



OPINION

HOME

GUEST VIEWPOINT

## Water and peace in Middle East

Drought and population growth fuel conflict and instability

**1/3** – Adilla Finchaan checks her land in Latifiyah, about 20 miles south of Baghdad. Below-average rainfall and insufficient water in the Euphrates and Tigris rivers — something the Iraqis have blamed on dams in neighboring Turkey and Syria — often leave Iraq bone dry. (Hadi Mizban/The Associated Press)

**BY M. REZA BEHNAM**

*For The Register-Guard*

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**T**he Middle East, oil rich but water poor, with about 6 percent of the world's population, has only 1 percent of the Earth's renewable water resources. Fourteen Middle East and North African countries are among the 33 most water-stressed in the world.

Climate change, drought and population growth have increased the demand for water in this arid region, fueling conflict and instability. Clashes over water access have aggravated an already volatile Middle East. For many countries, water scarcity has become a national security issue.

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Middle Easterners depend on four main sources of water: aquifers, precipitation, rivers and desalinized sea water. The underground aquifers, however, are drying out at alarming rates. Increasingly, the oil-rich Persian Gulf states are depending on desalination for water security. Only Iran and Turkey have been self-sufficient in water.

Once known as the Cradle of Civilization, the fertile soil of the Middle East gave birth to agriculture. Grains thrived in the Fertile Crescent, “the land between the rivers” — the Tigris and Euphrates. With an abundance of barley, beer brewing and production flourished in ancient cities along the Tigris and Euphrates under the auspices of the Sumerian goddess of brewing, Ninkasi, circa 3900 B.C.

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Today, however, most countries in the region are net food importers, especially grains.

Aridity, drought and climate change have contributed to food insecurity and surging food

prices. Water scarcity contributed to the 2011 uprisings in Egypt and Syria, and was embodied in the protesters' rallying cry: "Food, freedom and dignity."

Egypt, for example, imports 90 percent of its wheat from Russia. Its economy was disrupted in 2010, when wildfires and a heat wave in Russia led to a 30 percent increase in Egyptian food prices.

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Additionally, in 2004, the government of then-President Hosni Mubarak privatized the country's water supply — a condition mandated by the World Bank to secure loans. Revolutionary fervor intensified as the government diverted water to wealthy enclaves, while across Egypt access to water became more difficult and prices doubled. Little wonder that some Egyptian commentators called the 2011 Arab Spring a "Revolution of the Thirsty."

Syria was made especially vulnerable after suffering its worst drought in 500 years. Government cronyism and mismanagement of the country's water resources contributed to crop failures and the subsequent food crisis. Between 2006 and 2011, 75 percent of Syrian farms failed, sparking the migration of 1.5 million Syrians to urban centers. The rural-urban migration aggravated unemployment and poverty — a factor in the 2011 social upheaval that has led to endless war and immeasurable suffering for the Syrian people.

Competition for shrinking water resources is an important factor in trans-boundary conflicts and state instability. Trans-boundary water tensions dominate in a region where only 43 percent of surface water originates within a single country, and where water management imparts leverage.

The extensive growth in the number of dams is a symptom of how water has become, for some countries, an issue of national security and a source of conflict. Turkey and Iran

have constructed hundreds of dams to meet their water needs, while neighboring countries have paid a high price.

Conflicts in the Middle East and North Africa center on the region's three major river basins: the Nile, the Tigris-Euphrates and the Jordan. These large river systems are shared by two or more countries.

The headwaters of the Nile are in Ethiopia and central Africa, and merge in Khartoum, Sudan. As a downstream country, Egypt is almost entirely dependent on the River Nile. For centuries, it has used its influence and power to dominate and protect what it sees as its historic water rights. The giant Aswan Dam, completed in 1971, gave Egypt the water governance it desired.

To safeguard control of the Nile, Cairo has, over the years, encouraged conflicts in Ethiopia and Sudan, believing that instability will impede water development projects in those countries. It has, for example, abetted the Somali insurgency of the Ogaden National Liberation Front against the government of Ethiopia in the Front's fight to regain the disputed Ogaden region — the ethnic Somali region of Ethiopia. It did the same in Sudan by aiding the rebel Sudanese People's Liberation Army in southern Sudan in its long war with north Sudan.

The Grand Ethiopian Renaissance Dam — Ethiopia's new hydroelectric mega-dam on the Blue Nile — is causing alarm in Cairo. Ethiopia sees the dam, which will be the largest in Africa, as key to its economic and energy future, but for Egypt it could mean water shortages, as well as diminution of its political clout.

The Tigris-Euphrates River system is a continuing source of strife among the countries that share it. The rivers are vital lifelines for Iraq and Syria. The headwaters are in mountainous southeastern Turkey, an area largely populated by Kurds. Turkey has used its strategic position as an upstream country to engage in power politics, to maintain influence over its southern neighbors, and to manage its Kurdish population of about 15 million.

Turkey's extensive system of about 1,000 dams has created water shortages in parts of Syria, Iraq and Iran. One of Turkey's largest and most controversial dam projects is the Guneydogu Anadolu Project, also known as the Southeastern Anatolia Project. The GAP involves construction of 22 dams along the Tigris and Euphrates in nine predominantly Kurdish provinces.

One of the most controversial of the GAP dams — the Ilisu Dam — threatens to reduce downstream water flows and cause ecological damage to the Tigris River basin. Its reservoir will flood rural villages, forcing thousands to relocate without compensation — the majority of whom are ethnic Kurds. It also will drown Hasankeyf, believed to be one of the world's oldest cities.

The Kurds contend that Ankara's dam projects are meant to destroy their Kurdish identity and weaken the outlawed Kurdish Workers' Party — committed to an independent state within Turkey. The dam will flood the canyons where the PKK mobilizes, making the terrain impassable by foot.

Syria, Iraq and Iran are troubled that the Ilisu will reduce river flows, leading to further soil erosion, increased salinization and water refugees. The Ilisu will reduce water to Iraq by approximately 56 percent, threatening the very existence of its southern marshlands.

Iran's dams — more than 600 — also have the potential to trigger transboundary discord. Projects such as the Daryan, a mega-dam on the Sirwan River, a tributary of the Tigris, will decrease the water supply to Iraq's Kurdistan region by 60 percent.

Iran's government is beginning to realize that poor planning and years of drought have rendered many of the dams useless, with many contributing to environmental damage. Khuzestan, for example, an oil-rich Iranian province on the border with Iraq, literally has become a wasteland. Khuzestan's water supply has been reduced by two-thirds largely because of dam construction on the Karun River. As the river and wetlands dry up, farmers have fled to cities in search of employment. The 2017-18 protests across Iran began over high food prices and unemployment, mirroring the migration crisis and rebellion in Syria.

Nearly 96 percent of Iran is suffering from different levels of prolonged drought, and its nine major cities, including Tehran, already are struggling for potable water. Any disruption becomes a cause for alarm, as witnessed by recent clashes in Isfahan over water shortages.

Afghanistan's construction of the Kamal Khan Dam on the Helmand River has raised dread in Iran. The dam would restrict the Helmand River's flow and could destabilize Iran's restive southeastern provinces — a poor, Sunni-majority area.

Water scarcity has always plagued riverless Libya. However, in 1983, Libyan leader Muammar Gadhafi initiated one of the world's largest irrigation and engineering projects,

with the goal of bringing drinking and irrigation water to cities and farms across Libya. The discovery in the 1950s of a vast reservoir of fresh water in an aquifer deep in the Sahara Desert — the Nubian Sandstone Aquifer System — spurred development of the massive irrigation system Qaddafi named the Great Man-Made River.

The vast network of wells and underground pipelines was 70 percent completed by the time Gadhafi was brutally toppled and political violence began in 2011. Inexplicably, NATO planes bombed the GMR water system as well as a pipe-making facility at Brega in July 2011. Amid the chaos of civil war, the GMR has suffered damage. The destruction has threatened water shortages for a majority of Libya's 6.4 million people, whose standard of living had begun to improve before the NATO bombing.

The politics of water has always fueled the wars between Israelis, Palestinians and their neighbors. Confiscation and control of the Syrian Golan Heights, the West Bank and Gaza water resources is a defining element of the Israeli occupation, and a fulfillment of early Zionist ambitions. To make peace, Israel would have to abandon control of the Jordan River, the Sea of Galilee, access to the Dead Sea, and the West Bank's lush aquifers.

Israel's 19th century Zionist founders were mindful that their dream of a future homeland in Palestine was sustainable only if they acquired the Negev Desert and all the water resources of Palestine and parts of Jordan — which meant control over the headwaters of the Jordan-Yarmouk River system and the Litani River in Lebanon.

Soon after 1948, Israel set in motion its plans for dominance of the area's water resources. Construction of the National Water Carrier — a system of tunnels and canals intended to transport water from the Upper Jordan River to the envisaged settlements in the Negev and coastal areas — began in 1953. In 1963, Israel began pumping water from the Sea of Galilee into the NWC, posing a grave threat to Syrian, Lebanese and Jordanian water resources. In 1964, Syria reacted by attempting to divert water into its own territory.

In his memoirs, Ariel Sharon, the Israeli general and former prime minister, revealed that the 1967 war was launched in response to Syria's plan to reroute the headwaters of the Jordan River. Israel attacked construction sites inside Syria that same year, setting off the 1967 Six-Day War.

Israel declared the water resources of the occupied Golan Heights, the West Bank and the Gaza Strip to be property of the state, putting them under complete military authority. By annexing the Golan Heights, Israel secured direct dominance over the headwaters of the Jordan River, fulfilling earlier Zionist designs.

In the West Bank, Israel's water company, Mekorot, controls the water infrastructure and groundwater resources there, forcing Palestinians to rely on it for their water needs. Mekorot routinely reduces Palestinian supply, and sells Palestinians their own water at inflated prices.

More than 200,000 Palestinians in the West Bank have no access to piped water systems. Palestinians cannot drill for water, and cannot build or rehabilitate any water structure without permits from the Israeli military authorities, which are virtually impossible to obtain. Water is withheld from Palestinian communities, particularly in areas scheduled for settlement expansion, to provoke displacement. There is little water for human consumption, let alone to irrigate the few remaining Palestinian fields not yet confiscated.

From its founding, Israel has coveted the water of southern Lebanon — the Litani River and Shabaa Farms. Historical records from the 1950s indicate that Moshe Dayan, then chief of staff of the Israel Defense Forces, and others favored annexing southern Lebanon up to the Litani River.

To control the Litani River, Israel invaded southern Lebanon in 1978 (Operation Litani) and again in 1982. Israel finally withdrew from southern Lebanon in 2000 under pressure from Hezbollah. Israel's determination to eventually capture the Litani, and retain control over the Shebaa Farms in southern Lebanon continues to inflame unrest with Lebanon.

Water scarcity in the Middle East and North Africa is compounded by the horrific environmental damage caused by decades of war. Much of the region's soil is saturated with lead from munitions, whose accumulation is negatively affecting water quality.

Maintaining an adequate supply of clean water has become the region's most pressing economic and security challenge. The acuity of the problem is reflected in the 2010 U.S. State Department declaration that it was upgrading water scarcity to "a central U.S. foreign policy concern." Treaties to protect shared water systems and shared groundwater are urgently needed. Yet, this century has not produced a single new water-sharing treaty.

The region's arid climate and water paucity are making living very harsh. In addition, the region has suffered profoundly after decades of drastic change set off by U.S. invasions of Afghanistan (2001) and Iraq (2003), subsequent social unrest, toppled rulers, violent insurgencies and the breakdown of state institutions. The chaos and weakened power centers have made it all the more difficult to respond to the dangers of a hotter and drier environment.

Just as water knows no political or cultural boundaries, the region's leaders must realize that water does not belong to any one state, that access to clean water is a fundamental human right and a public trust to be protected. The crucial issue for the Middle East and North Africa is whether they will see dwindling water resources as a cause for competition, leading inevitably to conflict, or as a cause for cooperation, leading to peace.

The willingness to think beyond political boundaries and narrow self-interest to a future based on interdependence will govern the region's future.

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