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**TRANSBOUNDARY WATER MANAGEMENT IN THE MIDDLE EAST:  
THE CASE OF JORDAN RIVER**

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**Introduction**

Already in 1985, Egypt's Minister for Foreign Affairs Boutros Boutros-Ghali warned that "*The next war in the Middle East will be fought over water, not politics*".<sup>1</sup> Ten years later, in 1995, World Bank Vice President Ismail Serageldin took a more global view towards water and conflict stating, "*many of the wars of this century were about oil, but wars of the next century will be over water*".<sup>2</sup>

Indeed, environmental security as part of Human Security has gradually gained important attention from policy makers and academics, with water placed in a prominent position. Transboundary waters are covering almost 45% of the total land surface,<sup>3</sup> while over 90% of the world's population lives within countries sharing these basins.<sup>4</sup> The percentage of the global population living directly within transboundary basins and aquifers reaches an impressive 40%.<sup>5</sup> Approximately 300 transboundary aquifers systems are supporting almost 2 billion people globally.<sup>6</sup> These numbers underline the essentiality of successful management aiming to long-term environmental sustainability, economic and social development. One of these cases is the Jordan River, found in Middle East and shared mostly

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<sup>1</sup> Retrieved on 7.7.2018 from: [http://news.bbc.co.uk/2/hi/talking\\_point/2951028.stm](http://news.bbc.co.uk/2/hi/talking_point/2951028.stm)

<sup>2</sup> Retrieved on 10.7.2018 from: <https://www.independent.co.uk/news/water-shortages-to-be-new-cause-of-wars-1595148.html>

<sup>3</sup> Beach Heather L., Jesse Hammer, Joseph J. Hewitt, Edy Kaufman, Anja Kurki, Joe A. Oppenheimer, Aaron T. Wolf (eds.) (2000), *Transboundary Freshwater Dispute Resolution*, Tokyo/New York/Paris: United Nations University Press.

<sup>4</sup> Claudia W. Sadoff and David Grey (2005), 'Cooperation on International Rivers. A Continuum for Securing and Sharing Benefits', *Water International*, Vol. 30, no. 4.

<sup>5</sup> Swedish Ministry for Foreign Affairs (2002), 'Financing Transboundary Water Management', *Development Financing 2000 Policy Brief*, p.1.

<sup>6</sup> Kim, K. & Glaumann K. (2012), 'Transboundary Water Management: Who does What, Where?', *Swedish Water House*, p. 3.

between Jordan and Israel (Syria is also a riparian state, while the Palestinian West Bank is included in the basin as well).

### Theoretical underpinnings

There is a vigorous debate about whether transboundary freshwater resources can work as drivers for conflict or cooperation. The proponents of the first position focus on the generality that many countries are highly dependent on water that originates outside their border. Gleick, for instance, uses the examples of Egypt, Hungary and Mauritania where over 90% of their water originates from outside their borders.<sup>7</sup> Falkenmark, among others, claims that there is a serious risk of international conflict, particularly in the Middle East and Africa, between upstream and downstream countries.<sup>8</sup> Indeed, as Furlong and Gleditsch have shown with their research, *'everything else being equal, a river sharing dyad in which at least one member suffers from water scarcity has a 41% higher risk of experiencing an outbreak of a militarized dispute with at least one fatality'*.<sup>9</sup> However, they have also pointed out that such disputes are low-probability events and cannot be taken as 'water wars'.<sup>10</sup>

The advocates of the positive scenario underline that freshwater instead of acting as an accelerating factor for disputes, works mostly as a tool of cooperation. They do understand that the complexity of transboundary freshwater resource management makes it difficult, in many cases, for the riparian states to cooperate effectively. Yet, interested parties usually make decisions to achieve mutual benefit, expressing their needs via negotiations. Therefore, in most cases, riparian states proceed to multilateral negotiations, based on the general principles provided by international water law, in order to avoid a possible conflict. These negotiations find support via the involvement of international institutions, such as the World Bank and the United Nations.

### The Middle East and the Jordan River

Many authors have indicated the Middle East as a possible location for a 'water war,' making this region the most well-known example. They claim that water played a significant role when Israel in March, May, and August 1965, as well as in July 1966, attacked the water diversion works of Syria,

<sup>7</sup> Peter H. Gleick (1993), 'Water and Conflict: Fresh Water Resources and International Security', *International Security*, vol. 18 no.1, pp. 100-104.

<sup>8</sup> Malin Falkenmark (1990), 'Global water issues facing humanity', *Journal of Peace Research*, vol. 27, no 2, p. 179.

<sup>9</sup> Kathryn Furlong & Nils Petter Gleditsch (2003), *'Geographic Opportunity and Neomalthusian Willingness: Boundaries, Shared Rivers, and Conflict'*, Paper prepared for presentation at the Joint Sessions of Workshops European Consortium for Political Research Edinburgh, UK, 28 March–2 April 2003. p. 20.

<sup>10</sup> Ibid.

Jordan, and Lebanon. This project, named the Headwater Diversion Plan, intended to channel two of the sources of the Jordan River, the Hasbani River in Lebanon and Banias River in Syria, around Lake Tiberias through Syria to the Yarmouk River where the water would have been regulated by a Jordanian dam at Mukheib.<sup>11</sup> It has also been argued that these trends towards competitive utilization of the water in the Jordan River system played a key role in the Six-Day War in 1967. This hypothesis was supported by a statement by the Prime Minister Levi Eshkol in 1967 and just before the Six-Day War between Israel and its Arab neighbours, saying that: '*water is a question of survival for Israel, and therefore Israel will use all means necessary to secure that the water continues to flow.*'<sup>12</sup>

According to an analysis based on Naff's and Matson's writings, in that war Israel destroyed a Jordanian dam on the Yarmouk, the most important tributary to the Jordan River. Israel, by conquering the West Bank and the Golan Heights from Syria, improved its hydrostrategic position through control of the Upper Jordan River. The occupation of the Golan Heights had a great impact for the Arab states since it made it impossible for them to divert the Jordan headwaters. Indeed, as Naff and Matson argued, the 1969 ceasefire found Israel with control of half the length of the Yarmouk River, compared to 10 km before the war.<sup>13</sup>

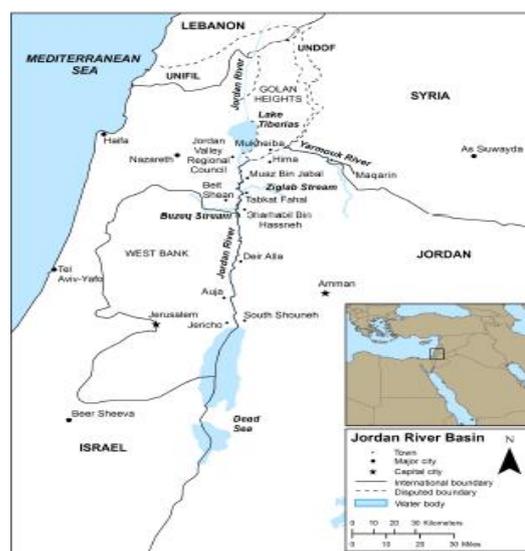


Figure 1 The Jordan River

Yet, as Gleick has shown, water was used and manipulated as an instrument of war, but not essentially as the main cause for engaging in actual conflict for control of natural resources.<sup>14</sup> According to Toset et al., 'although such conflicts over shared water resources appear to be zero sum games, it seems far-fetched to argue that water is the main or even a very important general reason for war in the Middle East'.<sup>15</sup> Issues such as nationalism and control of land territory seem to be more important factors in most of the

<sup>11</sup> Thomas Naff, & Ruth C. Matson (1984), *Water in the Middle East. Conflict or cooperation?*, Boulder, CO: Westview, p. 43.

<sup>12</sup> Daphne Biliouri (1997), 'Environmental issues as potential threats to security'. Paper presented to the 38<sup>th</sup> Annual Convention of the International Studies Association, Toronto, 18–21 March, p. 5.

<sup>13</sup> Thomas Naff, Ruth C. Matson (1984), p. 44.

<sup>14</sup> Peter H. Gleick (1993), pp. 79–112.

See also: *Water in Crisis: A Guide to the World's Fresh Water Resources*, New York: Oxford University Press, 1993.

<sup>15</sup> Hans Petter Wollebæk Toset, Nils Petter Gleditsch and Havard Hegre (2000), 'Shared Rivers and interstate conflict', *Political Geography*, 19, pp. 971–996.

disputes in the Middle East. Wolf says categorically that 'the only problem with these theories is a complete lack of evidence' and that 'water was neither a cause nor a goal of any Arab-Israeli warfare'.<sup>16</sup>

### **Latest Developments around the management of the Jordan River**

In Mid 2017 we witnessed another episode in the story of Jordan River, which, to some extent confirms the previous belief over the real factors driving to conflict over the management of shared waters. An episode that threatened to derail a very ambitious regional project. Following a time of convergence over the need to jointly address the management of the shared water resources and save the Dead Sea from extinction, the relations of the two countries reached again in a very critical level. According to H. Hussein: '*Relations between Jordanian and Israeli governments have deteriorated over the past months, reaching their lowest point since the 1994 peace treaty was signed*'.<sup>17</sup>

Back in 2015, Jordan, Israel and Palestine signed a very promising agreement for the implementation of the regional water-sharing project named Red Sea-Dead Sea Canal (RSDSC). This agreement was the formal continuation of a memorandum of understanding signed back on December 9, 2013 in Washington D.C. at the headquarters of the World Bank.<sup>18</sup> The RSDSC was seen as a great opportunity for the three actors to boost interdependency and build up a closer regional cooperation. The project's overall objective was to provide water to the two most water stressed areas in the region, northern Jordan, and southern Israel, via a water swap agreement. This project has been accepted as a "win-win solution" by both participants.

Another important, mutual benefit, of the project would have been the delay of the disappearance of the Dead Sea, which is at the brink of annihilation due to the overexploitation of water across the Jordan River. Although, as experts claim, it is unlikely that the Dead Sea would lose all of its water, the pace of scarcity will eventually make it to look like a small pond. The "Red-Dead project" also foresaw the desalination of seawater at the Jordanian port of Aqaba with the allocation of 200m cubic meters of leftover brine through a pump into the Dead Sea annually. Although this could not reverse the long-lasting problem, since the Dead Sea needs at least 800m

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<sup>16</sup> Aaron T. Wolf, "Water wars" and water reality: conflict and cooperation along international waterways', in Steve Lonergan (ed.), *Environmental change, adaptation, and human security*, Dordrecht: Kluwer Academic, 1999, p. 254.

<sup>17</sup> Hussam Hussein (2018), 'Jordan-Israel Tensions Threaten to Derail Water-Sharing Project', *IAI Commentaries* 18, p. 1.

<sup>18</sup> Retrieved on 18.7.2018 from:

<https://www.nytimes.com/2013/12/10/world/middleeast/israel-jordan-and-palestinians-sign-water-project-deal.html>

cubic meters to remain in the current situation, it could definitely slowdown the damage.<sup>19</sup>

An incident that took place in Amman on July 2017, led to the killing of two Jordanians by a guard of the Israeli embassy. Although Jordan allowed the security guard to leave the country, on the ground that the Israeli government would proceed to his prosecution, Binyamin Netanyahu, the Israeli Prime Minister, invited the guard to his office and embraced him, causing, as an effect, unrest to Amman. Jordan immediately banned Israeli diplomats from returning, while high-level talks on water projects were put on hold. The repercussions of this diplomatic crisis on the RSDSC have been confirmed by the government of Israel, which, retaliating Jordan's decision stated that the joint project would not resume until the Jordanians allow the return of the Israeli diplomats in Amman.<sup>20</sup> This development has increased the risk for the overall project's implementation, even though it has been a top priority for Jordan.

As it has been recently reported by the press, unofficial Jordan-Israel negotiations have resumed in early 2018, also stating that Jordan has allocated 2m \$ for the project.<sup>21</sup> If this development is true, it could indicate that that eradication of the ambitious project has been avoided. This affirms belief that water scarcity mostly works as an accelerating factor in sidestepping conflicts, rather than being a source of tension and a factor that threatens good neighboring relations.

## Conclusion

In order to mitigate the risk of a deadlock in the future, the two countries have to systematically work in alleviating mutual perceptions as a way to disengage the implementation of high importance regional projects from domestic politics and ethnonationalism. According to Dinar: *'one major barrier in domestic acceptance of negotiated agreements is nationalism. Ethnonational communities may be driven by concerns for security against physical and economic threats from states with rival ethnonational communities. People's perception of a threat may be a reaction to their own government's actions, especially when government authorities appear to be*

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<sup>19</sup> The Economist (2/12/2017), Retrieved on 18.7.2018 from: <https://www.economist.com/middle-east-and-africa/2017/12/02/jordans-water-crisis-is-made-worse-by-a-feud-with-israel>

<sup>20</sup> The Times of Israel, 13 November 2017, Retrieved on 19.7.2018 from: <https://www.timesofisrael.com/?p=1729369>.

<sup>21</sup> "Israel and Jordan Secretly Resume Negotiations on Dead Sea Canal Project", in Middle East Monitor, 29 December 2017, retrieved from: <https://www.middleeastmonitor.com/?p=271751>; "Jordan Allocates Initial \$2 Million for Joint Pipeline Project with Israel", in Middle East Monitor, 2 January 2018, retrieved from: <https://www.middleeastmonitor.com/?p=272200>.

*jeopardizing the national interest by compromising or cooperating with a state that is perceived as a rival*.<sup>22</sup>

The recommencement of the dialogue, even unofficially, indicates that other political issues need to be left aside when regional projects are at stake. It also shows that issues of mutual interest can be drivers of cooperation rather than conflict. In other words, stereotypes based upon contemporary interpretations of the historical past have to be abandoned.<sup>23</sup> The reopening of the Israeli embassy in Amman and the appointment of the new Israeli Ambassador in last April shows that the two countries agreed to end a diplomatic standoff.<sup>24</sup> Yet, there are more to be done, since the complexity of the project's itself requires a lot of effort and understanding from all sides.

A push could be provided by third parties and particularly Civil Society Organizations, such as the NGO Friends of the Earth, which since 2010 implements a very ambitious project that includes grassroots environmental education and public awareness activities in twenty-five communities in both sides. Israeli, Jordanian, and Palestinian mayors were involved from the onset in support of regional water policy reform. They have all signed memorandums of understanding with their neighbors, committing their communities to rehabilitate the river and identifying tangible actions. These have resulted into funding joint projects such as the creation of a cross-border Israeli-Jordanian Peace Park, 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.<sup>25</sup> Bottom up initiatives of this kind could work in parallel with high level diplomatic discussions, assisting the latter to overcome identity barriers and thus bring progress in the implementation of joint projects. Besides, as Wessels argues: "*water does not cause violent conflict, but it is identity that shapes people's attitudes and creates the others*".<sup>26</sup>

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<sup>22</sup> Shlomi Dinar (2002), 'Water, Security, Conflict and Cooperation', SAIS Review Vol. XXII, No. 2, p. 244.

<sup>23</sup> Terrence Hopmann, *The Negotiation Process and the Resolution of International Conflicts*, Columbia, S.C.: South Carolina University Press, 1996, pp. 234-235.

<sup>24</sup> Retrieved on 20.7.2018 from: <https://www.timesofisrael.com/israels-new-ambassador-to-jordan-takes-up-post-after-diplomatic-crisis/>

<sup>25</sup> M. Mehyar, N. Al Khateeb, G. Bromberg, and E. Koch-Ya' ari. (2014): 'Transboundary cooperation in the Lower Jordan River Basin'. In E. Weinthal, J. Troell, and M. Nakayama (eds), *Water and Post-Conflict Peacebuilding*, London: Earthscan, pp. 266-268.

<sup>26</sup> Josepha Ivanka Wessels (2015): "Playing the game", identity and perception-of-the-other in water cooperation in the Jordan River Basin, *Hydrological Sciences Journal*, p. 5.