YEMEN FORETELLS A LOOMING WATER CRISIS IN THE MIDDLE EAST

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Historically, water has proven to be crucial in the development from nomadic territories to great civilizations. The Nile, the world's longest river, provided ancient Egyptians with the fertile soil and irrigation necessary to build cities in the middle of the desert. Today, however, politics is placing a chokehold on the lifeblood of many societies. The Nile is currently subject to a dispute between Egypt and Ethiopia as the latter fills its dam, which could potentially reduce the downstream flow to Egypt by more than one-third.[1] The two countries are not alone in their struggle over scarce water supply. Governments across the Middle East and North Africa (MENA) region are confronting water shortages, where 11 out of the 17 most water-stressed countries are located.[2]

Prolonged conflicts make it hard for MENA countries to safeguard their water supplies. During conflicts, water facilities may be directly attacked, disrupting access to clean water and sanitation.[2] The ongoing water crisis in Yemen, a country ravaged by a brutal civil war, is a case in point. Sana'a, Yemen's capital, runs the risk of water depletion within the next decade. Airstrikes have damaged water, sanitation, hygiene, and health infrastructures, putting citizens at a greater risk of contracting water-borne diseases. Fighting over scarce water resources has intensified the conflict, leading to a vicious cycle. A study by Sana'a University finds that between 70 to 80 percent of all rural conflicts in Yemen are related to water. Meanwhile, the Yemeni government is so preoccupied with quelling rebellions that it fails to heed the equally pressing issue of water security.

The consequence of such neglect is disheartening. A cholera outbreak has killed 2.5 million Yemenis since 2016, with one person dying each hour from cholera at one point of the epidemic. A lack of safe water and sanitation also causes malnutrition, leaving the population—particularly children—vulnerable to diseases. According to the United Nations Children's Fund (UNICEF), "in parts of Yemen, acute malnutrition rates among children under the age of five were the highest ever recorded in late 2020, with nearly 2.3 million children suffering." What is worse is that children are often the ones who spend the additional time and bear the physical burden of collecting water from distant reservoirs—an arduous task that disrupts their education.[2]

Conflicts aside, demographics and agriculture also play a role in destabilizing Yemen's already precarious water supply. Like most MENA countries, Yemen has a relatively high population growth rate (2.25% in 2020) and heavily depends on agriculture—which in the MENA region accounts for more than 80 percent of water use, 10 percent greater than that of other nations.[4] The intensive irrigation that farming necessitates causes Yemen to consume more water than it can afford. As climate change reduces rainfall and pollutes existing water sources, the government uses the already-limited water reserve to replenish arid lands, further straining the supply of safe drinking water.

Without water reform programs, other MENA countries may soon find themselves in the same predicament as Yemen. The first step should be to decrease the amount of water allocated to agriculture by retaining rainfall water and improving irrigation efficiency. Rainfall water harvesting limits wastage and can be achieved through the construction of dams that guide water flow. Irrigation systems are also prone to wasteful leaks, so countries should invest in replacing outdated pipes and sprinklers to aid in water conservation. This water can then be allocated to the people, who suffer daily from dehydration and lack of sanitation.

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