



## AN ANCIENT PRACTICE WITH A NEW FACE

// The Use of Water as a Weapon in Times of Climate Change

Throughout history, state and non-state actors have used their power over water and water infrastructure to demonstrate the power they have to oppress civilians or gain ground in combat. Today, climate change and associated water scarcity make this practice even more effective and harmful. However, the use of water and water infrastructure as a weapon continues to be neglected in both the political and academic arenas. The time is long overdue for decision makers and scientists to raise awareness of and spur action that addresses this phenomenon, but as water becomes increasingly scarce it has become an urgent matter.



*Fighters from the Democratic Forces of Syria take positions at the top of Mount Annan overlooking the Tishrin dam in December 2015. They had captured the dam from the Islamic State, cutting one of its main supply routes across the Euphrates (Photo: © picture alliance/REUTERS/RODI SAID).*

by **Christina Kohler**

The use of water and water infrastructure as a weapon is a type of violence that has long been a part of warfare. It involves the practice of actors directly attacking and destroying wells, dams, reservoirs, treatment plants or pipelines, or manipulating water resources by contaminating them with, for instance, disease-causing agents. By doing so, aggressors use their power over water and related infrastructure to demonstrate their power, oppress civilians or gain ground in com-

bat. History is replete with examples that go back to the era of ancient Mesopotamia. Well known incidents were recorded during World War II in Europe and Asia, where different warring parties repeatedly targeted water infrastructure such as dams as strategic bombing targets. Still, the weaponization of water was long considered an exceptional and rather sporadic event during armed conflicts.<sup>1</sup>

Today, accelerating climate change and the associated scarcity of water has increased the strategic value of water resources and water systems. This makes the practice of using water as a weapon more effective and potentially more popular among state and non-state actors. The Middle East is a region that is particularly marked by water scarcity, although this varies widely depending on the local area. In fact, since 2011, when a mass uprising swept across the Middle East, there have been increasing reports of water being used as a weapon by state and non-state actors in Iraq, Syria, and Yemen. Media reports have included the bombing of water resources by the Syrian government in Damascus in 2017 that cut 5.5 million people off from their water supply. The so-called Islamic State (IS) adopted this tactic as an integral part of its strategy for monopolizing power and establishing a caliphate. In Iraq and Syria, IS used dams, canals, and reservoirs to deny water and energy to regions outside their territories and to flood the route of approaching enemy armies. In the city of Raqqa, IS exhausted water reserves and disrupted distribution networks, forcing residents to use untreated water, which led to the spread of waterborne diseases such as hepatitis A and typhoid. Such use of water and water infra-



*A fighter of the Syrian Defense Forces is overlooking the Assad Lake near Tabqa Dam. In 2017, the Tabqa Dam was also at the center of a conflict between the US-supported Syrian Defense Forces and the Islamic State (Photo: Wikimedia Commons, CC BY 3.0, <https://bit.ly/3l038uG>).*

structure as a weapon extends well beyond the Middle East. For instance, in 2017, Al-Shabab poisoned a well in Somalia, allegedly to deny Somali government forces access to water, ultimately killing 32 civilians who drank from the poisoned well. Various incidents have also recently been reported from the disputed Crimea region.

A large number of examples collected by the Pacific Institute<sup>2</sup> demonstrates that the use of water as a weapon occurs during different types of conflict – including armed conflict, civil war, intercommunal violence, or social conflict – and is carried out by a multiplicity of state forces as well as by non-state actors. Emerging research shows<sup>3</sup> that this practice has already had a devastating impact on vulnerable societies living in drought-stressed regions of Syria. It has even accelerated migrant flows to Europe and beyond. Despite the growing urgency of the problem, the links between water scarcity and the weaponization of water remain largely unexplored, the security implications unknown and the quantitative assessment of the global scale of this phenomenon severely underreported. Scientific research on the links between climate-related water scarcity, peace, and security, is rising. However, such research significantly neglects the role of water as not only a trigger of conflict or cooperation, but also in its use as a weapon. For a long time,

the so-called “water wars” – where water becomes the trigger for conflict or cooperation – had captured all the attention of academics, policy makers, and the media. A case in point is the Nile river and the disputes in that region over infrastructure projects such as dams, irrigation networks, and pipelines among Ethiopia, Sudan, and Egypt. The countries in the basin are heavily dependent on the river, as it is the only major renewable source of water in the area and is thus essential for food and water security and a vital source for hydroelectric power generation.

By contrast, however, in the practice discussed here, water becomes a weapon and water or related infrastructure is used with the specific aim of harming individuals or depriving populations of this natural resource. There is more to this practice than meets the eye: the use of water and water infrastructure as a weapon can destabilize whole societies, as all human life is based on water resources and related systems. Moreover, the links between this practice and looming climate change with related water scarcity bring new dynamics into play.

#### **The links between climate change and conflict**

In many regions of the world water scarcity is a grave problem, affecting the livelihood of millions and leaving populations vulnerable to the use of water and water infrastructure as a weapon. The Intergovernmental Panel on Climate Change predicts that a temperature increase of 1.5 degrees Celsius by 2050 will result in a 243.3 million people, or 4 percent of the world’s population, experiencing new or aggravated water scarcity. Thus, climate change is one important factor – in addition to a growing population, weak institutions, and ineffective governance and distribution of water resources – causing water scarcity. It increases the number of people vulnerable to political actors’ use of water and water infrastructure as a weapon and magnifies the strategy’s impact, making it more harmful and effective.

A broad consensus already exists among scholars that climate change impacts human societies, their security, and ecosystems. However, the question of how climate change can be linked to different types of conflict remains controversial. Two potential pathways are discussed in the literature: accelerating climate change affects the likelihood of conflict directly via physiological and/or psychological factors and resource scarcity or indirectly by reducing economic output and agricultural incomes, raising food prices, and increasing migration flows.<sup>4</sup> The climate’s direct or indirect effect on different types of conflict, however, also depends on context-specific socioeconomic and political factors that intensify or weaken its effects.



Empirical research has long identified climate-related changes in the availability of natural resources as an important factor linking climate change – directly or indirectly – and security. For instance, research shows that countries with high levels of poverty and high dependence on natural resources such as water for agricultural activities are highly vulnerable to climate-related effects, which in turn are often associated with a higher likelihood of conflict.<sup>5</sup> Moreover, weather events such as storms, floods, and landslides can directly cause or increase scarcity that in turn can lead to conflict by, for example, damaging public and private water infrastructure, destroying crops, and killing livestock.

The use of water and water infrastructure as a weapon may account for a distinct mechanism linking climate change and conflict. Actors seek to take advantage of water scarcity by taking into account the water-related vulnerability of populations in their strategy to harm or control people. As a result, the climate influences conflict via the tactical considerations of actors. The practice can be considered a compound risk resulting from climate-related water scarcity. Obviously, empirical data are urgently needed on this mechanism linking climate-related water

scarcity and the use of water and water infrastructure as a weapon.

#### A pressing security risk that must be addressed

Throughout history, the use of water and water infrastructure as a weapon has persistently contributed to the lack of security and deterioration of economic and social well-being of affected populations. Climate change increases water scarcity and is therefore likely to increase the use of water and water infrastructure as a weapon in regions such as the Middle East, where this use is already practiced by state and non-state actors. Or, accelerating climate change may even spread this phenomenon to drought-stressed regions across geographic regions, making it a potent weapon in different types of conflict and warfare. Given such dire prospects, it is urgent that awareness be increased, and action triggered among decision makers in order to foster scientific research on this phenomenon.

Firstly, global awareness on the weaponization of water and related infrastructure needs to be fostered among global governance institutions and national governments. Decision makers have increasingly recognized climate-related security risks as a major

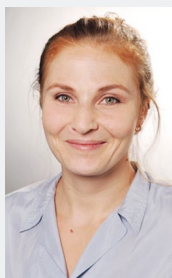


*When water becomes scarce, the civilian population suffers the consequences: often long distances have to be travelled to reach safe water and the use of water as a weapon becomes more likely (Photo: Flickr, United Nations Photo, CC BY-NC-ND 2.0, <https://bit.ly/31Weff6>).*

### The author

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challenge to peace in the coming decades. The topic was discussed in high-level meetings such as the Berlin Climate and Security Conference, UN Arria Formula meetings and open Security Council meetings. The use of water as a weapon should be a subject of discussion in upcoming meetings on climate security. Moreover, resource security has always been a central objective of numerous local, national, and international initiatives, notably the United Nations Sustainable Development Goals (SDGs). Nevertheless, the use of water as a weapon is barely mentioned in SDG 6. All attempts by UN agencies and humanitarian organizations so far to document this tactic as well as related human rights abuses have failed. Consequently, it could also be addressed within the UN by the Climate Security Mechanism that was launched in 2018 and provides integrated climate risk assessments to the UN Security Council and other UN bodies. In addition, the use of water as a weapon should be addressed by national, foreign, and security policy and be integrated into the existing discourse on climate security. For instance, in Germany, climate-related security threats have become a recurring topic on the policy agenda. The country significantly fostered the discussion of climate and security in its current and previous memberships of the United Nation Security Council and raised global awareness of the topic. However, until now the use of water and water infrastructure as a strategic weapon in conflicts has been neglected. In academia, more research on the link between cli-

mate-related water scarcity and the use of water as a weapon is urgently needed. Future research should increasingly be devoted to the compound risks resulting from the nexus between climate change and security, including the use of water and water infrastructure as a weapon. To understand the security implications of the use of water as a weapon and its global scale, actors and victims need to be identified and mapped. Interdisciplinary studies are crucial for determining where climate change and associated water scarcity increases the vulnerability of societies and thus the risk of actors using water as a weapon. Strategies need to be elaborated to address and prevent this phenomenon and support affected populations. Putting this issue on the policy agenda has long been overdue. However, with increasing climate change and associated water scarcity it has become a pressing security risk that requires urgent action.

#### References:

[hsfk.de/spotlight0920-references](https://hsfk.de/spotlight0920-references)



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