

AFGHANISTAN'S QOSH TEPA CANAL: THE UNCALCULATED WILDCARD IN CENTRAL ASIAN WATER DIPLOMACY

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Abstract

Since 2022, the de facto Taliban administration has built the roughly 285-kilometre Qosh Tepa Canal in northern Afghanistan. The canal has a weirless intake on the left bank of the Amu Darya, and it is designed to irrigate about 550,000 hectares across Balkh, Jawzjan, and Faryab provinces. Estimates of its eventual abstraction range from about 15 to 25 percent of the river's annual flow, and the more extreme published figures approach one-third (Ilkhamov, 2023; Kuchins et al., 2024; Overland et al., 2025). The project breaks with the basin's operating logic in three ways. It is unilateral, it is not offset by any reciprocal benefit to downstream states, and it is executed by an actor excluded from every Soviet and post-Soviet allocation regime. This article traces the canal's historical origins, evaluates its engineering vulnerabilities, and assesses the exposure of Uzbekistan and Turkmenistan. It contrasts the canal with the familiar upstream–downstream bargaining between hydropower and irrigation interests. It also examines the legal void created by Afghanistan's non-participation in the 1992 Almaty Agreement and the 1992 Helsinki Convention. I argue that Qosh Tepa converts Central Asian water security from a manageable sub-regional trade-off into an urgent multilateral necessity, and I propose institutional and technical pathways for responding.

Keywords: Qosh Tepa Canal; Amu Darya; transboundary water law; Central Asia; water diplomacy; Afghanistan; Uzbekistan; Turkmenistan

Chapter 1. Introduction

1.1 Background and Rationale

The Amu Darya is the largest river in Central Asia and the lifeline of the region's most populous downstream economies. For most of the twentieth century its waters were allocated through Soviet planning, and after 1991 the successor states inherited both the allocation quotas and the institutions that administer them. Afghanistan, whose territory contributes to the basin and forms a long stretch of its southern bank, was not a participant in this order (Kamil, 2021). Its exclusion carried little practical cost while Afghan withdrawals remained small.

That changed with the construction of the Qosh Tepa Canal, which the de facto Taliban administration began building in 2022. Designed to run about 285 kilometres and irrigate roughly 550,000 hectares, the canal is the largest single abstraction in the basin outside the established treaty framework (Kuchins et al., 2024). It therefore raises questions that scholars of the Aral Sea basin have not previously had to address in a sustained way (Micklin, 2016).

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1.2 Problem Statement

Existing water-governance arrangements in the Amu Darya basin were built around a reciprocal bargain between upstream hydropower interests and downstream irrigation interests. Afghanistan's unilateral, non-negotiated abstraction does not fit that model, because it creates a deficit for downstream states without any offsetting benefit that could be traded. The problem this thesis addresses is how such an abstraction should be understood analytically, what legal and institutional tools exist to manage it, and what practical steps the riparian states can take in the absence of a shared treaty framework.

1.3 Research Questions

The thesis is guided by one central question: how does the Qosh Tepa Canal change the structure of water security and water diplomacy in the Amu Darya basin? It pursues this through four sub-questions:

RQ1. What historical and institutional factors explain Afghanistan's exclusion from the basin's allocation regime, and how did the Qosh Tepa concept evolve into a state priority?

RQ2. What are the engineering characteristics, vulnerabilities, and likely hydrological effects of the canal, and how exposed are Uzbekistan and Turkmenistan?

RQ3. How does a non-reciprocal abstraction differ from the upstream–downstream trade-offs that structure existing regional diplomacy, and how have Tashkent and Ashgabat responded?

RQ4. What does international watercourse law provide in this situation, and what institutional and technical pathways could integrate Afghanistan into regional water governance?

1.4 Objectives and Significance

The thesis has three objectives. The first is analytical: to characterise Qosh Tepa as a structural disruption to basin governance rather than merely another dispute over volumes. The second is legal: to map the customary and treaty norms that apply to an actor outside the regional agreements. The third is practical: to formulate a phased set of recommendations for downstream states and regional institutions. Its significance lies in bringing together hydrological, legal, and geopolitical perspectives on a case that is moving faster than the academic literature.

1.5 Scope, Methodology, and Sources

The study is a qualitative, desk-based case study combining doctrinal legal analysis with regional political analysis. Its geographic scope is the Amu Darya basin, with particular attention to Afghanistan, Uzbekistan, and Turkmenistan, and to Tajikistan and Kyrgyzstan as upstream actors. Its temporal scope runs from the Soviet allocation regime of the 1980s to the canal's construction in the mid-2020s. The legal analysis draws on the customary principles of equitable and reasonable utilisation and the no-harm rule, as codified in the 1997 UN Watercourses Convention and discussed in the standard treatise literature (McCaffrey, 2019). The empirical analysis draws on policy reports, academic articles, and open-source monitoring of the canal's construction (Ilkhamov, 2023; Kuchins et al., 2024; Overland et al., 2025; Crosslin, n.d.). No primary hydrological data or interviews were collected, and the limitations that follow from this are discussed in Section 6.3.

1.6 Summary of the Argument

The Amu Darya's post-Soviet governance assumed four riparians: Tajikistan, Uzbekistan, Turkmenistan, and, at the margins, Kyrgyzstan. Afghanistan was treated as a residual user and never as a co-manager. Qosh Tepa ends that assumption. The canal is a legitimate exercise of development aspirations by a food-insecure state, but it is also a hydrological fait accompli. Downstream governments have moved from alarm to pragmatic engagement, and that pragmatism is fragile. It is necessary to bring

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Afghanistan into a transparent, data-driven framework, whether through IFAS/ICWC observer status or a volumetric agreement, and to accelerate downstream efficiency reforms.

1.7 Structure of the Thesis

Chapter 2 sets out the historical context, including Soviet-era allocation, Afghanistan's exclusion from post-Soviet institutions, and the genealogy of the Qosh Tepa project. Chapter 3 analyses the canal's engineering, its likely hydrological effects, and the exposure of Uzbekistan and Turkmenistan. Chapter 4 examines the geopolitical mechanics of a non-reciprocal deficit and the diplomatic responses of downstream states. Chapter 5 addresses the legal framework and the institutional pathways for integrating Afghanistan into regional governance. Chapter 6 presents policy recommendations, the conclusion, and the study's limitations and directions for future research.

Chapter 2. Historical Context and the Excluded Riparian

2.1 The Amu Darya and the architecture of Soviet allocation

The Amu Darya, at roughly 2,500 kilometres, is Central Asia's largest river by discharge. It forms in the Pamir and Hindu Kush ranges where the Vakhsh and Panj rivers meet. From there it flows along the borders of Tajikistan, Afghanistan, and Uzbekistan, crosses Turkmenistan, and re-enters Uzbekistan before reaching the desiccated Aral Sea basin. Runoff formation is concentrated in the mountainous upper basin, mostly in Tajikistan. Consumption is concentrated downstream, above all in Uzbekistan's cotton and wheat belts and in Turkmenistan's Karakum Canal system. Scholars of the Aral Sea catastrophe have documented how Soviet planning subordinated the river to irrigated monoculture. Diversions that grew from the 1960s onward left the sea a fraction of its former extent (Micklin, 2016).

Basin allocation in the late Soviet period was formalised through Protocol 566 (1987), issued by the USSR Ministry of Land Reclamation and Water Resources. It divided Amu Darya flows among the Soviet republics of Tajikistan, Turkmenistan, Uzbekistan, and Kyrgyzstan. Afghanistan, though its territory contributes to the basin, was not a party. The Soviet Union and Afghanistan regulated the shared river principally as a border-regime question, and no allocation regime treated Afghanistan as a rights-holder (Kamil, 2021). This asymmetry is the foundation of Kabul's contemporary rhetorical position. Afghan officials describe the canal as the exercise of a sovereign right over a river from which the country was historically excluded. Downstream capitals see it as a threat to a water order that generations of planners built on the assumption of Afghan absence.

2.2 Exclusion from post-Soviet institutions

When the USSR dissolved, the five Central Asian republics adopted the 1992 Almaty Agreement on cooperation in the management, use, and protection of interstate water resources. The agreement affirmed the continued validity of Soviet-era allocation quotas and created the Interstate Commission for Water Coordination (ICWC), with its executive bodies for the Amu Darya and Syr Darya basins. In 1993 the International Fund for Saving the Aral Sea (IFAS) was established to mobilise resources for the Aral basin. Afghanistan participates in none of these bodies. It has had, at most, sporadic technical contacts with them.

The consequence is structural. The institutions that were meant to govern the river cover only a portion of its riparians and, by extension, only a portion of its withdrawals. Pre-2021 Afghan use of the Amu Darya basin was modest, and expert estimates put it at some 3–5 cubic kilometres per year (Scientific Information Center of the Interstate Commission for Water Coordination [SIC ICWC] estimates, as summarised by CAWater-Info, n.d.). Given that modesty, exclusion carried little practical

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cost. Qosh Tepa removes that cushion. Estimates suggest that Afghan consumption in the basin could rise to 9–11 cubic kilometres per year (CAWater-Info, n.d.).

2.3 From Daoud to the Taliban: the genealogy of Qosh Tepa

The canal is not a Taliban invention. The concept dates to the 1970s and the government of Mohammad Daoud Khan, who recognised that drought-prone northern Afghanistan could become productive with reliable access to the Amu Darya (Kuchins et al., 2024). For decades it remained a paper project. In the late 2010s the Ghani government revived it. In December 2018 the Afghan government contracted the U.S. engineering firm AECOM to prepare a feasibility study financed by USAID. By August 2021, the design documentation was largely complete and the intake location identified, leaving the incoming authorities with a project that needed principally financing and construction capacity (Kuchins et al., 2024). The first few kilometres had been excavated shortly before the Taliban takeover.

The Taliban administration elevated the canal to a national priority. The logic is straightforward. Agriculture employs a large majority of Afghans, the country faces recurrent drought and acute food insecurity, and international development assistance has been sharply curtailed since 2021. A visible, nationally financed megaproject offers both food-security benefits and political legitimacy to a government without broad international recognition (Kuchins et al., 2024; Overland et al., 2025). Construction proceeded at extraordinary speed. Open reporting indicates that by March 2025 the canal had reached roughly 230 kilometres, and by mid-2026 management of the completed first stage was reportedly transferred to a state administrative body. Full operation is expected around 2028, and some assessments point to earlier operation (Kuchins et al., 2024; Overland et al., 2025). Status claims here rest on rapidly evolving reporting and should be re-verified before publication.

Chapter 3. Engineering Realities, Water Abstraction, and Downstream Scarcity

3.1 Technical specifications

The main canal is planned at approximately 285 kilometres, running from an intake in Kaldar district of Balkh Province westward across the desert plains of Jawzjan to Faryab Province. Its design envisages irrigation of some 550,000 hectares of new farmland. Reported channel dimensions vary between sources, with figures of around 80 metres commonly cited for the main channel and wider profiles of up to about 125 metres at the intake, at a depth of roughly eight metres. The design abstraction is on the order of 10 cubic kilometres per year at full capacity (CAWater-Info, n.d.; Kuchins et al., 2024).

What share of the river this represents depends on the flow baseline and hydrological year. Published estimates range from about 15–17 percent to 20 percent or more. Some analysts put the figure closer to one-third of the river's flow under dry-year conditions, since a fixed absolute withdrawal takes a larger proportion of a lower flow (Ilkhamov, 2023; Kuchins et al., 2024; Overland et al., 2025). A prudent planning assumption for downstream states is a 15–25 percent reduction in Amu Darya availability in normal years, with greater vulnerability in drought years. Irrigated agriculture in the northern Afghan provinces had been constrained by limited water, and Klemm and Shobair (2010) documented earlier that northern Afghan irrigation expansion held considerable potential impact on basin water use.

3.2 Structural vulnerabilities

The canal is built to a deliberately economical standard: earthen embankments and an unlined bed, comparable to Soviet-era canals in Uzbekistan and Turkmenistan (Ilkhamov, 2023). Three vulnerabilities follow.

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Seepage losses. Unlined earthen canals in sandy desert soils lose large fractions of conveyed water to infiltration. Conveyance efficiency in comparable Central Asian systems has historically been poor. Some fraction of the diverted volume may never reach the fields, which means the gross abstraction from the river is larger than the net agricultural benefit.

Salinization and waterlogging. Seepage raises groundwater tables. In arid soils with poor drainage, capillary rise then concentrates salts at the surface. The Soviet experience in Uzbekistan and Karakalpakstan is the cautionary precedent. Without an engineered drainage system, newly irrigated Afghan lands risk degradation within a few seasons.

Embankment integrity. Satellite-based monitoring has identified a breach in the canal wall that produced a lake in the desert some ten kilometres long at its extremities. This raises questions about the structure's engineering (Crosslin, n.d.). Breaches carry a dual risk. They are a local hazard to settlements, and they are a mechanism for uncontrolled water loss that further reduces the benefit per unit abstracted.

A further vulnerability is political-economic. Subsidiary distribution infrastructure, meaning secondary and tertiary canals, drainage, and on-farm systems, will take longer to build than the main canal (Kuchins et al., 2024). The near-term hydrological effect on the river may therefore be larger than the near-term agricultural benefit. This gap invites regional criticism and also creates a window for technical cooperation.

3.3 Downstream exposure: Uzbekistan and Turkmenistan

Uzbekistan. The country's agricultural economy in the lower Amu Darya basin, especially Surkhandarya, Kashkadarya, Bukhara, Khorezm, and Karakalpakstan, depends on the river for cotton, wheat, and horticulture. Cotton is a heavily water-demanding crop, and inefficient irrigation practices entrenched by decades of state-directed production magnify demand (Ilkhamov, 2023). Uzbekistan is further exposed because the lower reaches, including the Aral Sea zone, already experience acute stress. A reduction at the middle reach compounds scarcity where the margin is thinnest. Uzbek authorities have moved on efficiency: the national water-sector strategy targets water-saving technologies, including drip irrigation and canal lining, across approximately two million hectares, about half of irrigated land, by 2030 (Overland et al., 2025). Ilkhamov (2023) argues, however, that these measures are still insufficient to absorb a shock of the anticipated magnitude and that cotton-sector reform remains overdue.

Turkmenistan. Almost the entirety of Turkmenistan's irrigation depends on the Amu Darya, via the Karakum Canal, one of the world's longest irrigation and navigation canals. It carries a large share of the river's flow across the Karakum Desert toward Ashgabat and the southern oases and supplies most of the country's irrigated agriculture. Turkmenistan's exposure is therefore concentrated and systemic in a way that Uzbekistan's, spread across multiple sources and regions, is not. Because Turkmen water and agricultural data are closely held, downstream vulnerability there is also harder for outside analysts to model.

Both states face compounding stressors: warming, glacier retreat, and rising demand. The Qosh Tepa abstraction is additive to those trends rather than a substitute for them. Analysts writing from a hydrological perspective have also stressed that flow-timing effects matter as well as annual volumes. Withdrawals during the peak irrigation season can bite harder than their annual share suggests (Overland et al., 2025).

Chapter 4. Geopolitical Mechanics and Water Diplomacy

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4.1 Reciprocal versus non-reciprocal deficits

Central Asia's established water conflict is a reciprocal trade-off. Upstream Kyrgyzstan and Tajikistan want to release water in winter to generate hydropower. Downstream Uzbekistan and Turkmenistan want it stored for summer irrigation. In the Soviet system, that tension was managed through in-kind compensation: fuel and electricity flowed upstream in exchange for summer water. After independence the barter arrangements eroded and the states have negotiated ad hoc, but the structure remains one of mutual dependence. Each side holds something the other needs.

Afghanistan's abstraction has a different structure. Afghanistan offers downstream states no equivalent counter-flow: it does not provide energy or storage services that offset the loss. The result is a non-reciprocal deficit, a loss without a corresponding gain to be traded. This is the sense in which Qosh Tepa is an "uncalculated" variable. It was absent from every bargaining model and from the calculus that underpins existing allocations. It is also politically complicated for downstream capitals to confront, given the wider reliance of Uzbekistan and Turkmenistan on stable engagement with Kabul for trade corridors, security, and transit.

4.2 The trajectory of downstream responses

Initial reactions in Tashkent and Ashgabat combined public concern with cautious official language. As the construction became irreversible, both governments shifted toward pragmatism. Uzbekistan in particular has pursued economic diplomacy with Kabul, built around trade, transit, and infrastructure links, while raising water questions in bilateral and technical channels. It has also offered technical assistance, including expertise on canal lining and irrigation modernisation, both to reduce losses at the source and to shape Afghan practice toward efficiency (Ilkhamov, 2023; Kuchins et al., 2024). The logic is defensible: since the diversion cannot be halted, cooperation on efficiency reduces the net withdrawal and builds a relationship through which data and expectations can be exchanged.

Pragmatism has costs and limits. Engaging with the de facto authorities offers a degree of legitimacy that governments are reluctant to extend formally, and the absence of international recognition complicates treaty-making. Kabul has publicly asserted its right to use the river's waters, and Afghan project officials have argued that the canal will not significantly affect river levels. This is a claim that independent hydrological modelling does not generally support (Overland et al., 2025). Tajikistan, positioned upstream with limited exposure to the canal, has less direct stake but is a pivotal actor in any basin-wide negotiation because of its hydropower infrastructure and dominant runoff contribution.

Chapter 5. International Law and Institutional Integration Gaps

5.1 The applicable legal framework

Two customary principles anchor international watercourse law: equitable and reasonable utilisation, and the obligation not to cause significant harm to other watercourse states. Both are codified in the 1997 UN Convention on the Law of the Non-Navigational Uses of International Watercourses, and the same principles run through the Helsinki Rules and their successors (McCaffrey, 2019). The customary status of equitable utilisation is widely accepted, and the treatment of the no-harm obligation and its relationship to equitable use remains debated (McCaffrey, 2019). Both principles are procedurally supported by duties to notify, consult, and exchange data on planned measures. Whether these procedural duties are fully customary is more contested than the substantive norms.

Afghanistan's treaty position is thin. It is not a party to the 1992 Helsinki Convention on the Protection and Use of Transboundary Watercourses and International Lakes, and as far as I am aware it is

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not party to the 1997 UN Watercourses Convention. It did not sign the 1992 Almaty Agreement. Afghanistan's participation in the basin's legal order therefore rests on customary international law and on whatever bilateral instruments survive from the twentieth century, mainly border-regime arrangements with the Soviet Union whose succession status and water-allocation content are contested (Kamil, 2021). Downstream states thus lack a clear treaty basis to demand notification or consultation, though customary norms remain available as arguments.

Two complicating factors deserve emphasis. First, the Taliban administration is not universally recognised, which complicates the identity of the state party that would negotiate and bind Afghanistan. Second, the equitable-utilisation analysis cuts both ways. Factors such as population dependent on the watercourse, existing uses, and social and economic needs favour Afghanistan's claim to a greater share than it has historically received. But existing downstream uses, and the availability of efficiency alternatives, favour downstream states. A legally defensible outcome is therefore likely to be a negotiated reallocation rather than a zero-sum win for either side.

5.2 Pathways for institutional integration

Several pathways are available, and they are not mutually exclusive.

1. Observer or participant status in IFAS/ICWC. The lowest-cost option is to offer Afghanistan observer participation in ICWC and IFAS working groups and data-exchange processes. This need not prejudice questions of recognition, since technical bodies can engage with functional authorities on hydrological matters. It would place Afghan operators inside a data-sharing routine and expose them to the region's accumulated technical expertise.

2. Bilateral volumetric agreements. Uzbekistan and Turkmenistan could negotiate separate arrangements with Kabul specifying abstraction ceilings, seasonal patterns, and monitoring. Bilateralism is faster and easier than a basin-wide treaty, but it risks fragmentation and neglects Tajikistan's upstream role.

3. A framework accession track. In the longer term, accession by all riparians to the Helsinki Convention, which since its 2016 amendment is open to all UN member states, would supply a common procedural baseline. This is an aspirational track, given recognition constraints and the political sensitivities on all sides.

4. Third-party facilitation. Neutral technical facilitation, from academic institutions, development banks, or UN agencies, can supply modelling and data that all parties can accept, sidestepping the recognition problem. Track-two and track-1.5 dialogues have already begun to bring Afghan and Central Asian experts together.

5. Chapter 6. Policy Recommendations and Conclusion

6.1 Actionable steps

Modernise downstream irrigation. The fastest and most controllable response lies within downstream states' own borders. Scaling drip and sprinkler irrigation, lining main canals, laser land levelling, and improved water accounting can recover a substantial portion of the anticipated deficit. Uzbekistan's programme covering two million hectares by 2030 is a foundation, but implementation is uneven, and farmer incentives, including water pricing, are essential to adoption (Ilkhamov, 2023; Overland et al., 2025).

Establish joint hydrological monitoring. A shared, open monitoring system for the Amu Darya, combining gauging stations with satellite remote sensing, would reduce the information asymmetry that

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feeds mistrust. Satellite imagery has already demonstrated its value for tracking canal construction and integrity (Crosslin, n.d.). Formalising this into a jointly governed data platform, with Afghan participation, would convert a surveillance dynamic into a cooperative one.

Cooperate technically on canal lining and efficiency. Downstream offers of technical assistance should be structured to make lining and drainage a priority for the Afghan side. This serves both interests: it improves conveyance efficiency, reduces salinization risk, and lowers the gross abstraction needed to serve a given irrigated area. Since it also reduces the risk of catastrophic embankment failure, it has a safety rationale that transcends politics.

Promote crop diversification. On both sides of the border, shifting away from water-intensive cotton and rice toward less thirsty crops and higher-value horticulture would reduce demand. In Afghanistan, planning for the new command area should emphasise crop choices suited to water availability, rather than replicating the Soviet-era monoculture that produced the Aral crisis.

Anchor cooperation in a phased negotiation. A pragmatic sequence would begin with data exchange, proceed to joint monitoring and technical cooperation, and only then move toward volumetric commitments once trust and measurement capacity exist.

6.2 Conclusion

The Qosh Tepa Canal is at once an understandable answer to Afghan food insecurity and a disruptive intervention in a basin whose governance was designed without Afghanistan. Its historical roots, running from Daoud Khan through USAID-funded feasibility work to Taliban execution, show that the project reflects durable Afghan development aspirations rather than a passing political initiative. That is why it is unlikely to be reversed. Its hydrological consequences, a probable 15–25 percent reduction in Amu Darya availability downstream in normal years, layered on climate stress and inefficient legacy irrigation, are significant enough to reshape the region's agricultural and political economy.

The deeper significance of Qosh Tepa is structural. The basin's established disputes, however contentious, were reciprocal: upstream and downstream states each held leverage over the other. Afghanistan's abstraction is non-reciprocal and outside the treaty architecture, so it cannot be managed through the existing bargains. This is what turns Central Asian water security from a manageable sub-regional trade-off into an urgent multilateral necessity. The choice facing the region is between an uncoordinated race to abstract and a negotiated, monitored, efficiency-oriented framework. Given the legal ambiguities and recognition constraints, the most realistic route is incremental: begin with data and technical cooperation, and build toward binding commitments. The alternative is a basin where the largest unregulated withdrawal is also the least visible.

6.3 Limitations and Directions for Future Research

This study is subject to several limitations. It is desk-based and relies on secondary literature, think-tank analysis, satellite-derived observations reported by others, and treaty texts. It does not draw on primary hydrological measurements, fieldwork in northern Afghanistan, or confidential government data from the riparian states. Estimates of the canal's eventual abstraction vary widely, and the underlying flow baselines differ between sources, so the percentages reported here should be read as ranges rather than point values. Turkmen data in particular are scarce. Finally, the canal's construction status is changing quickly, and later developments may alter some of the empirical picture presented in Chapter 2.

Future research could usefully pursue four lines of enquiry. First, independent basin-scale hydrological modelling that combines the canal's design capacity with climate-change projections and

Multidisciplinary research and Innovation (SICMRI 2026)

realistic conveyance-loss assumptions. Second, an agro-economic assessment of Afghan command-area development, including drainage and salinity outcomes. Third, doctrinal work on how equitable utilisation and the duty to cooperate apply to a non-recognised de facto authority. Fourth, comparative study of other basins in which a previously marginal upper or middle riparian has begun large-scale abstraction.

References

1. Center for the National Interest. (2024). Afghanistan's Qoshtepa Canal and water security in Central Asia [Report launch]. <https://cftni.org/publications/afghanistans-qoshtepa-canal-and-water-security-in-central-asia/>
2. Crosslin, E. L. (n.d.). Monitoring the Qosh Tepa Canal project: A geospatial timeline of Taliban water diversion [Honors thesis, University of South Dakota]. <https://red.library.usd.edu/honors-thesis/384/>
3. Ilkhamov, A. (2023). Implications for Uzbekistan's water supply of Qosh Tepa Canal construction in Afghanistan. Central Asia Due Diligence. <https://cenasiaduediligence.uk/wp-content/uploads/2024/02/Ilkhamov-Qosh-Tepa-Uzb-Water-Supply-Eng.pdf>
4. Kamil, I. (2021). Afghanistan, the Amu Darya Basin and regional treaties. Chinese Journal of Environmental Law, 5(1), 37–62.
5. Klemm, W., & Shobair, S. S. (2010). The Afghan part of the Amu Darya Basin: Impact of irrigation in northern Afghanistan on water use in the Amu Darya Basin. Food and Agriculture Organization of the United Nations.
6. Kuchins, A. C., Aidarkhanova, E., Sadid, N., & Barakzai, Z. (2024). Afghanistan's Qoshtepa Canal and water security in Central Asia. Center for the National Interest.
7. McCaffrey, S. C. (2019). The law of international watercourses (3rd ed.). Oxford University Press.
8. Micklin, P. (2016). The future Aral Sea: Hope and despair. Environmental Earth Sciences, 75, Article 844.
9. Overland, I., et al. (2025). Afghanistan's Qosh Tepa irrigation project: Implications for transboundary water management in Central Asia. Environmental Research: Water, 1(4). <https://iopscience.iop.org/article/10.1088/3033-4942/ae36ca>
10. Scientific Information Center of the Interstate Commission for Water Coordination. (n.d.). Qosh Tepa Canal. CAWater-Info. https://www.cawater-info.net/afghanistan/qosh-tepa_e.htm
11. United Nations. (1997). Convention on the Law of the Non-Navigational Uses of International Watercourses. General Assembly resolution 51/229.
12. United Nations Economic Commission for Europe. (1992). Convention on the Protection and Use of Transboundary Watercourses and International Lakes. Helsinki.