

Water as a weapon

Climate change makes perfidious forms of exercising power even more effective and harmful

By Christina Kohler



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Water and water infrastructure have long been weaponised in military conflicts: Wells, dams, reservoirs, sewage treatment facilities and pipelines are targeted and destroyed; drinking water is poisoned or contaminated. By using water as a weapon, actors can show their power, oppress and kill enemies or gain ground in conflict in the name of a political, economic, religious, or social objective.

During World War II, for example, warring parties in both Europe and Asia repeatedly targeted dams in their strategic bombing raids. Nazi Germany deployed this tactic particularly often. They used strategic flooding along the river Ay in Normandy against their opponents and occupied areas like the Pontine Marshes in Italy to punish residents for alleged »disloyalty«. However, the use of water as a weapon was long considered an exceptional and rather sporadic event during armed conflicts (von Lassow, 2020). Climate change and associated water scarcity have increased the strategic importance of water and water infrastructure. This in turn has increased the use of water as a weapon, making this tactic more attractive to actors.

Syria: Government cuts 5.5 million people off from water supply

Since the mass uprisings in the Middle East in 2011, the weaponization of water has been reported more frequently about the use of water as a weapon in the region. Incidents were reported predominantly in Iraq, Syria, and Yemen that had long suffered from water scarcity. According to media coverage, the Syrian government in Damascus intentionally attacked water resources in 2017 to cut 5.5 million peo-

ple off from their water supply. The so-called Islamic State (IS) adopted this tactic as an integral part of its strategy for monopolising 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. Though, such use of water and water infrastructure 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 (<https://www.worldwater.org/water-conflict>) demonstrate 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. Initial findings indicate that this practice is already having devastating effects on vulnerable populations in drought-stressed regions (Kohler et al., 2019; Gleick, 2014). In Syria, it has led to increased displacement from rural to urban areas. 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 under-reported.

Existing research on the links between climate-related water and violent conflicts has thus far focused predominantly on the role of

Drought and famine pose serious threats to human survival in many places in the southern hemisphere and heighten the vulnerability of local populations to resource-related threats. The image shows emaciated cattle in the Maasai territory of Kenya.



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water as a trigger for conflict or cooperation – for example in the case of the ongoing disputes between Ethiopia, Sudan, and Egypt over infrastructure projects like dams along the Nile. 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. In fact, 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.

Interactions between climate change and conflict

Water scarcity is an intensifying threat in many regions of the world. It disrupts the livelihoods of millions of people and makes populations vulnerable to the weaponisation of water and related infrastructure. The Intergovernmental Panel on Climate Change (IPCC) projects that an increase in average global temperatures of 1.5 °C by 2050 would result in new and more severe water shortages affecting 243.3 million people – 4 per cent of the world’s population. Therefore, 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.

IN A NUTSHELL

- Manipulating water resources has long been used by actors to harm their enemies. Recent examples exist in Syria, Somalia, Iraq and the Crimean Peninsula.
- Existing research has long treated this tactic as a rare occurrence. Until today, it has not been addressed in depth.
- Climate change and associated water scarcity make the use of water as a weapon more effective and harmful.
- This tendency must be mitigated with comprehensive and interdisciplinary research as well as increased awareness and appropriate political measures.

A general consensus exists among researchers that climate change impacts human societies. However, the extent of its effects on human security remains controversial (*Friedensgutachten*, 2020). 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 (Koubi, 2019). 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 shown that changes in the availability of natural resources are of great importance as they link climate change to conflict: poor nations that are highly dependent on natural resources including, for example, water for irrigating crops, are *indirectly* very vulnerable to climate events and conflicts are more likely to occur there (Ide et al., 2014). In addition, 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.

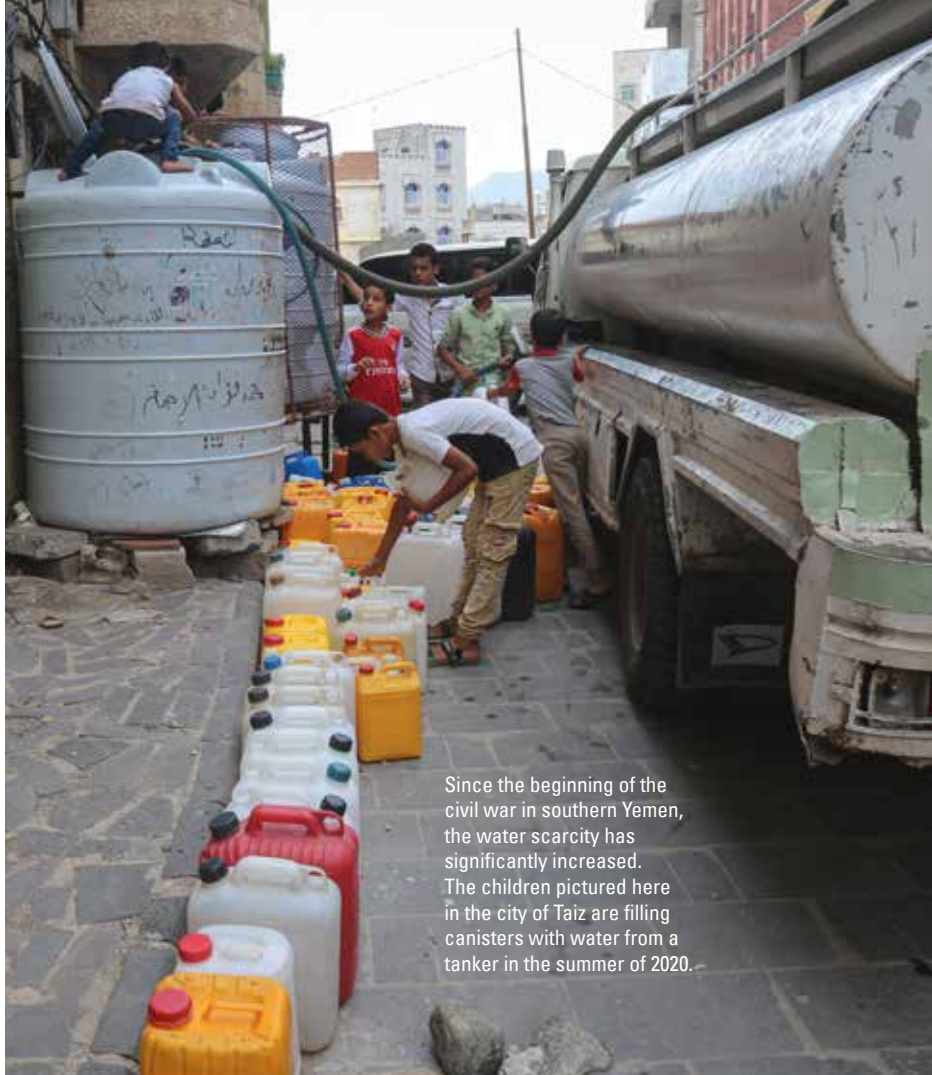
The use of water and related infrastructure as a weapon may point to a distinct mechanism linking climate change and conflict. Violent actors take advantage of climate-related water scarcity by incorporating the increased vulnerability of the population into strategies to harm or control populations. As a result, climate influences conflict via the tactical considerations of actors. As this practice results from climate change-induced water scarcity and can consequently be considered a growing risk, empirical data on this mechanism is urgently needed.

An urgent security risk that scholars should address

The weaponisation of water and water infrastructure has already contributed to human security threats in many regions of the world. It led to the 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. As climate change accelerates, this phenomenon could spread to other regions, especially those affected by drought, and become a powerful weapon in various types of conflicts in the future. 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.

To understand the implications of this strategy for human security and the possible global repercussions, violent actors and their victims must be identified and mapped. Furthermore, it must be examined what role climate-related water scarcity plays in the tactical considerations of violent actors to generate a fuller understanding of the mechanisms at work in the weaponisation of water. Interdisciplinary studies are of central importance here: On the one hand, climatic events such as droughts must be analysed in terms of their manifestations and regional characteristics from the perspective of natural science Earth system research. On the other hand, the analysis of social scientists, economists, and political scientists is necessary to understand the vulnerabilities and resilience of local systems to climatic events. Such a comprehensive approach based on a wide spectrum of interdisciplinary research methods and perspectives may advance understanding on the links between the climate and conflicts. ●



Since the beginning of the civil war in southern Yemen, the water scarcity has significantly increased. The children pictured here in the city of Taiz are filling canisters with water from a tanker in the summer of 2020.



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