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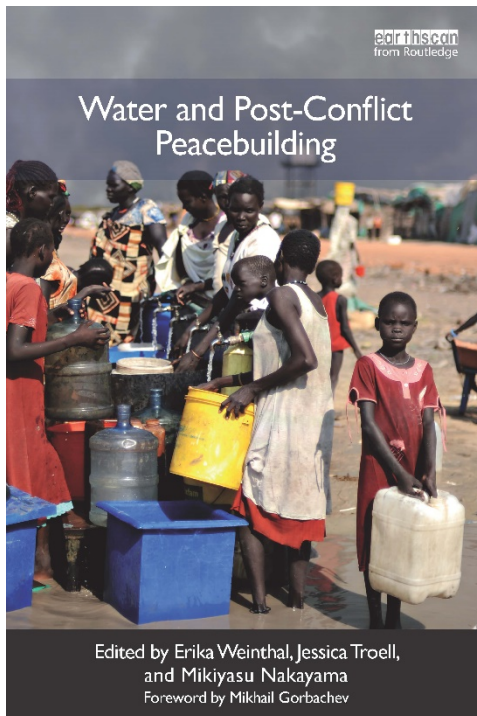
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This chapter first appeared in *Water and Post-Conflict Peacebuilding*, edited by E. Weinthal, J. Troell, and M. Nakayama. It is one of 6 edited books on Post-Conflict Peacebuilding and Natural Resource Management (for more information, see www.environmentalpeacebuilding.org). The full book can be ordered from Routledge at <http://www.routledge.com/books/details/9781849712323/>.

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Refugee rehabilitation and transboundary cooperation: India, Pakistan, and the Indus River System

Neda A. Zawahri ^a

^a Cleveland State University

Online publication date: October 2014

Suggested citation: N. A. Zawahri. 2014. Refugee rehabilitation and transboundary cooperation: India, Pakistan, and the Indus River System. In *Water and Post-Conflict Peacebuilding*, ed. E. Weinthal, J. Troell, and M. Nakayama. London: Earthscan.

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Refugee rehabilitation and transboundary cooperation: India, Pakistan, and the Indus River system

Neda A. Zawahri

At independence, in 1947, India and Pakistan experienced widespread communal violence, with the worst occurring in eastern and western Punjab.¹ As the states were engulfed in a war over Kashmir, people crossed the new border that now divided Punjab in an attempt to escape the bloodshed. To settle and rehabilitate the millions of refugees that entered eastern Punjab, India used the waters of the Indus River tributaries to establish an agrarian economy. India also employed refugees to build the hydrological infrastructure, including dams, canals, and irrigation networks, needed to support an agriculture-based economy. These policies also helped meet India's need to develop a border province threatened by the Indo-Pakistani conflict and to produce desperately needed grain to avert famine.

As India sought to restore sustainable livelihoods in conflict-torn eastern Punjab, it was drawing on the same water that was bringing Pakistan's arid lands to life. Conflict between India and Pakistan over the Indus River was averted by the direct mediation of the World Bank. After eight years of negotiation, India and Pakistan signed the Indus Waters Treaty (IWT) in 1960. The World Bank's mediation was also important to management of the two post-conflict societies because it coordinated the international donors who helped to underwrite the construction of the hydrological infrastructure that facilitated the reconstruction and economic development needed to build sustainable livelihoods.

Since signing the IWT, India and Pakistan have continued to confront the need to negotiate issues that arise as they develop the Indus River system. A commission established under the IWT has facilitated the management of many of these issues. For over fifty years, the riparian states have peacefully resolved their Indus River disputes using the conflict resolution mechanism specified in the IWT (Salman 2008).

This chapter analyzes the IWT and the effective use of the Indus River system's water to rebuild post-conflict eastern Punjab. First, the roots of the

Neda A. Zawahri is an assistant professor in the Department of Political Science at Cleveland State University.

¹ In this chapter, *eastern Punjab* refers to the portion of the Punjab region in India, and *western Punjab* refers to the portion in Pakistan.

Indo-Pakistani conflict and the humanitarian disaster that erupted as these two countries came into being are considered. The Indian government's refugee rehabilitation and economic development policies in eastern Punjab are analyzed in the following two sections. The Indo-Pakistani water dispute is then evaluated, along with attempts to foster transboundary cooperation. Next, the factors that contributed to the successful outcome are considered, followed by a discussion of lessons learned for reconstructing conflict-torn societies and a conclusion summarizing the major findings.²

BACKGROUND OF THE CONFLICT

As Great Britain withdrew from the South Asian subcontinent in 1947, Pakistan and India gained their independence on August 14 and 15, respectively.³ Due to the haphazard manner in which the decolonization process proceeded, Britain left behind some pernicious disputes that resulted in numerous Indo-Pakistani conflicts. These disputes included the interrelated conflicts over Kashmir and the Indus River system.

During the colonial era, 562 princely states were permitted to reign with some sovereignty, but at independence each had to accede to either India or Pakistan. Lord Mountbatten, the last British viceroy, specified that the accession should depend on the majority of the princely state's population and its geographic contiguity. Kashmir, a princely state, presented a special predicament. It had a Hindu monarch, Maharaja Hari Singh, while the majority of its population was Muslim. Kashmir's territorial contiguity to both India and Pakistan meant that it could accede to either state. The maharaja's indecisiveness and secret ambition for an independent state led him to waver and delay his decision (Dixit 2002; Schofield 2003). In October 1947, as communal violence overwhelmed Kashmir, tribesmen from Pakistan's North-West Frontier Province invaded. Fearing the collapse of his regime, the maharaja appealed to India for help. Under the advice of Lord Mountbatten, Jawaharlal Nehru—India's prime minister—refused to provide assistance until the maharaja acceded to India. Nehru also asked for a commitment to hold a plebiscite once order was restored to ascertain the people's wishes on the accession (Bose 2003; Schofield 2003).⁴ As India came to the maharaja's rescue, it fought its first war with Pakistan, which culminated in the

² Many of the data for this chapter come from field research in India (January through June 2002), Jordan and Syria (January through July 2001), and Washington, D.C. (May 2006 and June 2007).

³ In 1947, Pakistan consisted of two wings—west and east. After the 1971 civil war, eastern Pakistan became the independent nation of Bangladesh. Since the focus of this chapter is on western Pakistan, all references to Pakistan mean western Pakistan.

⁴ Some scholars have argued that the maharaja signed the letter of accession prior to the Indian army's arrival (Bose 2003), but Alastair Lamb argued, after inspecting declassified British documents, that the maharaja signed the letter after the conflict (Lamb 1992).



division of Kashmir between Indian-controlled Jammu and Kashmir and Pakistani-controlled Azad Kashmir.

Several factors contributed to the competition over Kashmir. The adversaries were divided along lines of ideology and national identity (Ganguly 2002). Pakistan's basis for existence was the two-nation theory, or the belief that the Muslims of South Asia constituted a distinct group and required their own independent state to guarantee their rights and freedoms. As a secular democracy, India was founded on ethnic and religious pluralism and a guarantee of religious freedom for all groups. The competition to secure Kashmir was further aggravated by the fact that several sources of freshwater, an essential livelihood resource, originated in or flowed through this territory (Mayfield 1955). To appreciate the significance of this often-overlooked issue, it is necessary to examine its origin.

The new Indo-Pakistani international border placed India upstream from an arid Pakistan, which lacked any alternative source of freshwater other than those originating from the Indus River system. The Indus River system consists of the main Indus River, two western tributaries, and five eastern tributaries, some of which are also shared by China and Afghanistan. India and Pakistan share six rivers of the Indus River system (see figure 1). Three of these rivers—the Chenab River, the Indus main stem, and the Jhelum River—flow through Jammu and Kashmir before entering Pakistan, and three—the Beas River, the Ravi River,

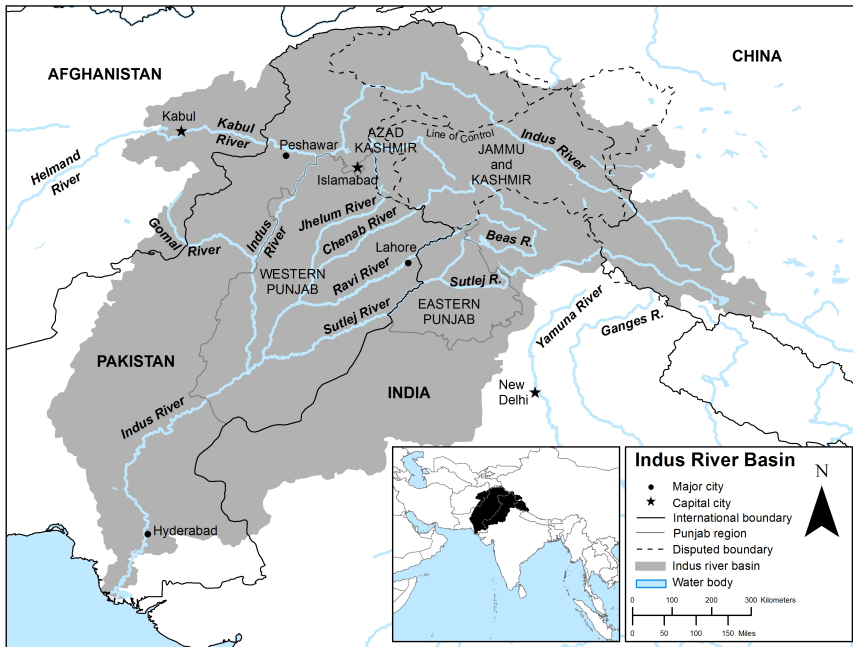


Figure 1. Map of the Indus River Basin, 1947

Source: Adapted from Lowi (1993).

and the Sutlej River—flow through India’s eastern Punjab before entering western Punjab in Pakistan.⁵

Demarcating the new Indo-Pakistani border in Punjab required a special commission because of its complexity. With little knowledge of the terrain and five weeks to delineate the border, Sir Cyril Radcliffe—the chairman of the commission—issued the award that divided greater Punjab in August 1947 (Butalia 2000). The Radcliffe Award bisected an elaborate canal system that relied on the Indus River to irrigate the granary of greater India during the colonial period. Britain had established canal colonies in Punjab to manage the famines that plagued the subcontinent, employ and settle the disbanded Sikh army, and develop crown wastelands (Michel 1967). The new Indo-Pakistani border left the headworks to several canals—the Upper Bari Doab, Dipalpur, and Eastern Grey canals—in India, but the irrigated farmlands went to Pakistan.

Once the states declared their independence and the Radcliffe Award was announced, the sporadic communal violence that had occurred prior to independence

⁵ The IWT, which addresses the use of these six rivers, refers to the Chenab River, Indus main stem, and the Jhelum River as the “Western Rivers,” because they are the western-most of the six rivers shared between India and Pakistan. IWT refers to the Beas River, the Ravi River, and the Sutlej River as the “Eastern Rivers.” This chapter similarly uses the terms *Western Rivers* and *Eastern Rivers* to refer to each set of rivers, respectively.

grew dramatically, producing the single largest movement of people in history (Haque 1995). In Pakistan, some members of the Muslim majority massacred Hindus and Sikhs, while in India some Hindus and Sikhs slaughtered minority Muslims. The area that experienced the worst communal violence was greater Punjab; over 4 million Hindus and Sikhs fled to eastern Punjab and more than 5 million Muslims fled to western Punjab (Aiyar 1995).

Neither government was prepared for the onslaught of refugees, and their weak civil administrations collapsed when confronted with the humanitarian crisis (Haque 1995). An ineffective police force combined with an inadequate military and a collapsed civil administration contributed to widespread communal violence, torture, abduction and rape of women, and the slaughter of 1 million people throughout eastern and western Punjab (Hodson 1997; Keller 1975; Haque 1995; Butalia 2000). During the turmoil, homes, businesses, crops, and warehouses were set ablaze. In eastern Punjab alone, 90 percent of the homes in 1,800 villages were demolished (Randhawa 1954). Fires also destroyed basic infrastructure, which resulted in the disruption of electricity and water supplies. The inability to maintain proper sanitation services and distribute clean water contributed to the outbreak of cholera and other waterborne diseases (Talbot 2007). People escaped the violence in caravans or on foot, only to be attacked en route.

After the initial spontaneous wave of refugees, the national governments undertook their own evacuations of religious minorities via trains, airplanes, and foot columns that included 40,000 to 60,000 people each (Rao 1967).⁶ On September 3, 1947, India and Pakistan agreed to establish the Military Evacuation Organization to secure the removal of minorities (Rai 1965). In planning these evacuations, the Indian government gave priority to civil servants and peasants. Civil servants were needed to operate the skeletal bureaucracy, and peasants were required to cultivate crops in farmlands vacated by Muslims (Rai 1965). These government-sponsored evacuations proved as dangerous as the spontaneous ones. Government-operated trains were derailed, their passengers killed, and their belongings looted. These trains often arrived at their destination “carrying only corpses” (Oberoi 2006, 51). Because food and water were in short supply, and at times deliberately withheld, many refugees also died of dehydration or starvation en route (Aiyar 1995).

As Sikh and Hindu refugees entered eastern Punjab, makeshift camps were established to provide temporary shelter and emergency relief. Approximately forty-five of these camps were created within the first few months of independence (Menon and Bhasin 1998). Refugees were also housed in schools, government offices, and military camps that were operated by the eastern Punjabi government with financial backing from the central government. Domestic and international nongovernmental organizations, such as the Red Cross, United Nations Children’s Fund, Arya Samaj, and All India Women’s Conference, assisted the government

⁶ The largest convoys are estimated to have had 400,000 to 800,000 refugees (Oberoi 2006; Keller 1975).

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in the establishment and operation of these camps, which enabled a rapid response to the humanitarian disaster (Keller 1975; Menon 2003). In the camps, refugees received food, clothing, medical assistance, and a cash allowance of around Rs. 6 (approximately US\$0.14) (Rai 1965; Oberoi 2006). Makeshift refugee camps tend to have improvised sewage systems and unsafe water supplies that can contribute to the outbreak of disease (Cernea and McDowell 2000). To minimize the spread of epidemics, eastern Punjabi refugees were inoculated against cholera and smallpox (Rao 1967).

In post-conflict situations, state capacity is usually low, which contributes to pervasive opportunities for corruption or the abuse of government office for personal profit (O'Donnell 2008). Since the potential financial gains outweigh any likely risks, corruption tends to be prevalent among civil servants, police officers, military personnel, and refugees (Bolongaita 2005; O'Donnell 2008). As in other conflict-torn societies, conditions in eastern Punjab created many opportunities for corruption. Reports indicated that during this period of chaos in the region some military and police officers participated in the looting of evacuee property and facilitated criminal activities, while others simply watched the slaughter (Hodson 1997; Rai 1965). The lack of an effective and sufficient police or military force to patrol the streets of eastern Punjab permitted young refugees to join local criminals and the police in looting evacuee properties, stealing cattle, and smuggling grain and ammunition (Rai 1965). Under these desperate conditions, India's central and provincial governments organized efforts to rehabilitate and settle refugees.

REBUILDING SUSTAINABLE LIVELIHOODS

To rebuild the lives of impoverished refugees, several factors appear to be important. A government's sense of urgency and its autonomy in the policy-making process seem to be essential to successful rehabilitation (del Castillo 2008). Experts have also suggested that a government needs to undertake a multilevel coordination effort (Cernea and McDowell 2000).

India's central government coordinated its efforts with those of the provincial government, various ministries and agencies, social workers, and voluntary organizations to integrate refugees into society by providing them with homes and stable livelihoods. It also formulated a three-tier plan that involved providing temporary shelter, guiding the settlement and rehabilitation of refugees in rural and urban areas depending on their place of origin, and rehabilitating displaced women and children (Rai 1965).

The Indian government felt an urgent need to settle refugees because post-conflict emergency aid to assist with the humanitarian disaster failed to arrive. Due to the financial drain inflicted on the young government, which totaled Rs. 10 million (at the time, in 1947, just over US\$3 million) from 1947 to 1948, there was pressure to integrate refugees into society immediately (Randhawa 1954; Rao 1967; Oberoi 2006). The absence of the international donor community also meant that India was relatively autonomous in formulating its refugee policy.

The majority of the refugees entering eastern Punjab were from rural areas (Randhawa 1954; Rao 1967; Kudaisya 1995). To rehabilitate rural refugees, it is essential to provide them with arable land that enables them to pursue a productive livelihood (Cernea and McDowell 2000; Unruh and Bailey 2009). Otherwise, a future of landlessness for rural refugees removes the foundation of their livelihood and productive system and threatens them with poverty. Along with providing rural refugees with arable land, experts have also noted the need to rebuild the social networks or communities that are essential to the provision of social capital in rural areas (Cernea and McDowell 2000).

Within months of their arrival, the government of eastern Punjab undertook land-based resettlement of rural refugees by settling them on farmlands evacuated by Muslims (Rao 1967; Randhawa 1954). To reconstruct social networks, the government distributed farmland to refugees in groups. Whenever possible, these groups included unattached women, such as widows or women who had been raped and then rejected by their families because of their perceived contamination (Randhawa 1954). The government also attempted to recreate the refugees' previous villages in eastern Punjab. These policies were designed to ease the psychological effect of resettlement, minimize the congestion of border areas, and enable refugees to pool their resources to improve agricultural production (Rao 1967; Kudaisya 1995; Keller 1975).

Initially, refugees were allocated six to ten acres on a temporary and equitable basis regardless of their previous holdings in what had become Pakistan (Rai 1965; Randhawa 1954; Rao 1967). To help these impoverished refugees to become viable farmers, the government provided loans to purchase agricultural inputs—seeds, fodder, and bullocks—and to feed their families until harvest time. Loans were also available for home improvements and the purchase of equipment such as tractors.

Irrigation water was available from canals or wells. Farmers received substantial subsidies on irrigation water from the few existing canals. The most reliable sources of water for farmers were shallow wells drawing from approximately twenty feet (Westley 1986). Wells allowed farmers to secure the right quantity of water at the exact time they needed it. Throughout this period, farmers had access to government loans to build or fix wells (Rao 1967). By the late 1950s, the central government had issued over Rs. 30 million (at that time, approximately US\$6.3 million) in loans to farmers.

ECONOMIC DEVELOPMENT AND EMPLOYMENT GENERATION

Economic development and employment generation are essential to stabilizing post-conflict states (Bigombe, Collier, and Sambanis 2000; Obidegwu 2004). The success of economic rehabilitation policies undertaken immediately after a conflict depends partly on a commitment by the government and a belief that refugees are a resource for economic development (Voutira and Harrell-Bond 2000; del Castillo 2008). Not only was the Indian government committed to rehabilitating rural refugees, but it also perceived them as potential contributors to meeting its desperate need for national food security (Rai 1965). In fact, the decision to settle

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rural refugees immediately was driven by the desire to decongest refugee camps and the emphasis on cultivating all available farmland to manage the country's severe domestic food deficit (Kudaisya 1995).

As Nehru noted in a speech, "The question of food has become almost a nightmare and is pursuing us all the time" (Nehru 1995, 234). The independence of Burma (now Myanmar) and Pakistan decreased the supply of food grains in India by 200 million tons, which contributed to a chronic food shortage and threatened widespread famine (Central Board of Irrigation and Power 1992). This constant threat of famine was aggravated by the fact that 80 percent of India's rural population depended on subsistence agriculture but lacked access to irrigation (Kaushik 1998). Dependence on the monsoons resulted in an unstable agricultural sector because a failed, late, or heavy monsoon led to crop failure. For the government, therefore, the "taking up of irrigation schemes to increase food production became the top priority" (Central Board of Irrigation and Power 1992, 75).

Building an agriculture-based economy

In eastern Punjab, the government sought to establish an agrarian economy (Verghese 1994). Agriculture was also an effective approach to economic development for a border province in which substantial investment in industrialization would have been irrational because of the ongoing threat of war with Pakistan (Talbot 2007). Eastern Punjab was the most neglected part of greater Punjab in terms of agricultural development. In fact, of the 26 million acres of farmland irrigated by the Indus River system at independence, 21 million were in western Punjab and 5 million in eastern Punjab.⁷ Eastern Punjab was arid, but with an adequate water supply it had the potential to become India's breadbasket. The Eastern Rivers flowed through eastern Punjab before entering Pakistan. They provided the Indian government with sufficient water to settle refugees, establish an agrarian economy, meet domestic food security needs, and generate hydropower to meet energy demands (Chadha 1986).

To deliver irrigation water from the Indus tributaries to farmers, the government undertook the construction of extensive hydrological infrastructure, which included the Nangal Barrage, Harike Barrage, Bhakra-Nangal Dam, Bhakra Canals, Bhakra Main Line, Madhopur-Beas Link, and Ferozepore Feeder. The largest of these projects was the multipurpose Bhakra-Nangal Dam along the Sutlej River. Initiated in 1948, the dam was designed to generate desperately needed hydropower to operate tubewells. These tubewells were needed because as farmers increased their reliance on shallow wells, the groundwater table fell. To encourage the use of tubewells, the government subsidized electricity and provided farmers credit to construct these much deeper and more reliable wells (Westley

⁷ Official response to parliamentary discussion, "Statement referred to in reply to part (c) of Starred Question No. 35 to be answered in the Lok Sabha on 4-11-1965, regarding water supply to Pakistan under Indus Waters Treaty," on file at the Parliament Library, New Delhi, India.

1986). The dam was also designed to distribute irrigation water to refugees settling in the area (Nehru 1988; Tan and Kudaisya 2000; Kudaisya 1995).

The government also undertook the remodeling and cleaning of existing irrigation systems to augment their capacity. Refugees were employed in the construction and remodeling of these irrigation systems, canals, barrages, and dams (Talbot 2007; Rai 1965; Rao 1967). Government-sponsored projects also employed refugees to expand farmland through the reclamation of wasteland and deforestation (Rao 1967). A number of researchers have suggested that these types of government-sponsored public employment programs are effective in lowering the unemployment rate among refugees and helping to stabilize post-conflict economies (McLeod and Dávalos 2008; del Castillo 2008).

After the temporary allocation of farmland, rural refugees in eastern Punjab pressured the government for a more permanent allocation that better reflected their previous landholdings. But permanent allocation was complicated by the insufficient quantity and quality of land in eastern Punjab. Sikhs and Hindus evacuated 5.7 million acres of farmland in western Punjab, while Muslims evacuated only 4.7 million acres in eastern Punjab (Rai 1965; Rao 1967). Moreover, the farmland of eastern Punjab varied substantially in soil quality, precipitation rates, and extent of desertification (Michel 1967; Gulhati 1973). To take into account the variance in the quantity and quality of land as it compensated farmers, the government formulated the measurement of a standard acre, in which each unit of land was evaluated based on its productivity.

Corruption during the rehabilitation process can minimize the intended benefits of any policy and complicate attempts to build a stable economic system (Bolongaita 2005; O'Donnell 2008; Unruh and Bailey 2009). But governments can implement preemptive policies to minimize the potential for corruption during the rehabilitation phase, a step that was taken by the Indian government.

To assess rural refugees' previous holdings of land, the Indian government asked them to submit claims for land in February 1948. It anticipated that some refugees would exaggerate their claims and took preemptive measures to discourage civil servants, elites, and refugees from lying or cheating on the claims.

The government sought to locate accurate information on refugees' previous landholdings by negotiating with Pakistan for the exchange of records. Complete records were received only from western Punjab. Due to the turmoil of the post-conflict environment in Pakistan, many records were missing, and other areas either failed to provide records at all or provided incomplete information (Rao 1967). To minimize exaggeration and misinformation, the Indian government decided to hold public meetings with refugees to ascertain the accuracy of the land claims they submitted. The objective of the public meetings was to allow disputes over the quantity of land claimed by each family. Those caught lying faced imprisonment or substantial reductions in the land allotted to them. Through these preemptive policies, the government was able to prevent corruption from derailing its rehabilitation program and undermining its effectiveness and legitimacy.

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Once the extent of a refugee's former landholdings was assessed, the government calculated it in standard acres and then subjected it to graded cuts that began at 25 percent and increased proportionally to the amount of land the family previously held (Rai 1965; Tan and Kudaisya 2000). Refugees received full ownership of the land once the government took legal possession of all evacuee property in 1954. By this time, eastern Punjab had settled 4.25 million refugee families on 20 million standard acres (Rao 1967). The government's efforts to rehabilitate refugees proved effective.

Consequences of the government's policies

Due to its commitment and strong interventions, the government was able to fulfill its objective of establishing an agrarian economy to rehabilitate refugees, contribute to the economic development of a border province, and generate food grains. Two months after the refugees' arrival in eastern Punjab, the government was able to allocate 2 million acres of land to settle them (Menon 2003). By the end of 1948, all refugee camps in northern India either had been closed or were about to close (Oberoi 2006). Due to the rapid expansion of hydrological infrastructure, the total irrigated area in eastern Punjab increased from approximately 33 percent at independence to 52.3 percent by 1950–1951 (Chadha 1986). When additional canals came into operation in the mid-1950s, the total irrigated area increased from 39.28 million acres in 1947–1948 to 66.50 million acres in 1956–1957 (Rai 1965). Farmers used government loans to transform marginal fields into productive farmland (Randhawa 1954).

Punjabi farmers received clear and secure property rights and clear access to water. Moreover, the Indian government subsidized agricultural inputs so that farmers paid minimum prices for irrigation water drawn from canals, electricity to operate tubewells, and fertilizer. On the output side, the government procured at premium prices all the grain produced by farmers. Farm property and profits were only lightly taxed. Due to this government support, Punjabi farmers had the economic incentive to produce as much as possible (Westley 1986).

The Indian government's efforts helped eastern Punjab make the transition from a grain importer to a surplus producer. At independence, eastern Punjab had an annual deficit of 35,000 tons of grain, but by 1950, the province provided 220,430 tons of grain to the central government (Rai 1965). In 1958, Punjab provided the central government with over 1 million bags of rice and other grains. Due to the development of the Indus River system to support the agricultural sector, by the mid-1980s the province was capable of contributing 1 million tons of grain to the national budget (Chopra 1981).

The standard acre measurement and graded cuts also helped minimize the number of landed elites and absentee farmers (Westley 1986). Due to the substantial graded cuts imposed on the landed elites and middle-class farmers, they were compelled to farm their allotted land more efficiently (Kudaisya 1995). Furthermore, the number of landless peasant refugees decreased because many received an

allotment of land to cultivate. Thus, it can be concluded that the government's policy successfully achieved the integration of the rural refugee population, because by 1960 the former refugee population achieved a level of prosperity and success that would make Punjab India's breadbasket (Kudaisya 1995).

FOSTERING TRANSBOUNDARY ENVIRONMENTAL COOPERATION

Although these policies were essential to the post-conflict settlement of refugees in India's Punjab, the consumption of water from the Eastern Rivers to achieve these goals had a direct negative impact downstream. Predominantly agrarian Pakistan had a single source of water that brought to life its otherwise arid lands: the Indus River system. India's control of eastern Punjab and Jammu and Kashmir provided it with a strategic advantage to "encircle Pakistan militarily and strangle it economically" (Suhrawardy 1991, 36). Consequently, securing access to this water became essential to Pakistan's industrialization efforts and the stability of its agricultural sector (Spate 1948).

In the abstract, the Indus River system carried sufficient water to meet both India's and Pakistan's domestic demand, but closer inspection reveals a strong distributional conflict. In 1947, the Indus River carried 168 million acre-feet annually. Of this water, India was consuming 8 million acre-feet and Pakistan 63 million acre-feet, while the remaining 97 million acre-feet went into the Arabian Sea (Central Board of Irrigation and Power 1992). The water entering the sea came from two undeveloped sources, the monsoons and the Western Rivers (Gulhati 1973). The Indus River system received 60 percent of its water during the monsoon period, but storage facilities to capture this floodwater did not exist. The Western Rivers carried 80 percent of the river system's water, but they were much less developed. During this period, India and Pakistan depended on the same Eastern Rivers, which were not only in full use but also provided insufficient water for farmers in Sind, a province in southeastern Pakistan. As a result, India's plans to establish an agrarian economy in eastern Punjab directly affected the quality and quantity of water available to Pakistani farmers (Fowler 1950; Gulhati 1973).

In the absence of an international mediator to help them to share the canal waters and Indus tributaries, India and Pakistan were left to their own means. The states did reach an arrangement immediately after independence. On December 20, 1947, chief engineers from western and eastern Punjab signed a standstill agreement that maintained the status quo prior to independence, which was favorable to Pakistan because it was consuming more of the canal waters.

On March 31, 1948, the standstill agreement expired, and on April 1, 1948, eastern Punjab stopped the waters feeding the Upper Bari Doab and Dipalpur canals, which delivered water to Pakistan. This action deprived an important Pakistani city, Lahore, of municipal water and hydropower. It also deprived 1.66 million acres of farmland of irrigation water; consequently, "millions of people faced the ruin of their crops" (Ali 1967, 320). After intense negotiations, India

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reopened the canals on May 3, 1948 (Nehru 1994), but this experience resonated with Pakistani leaders as a constant reminder of their vulnerability and dependence on India (Khan 1967). Pakistani fears proved accurate when the flow of water in these canals was reduced in 1952 and 1953 (Nehru 1998).

On May 4, 1948, India and Pakistan signed the Delhi Agreement, covering a new arrangement for sharing the canals (Nehru 1994). Unlike the standstill agreement, the Delhi Agreement recognized India's right to increase its consumption of water from the Indus and required Pakistan to pay India for operating the canals. In spite of this agreement, the states continued to compete over access to the eastern tributaries of the Indus from 1947 until 1952. During this period, India and Pakistan undertook unilateral development of the Indus River system rather than negotiating over the design and construction of hydrological infrastructure.

Mediating international river disputes

States with a history of animosity and conflict can use the help of a single neutral mediator to facilitate the negotiation process leading to a treaty (Nakayama 1997; Alam 1998; Salman 2002). The contribution of a single mediator is especially important for post-conflict states. In these states, the mediator can facilitate the resolution of a transboundary dispute and help to coordinate the donor community's financing of reconstruction and economic development. Experts have noted that assistance for reconstruction and economic development can be more important for the future of conflict-torn states than immediate humanitarian aid, because most developing states lack the necessary financial resources to underwrite this critical phase (del Castillo 2008). For India and Pakistan in 1951, a mediator did offer its help with the Indus water dispute.

The former chairman of the Tennessee Valley Authority, David Lilienthal, asserted in a magazine article that the dispute over Kashmir was actually about control of the Indus River and, as the title of his article warned, this could be "[a]nother 'Korea' in the making" (Lilienthal 1951, 23). The article came to the attention of the World Bank's president, Eugene Black, and the U.S. Department of State. Both agencies feared an imminent war between India and Pakistan over the Indus River and Kashmir (Gulhati 1973). With the blessing of the United States, the World Bank provided its good offices to facilitate negotiations between the riparian states.

India and Pakistan accepted the World Bank's offer to mediate the Indus River dispute for several reasons. Both states were interested in developing the irrigation potential of the region watered by the Indus River system in order to support an agrarian economy, but they needed foreign aid to finance the construction of hydrological infrastructure. The states were also interested in stabilizing their future access to the water of the Indus River system (Alam 2002; Yamamoto 2008).

After a failed attempt to persuade the riparian states to embrace an integrated development of the river system, the World Bank asked each state to submit its own proposal. The two countries' October 6, 1953, proposals differed extensively.

The following year, the World Bank introduced its own proposal, which involved the allocation of tributaries between the two countries (Michel 1967; Nakayama 1997). Although India agreed to the essence of the World Bank's proposal, Pakistan was worried that the proposed replacement infrastructure was insufficient. Following a thorough examination of Pakistan's concerns and further negotiations, the World Bank conceded to Pakistan's request for dams along the main Indus and the Jhelum tributary. India, which agreed to finance the replacement work to transfer Pakistan's dependence from the Eastern Rivers to the Western Rivers, feared that the additional infrastructure would increase its expense. The World Bank was able to draw on a consortium of states in addition to India to finance the building of Pakistan's infrastructure (Gulhati 1973).

The next contentious issue was the amount of time Pakistan required to complete its replacement infrastructure. The World Bank's president met with India's prime minister; following intense negotiations, he agreed to a ten-year transition period. After eight years of negotiations, Jawaharlal Nehru and Field Marshal Mohammad Ayub Khan—India's prime minister and Pakistan's president, respectively—signed the Indus Waters Treaty (IWT) on September 19, 1960.⁸

Indus Waters Treaty

Consisting of twelve articles and eight annexures, the IWT allocated the Eastern Rivers to India. However, because some of these tributaries meander back and forth across the Indo-Pakistani border before making their final departure from India and receive additional tributaries from inside of Pakistan, the treaty permitted Pakistani farmers residing along these tributaries the right to use the water (in articles II and III, and annexure B). The treaty allocated the Western Rivers to Pakistan, but it preserved India's right to use the rivers in Jammu and Kashmir to generate hydropower, meet municipal demand for water, and support the agricultural sector (in article III and annexures C and E). Although the Western Rivers flow through the disputed territory of Kashmir, mediators and leaders were vigilant in writing a treaty that excluded discussion of this dispute. India and Pakistan were in effect able to separate this macropolitical conflict from the management of their international river (Lowi 1993).

Another unique feature of the IWT was the fact that the World Bank was a signatory to several provisions. The World Bank was responsible for operating the Indus Basin Development Fund, which coordinated funding from the donor community and India to construct the hydrological infrastructure specified in article V of the treaty. The World Bank was also involved in the provision, stipulated in article X, that permitted the extension of the transition period should war occur. It was a signatory to annexure H, which covered sharing the canal waters during the transition period. The IWT's mechanisms for conflict resolution in annexures F and G also included a role for the World Bank.

⁸ For the complete text of the IWT, see <http://siteresources.worldbank.org/INTSOUTHASIA/Resources/223497-1105737253588/IndusWatersTreaty1960.pdf>.

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April 1970 marked the end of the ten-year transition period and the termination of several of the World Bank's official roles under the IWT (Salman 2008). When Pakistan completed construction of its hydrological infrastructure, the World Bank fulfilled its obligation under article V. The transition period did not require an extension, so article X expired; annexure H, which specified the sharing of canal waters during the transition period, also ended. The only remaining role for the World Bank involved facilitating the conflict resolution mechanisms in annexures F and G. After 1970, the IWT became a purely bilateral agreement, and with the exception of facilitating the conflict resolution mechanisms, the World Bank's direct involvement ended (Salman 2008).

Permanent Indus Commission

An analysis of existing treaties revealed that the majority establish river basin commissions to implement the accord and facilitate future cooperation (Conca, Wu, and Mei 2006). These institutions are especially important for post-conflict states because they provide interested states with cooperation mechanisms to manage their disputes. The institutional capabilities needed to facilitate cooperation are the same in post-conflict states as in other riparian states. There is, however, a difference in that post-conflict and developing riparian states can use the help of a neutral mediator to design an effective river basin commission capable of facilitating negotiations and averting conflict.

With the assistance of the World Bank, the IWT (in article VIII) established the Permanent Indus Commission (PIC) to implement the treaty and negotiate issues that arise over the development of the shared river system. Headed by two commissioners, one Indian and one Pakistani, the PIC was given sufficient capabilities to perform its functions.

The commissioners have the ability to communicate directly with one another, which enables them to schedule meetings, arrange maintenance work, and exchange hydrological and meteorological data. Commissioners also hold meetings on a regular basis, which permits them to negotiate the design of hydrological infrastructure and coordinate their work in cleaning the river. The commission's work year ends on June 1, and it is required to submit an annual report summarizing its activities to member states. To complete this report, the PIC must hold its meeting by May 31 every year. Since 1960, the PIC has met every May to finalize and submit its annual report. Meetings have been held even when member states lacked any official diplomatic relations, which demonstrates the commission's resiliency and ability to avoid the frequent tensions in the macropolitical environment (Zawahri 2009).

States with a history of animosity and conflict tend to lack sufficient trust and confidence in one another to maintain long-term cooperation. Therefore, neoliberal institutionalist theory argues, states in an anarchic international system require institutionalized monitoring mechanisms to enable them to overcome their fear of cheating and cooperate (Mitchell 1994). In the case of river basin

commissions, the capacity to monitor provides commissioners assurances against cheating and allows for transparency in managing the shared river system. It also provides adversarial states with mechanisms for long-term cooperation.

The IWT bestowed on the PIC the ability to monitor the entire river system. In fact, the treaty requires the commissioners to tour the river system every five years to ascertain the accuracy of exchanged information. Each commissioner can also ask for a special tour of any site along the river system, and this request must be granted.

As states develop a shared river system, they are likely to experience disputes (Zawahri 2008b). To manage these disputes and provide the commission with flexibility to address issues, states require conflict resolution mechanisms. The PIC commissioners are fortunate to have the capacity to draw on detailed conflict resolution mechanisms. The IWT indicates, in article IX, that when the commissioners are unable to resolve a question, they can send the issue to their two governments for further negotiations. Depending on the nature of the issue in question, it can also be sent to either a neutral expert or a court of arbitration. If the difference falls in one of twenty-three areas specified in the treaty, it can be sent to a neutral expert for resolution. The expert's decision is binding, as stipulated in annexure F. Should the neutral expert decide that the difference is actually a dispute, or should the difference not fall into one of the twenty-three designated categories, then it is sent to a specially established court of arbitration. In annexures F and G, the treaty outlines methods for the selection of the neutral expert, judges, and chair of the court, and the World Bank can facilitate the selection process.

During the 1960s, the PIC was busy implementing the treaty, managing the distribution of canal waters, exchanging hydrological data and flood warnings, maintaining drainage systems, and gathering data on the construction of hydrological infrastructure. The PIC conducted many tours of inspection, visiting hydroelectric plants, dams, drains, and flood embankments (PIC 1962, 1963, 1964). In response to requests from Pakistan, the commissioners negotiated the construction of wireless stations for transmitting flood warnings. The commissioners were responsible for maintaining India's extensive drainage systems inside both India and Pakistan. The Indian commissioner requested that Pakistan construct a drainage siphon under the Fordwah and Eastern Sadiqia canals along the Sutlej River in eastern Pakistan. Timber floating from India into Pakistan on the Ravi and Chenab tributaries was another issue the commissioners managed.

Over the years, the PIC's role has not changed. What did change was the increasing demand for it to negotiate issues as the riparian states increased their use of the shared river system. Commissioners negotiated the amount of agricultural land India is permitted to irrigate from the Western Rivers. For Pakistan, this was an important issue because it directly influenced the quantity and quality of water in these rivers. The more land India irrigated in Jammu and Kashmir, the less the quantity and quality of the water Pakistan would receive. The commissioners also negotiated the way flood warnings are delivered to Pakistan. In their 1989 agreement, India agreed to deliver them via broadcast,

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telephone, and wireless services (Gupta 2002). The commissioners negotiated, modified the design, and oversaw the construction of several major hydrological structures along the Indus River system. These structures include the Dulhasti (390 megawatts (MW)), Lower Jhelum (105 MW), Salal I and II (combined 690 MW), and Uri I (480 MW) dams in Jammu and Kashmir. As this book went to press, commissioners were overseeing the construction of two additional dams: Kishanganga (330 MW), which is to be completed by 2014, and Uri II (280 MW), which is to be completed in 2012.

The PIC has been relatively insulated from political pressure against cooperation. The deterioration in bilateral relations in 2001–2002 illustrates this point. After a series of terrorist attacks against India by militants suspected of being based in Pakistan, relations between the two states deteriorated significantly. Political and economic elites demanded that the Indian government abrogate the IWT or, at a minimum, cancel the PIC's annual meeting. Despite substantial domestic pressure, the PIC proceeded with its meeting (Zawahri 2009).

Since 1960, the PIC and the riparian states' foreign secretaries have succeeded in managing all but one issue. Recently, Pakistan invoked the neutral expert mechanism to address a difference that arose over India's construction of the Baglihar dam. Because the two states have accepted the expert's decision, it can be argued that the IWT has facilitated the peaceful management of the Indus River by India and Pakistan (Salman 2008).

FACTORS AFFECTING SUCCESS

A combination of factors affected the Indian government's ability to settle millions of rural refugees in eastern Punjab by using the waters of the Indus River system effectively. Within the Indian government, there was a general perception that the refugees in eastern Punjab were potential contributors to economic development (Rao 1967). There was also political will, strong intervention, and commitment on the part of the government at both the provincial and national levels, which was critical to securing the necessary financial resources and appropriate rehabilitation package (Voutira and Harrell-Bond 2000). In fact, the central government provided eastern Punjab with the most comprehensive rehabilitation program received by any Indian province (Menon and Bhasin 1998). The province also received the highest expenditure allocated for the development of infrastructure in the post-conflict setting (Chadha 1986). The government's willingness to expend these resources certainly facilitated the successful outcome, but the fact that many refugees came from the highly developed canal colonies in western Punjab meant that they were experienced farmers capable of cultivating their allotments efficiently.

Although the lack of international financial assistance for sheltering the millions of refugees was certainly a drain on the young Indian economy, it nevertheless provided the driving force to compel a rapid response. In other words, the high cost of housing refugees encouraged their rapid transfer to and settlement

on lands vacated by Muslims, along with the expansion of farmland into areas of marginal quality. This policy allowed the government to cut the cost of sheltering refugees and to close the camps sooner. It was also consistent with the government's need to cultivate all available farmland in an attempt to meet growing demand for food, decrease grain import bills, and minimize the constant threat of famine. It can therefore be argued that the lack of international financial support provided the impetus and urgency needed to settle rural refugees.

As for the transboundary consequences of India's development of the Indus River system, several factors contributed to the successful management of this issue. One of the most important factors appears to have been the presence of a neutral and legitimate mediator (Nakayama 1997; Alam 1998; Biswas 1999; Salman 2002; Weinthal 2000, 2002; Wolf, Yoffe, and Giordano 2003; Giordano, Giordano, and Wolf 2005). Scholars agree that the World Bank's mediation from 1952 to 1960 and its use of carrot-and-stick approach to persuade India and Pakistan to compromise were critical to the signing of the IWT (Salman and Uprety 2002; Nakayama 1997; Alam 1998; Biswas 1999).

The World Bank also performed an important function in organizing the international donor community to underwrite the treaty's implementation and enable the construction of hydrological infrastructure to support the establishment of an agricultural sector in the post-conflict Indus River Basin (Gulhati 1973; Salman 2002). The donor community and India funded the necessary hydrological infrastructure that allowed Pakistan to draw on the Western Rivers to meet its domestic needs for water. India also received financial support totaling US\$200 million to develop the irrigation potential of the Eastern Rivers (Swain 2004). Coordination of the donor community cut the transaction cost of locating donors to fund the treaty's implementation and assisted with the reconstruction of post-conflict economies. It also kept in check competing donor interests that might have prolonged, complicated, or even derailed the treaty's implementation. Therefore, it may be argued that the presence of a single agency with sufficient financial resources to fund the treaty's implementation facilitated the rapid and smooth development of hydrological infrastructure.

The fact that the IWT is clear, concise, and detailed could have contributed to the commissioners' ability to maintain peace. Negotiated and written by engineers, the treaty has meticulously detailed provisions for conflict resolution mechanisms, design limitations on hydrological infrastructure within Jammu and Kashmir, and the commission's ability to tour the entire river system. Moreover, the fact that the treaty focuses only on the Indus River system, and avoids discussion of Kashmir and other Indo-Pakistani disputes, might have also contributed to the commissioners' ability to manage water disputes.

The Israeli-Jordanian Joint Water Committee was not as fortunate. The Treaty of Peace between the State of Israel and the Hashemite Kingdom of Jordan, concluded on October 26, 1994, does not focus simply on water issues but on all Israeli-Jordanian political issues. The heavy participation of politicians in writing the treaty's water section also contributed to ambiguities and inconsistencies,

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which have complicated the commissioners' ability to perform their function (Zawahri 2008a). A clear and concise treaty likely contributes to cooperation, although scholars do argue that the simple presence of a treaty does not guarantee future cooperation (Downs, Rocke, and Barsoom 1996).

The mediator's presence during the first ten years of the treaty's implementation also had a positive impact. Scholars argue that a mediator's continued presence in the post-conflict environment is important for stabilizing the peace-building process (Walter 2002; Fortna 2004). A review of PIC minutes reveals that it was able to operate and perform its assigned task of sharing the canal waters and implementing the treaty without enlisting the World Bank's assistance (PIC 1961–1970). Nevertheless, the mediator's presence had an impact during one critical moment. In 1965, India and Pakistan fought their second war over Kashmir. During this conflict, India was still expected to deliver canal waters to Pakistan and make its annual installment to the Indus Basin Development Fund. Drought conditions plaguing the Indus River Basin contributed to domestic pressure from Punjabi farmers against making the deliveries to Pakistan. The 1965 war also created domestic pressure against making the annual installment. In spite of pressure, India delivered water in one canal and promptly paid the annual installment. However, India did fail to deliver water in the second canal, claiming that Pakistan did not submit the proper requisitions needed for making the delivery (Lok Sabha 1965a). An analysis of parliamentary debates provides a glimpse into the government's reasons for complying with most of its commitments, which included the need to preserve the treaty's integrity because of significant future gains in water and the need to avoid confrontation with the World Bank (Lok Sabha 1965a, 1965b).

In 1970, the World Bank completed the majority of its obligations under the IWT. Its only remaining role is to facilitate the selection process for the neutral expert or court of arbitration for the operation of the conflict resolution mechanisms. This remaining function is not sufficient to compel the states to alter their behavior to ensure cooperation. In fact, experts have noted that a mediator has "little power to prevent any of the signatories from defecting, that is becoming free riders, once [a] project is implemented" (Waterbury 1990, 7). Rather, India and Pakistan maintain cooperation with the IWT because it is in their interest. The treaty enables Pakistan to secure access to its only source of water, and India is able to develop the Eastern Rivers to support the agricultural sector in its northwestern provinces (Swain 2009; Zawahri 2009).

LESSONS LEARNED

There is no doubt that a committed government can use its resources effectively to provide refugees with livelihoods, integrate them into society, and bring peace and prosperity to a conflict-torn region. In the case of eastern Punjab, the Indian government was able to effectively use the waters of the Indus River system to establish an agrarian economy that permitted the settlement, employment,

and future prosperity of millions of refugees. Several lessons may be drawn from this case regarding the management of natural resources in post-conflict societies, the sharing of international rivers, and the implementation of treaties.

During the turmoil that occurs in conflict and post-conflict situations, corruption is inevitable (Bolongaita 2005; O'Donnell 2008). Throughout the communal violence and the process of settling refugees, the government of eastern Punjab faced corruption among civil servants, military officers, police, local elites, and refugees. At times, the government accurately anticipated and prepared for attempts at corruption, such as refugees' exaggeration of their landholdings. The government failed to prepare for other types of corruption, such as military escorts starving evacuees by withholding food rations. Government policies were unable to eliminate another form of corruption: elites still managed to collude with civil servants to secure control of large and highly fertile landholdings.

Despite the prevalence of corruption in the conflict-torn society, the government was still able to rapidly rehabilitate refugees and contribute to the economic development of a border province. One may conclude, then, that although corruption is inevitable and certainly contributes to economic inefficiencies, it does not have to paralyze a government or prevent it from responding effectively in a post-conflict environment. Moreover, a government's anticipation of corruption, by formulating policies that increase the cost of rent seeking, can minimize its impact.

In post-conflict situations such as eastern Punjab in 1947–1948, a state's power to formulate public policy expands extensively compared to more stable periods, even if its bureaucratic structure is weak (Rosenberg 2011). Taking advantage of this expanded political power, the Indian government was able to minimize the prevalence of landed elites and absentee farmers and increase the number of landholding refugee peasants. This policy had both domestic and regional consequences. Regionally, it increased India's interest in reaching an agreement with Pakistan over the river system because of its dependence on the Eastern Rivers. Domestically, India's change of land tenure compelled farmers to cultivate their lands more efficiently, which increased overall productivity. The policy also increased the number of rural refugees that the government could rehabilitate and prevent from falling into poverty. This accomplishment is remarkable because, under normal political conditions, the restructuring of land tenure is a highly complex and contentious endeavor. States, such as Egypt and Iran, that have attempted to restructure their land tenure have failed because of the governments' inability to penetrate rural politics.

Rather than sequencing emergency relief, rehabilitation, and development policy, the Indian government undertook a holistic and concurrent approach in which, as some refugees were receiving emergency aid, others were immediately dispersed onto vacant farmland and provided with financial support to enable their economic development. These simultaneous policies allowed India to integrate refugees into society rapidly. Scholars have suggested that the rapid rehabilitation of farmers also appears to contribute to success (Green and Ahmed

1999). Farmers can facilitate the rehabilitation and economic development of a conflict-torn society by helping to meet individual and urban food security needs along with providing the raw material needed for industrial development. The agricultural sector can also contribute directly and indirectly to revenue generation through exports and taxes (Green and Ahmed 1999).

The exact contribution of the donor community in providing emergency relief and aid to rebuild economies for conflict-torn states remains unclear (del Castillo 2008). Although donor assistance can help guide many countries through humanitarian disasters, their presence is not essential (Green and Ahmed 1999). Several factors interact to minimize the potential contribution of the donor community during this phase. Donors often have varying knowledge bases, competing goals, and even conflicting political agendas that can minimize the success of their efforts (del Castillo 2008). Moreover, the linkage between the donor community and the government in the policy-making process is often missing. As a result, lack of international financial assistance during a humanitarian disaster may actually contribute to a successful settlement of refugees because it enables host states to maintain their sovereignty over both the policy-making and implementation aspects of integrating refugees into society (Voutira and Harrell-Bond 2000). It may also serve to compel a rapid response by the government to minimize the financial burden generated by the crisis.

While donors tend to quickly pledge emergency humanitarian assistance, they rarely remain long enough in conflict-torn societies to support the economic development that is necessary to rebuild sustainable societies (del Castillo 2008). The Indus River system case, however, suggests that the presence of a single entity capable of mediating transboundary disputes, coordinating the donor community to implement an agreement, and providing the financial resources needed to reconstruct conflict-torn society appears to be important for peacebuilding. In fact, it might be argued that the function of a single mediator in providing the necessary financial aid is possibly more important for underwriting the long-term economic development in post-conflict societies than for providing short-term emergency aid.

The World Bank's direct mediation efforts facilitated the negotiations leading to a treaty (Salman and Uprety 2002; Nakayama 1997; Alam 1998; Wolf, Yoffe, and Giordano 2003). The accord contributed to the economic development of two post-conflict societies: it freed India to develop the Eastern Rivers of the Indus River to meet its need for irrigation water to develop eastern Punjab, and it enabled Pakistan to secure access to the river's Western Rivers to meet its domestic need for water. The lack of such an international mediator might have contributed to conflict in other basins. In the case of the Euphrates and Tigris rivers, which are shared by Turkey, Syria, and Iraq, the absence of a mediator might have contributed to an environment of competition and conflict (Naff and Matson 1984).⁹

⁹ It has also been suggested that in this case, the international community actually hindered cooperation because it repeatedly ignored requests from Syria and Iraq to mediate a treaty (Rubinstein 2001).

Implementation of a treaty is extremely complex, especially if there are any ambiguities in the agreement or if the signatories lack the financial means to underwrite the construction of planned infrastructure. States searching for donors to assist with implementing treaty commitments can confront difficulties as donors have divergent interests, objectives, and agendas. These difficulties can slow the implementation process or threaten the accord's integrity. A single donor can overcome these various obstacles and interests by collecting funding and coordinating the financing of projects. The World Bank's coordination of the donor community to underwrite the IWT also minimized the inefficiencies associated with the lack of coordination between donors.

The consequence of the absence of a single third party willing to coordinate the donor community to underwrite a treaty's implementation is evident in the Israeli-Jordanian peace treaty. The parties to that treaty spend precious time negotiating, arguing, and searching for donors to fund the various stages of projects—such as fact-finding, environmental impact assessment, design, construction, and operation and maintenance. A competitive and uncoordinated donor community has delayed the construction of some projects identified in the treaty.¹⁰

Concomitant with India and Pakistan's interest in cooperation is the fact that the World Bank was able to help the states design an effective river basin commission with appropriate conflict resolution mechanisms. Since states sharing a river are likely to experience continuous disputes, the availability of conflict resolution mechanisms is essential because they enable states to draw on standard operating procedures to settle these questions or disputes as they arise. These mechanisms also lend some predictability to the river's future development. To operate the conflict resolution mechanisms and facilitate the peaceful management of a jointly held river system requires a robust joint river commission. In the case of the Indus River system, India and Pakistan have been drawing on their conflict resolution mechanisms since 1960 as they developed the shared waters.

The Jordan-Israel peace treaty failed to provide sufficient conflict resolution mechanisms to the Joint Water Committee that was established to implement the treaty and manage the hydrological systems shared by Israel and Jordan. The absence of such mechanisms has meant that small disputes that could have been addressed through negotiations can flare up into bilateral disputes that require emergency meetings between national leaders (Zawahri 2008a).

Some experts have suggested that institutions require financial revenue, autonomy from member states, and authoritative decision making to manage the complexities inherent in sharing an international river (Waterbury 1997, 2002). River basin organizations certainly vary in their capacity to facilitate cooperation. Their success or effectiveness depends on the definition of cooperation. If cooperation is understood to require integrated water resource development of a river

¹⁰ Officials of Jordan's Ministry of Water and Irrigation interviewed by the author, April and May 2001, Amman.

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basin, then it is likely to require a highly complex and empowered river basin commission. On the other hand, in this analysis of the Indus River system, cooperation was defined as states altering their behavior after negotiations to resolve their water disputes and avert conflict. The type of river commission required for this level of cooperation needs to have sufficient capacity to facilitate the management of disputes. The Indus River's PIC has been successful in managing India and Pakistan's river disputes since 1960 by providing the two countries with a means to negotiate their disputes (Salman 2002).

CONCLUSION

Due to the communal violence that plagued India and Pakistan in 1947–1948, millions of people crossed the border between the two new states in one of the largest exchanges of populations in history. The worst massacres occurred in western and eastern Punjab. To settle the more than 4 million refugees who crossed into eastern Punjab, the Indian government decided to use the waters of the Indus River's Eastern Rivers to enable it to rehabilitate its refugees through the establishment of an agrarian economy. India was able to effectively facilitate economic development and peacebuilding in this conflict-torn province. The government's successful policies and programs also permitted the employment of refugees to construct the infrastructure necessary for turning eastern Punjab into India's granary, which helped to meet the nation's growing demand for food. The long history since India's independence permits us to assess this case and conclude that it truly represents a successful example of the effective management of a livelihood resource to contribute to peacebuilding in a post-conflict society.

Yet to implement these policies and projects, India had to draw on the same resource that sustained Pakistan's agrarian economy, which resulted in a trans-boundary dispute. From 1947 to 1952, the two riparian states negotiated two temporary agreements, but these failed to provide a stable solution. The direct mediation of the World Bank from 1952 until 1960 enabled the two states to avoid conflict over this natural resource and sign the IWT, which allocated the Indus main stem and the five easternmost tributaries between the states. India received the Eastern Rivers and Pakistan the Western Rivers. To finance the construction of hydrological infrastructure to shift Pakistan's dependence from the Eastern Rivers to the Western Rivers, the World Bank coordinated funding from India and a consortium of donors. The World Bank also operated the Indus Development Fund, which financed the implementation of these projects. To oversee the treaty's implementation and manage disputes arising from the development of the shared river system, the IWT established the PIC and provided it with sufficient authority to fulfill its task. Should questions, differences, or disputes arise, the states have extensive conflict resolution mechanisms to draw upon. For over forty years, the parties to the IWT have used the negotiation path to peacefully address all their Indus River disputes (Salman 2008).

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