



Towards Kabul Water Treaty:

Water Cooperation for Managing Shared
Water Resources – Policy Issues and Options



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1. The Context

1.1. River Basins of Afghanistan and Water Resources

Afghanistan National Development Strategy states that its water vision is “to manage and develop water in order to reduce poverty, increase sustainable development, and improve quality of life and ensure an adequate supply of water for future generations”.¹ The major rivers of Afghanistan are: Amu Darya; Helmand River; Kabul River; Harirud and Murghab. Afghanistan shares these rivers with Iran, Pakistan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan. Afghanistan’s water resources are unequally distributed. The Amu Darya basin, including the Harirud and Murghab basins and non-drainage areas, cover about 37% of Afghanistan’s territory but contain about 60% of water. The Helmand basin covers about 49% of the territory and holds only 11% of water. The Kabul–Eastern River basin, with area coverage of about 12%, holds around 26% of water.² The smaller rivers on which water is shared between Afghanistan and Pakistan are Kurram, Tochi, Pishin Lora, etc.

Kunar River commences in Pakistan, crosses the border with an average annual flow of 8.1 MAF and joins Kabul River at Jalalabad. Kabul River is 700 km long, out of which 560 km flow through Afghanistan and then enters into Pakistan north of the Khyber Pass and past Peshawar. It joins the main Indus River at Attock. Thus, Pakistan lies both at the upstream and downstream of Kabul River thus having unique water rights.

Kabul River Basin, including the important tributary of Kunar River, represents about 12% of available water resources in Afghanistan crucial to the livelihood of millions of people for domestic, agriculture, power generation and industry. It is the main source of freshwater for Kabul city’s growing population of over 3 million, though it has frequently run dry in the last ten years. It’s basin is divided into five regions covering Afghanistan and Pakistan (Figure 1).

Regional cooperation on shared water resources appears increasingly necessary to ensure sustainable development in the region and to maintain regional stability and security. Afghanistan has also formulated plans for water infrastructure development to mitigate floods and droughts and to fully exploit its irrigation and energy potential. While crucial to Afghanistan’s social and economic development, these plans will also affect transboundary water flow and, as a result, relations with its neighbours including Pakistan.

Heavily dependent on seasonal rain and snowfall, Afghanistan’s water resources have become unstable. Glacial retreat and early snowmelt have had severe effects on seasonal water availability.

The country needs new dams to increase storage capacity and improve irrigation efficiency to balance these seasonal shifts. Currently, Afghanistan has the lowest storage capacity per capita in the region. Water is also deemed necessary for power generation and industrial uses. Afghanistan’s geography provides significant opportunities for exploitation of available water resources.³ Insufficient infrastructure and lack of capacity, however, limits Afghanistan’s ability to store, effectively manage and develop it’s water resources.



Figure 1. Hydrologic regions of Kabul River basin

1.2. Irrigated Agriculture Development in Afghanistan

Internal renewable water resources of Afghanistan are 44.6 MAF (55 km³) per annum. Total water withdrawal was 21.2 MAF (26.11 km³) per annum in 1987. One-third of irrigation systems were directly affected by war and this does not take into account the indirect effects of abandonment. Agriculture is entirely dependent on irrigation. The most reliable data for irrigated areas dates back to 1967, giving a total of 2.39 mha. Irrigated land can be divided into 4 classes:

- a) River water 84.6%;
- b) Spring water 7.9%;
- c) Kareze 7.0%; and
- d) Persian wheels 0.5%. Around 85% irrigated area is under river-based irrigation, whereas 15% area is under groundwater irrigation. If this trend continues, there are chances that future development of agriculture would be largely on river flow diversions.

¹Ziaie, S.2008. *Water Sector Strategy. Afghanistan National Development Strategy*, p. 82.

²R. Favre and G. M. Kamal. 2004. *Watershed Atlas of Afghanistan*. pp. 63–66.

³Average annual precipitation yields an annual surface runoff water volume of 2,300 m³ per year per capita. According to the 2007 data of the FAO of the UN, Afghanistan’s total actual renewable water resources are estimated of 2,500 m³/year per capita (figures of the FAO Aquastat Water Resources and MDGs Indicator of March 2009).

There is no doubt that freshwater is crucial to the sustainable development of Afghanistan and the safety of its population. It is indispensable for irrigation in rural areas, where more than 75% of Afghan population lives. The agriculture sector contributes about half of the GDP⁴ accounting for approximately 95% of Afghanistan's total water consumption. Ninety per cent of Afghanistan's irrigation today is managed through traditional, community-based schemes, which are independent of broader national or regional arrangements and limited in their efficiency. Thirty years of war and unrest have dramatically destroyed Afghanistan's water infrastructure and diminished its human capacity in hydrology. Only 1.5 mha of agricultural lands were irrigated in 2002.

1.3. Interest of International Community in Water Development in Afghanistan

Because of Afghanistan's land locked setting, virtually all of Afghanistan's major rivers drain off into neighbouring states. Transboundary concerns are intensifying along all of Afghanistan's borders, and the added impacts of climate change and diminishing glaciers can no longer be avoided. Afghanistan requires solid support from donors' to study and add dimensions to both its current and future water requirements⁵.

As part of an effort to help shape more effective international cooperation toward stabilization of Afghanistan and South-West Asia, the East West Institute organized in 2009 a series of policy dialogues to explore new policy options for management of shared water resources. Bringing together over hundred policy makers and experts from the region and beyond, the meetings, held in Kabul, Islamabad, Brussels and Paris, addressed deficits in regional cooperation on water and laid foundations for new cooperative frameworks. Throughout the meetings, participants reiterated challenges:

- a) Technical and knowledge deficits in water sector;
- b) Restricted management of national water resources
- c) Limited prospects for development of a coherent policy on transboundary river basins. Information deficit in Afghanistan is also a serious issue, which needs to be addressed on priority basis.

Despite all these challenges, the government of Afghanistan is of the opinion that water infrastructure projects across Afghanistan are in advanced planning stages. Aimed at exploiting irrigation and energy potential on rivers, these projects are a potential source of tension between upper and lower riparian

states who feel they will either receive less water and/or be held hostage to upstream control of transboundary resources.

To date, upstream states have claimed the right to benefit from their natural resources. Meanwhile, downstream states claim a right to benefit from water that has flowed through their territory for centuries – the historical water rights.

1.4. Shared Water of Kabul River and Dialogues between Afghanistan and Pakistan

The government of Afghanistan with the support of the international donors has developed comprehensive plans for the development of hydropower projects, irrigation schemes and rehabilitation of old schemes on various rivers including the River Kabul, which will affect the historic rights of lower riparian states. Transboundary water conflicts are going to be severe in future; how both the countries are going to resolve these conflicts is a real challenge. Currently, there is no Water Treaty between Afghanistan and Pakistan. Any new water development in Afghanistan is going to have severe impacts on the historic rights of Pakistan, particularly on the water of the Kabul River.

Currently, Afghanistan has adequate financial resources from the donors, which would be used for development of water and agriculture infrastructures; and would adversely affect Pakistan's historic rights on Kabul River. Let's first see, what options are available to address transboundary water issues with Afghanistan? It is in the benefit of both the countries to enter into a Water Treaty for managing shared water resources. Despite repeated attempts on both sides to reach an agreement nothing substantial has materialized as yet. On the Pakistani side, policy makers like to recall the formation in 2003 of a nine-member technical committee, led by Pakistan's then Chairman of the Federal Flood Commission, to begin drafting a Water Treaty with Afghanistan. The committee maintained that its efforts failed because it did not receive sufficient river flow data from Afghan authorities.

In 2006, an effort was made towards a drafting process for a bilateral treaty. The World Bank offered support for a consultation process between Afghanistan and Pakistan. The bank's mediating role was appropriately considered, as it was recognized for its engagement in formulating the Indus Waters Treaty. Despite the World Bank's offer did not result in renewed dialogue. No institutionalized framework of cooperation on the Kabul River basin currently exists.

⁴Figures from the public website of the World Bank, <http://web.worldbank.org/>

⁵Ziaie, S.2008. *Water Sector Strategy. Afghanistan National Development Strategy*, p. 82.

Factors that have instigated bilateral cooperation efforts are complex and include the power asymmetry between Afghanistan and Pakistan, the decades-old dispute over the Durand Line⁶, and the recent dispute between Pakistan and India over the Indus River in the interpretation of the Indus Water Treaty which is worth consideration.

In March 2009, at the meeting of Economic Cooperation Organization, Afghan, Iranian and Tajik leaders agreed to speed up implementation of projects on water-energy nexus. Joint commitments of a similar nature were not made between Afghanistan and Pakistan. The most ambitious joint statement by the two countries was the Islamabad Declaration, adopted after the third Regional Economic Cooperation Conference on Afghanistan in May 2009. The declaration recognized Afghanistan's centrality for peace, prosperity, and stability in Central Asia as well as South Asia and endorsed the need for a comprehensive approach and participation of the international community in economic development. The declaration calls for improved regional cooperation in areas like transport, trade, energy, agriculture, capacity building, education, border management, counter-narcotics, refugee return and re-integration. To date, however, the Islamabad Declaration has not led to any improvement in water cooperation.

2. Analysis of Flows of Kabul River at Attock

The findings of analysis conducted for flows of the Kabul River are:

- Sharp decline in annual flows of Kabul River from 28 to 19 MAF (34.6 to 23.5 km³; *Figure 2*);
- Lowest and highest annual flows were 11.2 MAF (13.82 km³) and 34.8 MAF (42.94 km³). The ratio between lowest and highest annual river flows is 1:3 (*Figure 3*). This high ratio raises few questions: Is it due to:
 - a) Climatic variability and/or change;
 - b) More frequent and severe droughts; and/or
 - c) Diversion of more waters for multiple uses in Afghanistan.

Decline in seasonal river flows during Kharif season were more severe than Rabi season due to changes in the monsoon rainfall over the last 70 years (*Figure 4*). This issue is of serious concern and deserves detailed study by hydrologists and water management experts with an objective to build scenarios for future predictions regarding water availability to Pakistan and expanded use of water in Afghanistan.

It is also the right time for Pakistan to raise issue of its rights of lower riparian and the option of entering into negotiations with Afghanistan with an ultimate aim of signing a treaty with Afghanistan on River Kabul.

Reduced flow of Kabul River at the rim station of Attock is an indication that it is the right time to start "Negotiations in Good Faith" with Afghanistan to enter into "Kabul Water Treaty" as Afghanistan is going to have new water developments which will certainly affect the historical rights of Pakistan. Pakistan being the lower riparian has to protect the country's right using the principle of "Maintaining the Historical Rights" through negotiations based on the principles of "No Harm" and "Ensuring Equitable Utilization of Waters" for the basin states. The situation of No Treaty between Afghanistan and Pakistan is not going to help anyone because river basins and water has to be used for the benefit of the basin states.

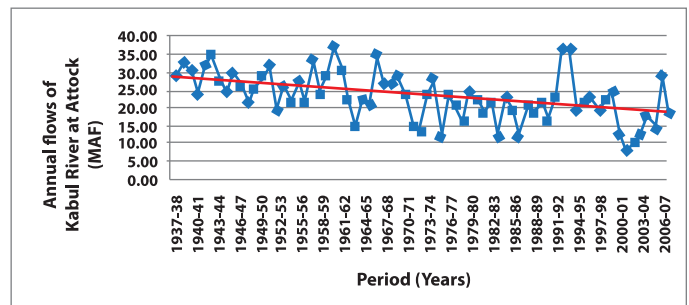


Figure 2. Trends of annual flows of Kabul River

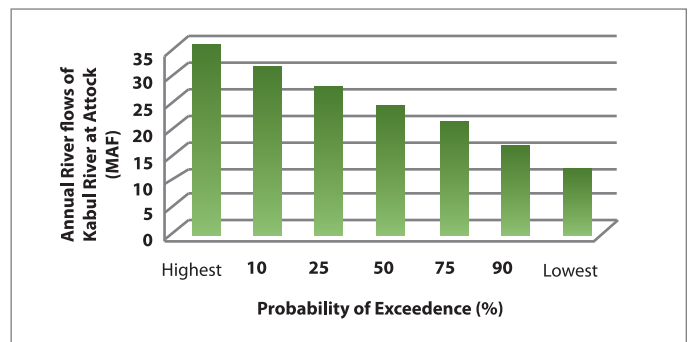


Figure 3. Probability analysis of annual flows of Kabul River

⁶A. Khalid. 2007. Need for a Pak-Afghan treaty on management of joint watercourses. pp.15–16

3. Key Issues

3.1. Transboundary Waters

Afghanistan is planning to initiate development of hydropower projects on the Kabul River, which will affect historic rights of lower riparian – Pakistan. The critical issue is that there is no Water Treaty between Afghanistan and Pakistan. Therefore, any new water development in Afghanistan is going to have serious impacts on the historic rights of Pakistan on sharing water resources. The international community is taking interest in water development in Afghanistan and financial resources are also available to Afghanistan for such developments.

The situation of No Treaty between Afghanistan and Pakistan is not going to help Pakistan because upper riparian always enjoys the upper hand in sharing water of joint basins in a situation of conflict. Pakistan has a unique position on the River Kabul, as one of the major tributary named “River Kunar” has originated from Pakistan. Thus, Pakistan has both upper and lower riparian of the River Kabul. Afghanistan is the middle riparian. River Kabul is also a tributary of the Indus-Pakistan and it provides water to the Indus River system, where water has been fully apportioned for usage by various sub-sectors. The historical rights on water of Kabul River entering into the Indus Main have been established since last many centuries.

There are no regional mechanisms for cooperation on water in South-West Asia that involve Afghanistan, Pakistan and Iran. With the exception of 1973 bilateral treaty between Afghanistan and Iran on the River Helmand, no bilateral legal frameworks on shared water resources exist with any other basin state. Regional cooperation requires political will, which, to date, has not been forthcoming. Instead, mistrust and political considerations focusing on what is perceived as national interest have hampered the potential for forward looking cooperation between the basin states.

3.2. Trends of Flows of Kabul River

Sharp decline in annual flows of Kabul River at Attock in Pakistan based on historical data (1937-08) is observed from 28 to 19 MAF (34.6 to 23.5 km³) due to climatic variability or change; or due to persistent drought; or enhanced use of water by Afghanistan. Probability analysis of annual flows of River Kabul at Attock indicated that lowest and highest annual flows were 11.2 and 34.8 MAF (13.82 and 42.94 km³), respectively based on historical data of 1937-07. The ratio between the lowest and the highest annual river flows is 1:3, which is the highest compared to any other river of Indus-Pakistan. Why is this ratio higher than all other rivers?

The decline in river flows during the Kharif season was more severe than the Rabi season due to changes in monsoon rainfall in the last 70 years.

4. Potential Options

4.1. Resolving Conflicts on Shared Water Resources

- Basin states may reframe precisely the narrowly defined perceptions of national water security, reversing stereotypes surrounding water, creating political will, and increasing people’s participation to address the issues of transboundary waters between the basin states.
- Encourage the involvement of recent agreements in the framework of ECO and other forums to serve as a fertile ground for regional and bilateral water diplomacy.
- Initiate dialogues and support Kabul Water Treaty between Afghanistan and Pakistan, as situation of No Treaty between the basin states is not going to help anyone. Treaty would provide framework for the basin states to get benefit from waters of the Kabul River.
- Initiate negotiations with Afghanistan to have Kabul Water Treaty between the basin states using the principles of International Water Law of “Negotiations in Good Faith”, “Maintaining the Historical Rights”, “No Harm to Anyone” and “Ensuring Equitable Utilization of Waters” for the basin states.

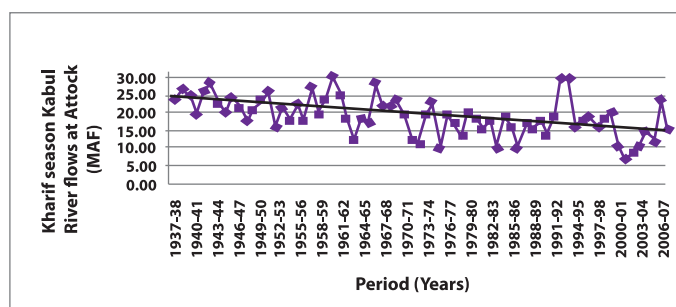


Figure 4. Trend of Kharif Season flows of the Kabul River

4.2. Regional Cooperation on Water

- Create transparent and shared repository of hydrological data on Kabul transboundary river basin between the basin states to improve predictability of water flows and establish transparency of available water resources at the regional level. Mutual trust in such a data repository will be both a crucial condition for and a result of its existence. Policy makers should therefore consider establishing the repository under the aegis of a third party – the support of developed country and having comparative advantages of managing river basins (Royal Government of Netherlands) and under the auspices of IUCN.
- Establish a Regional River Basin Management Commission with offices in each of the basin states (Afghanistan, Iran and Pakistan) to build mutually beneficial cooperation on scientific and technical matters to ultimately build trust in the region and alleviate concerns of basin states through fostering support of the international community for regional cooperation rather than dealing with national issues.
- Launch a multilateral dialogue process to build confidence and establish an agenda for transboundary river basin management mechanism and inter-governmental river-basin based water security watchdogs to build confidence and a common understanding for the most pressing water issues in the region. This could be done by optimizing existing frameworks of regional cooperation, but also by extending beyond such frameworks.
- Encourage informal gathering of scientists from Pakistan and its neighbours to conduct a comprehensive joint scientific and technical assessment on the value of establishing river-basin-based hydrological mechanisms to improve management of transboundary river basins. Support from international community for developing such forums will be of high value.

5. Way Forward

The way forward towards Kabul Water Treaty is presented as under:

- There is a need to change the mind-set in Pakistan to assist the neighbouring basin state in renovation of damaged and building of new infrastructure. The most possible option is to protect the existing usage of water in both the basin states under the International Water Law. Apportionment of left-over water may be made later, based on the projects in pipeline and planned for the near future for both the basin states.
- An unconventional approach needs to be adopted to explain to the people of the basin states as to why it is an existential issue for both States, because the economy of both the countries is dependent largely on agriculture. An invitation may be extended to Afghanistan to explore ways in which the principles of the International Water Laws could be respected, while providing a win-win situation for both the States. With a good will, there are multiple ways in which the Treaty could be negotiated so that both the basin states can benefit from it.
- A strong leadership role from the government of Pakistan is required to show the generosity of spirit, which is an integral part of being truly a good neighbour after resolving the pending issues of mistrust. Discussions on the Kabul waters should be de-linked from both historic grievances and from Durand Line-related issues. Again, it is a sign of statesmanship, not weakness, to acknowledge the past and to move forward.
- The first step in this direction can be taken by establishing a Tripartite Transboundary Water Forum on River Kabul under the auspices of IUCN, so that dialogues, meetings and actions can be initiated for the collection of data and documentation of the capacity of water supply from the River Kabul and related data.



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