BLEED DRY

HOW WAR IN THE MIDDLE EAST IS BRINGING
THE REGION’S WATER SUPPLIES
TO BREAKING POINT.
AN ICRC REPORT.
BLED DRY
HOW WAR IN THE MIDDLE EAST IS BRINGING
THE REGION’S WATER SUPPLIES
TO BREAKING POINT.
AN ICRC REPORT.
Even without recent droughts and ongoing conflicts, many Middle Eastern states would be struggling to meet the basic water needs of growing urban populations and demand from rising food production.

But the conflicts in Syria and in Israel and the Occupied Palestinian Territory, as well as the aftermath of conflict in Lebanon and nearly three decades of war and sanctions in Iraq, have helped push the region’s water resources and delivery systems close to breaking point, according to the International Committee of the Red Cross.

Throughout the Middle East people are suffering from severe water shortages, which not only hinders agricultural production but also places limitations on domestic supply. The rising violence of the past few years and record-low rainfall have made access to an adequate quantity and quality of water increasingly difficult. In Syria for instance, the combined effects of a protracted conflict and consecutive drought years have hit many people very hard.

Many of the aging water supply, sanitation and electrical systems that service the region’s growing population were already struggling to keep up with demand even before the conflicts began. Now with more than 7.5 million people displaced within Syria and some 4 million seeking safety elsewhere (mostly in neighbouring Iraq, Jordan, Lebanon and Turkey), along with another 2.5 million displaced due to fighting in Iraq, already fragile water systems in communities hosting the displaced people are being pushed to the limit and water quality continues to deteriorate. In Yemen dwindling water supplies and years of civil war have had serious effects on food production and the local economy.

“In countries like Iraq, Syria, Jordan, Lebanon, Yemen, or in the occupied Palestinian territory (East Jerusalem, West Bank and Gaza), a lot of the infrastructure is very old,” says Michael Talhami, ICRC Regional Water and Habitat Advisor for the Near and Middle East. “And because of prolonged periods of conflict, or in some cases sanctions, or due to a lack of investment, the necessary maintenance or rehabilitation of these municipal systems have been neglected. Many of these water systems, therefore, are extremely inefficient — a lot of water is simply lost due to leakage in the water supply system.”
Heavy fighting using high-intensity, explosive weaponry means that many water, sanitation and electrical systems have suffered regular and serious damage. This has meant that access to water has continued to decrease both in terms of quantity and quality. The rate at which water is lost due to damage to these systems continues to increase in many cases. Thus, even more of this precious resource is squandered, while waste water treatment is often forgone.

The cost of water is also rising in many cases. This is due either to municipal service providers having to run generators to make up for the lack of access to the electricity network. Or it is the result of people having to purchase water from private vendors who sell water from trucks.

The ICRC has also observed a disturbing trend in which water supply, sanitation and electrical infrastructure are being directly targeted by warring parties. In other instances, parties to a conflict that have control over essential service infrastructure are using access to water and electricity supply as tactical weapons or as bargaining chips in negotiations.

“Using access to water as a tactic or weapon during conflict, or targeting water or energy facilities, creates immediate and long-term, negative impacts on public health for already very vulnerable populations,” says Robert Mardini, ICRC’s head of operations for the Near and Middle East.
“Such attacks are particularly harmful because water, sanitation, and energy supplies are intimately interconnected. So an attack on an electrical station, for example, could have an impact on sewage treatment, water availability, the quality of available water, or the functioning of health facilities. If this trend continues, the humanitarian community will not have the capacity to meet the populations’ needs by substituting services or by continuing to offer quick-fixes.”
LONG-TERM HEALTH AND HUMANITARIAN CONSEQUENCES

All these trends have devastating consequences for people who live in areas where few alternatives exist for gaining access to a sufficient quantity and quality of water. In many cases the arrival of large numbers of refugees or internationally displaced persons has worsened an already existing water scarcity crisis.

Many Syrian refugees, for example, have had little choice but to gather in camps or in host communities where water resources were already scarce, of low quality, or expensive. In some cases, such scarcity is one of several issues creating tensions between the displaced and those hosting them, while in other cases it adds to mounting social grievances for which local authorities or government are blamed.
The challenges are common to most countries of the region, particularly those now coping with expanding refugee populations or large movements of people within their borders due to fighting. Here are some of the other main issues that require immediate international attention and support:

- Municipal service provision in host communities is severely strained and already scarce water supplies are stretched to the maximum.

- The increase in demand for water has resulted in over pumping, which has in turn led to declining water table levels, higher pumping costs and increasing salinity.

- The size and scope of urban water supply, sanitation and electrical systems requiring maintenance and repair have greatly increased. These large systems demand greater investment of time and resources to maintain, during times of stability and of conflict. At the same time in protracted conflicts there is all too often a brain-drain of skilled staff.

- Energy shortages, intermittent supply and severe fluctuations in the voltage of the power supply place significant constraints on the operation of municipal water and sanitation systems. Therefore, less drinkable and domestic (household) water is available and less wastewater is actually treated.

- Lack of adequate power supply means local authorities must increasingly resort to using generators, which raises the costs of water. As municipal services decline and economic hardship sets in during prolonged periods of conflict, people tend to forgo payment for such services as water, sanitation and electricity. As a result service providers have less revenue to make necessary repairs and perform routine maintenance.

- Growing household (or domestic) water consumption by the region’s rising population has meant more water is diverted from the agricultural sector, which is already under threat due to conflict. This leads to over-extraction of water resources to meet the demands of agricultural and domestic use. This damages the sustainability of water resources. Consequently many Middle Eastern countries are increasingly reliant on importing food commodities, leaving local residents and refugees more vulnerable to fluctuations in international market prices.
There is a general lack of respect among warring parties for the protected status of water installations. The ICRC has observed a troubling trend in which water and sanitation infrastructure is being destroyed, either through deliberate targeting, or as a result of collateral damage, as well as in some instances water infrastructure being used as a political or military bargaining chip. International Humanitarian Law clearly prohibits, whatever the motive, the attacking, destroying, removing, or rendering useless of “objects indispensable to the survival” of civilian populations, such as “foodstuffs, agricultural areas for the production of foodstuffs, crops, livestock, drinking water installations and supplies, and irrigation works.”

Fighting poses continuing challenges to our ability to reach the areas needed to ensure access to essential services (water, sanitation and energy) that are critical to maintaining public health.

Support in terms of water, sanitation and habitat is greatly needed in all of the conflict affected countries as well as those countries where people have sought refuge from the conflict in Syria.
WHAT WE CAN DO ABOUT IT
Despite the dire situation, there are positive steps that can be taken:

• With sufficient resources and coordination with local water authorities, considerable improvements can be made to existing urban services (water, sanitation and energy) that could greatly improve access to an adequate quantity and quality of water.

• By working with local partners such as the Red Cross and Red Crescent National Societies, as well as local service providers of water, sanitation and energy in all of the affected countries, the ICRC has made considerable progress in addressing some of the most serious needs, and in developing dialogue with all parties to the conflict.

• There have been numerous cases in which the ICRC has observed that warring parties have respected the civilian infrastructure and proper operation of essential services. This indicates there are opportunities for productive engagement aimed at fostering greater respect and understanding around this issue.

What we are doing about it:
ICRC water-related action in the Middle East by the numbers

9.5 million: Number of people in the region who benefitted from emergency repairs and rehabilitation of water supplies in 2014.

600,000: Number of people in the region who received water delivered by trucks and provided by the ICRC in 2014.

1.1 million: Number of people who benefitted from improvements to water storage or water distribution facilities.
A DESERT REGION WITH A GROWING POPULATION

Nowhere on earth is the intersection between conflict and water more evident than in the Middle East. Even before the conflicts of recent decades, water use was already at unsustainable levels in many countries in the region.

“This is an area that relies a lot on agriculture and food production and demands a lot of water,” notes Guillaume Pierrehumbert, ICRC water and habitat coordinator in Israel and the Palestinian Occupied Territory, who has worked in several countries throughout the region. “It’s not just about the water for drinking, which represents just a small quantity of the needs.”

Over the years the populations of most countries have grown rapidly, while peoples’ expectation about the quality of services has also risen. As it has in other water-stressed regions, this created competition over access to water between sectors (agriculture versus domestic, and/or urban versus rural).

In many water-rich countries, agriculture makes up 80 to 90 percent of total water use. With sufficient water available, they can direct a high percentage of water toward growing crops while still having enough for domestic consumption.

Most water-poor countries, however, can only allocate 50 to 60 percent of their water resources to growing food. “As their populations grew, they either had to re-allocate water from the agricultural sector to the domestic sector to meet the domestic water needs or run the risk of over using their already scare water resources,” Talhami notes.
VIRTUAL WATER
This leaves water-poor countries vulnerable during times of drought and conflict. “Countries in this region have increasingly made up for their water deficit by importing food commodities that are grown with water elsewhere, typically in water-rich countries,” says Talhami. “This is commonly referred to among water experts as ‘virtual water.’”

This trend is aggravated by conflict and climate change in the region. A case in point has been the recent drought, which had a dramatic impact on wheat production in Syria. “Wheat is primarily grown in rain-fed areas in the north-eastern part of Syria,” notes Talhami. Last year, due to conflict and drought, wheat production was low. “This means that Syria could become even more reliant on imported food, and will therefore be acutely vulnerable to any spike in world food prices, which would exacerbate the difficulties many people already face as they try to obtain food at a price they can afford.”

Meanwhile, successive drought, unsustainable water management practices and increased urbanization in countries such as Syria have also placed at risk the sustainability of water resources and the ability to meet the mounting need for both water and food. “As an example, there was a river that used to flow through Damascus, the Barada river, which was feeding the entire city until the 1960s and 70s,” noted David Kaelin, ICRC water and habitat programme coordinator for Syria.

“Because Damascus increased its population even more than the rest of the country, probably 10 times over the past 60 years or so, along with use of this water for agriculture, the river literally stopped flowing,” Kaelin says. “There is hardly any water flowing in the Barada river in Damascus. Almost the entirety of this water was used before the crisis for the population and for agriculture.”

In the meantime, the city’s main wastewater-treatment facility, situated on the front lines between the warring parties, is severely damaged and no longer operating. This greatly enhances the risk of groundwater contamination, which in turn could pose a serious threat to public health.

“So in Syria today there is demographic pressure, a water-scarce environment and climatic events all coming together,” says Kaelin. “And you top it off with a very intense, widespread conflict that touches every part of the country, and what you have is a recipe for disaster.”

The water crisis in Syria is not exceptional in the region. “Water can play an indirect role in exacerbating existing conflicts, tensions or social grievances,” says Talhami. “For instance, during the political upheavals of the so-called ‘Arab Spring,’ water-related issues formed part of a complex set of variables that ultimately lead to the civil unrest.”