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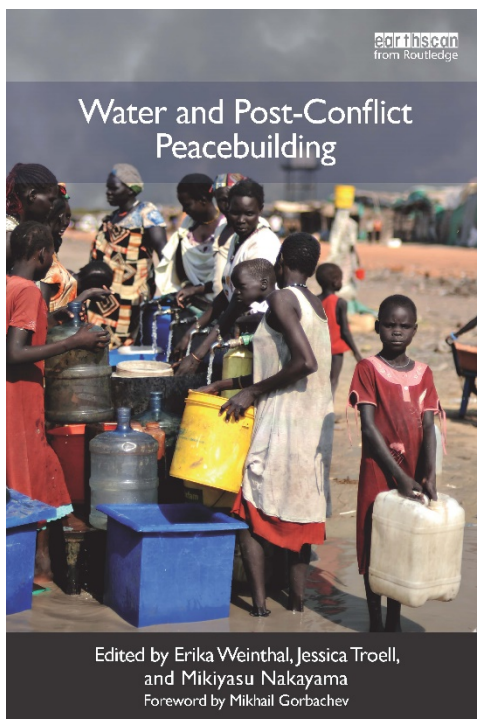
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This chapter first appeared in *Water and Post-Conflict Peacebuilding*, edited by E. Weinthal, J. Troell, and M. Nakayama. It is one of 6 edited books on Post-Conflict Peacebuilding and Natural Resource Management (for more information, see [www.environmentalpeacebuilding.org](http://www.environmentalpeacebuil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

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### Transboundary cooperation in the Lower Jordan River Basin

Munqeth Mehyar, Nader Al Khateeb, Gidon Bromberg, and Elizabeth Koch-Ya'ari<sup>a</sup>

<sup>a</sup> *EcoPeace/Friends of the Earth Middle East*

Online publication date: October 2014

Suggested citation: M. Mehyar, N. Al Khateeb, G. Bromberg, and E. Koch-Ya'ari. 2014. Transboundary cooperation in the Lower Jordan River Basin. In *Water and Post-Conflict Peacebuilding*, ed. E. Weinthal, J. Troell, and M. Nakayama. London: Earthscan.

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# Transboundary cooperation in the Lower Jordan River Basin

*Munqeth Mehyar, Nader Al Khateeb, Gidon Bromberg, and Elizabeth Koch-Ya'ari*

EcoPeace/Friends of the Earth Middle East (FoEME) was founded in 1994 to foster regional peace through transboundary environmental projects. As one of only a few transboundary organizations working on environmental peacemaking today, its approach and experience in water resource management in conflict and post-conflict situations can serve as a model for both top-down and bottom-up efforts. One of FoEME's central areas of activity, the rehabilitation of the Lower Jordan River, illustrates key strategies by which water projects can facilitate transboundary cooperation.

The Lower Jordan River flowed freely for thousands of years from the Sea of Galilee (also known as Lake Tiberias and Lake Kinneret) to the Dead Sea. The river's location in the Great Rift Valley, at the meeting point of Asia, Africa, and Europe, creates a lush wetland ecosystem, rich in biodiversity and one of the most important migratory flyways on the planet with an estimated 500 million birds traveling its length twice annually (Turner, Nassar, and Al Khateeb 2005). This river has been immortalized in the holy texts of the three Abrahamic traditions and remains an important cultural anchor for half of the world's population.

Sadly, the mighty Jordan River has been reduced to a trickle—devastated by overexploitation, pollution, and a lack of regional management. According to recent studies conducted by Yale University (Anisfeld and Shub 2009), this important regional water resource once carried an average of 1.3 billion cubic meters of fresh water from the Sea of Galilee to the Dead Sea every year.

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Friends of the Earth Middle East ([www.foeme.org](http://www.foeme.org)) is an association of Jordanian, Palestinian, and Israeli environmentalists working to promote cooperative efforts to protect the region's shared environmental heritage. Munqeth Mehyar, Nader Al Khateeb, and Gidon Bromberg are FoEME's Jordanian, Palestinian, and Israeli directors, respectively; Elizabeth Koch-Ya'ari is the Israeli coordinator of the organization's Jordan River Rehabilitation Project. An earlier version of this chapter was published in *Getting Transboundary Water Right: Theory and Practice for Effective Cooperation*, Stockholm International Water Institute Report No. 25, edited by A. Jägerskog and M. Zeitoun (Stockholm International Water Institute, 2009).

The 1994 Treaty of Peace between the Hashemite Kingdom of Jordan and the State of Israel committed the two countries to work toward the ecological rehabilitation of the river, renewing hopes that they would act to restore the Lower Jordan River through coordinated management. Despite this formidable commitment, in the sixteen years that have passed since the signing of the treaty, neither government has taken concrete action to return any measure of fresh water to the river. On the contrary, a new dam—the Unity Dam, which was a joint Syrian and Jordanian undertaking—was built on the Yarmouk River, a tributary of the Jordan, to capture its remaining winter floodwaters.

In 2010, FoEME completed the first environmental flows study ever conducted on the Lower Jordan River, in a trilateral effort to identify its ecological needs. The study found that the river was in even worse ecological shape than previously estimated with just 20 to 30 million cubic meters (mcm) of annual discharge. This striking finding indicated that, in the absence of a formal regional management authority, Israel, Jordan, and Syria have diverted nearly 98 percent of the Lower Jordan River's historic flow for domestic and agricultural purposes. This big-grab approach to water management has effectively destroyed the Lower Jordan River, reduced biodiversity along its banks by over 50 percent, and transformed the culturally and historically important river into little more than an open channel of agricultural runoff, diverted saline waters, and wastewater, which has further resulted in the devastation of its terminal lake, the Dead Sea (Gafny, Talozí, and Al Shiekh 2010).

The story of the demise of the Lower Jordan River is hardly unique. Around the world, human activity has pulled massive quantities of water from the great rivers—the Indus on the Indian subcontinent, the Yellow in China, the Rio Grande along the U.S.-Mexico border—to the extent that they now either disappear before reaching the sea or contain long sections that seasonally run dry. The underlying reason is always the same: rivers are viewed, not as valuable in themselves, but as exploitable resources for human and economic development. The vital ecosystem services they supply, which support people, fish, animals, and plants as well as economic development, are overlooked until they are lost.

## **PROGRESS IS POSSIBLE**

Despite this grim picture, FoEME has demonstrated that it is possible to reverse decades of deterioration on a river—even, as in the case of the Lower Jordan River, in the midst of animosity, sometimes erupting into violent conflict, between the countries that share it, and in spite of reduced precipitation due to climate change. Positive action, though still piecemeal and slow, is taking place at the grassroots level as well as at the national and regional levels due to increased public awareness and advancement of a strong regional coalition in support of efforts to rehabilitate the river.

At the grassroots level, support is growing in communities on both sides of the Lower Jordan River in Israel, Jordan, and Palestine, led by FoEME coordinators



Note: The Sea of Galilee is also known as Lake Kinneret and as Lake Tiberias.

who run grassroots environmental education and public-awareness activities in twenty-five communities. These local leaders coordinate dozens of activities involving youth and adults and serve as direct links to municipal representatives. Thousands of Jordan Valley residents have participated in Neighbors Path Tours that educate them on the state of the river and its tributaries. Through these tours, many residents learn for the first time how the river's waters are being diverted, come to understand the effects of pollution, and see the economic opportunities that have been missed because of the unhealthy state of the river. Some tours actually cross the border, and all explore the water issues of neighboring communities. Media participation in these unique tours helps tell the story of the Lower Jordan River to the broader public, both local and international, effectively placing its plight at the center of the public debate and creating a constituency of local residents empowered to voice their concerns.

Israeli, Jordanian, and Palestinian mayors were involved from the outset as necessary partners in support of regional water policy reform. The project identified mayors both as the most receptive to community residents' needs and perspectives and as key stakeholders with much to gain from the economic opportunities a rehabilitated river would create. Mayors have not only participated in tours in their own communities and neighboring cross-border communities but have also led municipal efforts to remove pollutants from the river. They have, on several occasions, literally jumped into the river together, in public events designed to express their commitment to regional water policy reform.

FoEME has created a Lower Jordan River Regional Advisory Committee, involving key government representatives and other stakeholders from Israel, Jordan, Palestine, and the international community. This forum is unique in bringing regional decision makers to the table to strategize how to achieve the shared goal of rehabilitating the Lower Jordan River. Through involvement in this forum, leading national figures have spoken out publicly, drawing public attention to the state of the Lower Jordan River and advancing plans for its rehabilitation, primarily at the national level but also in communication with their regional counterparts.

The cumulative results of these bottom-up and top-down strategies are starting to yield concrete results. All Jordan Valley mayors have signed memorandums of understanding with their neighbors, committing their communities to rehabilitate the river and identifying concrete actions that they can take. These commitments have enabled further financial support of joint projects such as the creation of a cross-border Israeli-Jordanian Park, the Jordan River Peace Park, at the confluence of the Jordan and Yarmouk rivers; the building of an environmental education center in Auja, Palestine; and the creation of a protected area, park, and visitor center on the Ziglab Stream, a tributary of the Jordan River in Jordan.

The current practice of allowing untreated sewage to flow into the Lower Jordan River will be significantly reduced with the upcoming activation of several new sewage treatment plants in the Jordan Valley. In Israel, a plant has been completed in the community of Beit She'an. The Jordan Valley Regional Council, also in Israel, has broken ground on a new plant that will treat the sewage of Tiberias and other Sea of Galilee communities. In northwestern Jordan, North Shuna—the largest community in the valley—has launched a project to collect sewage from cesspits for treatment rather than allowing it to seep into the ground and pollute the springs that flow into the Lower Jordan River.

Lower Jordan River champions are also hosting discussions on how to bring fresh water back to the river. In a joint initiative of the Israeli Ministry of Regional Cooperation and Ministry of Environmental Protection, the terms of reference for the ministries' program to rehabilitate the Lower Jordan River from the Sea of Galilee to Bezeq Stream have been drafted and presented to their Jordanian and Palestinian counterparts for feedback via FoEME's Regional Advisory Committee.

## **RESTORING AND REALLOCATING THE LOWER JORDAN RIVER**

Returning fresh water to the river is the most important and most difficult issue. While Israeli, Jordanian, and Palestinian champions have made public statements committing to rehabilitating the river and drafted plans for how this will take place, freshwater resources have yet to be allocated to the struggling river.

To address this concern, the Jordan River Rehabilitation Project undertook two studies to inform a regional strategy for the Lower Jordan River. The environmental flows study mentioned earlier identified a target level of rehabilitation, and a related economic study identified tradeoffs and opportunities for national and regional water management reform to reallocate water to the Lower Jordan (Gorskaya, Rosenthal, and Harthi 2010). Both of these studies involved Israeli, Jordanian, and Palestinian experts working together and were overseen by FoEME's Regional Advisory Committee.

The environmental flows study (Gafny, Talozzi, and Al Shiekh 2010) proposed a regional rehabilitation strategy that requires 400 to 600 mcm of flow annually, including one minor flood,<sup>1</sup> a salinity level of no more than 750 parts per million, and a base flow that consists of at least 75 percent fresh water with the remainder made up of high-quality treated effluents. This would remove most of the environmental disturbances, restore the river's structure and function, allow the natural riparian plant community to recover, and achieve fair to high ecosystem integrity, health, and stability.

This strategy would require substantial but achievable water and economic resources. The economic study (Gorskaya, Rosenthal, and Harthi 2010) identified between 463 and 1,053 mcm of freshwater resources that could be saved or produced from the Israeli, Jordanian, and Palestinian water economies and potentially allocated to the Lower Jordan River through the implementation of reasonably priced domestic and agricultural water demand management.

To further strengthen the national and regional political will required to implement the measures recommended in these studies, public hearings, parliamentary debates, and regional conferences are planned to educate the public and create political momentum.

The equitable sharing of the Lower Jordan River's water between people and nature in all countries bordering the river is of paramount importance. While Palestinians are presently denied the right to extract water from the river by Israel, they sit alongside their Israeli and Jordanian counterparts in FoEME's Regional Advisory Committee meetings to work for a new future for the Lower Jordan River. FoEME's experience has shown that a dual approach—an energetic

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<sup>1</sup> All floodwaters are currently caught and stored rather than being allowed to flow into the Lower Jordan River. Floods are essential to healthy river ecology as they flush fine sediment and associated pollutants, reconnect the channel and floodplain, remove invasive plant and animal species, and provide biological cues for native migration and breeding. Therefore, flow variation, including at least one minor (artificial) flood, is a critical part of the rehabilitation plan.

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grassroots or bottom-up campaign that demonstrates local benefits for transboundary environmental rehabilitation projects, combined with top-down advocacy—is critical to creating concrete change. The international community is supporting this work in two ways: encouraging the three Lower Jordan River national governments to work together for water policy reform, and sharing other experiences of cross-border water resources management, for example from the Rhine River in Europe, the Great Lakes of North America, and the Nile River in Africa.

Decades of conflict and human arrogance have led to the near total demise of the Lower Jordan River. FoEME believes that cross-border cooperation to advance peace and sustainable development in the Lower Jordan River Valley is the only hope to restore the river to health, while creating economic and social opportunities for all communities along its banks.

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