

The water conflict era has begun

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FEW consequences of climate change carry as much destabilizing risk as reduced access to fresh water. Whereas oil regularly determined wars in the 20th century, access to water is now triggering multiple forms of conflict in the 21st century.

According to the World Health Organization, one in three people globally lacks access to safe drinking water, mostly due to deficits in infrastructure and sanitation in developing nations. The Earth's glaciers — a source of fresh water for at least one-fifth of humanity — are also melting far faster than anticipated, especially given that the planet's seven hottest years on record have all occurred since 2014.

The U.N.'s Intergovernmental Panel on Climate Change predicts more than one billion people could experience severe water scarcity and resulting food shortages before 2050. Recent history has provided a worrying preview of what that type of future looks like.

Soldiers from Kyrgyzstan and Tajikistan at the end of April clashed over a water supply station near the two countries' shared border, leaving several people dead and dozens wounded. Earlier in the month, Egypt's strongman President Abdel Fattah el-Sisi threatened Ethiopia with military action, saying "all options are open" if it continues to fill the massive new Grand Ethiopian Renaissance Dam, which sits on an upstream tributary of the Nile River.

Egypt and its more than 103 million people depend on the Nile for 93 per cent of the country's annual water supply.

Elsewhere, water cutoffs in Yemen in 2009 provoked public anger and rioting. A lethal crackdown on protesters badly damaged the legitimacy of the central government, which was toppled by a Houthi rebel uprising five years later. The country has been mired in a hellish civil and proxy war and a humanitarian catastrophe ever since.

One widely cited study by U.S. economists in 2015 suggests a local temperature rise of 0.5 degrees Celsius is associated with a 10 to 20 per cent increase in the risk for deadly conflict. Nowhere is this playing out more profoundly than in Africa's Sahel region — a semi-arid swath of territory running along the southern edge of the Sahara desert. In October, the U.N.'s humanitarian chief described the region as "a canary in the coal mine of our warming planet."

The gradual climate-change-induced southern expansion of the Sahara is squeezing pastoralist tribes, subsistence farmers and competing ethnic groups into smaller tracts of livable area. The result has been a huge spike in intercommunal bloodshed as communities form armed militias to fight for dwindling land and water resources in spaces that are virtually ungovernable.

U.N. officials last month warned that 29 million people across six countries in the region require aid and assistance due to the convergence of climate and security problems, which include terrorist groups linked to al-Qaeda and the Islamic State.

Climate change is also an underlying factor fueling irregular migration across the southern U.S. border, an issue that continues to polarize American society. Over the past decade, migrant flows have morphed

from predominantly working-age Mexican adults to now mostly entire families from Central America fleeing not only murderous gangs and corrupt governments, but disappearing livelihoods as small-scale farms are being wiped out by more intense hurricanes and reoccurring drought.

A nightmare water-conflict scenario also remains between nuclear-armed neighbors India and Pakistan. The two countries have a water-sharing agreement dating back to 1960, but reduced waterfall and flaring tensions in the Kashmir region — a disputed territory partially controlled by both countries, and through which a half-dozen major Himalayan glacial rivers flow — are jeopardizing co-operation on water supplies. Between 1950 and 2015, water availability per capita in Pakistan has dropped by almost 85 per cent, and in India by 72 per cent.

Studies have estimated a nuclear war between the two countries could kill between 40 and 160 million people, create tens of millions of refugees and produce a level of nuclear fallout that might disrupt global weather patterns for more than two decades.

The good news is that numerous NGOs and intergovernmental organizations are working to find solutions, such as improving water management systems and developing smarter agricultural and irrigation practices. The World Resources Institute in particular is also developing a global conflict early-warning system to enable governments to better anticipate and avoid conflicts over water.

However, that doesn't change how current and nascent water conflicts are confirming what author David Wallace-Wells says in the opening line of his book *The Uninhabitable Earth*: "It is worse, much worse, than you think."

Even if the world meets its current climate targets, the consequences of climate change will be worse — much worse — than we think.

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