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ISRAEL'S STRATEGIC BALANCE:  
OPPORTUNITIES AND RISKS**Regional Water Security: Challenges and Opportunities in the Middle East****Dr. Col. (Res) Shaul Shay****Introduction**

In no part of the world water and *regional hydro politics* are more important than in the Middle East and North Africa (MENA). Water availability has become a serious issue in MENA due to population explosion, climate change, droughts, desertification and scarce rainfall. According to World Bank data, the Middle East and North Africa have some of the smallest per capita water resources in the world. Most MENA countries cannot sustainably meet their water demand. With growing populations and increasing demand, water availability per capita is expected to be halved in the region by 2050.

Climate change projections suggest that the Middle East will become hotter and drier, placing increased pressure on climate-dependent water sources. Surface water sources, including rivers, lakes and dams, are unlikely to satisfy water demand. Groundwater sources are already overdrawn and could be largely depleted by 2030. Much of the Middle East is already arid, and as the amount of rainfall declines due to climate change, soil moisture is also likely to fall, adversely affecting agriculture. Nearly two-thirds of the region's agriculture is rain dependent, making it vulnerable to any further drop in precipitation.

The Middle East is a conflict-ridden region and water insecurity is a growing threat to the arid region. Increasing demands on a limited, contested natural supply of fresh water further exacerbate tensions in and among communities and countries in the region.

Despite the fact that most of the countries in the region suffer from a demand–supply imbalance in the water sector, they failed to reach an effective cooperative water management. Addressing water sustainability requires resources, a plan and an integrated approach. There is a lot that MENA countries can learn from each other's experience and from the efforts of governments elsewhere around the world.

But just as conflict over water can fuel instability, sound water management and regional cooperation on water issues can bolster harmony,

The importance of regional efforts to integrate water issues in national and international policies is indispensable as it will help in finding necessary mechanisms to reduce potential crises generated by water shortages.

The Institute for Policy and Strategy (IPS), IDC Herzliya, in cooperation with EcoPeace and the Konrad Adenauer Foundation, organized a "Round Table" to explore the extent and nature of water security problems in the Middle East.

## **Round Table- Regional Water Security: Challenges and Opportunities in the Middle East**

Chair: Prof. Shaul Mishal, Head of Middle East Studies, Lauder School of Government, Diplomacy & Strategy, IDC Herzliya .

Opening Remarks: Dr. Michael Borchard, Head, Konrad-Adenauer-Stiftung Office in Israel.

Adv. Gidon Bromberg, Israeli Director of Ecopeace Middle East Amb.

Dr. Oded Eran, Senior Research Fellow, Institute for National Security Studies (INSS) Eng.

Saad Abu-Hammour, Secretary General, Jordan Valley Authority, Hashemite Kingdom of Jordan.

Ms. Nada Majdalani, Palestinian Acting Director, EcoPeace.

H.E. Dr. Clemens von Goetze, Ambassador of Germany to Israel.

Col. (res.) Dr. Shaul Shay, Director of Research, Institute for Policy and Strategy (IPS), IDC Herzliya; Former Deputy Head of the National Security Council.

Dr. Lorenz Peterson, Director of Climate Change, Rural Development and Infrastructure Division, GIZ – German Society for International Cooperation.

Mr. Ryan Bowles, Regional Environmental Officer for North Africa and the Middle East, U.S. Embassy, Amman, Jordan.

# **The Water Security Concept- Challenges and Opportunities for Cooperation in the Middle East**

**Gidon Bromberg & Giulia Giordano, EcoPeace Middle East, Tel Aviv Office**

## **What is Water Security?**

The concept of water security has attracted growing attention in the past few years. Multiple definitions can be found in both policy and academic literature, spurring a debate on the different approaches and framings of water security. Such definitions generally tend to highlight issues of access and quantity but have recently expanded to include water quality, human health, and environmental concerns. UN Water has advanced a comprehensive definition, which encompasses multiple dimensions, ranging from issues of water scarcity and climate change to good governance and trans-boundary cooperation. Accordingly, water security is defined as “the capacity of a population to safeguard sustainable access to adequate quantities of acceptable quality water for sustaining livelihoods, human well-being, and socio-economic development, for ensuring protection against water-borne pollution and water-related disasters, and for preserving ecosystems in a climate of peace and political stability”.<sup>1</sup> This definition highlights the centrality of water security to achieving a larger sense of human security and ecological sustainability.

## **Why is Water Security Particularly a Relevant Concept in the Middle East?**

An increasing number of experts today agree that a correlation exists between water insecurity and political instability<sup>2</sup>. Climate change further exacerbates water insecurity and can therefore have a multiplier impact on political instability. An area of real concern and particular relevance is the Middle East North Africa (MENA) region, the most water scarce region in the world.

It comes as no surprise that water issues are typically regarded in MENA countries as a matter of national security. The region hosts 5% of the world’s population but has only less than 1% of the world’s renewable water supply<sup>3</sup>, with a total water demand exceeding naturally available water supplies by almost 20%<sup>4</sup>. In addition the region registers high fertility rates and suffers from inefficient water usage and mismanagement, antiquated water infrastructures and networks, lack of legal, political, and economic frameworks for the management of transboundary water resources, and pollution. Climate change has already led to increasing pressure on existing natural water resources in the region. As reported by an EU policy paper<sup>5</sup>, climate change “is best viewed as a threat multiplier which exacerbates existing trends, tensions and instability”, and this is particularly true when looking at an already fragile and conflict prone region, as the MENA is. The EU paper also underlines that the implications “are not just of a humanitarian nature they also include political and security risks that directly affect European interests” suggesting therefore that responses to climate change should be both multilateral and multi-sectoral.

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<sup>1</sup> UN-Water Analytical Brief on Water Security and the Global Water Agenda, 2013

<sup>2</sup> EU, NATO, OSCE

<sup>3</sup> nato, 2017

<sup>4</sup> The World Bank, The Grain Chain: Food Security and Managing Wheat Imports in Arab Countries

<sup>5</sup> Climate Change and International Security Paper from the High Representative and the European Commission to the European Council, March 2008

A recent report published by NATO<sup>6</sup> claims that competition for resources has contributed to increasing tensions in the MENA region, and argues that a combination of war, poor governance, demographics, and climate change is making the situation worse. While not seconding the determinism of the “water wars prophecies” widely spread in past literature, this report acknowledges that economic, social and environmental issues contribute to both provoking and fueling conflicts, although traditional causes remain the main triggers.

There is increasing evidence that an important catalyst behind the social discontent that led to the uprisings known as the ‘Arab Spring’ in Syria, Egypt and Yemen, was with differing degrees related to water shortage and failure of governance to respond to the resulting water crises. The failure to adequately respond, of the Syrian government, to the prolonged drought that hit the region, as well as years of miscalculated national policies led to a dramatic water crisis, with repercussions on the productivity of agricultural lands, and the rise of prices of essential goods. The implications were not confined to the national borders, but have travelled across the region and even reached the heart of Europe, in the form of a massive migratory influx, the largest post WWII.

The already acute water and sanitation crisis in Gaza could have significant humanitarian and national security consequences for Palestinians and on neighboring countries Israel and Egypt and potentially trigger regional and international dynamics that could lead to an armed conflict. The flooding of the Nile Delta, due to climate change and the rise of Mediterranean Sea levels, could result in millions of climate refugees, leading to serious concerns for Egypt’s national security that could potentially impact the broader Mediterranean region.

### **Can a water security concept advance Middle East stability - Considerations for Israeli policy makers?**

Israel is situated at the very heart of the Levant, sharing borders and water resources with Lebanon, Syria, Jordan, Egypt and of course the Palestinian Territories. Over many decades Israel has extensively invested in the research and development of new water technologies, and today it is one of the world leaders in desalination, wastewater treatment and reuse and in sophisticated agricultural technologies which allow for a reduced consumption of water. Very much due to such technological advances Israel has accumulated an extraordinary water surplus for domestic needs, turning a water scarce country into a “regional water superpower.”<sup>7</sup>

Bilateral cooperation over water is strongly taking place between Israel and Jordan, reflecting a shared water security agenda and is scheduled to further expand in the near future. Both Israel and Jordan openly state that their cooperation in the field of water is a national security issue for both countries, with water security essential for national stability in Jordan and Jordan’s stability seen as critical for national security in Israel. Israel reportedly has increased its supply of water to Jordan beyond the direct needs of Jordan’s population but also for the benefit of Syrian refugees in Jordan, understanding that water supply to the refugees is critical to Jordan’s internal stability. In its 2013 water swap agreement Israel agreed to sell to Jordan a very large quantity of water from the Sea of Galilee, 50 million cubic meters (mcm) annually, at what in Israel is considered a discounted rate. Selling water at a discounted rate to its neighbor, reflects an understanding

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<sup>6</sup> Askin, O., Food and Water Security in the Middle East and North Africa, NATO Parliamentary Assembly – Science and Technology Committee, March 2017

<sup>7</sup> Odeinheimer, N., “Israel, a regional water superpower”, The Jerusalem Post, March 2017

that the price of water is not just the marginal cost of its production but can be associated with a political stability dividend.

By comparison, in the same 2013 agreement Israel agreed to sell an additional 20-30 mcm of water to the Palestinian Authority not at any discount rate but at the full cost of producing desalinated water. Unlike with Jordan, Israel and the Palestinian Authority have failed to develop a mutually advantageous water security agenda. Water is managed in a competitive manner, ignoring changes in technology that have transformed water away from being a zero sum game. A recent report on water issues of the Israel State Comptrollers' Office concluded that per the West Bank and Gaza, Israel has failed to develop any clear vision, failing as the report indicates to strategically assess its own interests let alone take leadership on the issue of transboundary water pollution and the role it can play in advancing national security interests. The closure of the Ashkelon desalination plant in Israel for several days in 2016, due to sewage from Gaza, highlighted the potential threat to the water security of Israel of failing to have policies in place to deal with trans-boundary pollution. Statements made in 2017 however by Israeli Water and Energy Minister Yuval Steinitz reveal a growing understanding in Israel of the need to re-evaluate water policies, with the Minister declaring that a water master plan for the West Bank would be prepared. Such a unilateral plan focused only on water supply however would fall short of the need to develop a comprehensive water security strategy between Israel and the Palestinian Authority.

Beyond Jordan and the Palestinian Territories Israel appears to have no strategy in place to consider issues related to water security and how water insecurity in the broader Levant and MENA region might have a destabilizing impact on Israeli, regional and broader international security interests. Water insecurity in Egypt, Lebanon, Iraq and the broader MENA region should be of concern to all, including the international community. Further research is needed to better understand if a comprehensive water security concept can be helpful in advancing peace, stability and cooperation across the region.