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The Politics of Water Security in the Kabul River Basin

Paula Hanasz*

FDI Associate

“The insurgency is only fundamentally effective in the Pashtun belt. The critical part of the population is where the water and the roads are. People near water are more important economically: along the Helmand and Kabul rivers. You secure these areas, and you take the oxygen out of the insurgency.”

Gen. Stanley McChrystal
The Atlantic Monthly, April 2010

Key Points

- The simmering water conflict between Afghanistan and Pakistan is rarely noted
- Water shortage and mismanagement in this region contributes to geopolitical upheaval
- Afghanistan and Pakistan should seek formalised bi-lateral cooperation for technical information exchanges, flow monitoring, and water planning.
- The Indus Waters Treaty of 1960 serves as an example for future transboundary water management policies between Afghanistan and Pakistan
- Failure to codify shared water management principles between the two countries, could exacerbate socio-political tension in the region

Introduction

There are no agreements between Pakistan and Afghanistan governing the rights to the water of the Kabul River, a tributary of the Indus, a resource that flows between the two countries. Afghanistan's plans for irrigation, fishing and hydro-power could eventually trigger tensions, especially given the decades-long, still unresolved, border dispute between the two countries (Renner 2009, pp. 6-7).

The border region between Afghanistan and Pakistan is well-known for its ideology-based terrorism and tribal conflict. However, the simmering water conflict in the region is rarely noted, let alone factored into the causes of local unrest. This is a serious oversight. As the water use demands of Afghanistan and Pakistan increase in coming decades, and as climate

changes affect patterns of precipitation, the strain on the Kabul River Basin will be great. This, in turn, increases the strain on an already vulnerable population.

It has even been hypothesised that water scarcity has led to civil unrest in Afghanistan, even to the rise of the Taliban, because traditional farmers and herders were badly affected by water shortages and took the radical recourse to violence. Combined with shrinking water availability due to climate change, the probability of eventual conflict is significantly increased. It can therefore be seen that in this region water security is as important as national security (Aziz 2007, pp. i, 4, 9).

Afghanistan, Pakistan and the Kabul River Basin

The Kabul River and its tributaries flow into the Indus River in Pakistan. The Kabul River Basin encompasses around 12 per cent of Afghanistan's territory and supports over seven million of its people. It accounts for about 26 per cent of Afghanistan's total annual river flow. The region is blighted by drought and this is being exacerbated by climate change (Aziz 2007, p. 1).

Water demand in Kabul City and within this river basin, is expected to increase. Feasibility studies on hydro-electric power and irrigation diversion are being developed. Once implemented, such projects will affect water flow into Pakistan (GIROA 2007b, p. 7). A net reduction in the Kabul River flow into Pakistan is likely to have adverse effects on the livelihoods of Pakistanis, especially if it occurs in conjunction with climate change. Ultimately, the melting of the Hindu Kush and Himalaya glaciers will also reduce the flows into the Indus River. This will happen gradually, but will nonetheless generate strong pressure on the fragile livelihoods of those already threatened by water scarcity. Pakistan is currently classified as water-short with predictions of it becoming water-scarce by 2016. The country has the world's largest contiguous irrigation system, which doubled in size between Pakistan's independence in 1947 and 2005, due mostly to expansion of irrigation infrastructure (Aziz 2007, pp. 6-8).

There are four major hydro-electric dams in the Kabul river basin in Afghanistan (the Mahipar, Naghlu, Sarobi I and Sarobi II hydro-power plants). Yet there is no water sharing agreement between Afghanistan and Pakistan for the Kabul River, though Pakistan benefits from water flow coming from Afghanistan. Pakistan provides no financial support for flow control structures or management of the river, even though it has significantly increased its water use from the Indus River during the last 30 years. Currently, it has a higher water demand than can be met. Perhaps because of this uncooperative stance, Afghanistan has also been reluctant to share river flow data with Pakistan. This scuppered the 2003 initiative by Pakistan's Federal Flood Commissioner, to draft a water treaty with Afghanistan (Aziz 2007, p. 11). In the absence of a treaty over water rights to the Kabul River, conflict between the two states cannot be ruled out, because of competition for shared resources and no pre-determined, mutually agreed, allocation system (Aziz 2007, p. i).

The effect of climate change on water availability

The problems from water use inefficiency will continue to be exacerbated by water shortages caused by climactic changes, such as glacial melt, drought, shifting precipitation patterns and rising temperatures. Changing environmental conditions can have profound effects on human development and security. Some predictions say that by the middle of this century, increasing temperatures and growing water stress may reduce crop yields in South Asia by 30 per cent (Renner 2009, pp. 2-7).

The Hindu Kush Mountains act as a natural storage facility and source of water, through the accumulation of snow during winter, snow melt and rainfalls during spring, and the release of frozen water from glaciers in the summer, which sustains the vital flow of rivers (UNEP 2008, p. 11). This is clearly a fragile balance and one that, if altered, would have severe repercussions for the people who benefit from it. In the past half century alone, larger glaciers in the Pamir and Hindu Kush Mountains have shrunk by 30 per cent and smaller glaciers have disappeared altogether (UNEP 2008, p. 11).

Rising temperatures cause more precipitation to fall as rain instead of snow and this, in turn, leads to shrinking glaciers. Initially glacial melting results in increased water flow in the summer months, which may appear as a comforting sign at first. Ultimately, however, it compromises hydro-power generation and reduces production capacity for foodstuffs and commodities like cotton. This, in turn, may lead to growing poverty, rising food prices in the cities and an escalating rural-urban migration. Therefore, the melting of the Hindu Kush-Karakorum-Himalaya glaciers will have a significant impact on the daily lives of millions of people. Changing monsoon patterns are projected to decrease precipitation over the region of the Kabul River Basin by up to 20 per cent (Renner 2009, p. 8). In Afghanistan and Pakistan, severe droughts are usually caused by low winter precipitation for two consecutive years, which occurs at least once every 10-15 years. During the last cycle of drought, however, the glaciers decreased in size, which poses additional, longer-term, threats to the water sector (GIROA 2008, p. 8).

Water shortage in this region is a factor in geopolitical upheaval. Failure to reach an agreement will likely lead to further social dislocation. A treaty reached now, before the problems become perennial, could avoid conflict and mitigate suffering in the future. The longer the delay in achieving this, the harder it will be to reach a mutually-beneficial settlement (Aziz 2007, pp. 18-19).

Water conflict and the case for peacetime treaties

What, then, would water conflict look like, and how could it be mitigated? There are three types of water conflicts: direct (competing and conflicting demands), indirect (migration, environmental refugees or seasonal high peak demands from tourism) and structural sources (limited institutional and social capacity, fragmented authority, insufficient public participation). These conflicts are further exacerbated by factors such as: water scarcity (either permanent or temporary), differences in international goals, complex social and historical contexts, misunderstanding or ignorance of data, asymmetric power between

riparian states, significant data gaps, disputes over specific projects, and non-cooperative stances between governments (UNESCO 2006, pp. 377, 385, 391).

There are many causes of water conflicts but there are also many ways to resolve them. Yet despite the many resolution methods available world-wide, there is no standard international legal structure. Therefore it is voluntary methods that are not legally binding that are most often developed and applied between riparian states. Transboundary water management is, in a sense, more difficult than national and sub-national water management. The principles, rules and procedures that steer water management usually differ more between countries than within countries. It requires coordination over different political, legal and institutional settings, as well as different information management approaches and financial arrangements (World Water Council 2009, p. 1). To succeed, self-regulating transboundary water management must evolve through three phases: problem setting, direction setting, and implementation (UNESCO 2006, p. 389).

Currently, there is no pressing water crisis in the region that needs resolution – and this is one of the contributing factors to the lack of an international water rights agreement between Afghanistan and Pakistan. There is, seemingly, simply no immediately perceived need for transboundary engagement; but this is a short-sighted assumption. One theory of water cooperation states that cooperation is best when water supply is neither high nor low. This is because if there is enough water for all relevant users, there is no pressing need for cooperation that may put one party at a desperate disadvantage. When there is severe water scarcity, then it is assumed that ‘individual interests will prevail’ (Wegerich 2009, p. 4). The consequence of this for Afghanistan is that right now is probably a very good time to initiate cooperative relations with neighbouring riparian states.

The 1960 Indus Waters Treaty as exemplar for cooperation in the Kabul River Basin

Under international law a state cannot use its property to harm another state (Abidi 1977, p. 367). There are four principles that Afghanistan should adhere to when negotiating transboundary water management treaties. First, the institution created must be flexible and permit public participation. Second, it must contain clear but flexible criteria for water allocation and quality, as well as specifying priority usage in times of shortage and standards for ecological protection. Third, the treaty should take a holistic basin approach. It should provide for equitable distribution of benefits from different uses, such as hydro-electric power, irrigation, tourism and the protection of aquatic ecosystems. Lastly, the treaty must include a detailed conflict management mechanism (Aziz 2007, p. 15).

Afghanistan should seek bi-lateral cooperation with Pakistan for technical information exchanges, flow monitoring, and water planning. Agreement should also be reached over cost-sharing for the demands and management of the Kabul River and associated rivers and tributaries (GIROA 2007b, p. 8). The preferred model for a treaty between the two countries is the Indus Waters Treaty (Aziz 2007, p. i).

The Indus Waters Treaty of 1960 serves as an example for future transboundary water-management policies between Afghanistan and Pakistan, for several reasons. First, its geographical and cultural proximity makes it applicable. Second, because the treaty exists

between nations with historical animosity. Indeed, it was created at a time of heightened tensions but has remained an example of peaceful cooperation and mutual benefit between the two countries. Third, the flow of the Indus represents a classic case of conflicting claims between upstream and downstream riparians (Wolf & Newton 2007).

Relations between India and the newly created Pakistan were precarious in 1947. The World Bank was called in to mediate elaborate discussions between the two countries, which resulted in the Indus Waters Treaty of 1960. The treaty fostered remarkable bi-lateral cooperation between the two countries, despite two wars. The creation of an institution composed of Pakistan and India to oversee the implementation of the treaty, was a vital part of the conflict management. Positive and active third party involvement (from the World Bank) was also crucial (Aziz 2007, pp. 15-17).

Negotiations over rights to the Indus lasted twelve years. Once the Indus Waters Treaty was concluded, it addressed both technical and financial concerns of each side and set out a timeline for transition. The Indus Waters Treaty was signed on 19 September 1960 and awarded Pakistan unrestricted use of the western rivers, which India would allow to flow unimpeded, with minor exceptions. The treaty also made provisions for the construction of specific dams, canals, tube wells and, in case of dispute, a 'neutral expert' was to be appointed.

The significance of the Indus Waters Treaty lies in the fact that water issues were separated from other contentious issues between Pakistan and India, which allowed for negotiations to continue even during times of heightened political tensions. The treaty also illustrated that positive, active and continuous involvement of a third party is vital to overcome conflict and that some points may be agreed to more quickly if it is explicitly agreed that no precedent is being set (Wolf & Newton 2007).

There are a number of lessons from this treaty that are applicable in the case of the Kabul River waters shared between Afghanistan and Pakistan. First and foremost, both countries must have the will and foresight to address their mutual problems. The second issue to overcome is that of power asymmetry. Despite its many social and economic problems, Pakistan still holds a certain military and institutional advantage over Afghanistan. Afghanistan must not become intimidated by this – as Pakistan did not become intimidated by India's comparative upper hand during the Indus Waters Treaty negotiations. Likewise, Pakistan should exhibit statesmanship in this matter if progress is to be achieved. Similarly, Afghanistan and Pakistan must leave the issue of the disputed Durand line out of any water-related discussions, just as Pakistan and India avoided contentious border issues in their discussions. Lastly, prior to agreeing and drafting any treaty, Pakistan and Afghanistan must begin the exchange of hydrological data about the Kabul River. The importance of this has already been discussed frequently throughout this paper.

Increasing cooperation between Afghanistan and Pakistan

A treaty is a lengthy and convoluted process. However, there are a number of other measures that Afghanistan and Pakistan can employ to strengthen cooperation and diffuse tensions in the Kabul River Basin.

Firstly, there should be a study into consumption of water in the Kabul River basin, recharge into groundwater and future demand for agricultural and economic development. Moreover, monitoring should be established to measure actual flow from Afghanistan into Pakistan from this and associated rivers (GIROA 2007b, pp. 4-8). All these data sets, once collected, can be enhanced through the sharing of information between the two countries. Information is not always shared between countries, and is sometimes collected and reported only for legal obligations, without consideration of its actual applicability (World Water Council 2009, p. 11).

The second critical policy need is to implement greater efficiency of water usage in Afghanistan (Renner 2009, p. 10). This cannot be achieved without accurate and up-to-date hydrological data. That is why the recommendation above is so important. Dukhovny *et al* call for an increase in the efficiency of water and land use through the provision of a sustainable water supply; equitable and regular water sharing between sub-basins and irrigation systems; and a significant reduction in unproductive water losses on the way to the end users (Dukhovny et al 2008, p. 30).

Third, climate change adaptation measures should be designed and managed to avoid negative transboundary impacts and to generate the best possible benefit for the whole river basin (World Water Council 2009, p. 6). Climate change is not restricted to certain political borders and therefore requires transboundary solutions. Reduced rainfall and runoff lead to increased heat stress, drought and desertification, all of which will amplify existing problems and increase migration (Renner 2009, p. 7). Not taking relatively simple steps now to prepare for such contingencies, creates a whole spectrum of much bigger problems that will have to be addressed in the relatively near future.

In short, the most appropriate time for international water cooperation is when there is neither grave water scarcity nor great water abundance (Wegerich 2009, p. 4). Such a time is now.

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***About the author:** *Paula Hanasz is a consultant with Noetic Solutions Pty Ltd. Noetic is a leading strategic management and knowledge consulting firm, specialising in the business of government.*

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Published by Future Directions International Pty Ltd.
Desborough House, Suite 2, 1161 Hay Street, West Perth WA 6005 Australia.
Tel: +61 8 9486 1046 Fax: +61 8 9486 4000
E-mail Gary Kleyn: gkleyn@futuresdirections.org.au Web: www.futuresdirections.org.au