.

On 30 March 2022, Taliban Deputy Prime Minister Mullah Abdul Ghani Baradar launched the construction of the Qosh Tepa Canal, aimed at diverting water from the Amu Darya, a transboundary river highly relied on by Tajikistan, Uzbekistan and Turkmenistan.[1] This is among the numerous infrastructural projects that the Taliban has undertaken since taking over Afghanistan in August 2021. Upon completion, the 285-km-long Qosh Tepa Canal, starting in the Kaldar district of northern Balkh Province, will pass through Jawzjan province and is expected to end in Andkhoy district in Faryab Province.[2] The canal aims to convert 550,000 hectares of arid land into farmland.

Map 1: Route of Qosh Tepa Canal



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Soviet Legacy

The Soviet Union's agricultural policies encouraged the production of cotton through increased investment and technological borrowing.[3] Large infrastructure projects were initiated in the Amu Darya Basin, wherein downstream riparian states—Uzbekistan and Turkmenistan—would majorly use the water to grow cotton, while Tajikistan, which is upstream, would use the water to generate energy. The Soviet

[1] **"The Qosh Tepah Canal and Afghanistan's Water Right in Amu Darya"**, *Opinio Juris*, 4 May 2023.

[2] **"Work on Second Phase of Qosh Tepa Canal Starts"**, *TOLO News*, 11 October 2023.

[3] Richard Pomfret, **"State-Directed Diffusion of Technology: The Mechanization of Cotton Harvesting in Soviet Central Asia"**, *The Journal of Economic History*, Vol. 62, No. 1, March 2002.

Union seemed to dominate the water resource management in the basin, sidelining Afghanistan, a weaker neighbour, by not including it in the 1987 negotiations that allocated water among the four Soviet Republics.[4] During the late 1980s, as the Soviet Union became concerned about the Aral Sea crisis, these meetings concluded with the adoption of Protocol 566 by the Scientific and Technical Council of the USSR's Ministry of Water Resources.[5] The Protocol allocated annual water distribution limits for the Union Republics of the Amu Darya Basin and established River Basin Organizations (Basseynoe Vodnoe Ob'edinenie, BVOs) to manage water within these limits.[6]

Table 1: Central Asian Countries' Water Allocation – Protocol 566

Country	Limit (bcm / year)	Share per cent
Uzbekistan	29.60	48.20
Tajikistan	9.50	15.4
Kyrgyzstan	0.40	0.6
Turkmenistan	22.0	35.8
Total	**61.50**	**100**

Source: Protocol 566: Improvement of the Scheme on Complex Use and Protection of Amu Darya Water Resources

Post-Soviet Collapse and Afghanistan

Following the dissolution of the Soviet Union in 1991, the Central Asian Republics (CARs) established multiple agreements and organisations for the water management of Amu Darya where they maintained the quotas set by Protocol 566.[7] Even though based on Soviet legacies, these agreements have helped the CARs to take initiatives in strengthening regional cooperation over water resources and their management. Until now, the water from the Amu Darya has been divided among the five northern neighbours of Afghanistan—Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and

[4] Ikramuddin Kamil, **"Afghanistan, the Amu Darya Basin and Regional Treaties"**, *Chinese Journal of Environmental Law*, Vol. 5, No. 1, 2021.

[5] Protocol 566, signed on 10 September 1987 is an agreement that authorised the extraction of 61.5 billion cubic metre of water from Amu Darya by the four SSRs (Kyrgyzstan, Tajikistan, Uzbekistan, Turkmenistan), excluding Kazakhstan while it significantly assumed that Afghanistan would divert 2.1 billion cubic metre from the river. However, it does not appear that Kabul was consulted during this time. This protocol still remains the primary framework for water allocation among these states. See **"Protocol 566: Improvement of the Scheme on Complex Use and Protection of Amu Darya Water Resources"**, Ministry of Land Reclamation and Water Management of the Soviet Union, 10 September 1987.

[6] Kai Wegerich, **"Hydro-Hegemony in the Amu Darya Basin"**, *Water Policy*, Vol. 10, No. S2, 2008.

[7] See **"Protocol 566: Improvement of the Scheme on Complex Use and Protection of Amu Darya Water Resources"**, no. 5.

Uzbekistan—through the 'Agreement on Cooperation in the Field of Joint Management of the Use and Conservation of Water Resources of Interstate Courses' (Almaty Agreement of 1992).[8] This agreement also created the Interstate Commission for Water Coordination (ICWC) for management of regional water allocation.

It is crucial to note that, even though there were established mechanisms for water management, Afghanistan was excluded from these regional agreements to oversee the distribution and management of water resources. By virtue of being under the Soviet Union, the CARs have had standard practices of water management and governance. On the other hand, Afghanistan suffered political challenges of its own. Afghanistan's fairly unstable political scenario could have led to the CARs lack of will to engage with the former to focus on water-sharing treaties.

Moreover, there is a general lack of cooperation and commitment among the Central Asian states as well. Decisions in the existing regional institutions like ICWC must be made unanimously and all member states have a veto. This implies that "agreement is dependent on the 'political will' of both upstream and downstream users".[9] Thus, Afghanistan's exclusion may be indicative of the lack of commitment of other riparian states to change the existing status-quo.

Implications on Afghanistan's Food Security

The canal is being constructed during challenging times for the Afghan people. Rising temperatures are rapidly changing precipitation patterns throughout Afghanistan and limiting water availability. Further, water scarcity also impacts the livelihoods of the locals, and contributes to increased disease outbreaks and causes displacement. The canal will supply water to the parched northern plains of Afghanistan, which are becoming more arid as a result of climate change.

The country is facing high food insecurity, making its population heavily dependent on foreign aid for basic necessities. The Taliban is funding the project with its resources, primarily generated by selling mining rights to Chinese companies.[10] The canal aims to irrigate 550,000 hectares of land across Afghanistan's northern provinces and is expected to provide employment to a quarter million people. Thus, the water diversion of Qosh Tepa could increase irrigation and agriculture in the region, resulting in slight improvements in food security and livelihoods.

Additionally, since taking over Kabul, the Taliban stressed on its vision to ban opium poppy production. The ban announced in April 2022 has had remarkable success in

[8] See **"Agreement on Cooperation in the Field of Joint Management of the Use and Conservation of Water Resources of Interstate Courses"**, 1992.

[9] Stuart Horsman, **"Afghanistan and Transboudary Water Management on the Amu Darya: A Political History"**, Central Asian Waters, edited by Muhammad Mizanur Rahaman and Olli Varis, Water & Development Publications, Helsinki University of Technology, 2008, p. 69.

[10] **"Taliban Selling Afghanistan's Mines Despite Sanctions"**, *Voice of America*, 7 September 2023.

drastically lowering the cultivation of opium poppies, from an estimated (233,000 ha) in 2022 to 10,800 (8,600–15,100) ha in 2023.[11]

Table 2: Opium Poppy Cultivating Provinces, 2019–2023

Province	2019	2020	2021	2022	2023	Reduction (ha) 2022 - 2023	Percentage of country total
Kandahar	14,000	20,600	17,000	29,200	3,550	25,650	33%
Badakhshan	4,700	6,400	3,600	4,300	1,600	2,700	15%
Zabul	200	400	1,000	1,550	900	650	8%
Uruzgan	11,600	13,400	9,700	14,600	650	13,950	6%
Faryab	6,600	13,100	4,800	6,900	550	6,350	5%
Nangarhar	3,100	2,200	2,000	5,200	550	4,650	5%
Badghis	7,600	22,400	4,900	14,100	400	13,700	3%
Helmand	90,700	115,600	109,800	122,000	150	121,850	1%
Balkh	7,000	5,900	2,200	4,500	150	4,350	1%
Farah	7,100	10,500	11,500	15,800	150	15,650	1%

Estimates are rounded, percentage changes have been calculated based on precise figures.

Source: Afghanistan Opium Survey 2023, p. 18

As indicated in Table 2, provinces of Balkh and Faryab that will benefit from the water supply of Qosh Tepa have also witnessed a reduction in poppy cultivation by 4,350 ha and 6,350 ha from 2022 to 2023 respectively, while Jawzjan has been poppy-free from 2023.[12] Therefore, the Taliban's ban on poppy cultivation combined with the country's basic needs of food and livelihood, could encourage communities to move away from illicit crop cultivation and move towards growing licit crops.

However, with a reduction in international aid, restricted access to international payment systems and sanctions against the Taliban, a sustainable reduction in opium cultivation could only be attained if accompanied by long-term development support throughout the entire country, which at the moment seems unclear.

In the face of a humanitarian crisis, water from the canal would help Afghan farmers in producing crops such as wheat and maize, for local consumption. The canal could also increase the agriculture possibilities in the arid northern regions, creating employment opportunities for the poor. The construction process of the first phase

[11] **"Afghanistan Opium Survey 2023"**, United Nations Office on Drugs and Crime, November 2023.
[12] Ibid., p. 20.

itself has employed more than 4,000 workers in its active work sites on the canal.[13] Thus, in a long run, the construction of the canal could benefit in creating a sustainable food security environment and provide employment for Afghanistan's populace.

Under Taliban's direction, the canal has made impressive progress, showcasing their will, autonomy and strength. Whilst doing so, it has also raised significant concerns for the CARs as well. In December 2023, Rivers Without Borders, an organisation dedicated to safeguarding transboundary watersheds, reported that the under-construction canal was leaking.[14] Analysts noted that satellite images of the nine-kilometre-long spill was steadily increasing, indicating the Taliban's inability to correct the situation.[15] Therefore, as concerns rise over the impact of water diversion upon the canal's completion, it is unclear whether the Taliban have considered the impact of such infrastructure construction on the downstream Central Asia countries.

Concerns and Scarcity Crisis in Uzbekistan and Turkmenistan

While the construction of Qosh Tepa might seem like a source of hope for Afghanistan's water problems, diverting 10 billion cubic meters (bcm) of water annually from the Amu Darya[16] has raised concerns among the downstream Central Asian countries. The Amu Darya's waters account for 80 per cent of all accessible water resources in the region. Thus, the Qosh Tepa canal will significantly impact the CARs, particularly Uzbekistan and Turkmenistan.[17] Some studies have suggested that within 5–6 years of the canal's completion and operation, Turkmenistan and Uzbekistan's average water intake capacity along the river's middle and lower reaches could drop from 80 per cent to 65 per cent.[18]

Uzbekistan is already dealing with water depletion mainly due to droughts, desertification and climate change. With approximately 40 per cent of Uzbekistan's population depending directly or indirectly on the country's agricultural sector, where cotton is the main crop and contributes to around 17 per cent of the country's GDP,[19] further diversion of water could exacerbate water scarcity in the country.

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[13] **"Officials: 25% of 1st Phase of Qosh Tepa Canal Construction is Completed"**, *TOLO News*, 25 November 2022.

[14] **"Central Asia in Focus: Is the Taliban's Controversial Canal Leaking Water?"**, *Radio Free Europe/Radio Liberty*, 19 December 2023.

[15] **"Ecologists Find Traces of Accident at Taliban-built Kosh-Tepa Canal"**, *Rivers Help*, 12 December 2023.

[16] **"The Qosh Tepa Canal: A Source of Hope in Afghanistan"**, *The Diplomat*, 1 December 2023.

[17] **"Water Crisis Looming: Uzbekistan and Turkmenistan's Imperative for the Grand Afghan Canal"**, Central Asian Bureau for Analytical Reporting, 22 July 2023.

[18] Ibid.

[19] Ibid.

For Turkmenistan, the two main crops—cotton, primarily grown for export, and wheat, which is consumed domestically—create sub-dependency on a vast amount of water used for irrigation. Agriculture accounts for approximately 10 per cent of Turkmenistan's GDP.[20] It also employs nearly half of the country's workforce. Therefore, cotton production plays a dominant role in both the economies of Uzbekistan and Turkmenistan and most water resources are channelled towards its sustenance. Thus, any further decrease in water supply might have far-reaching implications for both countries' agriculture and food security.

Furthermore, Uzbekistan and its populace are already suffering due to the aridification of the Aral Sea. Over the last 50 years, the total flow of rivers into the Aral Sea has dropped to an average of 12.7 cubic kilometres or almost 4.5 times.[21] This has intensified the desertification process of the region, leading to the formation of vast salt fields on the dessicated parts of the Aral Sea, turning into what is now known as 'Aralkum desert'. The desertification has also impacted the socio-economic situation through the loss of the sea's fishing industries. There are also changes in the demographic situation and health conditions of the Uzbek population, especially in the Autonomous Republic of Karakalpakstan. As a result of exposure to significant pollutants, there has been a rise in infant mortality, tuberculosis and bronchitis among the population.[22] The decrease in river flows to the Aral Sea and its desiccation have led to the salinization of the soil in the region, which could increase due to water diversion.

Due to the growing climate change induced water scarcity, poor infrastructural management, and lack of regional coordination and cooperation, the canal could complicate relations between Afghanistan, Uzbekistan and Turkmenistan. As a result, the stakes remain very high as the countries deal with the uncertainties and challenges that could arise due to their shared water resources, with the potential of turning into a transboundary conflict.

Way Ahead

The Central Asian Republics in the last three years have taken several measures to accommodate with the Taliban regime in Afghanistan. It is crucial to note that even without the construction of the Qosh Tepa canal, the Central Asian Republics of Uzbekistan and Turkmenistan have experienced water shortages. Water diversion through the canal could lead to increased water shortages. Even though the Uzbek government has supported farmers in adopting methods such as drip irrigation, it

[20] Ibid.

[21] **"Aral Sea"**, UN Multi-Partner Human Security Trust Fund for the Aral Sea Region in Uzbekistan, 2021.

[22] Ibid.

still has a long way to go before a holistic change in the agricultural production patterns and techniques can be seen.

In response to the impending water crisis, Uzbekistan has raised its concerns and reached out to the Taliban through diplomatic channels. In late March 2023, officials from Uzbekistan travelled to Afghanistan for talks on the canal that ended up diverting vast amounts of water needed by Uzbek farmers. Following the visit, the Ministry of Foreign Affairs in its statement mentioned discussion on 'issues of cooperation in the water and energy sectors'.[23] The Taliban announced on X that

> Uzbekistan is ready to cooperate with the Islamic Emirate in completing the Qosh Tepa Canal project by taking the right to water from the Amu River in accordance with international norms and fully considering the privileges and rights.[24]

In addition to promoting diplomatic interaction with Afghanistan to handle transboundary water management, Uzbekistan is implementing water-saving technologies as well.[25]

In March 2024, during a delegation visit from Afghanistan to Turkmenistan for a business forum on the trade and economic relations of both the countries, the Afghan delegation held a meeting at the Ministry of Foreign Affairs of Turkmenistan where the water sector was a topic of interaction.[26] Without explicitly mentioning the Qosh Tepa Canal project, the Turkmenistan Foreign ministry stated that

> The Turkmen side noted that the rational use of water resources in the region should be carried out based on generally recognised norms of international law regulating the regime of water use on transboundary rivers, watercourses and border lakes.[27]

One major issue remains Afghanistan's exclusion from regional water agreements. This can complicate collaborative solutions. Therefore, it becomes imperative for the CARs and Afghanistan to agree on new measures of water utilisation quotas for Amu Darya. New agreements should also be reached on water resources management in the region. Additionally, it should be noted that whilst having diplomatic engagements, neither Uzbekistan nor Turkmenistan officially recognises the Taliban regime in Afghanistan. While no country has denied Afghanistan's right to withdraw water from the Amu Darya, regional, ecological and infrastructural issues have been in the limelight as a result of the Taliban's decision regarding the Qosh Tepa canal.

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[23] **"The Delegation of Uzbekistan Visited Afghanistan"**, Ministry of Foreign Affairs Republic of Uzbekistan, 22 March 2023.

[24] **"The Uzbek delegation further added that Uzbekistan..."**, X (formerly Twitter), 22 March 2023.

[25] **"Qosh Tepa Canal Construction Sparks Water Scarcity Concerns in Uzbekistan"**, *Daryo*, 1 June 2024.

[26] **"Information for the Media"**, Ministry of Foreign Affairs of Turkmenistan, 7 March 2024.

[27] Ibid.

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