

local empowerment, policy planning, and implementation is absent. It is doubtful that these bodies will be targeted by militants for extortion, as that would alienate the very people whose support or at least silence is necessary for militancy to thrive. The lack of use of local popular bodies to create rural infrastructure instead of private contractors chosen in a centralized manner through dubious means does little to reduce popular alienation or re-create infrastructure. What it leads to is a skewed income and asset distribution apart from enriching the militants. Similarly, steps taken in the direction of entrepreneurship training among local residents so as to enable them to set up enterprises on their own is a more sustainable model than setting up state-owned enterprises. These activities, especially in the areas of adding value to horticultural produce, can do much to generate incomes and employment. Making them targets of extortion by militants may not be accompanied by the same social sanction as in the case of extortion of government contractors.

So far, neither the state government nor the central government has moved in this direction, although most recently the central government has prodded the state government in the direction of democratic decentralization. This clearly is an opportunity lost, as the goal of economic development need not be given up even when an insurgency is on. But in a milieu where years of “easy money” accentuated by “security concerns” create an impressive array of vested interests bolstered by casualty graphs that point downwards accompanied by surprisingly steady numbers of militants waiting to infiltrate into India, resources keep on flowing in the same manner and volume as previously. In such circumstances, policy shifts—especially radical ones—are the first casualties.



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## Kashmir and Water: Conflict and Cooperation

by SEEMA SRIDHAR

### Water, Wars, and Kashmir

**C**onflicts over water—a precious resource, the supply of which is growing sparser and the demand for which is ever mounting—have been much talked about by experts. Growing populations and extending development would render conflicts between water-rich and water-scarce nations inevitable. Upstream states that control the flow of water to downstream states would use this valuable resource as a key diplomatic and strategic tool to coerce the downstream nations into submitting to its demands. According to the 2002 United Nations World Water Development Report, there were 507 conflictive events over water during the previous fifty years. Thirty-seven among these involved violence, of which 21 consisted of military acts (18 between Israel and its neighbors). “Some of the most vociferous enemies around the world have negotiated water agreements [concerning international rivers] or are in the process of doing so,” says the report. Global warming would act as a catalyst to water-conflict scenarios, with decreasing rainfall and increasing evaporation in some areas that have made the regular climate patterns erratic. Intermittent phases of flooding and droughts causing massive human suffering would pressure governments into turning off the taps to its neighbors.

The Indus River, whose basin cradled one of the oldest civilizations of the world, sustains Pakistan today. Both India and Pakistan depend on snow-fed rivers that rise in the Himalayas. Pakistan depends on the Indus for its survival and sustenance. The Indus, moreover, passes through Jammu and Kashmir, which is in dispute between the two countries. The history of water sharing between India and Pakistan has been marked by exceptional cooperation and intermittent conflicts over the interpretation of the water sharing treaty that forms the basis for this cooperation. The Tulbul Navigation Project and the Baglihar, Kishanganga, and Salal hydroelectric power projects are a few contentious issues between the two countries revolving around the Indus Waters Treaty (IWT). The incongruities in interpretations of the IWT have been attributed to political motives, rather than differences over technical and engineering aspects of water management.

### The Indus Waters Treaty: Emergence of an Effective Conflict Management Tool

The IWT brokered by the World Bank (WB) provided for the division of the rivers between India and Pakistan. The eastern rivers—Sutlej, Beas

and Ravi—were allocated to India. The western rivers—Jhelum, Chenab and Indus—were allotted to Pakistan (barring their use by India under specified conditions in Jammu and Kashmir), with limited consumptive rights over these to India. How did the IWT come into being?

In April 1948, the lack of a water-sharing agreement led India to curtail the flow of west flowing tributaries to Pakistan. This brought to the fore the imperative of negotiations for an equitable distribution of the Indus River and its tributaries between the two riparian states, and for developing a coherent plan for integrated development of the water basin.

The hurried partition of the Indian subcontinent through the India Independence Act by British Parliament in 1947, under the duress of increasing communal violence, resulted in the creation of two new independent states, India and Pakistan. The two countries, however, were beleaguered by problems related to delineation of their international boundaries; accession of a number of princely states, especially that of Jammu and Kashmir; as well as the decisions about their complex river systems, the Indus (shared by India with West Pakistan) and Ganges and Brahmaputra (shared by India with East Pakistan). Of these three rivers, the Indus basin—typified by thousands of kilometers of man-made irrigation canals and headworks that regulated the flow of its waters—proved to be the most complicated. What exacerbated the problem was the fact that the Indus originated from the disputed territory of Jammu and Kashmir, the legal status of which both countries became involved in war soon after independence in 1947. However, the waters irrigated most of the fertile lands of Punjab, divided into East and West Punjab.

The existing water turn systems were frozen by a “Standstill Agreement” in December 1947 at the two headworks of Madhopur (on the Ravi) and Ferozepur (on the Sutlej) until March 31, 1948. Upon expiry of this agreement on April 1, 1948 and in the absence of a new agreement, India discontinued the delivery of water to the Dipalpur Canal and the main branches of the Upper Bari Daab Canal from these headworks. The Arbitral Tribunal (AT) that was set up by the Indian Independence Act to look into differences over matters of division of assets between the two countries also expired on the same day.

In April 1948, the Engineers of the two divided Punjab States met in Simla and signed two Standstill Agreements regarding continuous flow from two other canals, Depalpur and Central Bari, until October 1948. As per this agreement the West Punjab provincial government would pay seigniorage charges and proportionate maintenance costs, and interest on a proportionate amount of capital. In July 1950, Pakistan stopped seigniorage payments to India, which continued to supply water as per the

agreement. Due to ongoing hostilities between the two neighbors on account of Kashmir, no further talks were held.

David Lilienthal, former chairman of the Tennessee Valley Authority and a former Chairman of Atomic Energy Commission, USA visited the two countries in 1951 and proposed that India and Pakistan work out a program jointly to develop and operate the Indus Basin river system. Inspired by this idea, Eugene R. Black, then President of the World Bank, visited the two countries and proposed a Working Party of Indian, Pakistani, and World Bank engineers to tackle the functional aspects of water sharing. The two countries accepted this mediation and the World Bank stepped in with its own draft proposals for resolution in February 1954, distributing the three Eastern Rivers to India and the three Western rivers to Pakistan. Protracted talks were held amid mounting tensions, and finally the Indus Waters Treaty was signed by Jawaharlal Nehru, then Prime Minister of India; Field Marshal Ayub Khan, then President of Pakistan; and W.A.B. Illif, then President of the World Bank, in Karachi in September 1960.

The IWT provided for one of the most comprehensive dispute resolution mechanisms. Under the IWT, India can undertake projects on the western rivers for general conservation, flood control, irrigation and hydropower generation, and duly inform Pakistan of the same. Pakistan’s objection would render it a matter of dispute to be settled either by negotiations or by a neutral expert, or by arbitration. Three members, one from India, one from Pakistan and the third member by mutual agreement or an International Court of Justice appointee in lieu would be the arbitrators. Any unresolved “question” between the two parties through the Permanent Indus Commission becomes a “difference” to be referred to a neutral expert, who is appointed by the two countries, and failing that, the World Bank. If the neutral expert’s recommendations are unacceptable to either of the parties, the matter would be treated as a “dispute” and it would be referred to a Court of Arbitration established by the World Bank, along with other institutions such as the secretary general of the United Nations.

### **Water Conflict: Key Issues of Contention**

Water sharing between the two neighbors has been characterized by intermittent conflict and long sustained cooperation. However, recent issues have brought the sustainability of the IWT under serious scrutiny. Twenty-seven projects undertaken by India in the Indus basin in Jammu and Kashmir have been questioned by Pakistan. This has resulted in delays in implementation, prohibitive increases in costs, and stalling of development in J&K. Three of the most

► **Pakistan depends on the Indus River, which passes through Jammu and Kashmir, for its survival and sustenance.**

► **The history of water sharing between India and Pakistan has been marked by exceptional cooperation and intermittent conflicts.**

► **The Indus Waters Treaty was signed by India, Pakistan, and the World Bank in Karachi in September 1960.**

contentious issues—the Baglihar Hydel Power Project (BHP), Tulbul Navigation Project (TNP), and Kishenganga Project—are discussed below.

**Baglihar** • The 900 megawatt (MW) BHP on the Chenab River in Doda district in Jammu stands out as a key issue between India and Pakistan. It was also the first ever to be referred for international arbitration through the dispute resolution mechanism under Article IX of the IWT. Pakistan feared that the BHP would divert considerable downstream flows and could also be used to cause floods in the riparian areas.

Similar objections were raised by Pakistan over Salal, a 480 MW hydropower project on the Chenab in 1978, that storage could be used for drying up flows as well as for flooding the lower riparian states. However, any attempt to flood Pakistan would inundate the Indian side of the Line of Control (LoC) first. Such action would also run counter to the rules of war and against the Geneva Conventions, inviting international condemnation. It is highly unlikely, therefore, that India would indulge in such an act and such fears are thus unfounded. India's agreement to make design changes in the Salal dam has resulted in severe siltage problems and India was wary of a repetition of the same.

In response to Pakistan's objections over the BHP, India contended that as it was a run of the river project, the water utilized for power generation would be released back into the river stream and therefore there would be no difference in the quantum of water release. Both India and Pakistan tried to resolve the issue through bilateral talks. Pakistan's demand to shelve construction work until the issue gets resolved was not heeded by India, as the latter did not want a repetition of the TNP, which has been shelved since 1987. Since no breakthrough was achieved, Pakistan sought arbitration of a neutral expert under the ambit of the IWT to look into the matter. The report by the neutral expert, Raymond Laffitte, vindicated the Indian position that the BHP was not in violation of the Indus Waters Treaty. Design changes, including reductions in freeboard and pondage and increase in the height of the power intakes, were recommended. The neutral expert overruled Pakistan's objections over the use of gated spillways, as it is one of the most important techniques to handle the problem of sedimentation. The verdict on the BHP case will hopefully establish momentum for building such projects in the conflict-ridden state, to augment developmental work there.

**Tulbul** • The Tulbul navigation project, called Wullar barrage in Pakistan, is part of the composite dialogue within the framework of the peace process underway between India and Pakistan (unlike the BHP, which was referred for international arbitration).

The TNP originally envisaged the construction of a 439-foot long and 40-foot wide barrage by India in 1984 on the River Jhelum, at the mouth of Wullar Lake, near Sopore in Kashmir. With a maximum storage capacity of 0.30 million acre feet (MAF), it was intended to maximize the utilization of water at India's largest fresh water lake, making the Jhelum navigable by regulating water storage in the Wullar through enhancing currents in the Jhelum during the lean months from November to February. Pakistan claims the TNP is in violation of the IWT, believing it could be used by India to control the river's flow as a geo-strategic weapon.

The Indian stance is that the purpose of the barrage is to make the river navigable in summer and not to affect the outflows into Pakistan. The barrage, according to Pakistan, would impede flows into their Upper Chenab Canal and the Lower Bari Doab Canals. The case was referred to the Indus Waters Commission in 1986, but failed to be resolved. Before Pakistan could move to the International Arbitral Court, India stopped construction and the project has been shelved ever since 1987.

The most recent talks in August 2007 in the fourth round of composite dialogue ended inconclusively. In 1991, a draft agreement was prepared, which allowed the construction of the barrage with certain technical stipulations—such as leaving 6.2 meters of barrage ungated, reducing general storage capacity by 30,000 acre feet—with due monitoring by the Indus Water Commissioners. However, the draft agreement was not signed, since Pakistan linked its resolution to the 390 MW Kishenganga hydroelectric project, another unresolved issue between the countries, and demanded that India should forego its construction. The 1991 draft could be used as a basis for resolution as it asserted that the issue would be resolved within the scope of the IWT. Each contentious issue has to be resolved separately for giving resolution a real chance. The tremendous potential of waterways in J&K needs to be utilized and reaching a consensus over such projects is imperative.

**Kishenganga** • The Kishenganga Project entails a 75 meter high concrete dam at Gurez at about 8,000 feet to store 140,000 MAF of water and divert some flows through a 22 km tunnel bored into the mountain into the Madmati Nala, which empties into the Wullar Lake. Kishenganga, called Neelum on the other side of the LoC, is a tributary that flows into the Jhelum near Nowshera (close to Muzaffarabad). Inter-tributary transfer is allowed under the IWT. Pakistan's objection is that the water is not transferred into the same tributary Neelum, although it finally gets into the Jhelum. It also fears that the project would flush the Wullar Lake. India informed Pakistan about the project in 1994, while Pakistan contends that the construction of a dam on the Neelum near

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► The Tulbul navigation (Wullar barrage) project is part of the composite dialogue within the framework of the peace process underway between India and Pakistan.

Nowshera had been underway for irrigation purposes and that 133,000 hectares was already being irrigated at that time. Pakistan's Water and Power Development Authority (WAPDA) does not show this as one of its projects, and there is no evidence to substantiate this claim. According to India, the work on the Kishenganga Project commenced well before the Neelum project, while Pakistan insists to the contrary. Determination of the "existing use" of water that will get affected and the date that is to be taken into account for the same are the major issues of the dispute, among others.

#### **Areas for Cooperation: Revising the Indus Waters Treaty**

The Indus is the lifeline of Pakistan and water sharing is therefore a very emotive issue in Pakistan as well as in Kashmir. The Kashmiris, however, feel that the IWT is unfair to them, as India relinquished consumptive rights over the west flowing rivers, which pass through the Indian state of Jammu and Kashmir (J&K). To meet the energy requirements of the state, harnessing these rivers is essential. The benefits that would have accrued to the state were surrendered by the Indian government without due consultation with the local government. Several power projects in the state have been held up due to disputes with Pakistan over the IWT. Having a hydroelectric power potential of over 20,000 MW, J&K is in need of the critical infrastructure to harness its abundant resources. So far, hardly 1,500 MW of this potential has been exploited, both under state and Indian Central Government schemes. Against its requirement of over 1,600 MW, the state generates only about 450 MW. The state has an annual expenditure of Rs 2000 crore (approximately \$500 million) on purchasing power from outside to meet its demands. The ongoing peace process in Kashmir needs to be complemented by an augmented pace of development. Addressing the current power situation holds the key to the development question in the region and would provide enormous employment opportunities. Speedy resolution of the pending disputes is vital and the IWT, which has been honored even during wartime, needs to be the basis for resolution.

Article VII of the IWT envisages future cooperation, pointing to the "common interest in the optimum development of the rivers" and calling upon both sides "to cooperate, by mutual consent, to the fullest extent in undertaking engineering works in the rivers." Both India and Pakistan are also poor managers of water and have an inter-provincial problem of water sharing. Joint mechanisms under the IWT for harnessing and management of water should be part of the portfolio of confidence building measures between the two countries. The IWT-2 that is discussed in some policy circles would be a

take off from the IWT, which is instructive on the purposes of cooperation and dispute resolution and also provides ample scope for revision. With climate change threatening to impact rainfall patterns and water supply, both India and Pakistan need to think seriously of such a joint mechanism. Achieving the goals of more storage structures and better distribution channels requires joint deliberation. Laffitte stressed the use of modern technology in the BHP report, and cooperation on such technology for better water management would be extremely pertinent. It would significantly help in integrating the region economically. Political determination on both sides is absolutely necessary to make resolution and initiation of such joint management of the Indus basin possible. Politicizing this emotive issue of water, as has occurred in the past, cannot be allowed to overshadow the process of such emerging cooperation. Solutions to water sharing issues are vital for the development of Jammu and Kashmir, and cooperation would represent a significant confidence building measure that would favorably impact the livelihoods of millions of people on both sides of the LoC.

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► **Addressing the current power situation holds the key to the development question in Kashmir and would provide enormous employment opportunities.**

► **Cooperation between India and Pakistan over water issues would represent a significant confidence building measure that would favorably impact the livelihoods of millions of people on both sides of the Line of Control.**