

# Water scarcity in Jordan River Basin

In many parts of the world water scarcity poses serious threats to economic and social security. Historically, water shortage has been a major source of turbulence across national borders in various parts of the world. Immediate examples of relevance would be riparian countries to the Jordan River Basin in Western Asia and the Nile River basin in Africa, to mention just a few. In other parts of the world similar circumstances exist. However, by virtue of its peculiar political situation with a number of wars tallying their tolls over the past six decades, the Middle East region has been a center of focus when it comes to shedding the light on water scarcity. In particular the Jordan River basin has been a focal point in the study of water issues globally. This was, in part, due to the lingering political and often military conflicts between a number of countries involved in that part of the world.

Countries of the world having political dominance have traditionally given this matter utmost priority in shoring up efforts aimed at resolving and mitigating such issues in this volatile region of the world. Over the past two decades, there has been a concerted effort lead by the World Bank to help resolve an issue that has often led to wars in a region that can potentially lead to economic instabilities at a global scale.

In an area characterized by a semi-arid climate with one of the lowest rainfall averages on top of political instabilities, a zone of historical focus globally is under constant environmental threat due to a continuous decline in the water table in the Dead Sea basin. This was attributed to the over consumption of fresh water

coming in from the Jordan River and its subsidiaries. This has come about also as a result of a major diversion of the Jordan River into Israeli territories for a number of decades. This has led to a constant decline in the water table of the Dead Sea at an annual rate of 1 meter below sea level. When no solution is put in place, such a decline would ultimately lead to significant changes to the landscape around that basin that would threaten one of the world's unique historical and religious attractions.



Figure 1: Jordan River Basin

In recent years one would commonly hear about conveying water into the Jordan River basin from geographically remote areas. In so doing the benefit would be a twofold; one would be the restoration of the Dead Sea water table over a number of years, as the other goal would be to compensate for a huge shortage in fresh water to notably increasing rates in population in countries of the region. There has been talk about a number of options in the regard: The Red Sea – Dead Sea and the Mediterranean to Dead Sea alternatives. With either alternative having its own merits at mitigating the intensity of the water shortage, the more popular alternative that would be more acceptable to the riparian countries of the Jordan River basin has been the Red Sea to Dead Sea option despite the added overheads and construction costs involved.



**Figure 2: the lower Jordan Valley**

In a concerted effort lead by the World Bank and the countries involved, viz., Israel, Jordan, and the Palestinian Authority, at resolving the water conflict, plans are in their final phases towards putting a viable water conveyance system in place. The Red Sea – Dead Sea alternative that has received regional acceptance is now also receiving global acceptance towards international finance. The benefits reaped by putting together such a project on the ground would be environmental and historical in scope as well as one political having to do with creating a sustainable form of collaboration between countries that have historically

fought wars, aimed at contributing towards global peace and security.

Towards that end, various research efforts and assessment studies have taken place as contributed by the various beneficiary countries, with pronounced efforts from the Israeli partner. In that regard, there have been various climatic, economic, environmental and political studies taking place to varying extents by the countries involved, in addition to the major effort put in place by the World Bank itself.

A more recent research effort, amongst others beyond the scope of this reporting, has been one dealing with the development of a water economy model for the Jordan River basin shared by Jordan, Israel and the Palestinian authority and that of the Hasbani River basin in southern Lebanon. This research project is being led by Prof. Michiel A. Keyzer of the Centre for World Food Studies (SOW-VU) in the Netherlands with other project partners from Jordan, Lebanon, the Palestinian Authority, with a limited participation from Syria due to prevailing political circumstances. Partnering institutions from the region include Jordan University of Science & Technology in Irbid, Jordan, Al-Quds University in the Palestinian Authority, The American University of Beirut in Lebanon, and the Arab Center for the Study of Arid Zones and Dry Lands – ACSAD.