

Untangling the complexity of local water management during armed conflict: Comparative case studies from the Middle East

Maintaining access to water in areas of ongoing armed conflict is a complex undertaking, particularly in times of increasingly protracted conflicts and rapidly progressing climate change. While the overall scale of water management challenges in such settings is generally known, particularly among humanitarian organizations, there is still little scientific research on the dynamics that cause much of the complexity. Aiming to address this gap, this dissertation advances the conceptual understanding and empirical evidence on local water management in armed conflicts by systematically analyzing conflict impacts on local water systems and water governance arrangements, as well as local coping strategies to uphold water management.

Following a comprehensive literature review, the dissertation presents three comparative case studies. Each investigates different facets of local water management during armed conflict, drawing from a set of twelve cases across Iraq, Palestine, Syria and Yemen.

First, a systematic mapping of direct and indirect conflict impacts on water management, utilizing the social-ecological systems framework, shows the breath of relevant dynamics and potential feedback loops. It reveals patterns of conflict-affected water management across different countries and types of conflicts, highlighting the crucial role of financial mechanisms in upholding water management throughout conflict and the importance of enforcing international humanitarian law on the protection of civilian infrastructure.

Second, the research zooms in on the topic of urban water services and infrastructure resilience during conflict. It analyzes conflict impacts and coping strategies in five Middle Eastern cities, pinpointing how communities develop decentralized alternative water supply systems that prioritize short-term resilience over long-term sustainability and can come at the cost of health risks and high water prices.

Third, an actor-based analysis investigates key water governance processes in territories under the control of non-state armed groups. It sheds light on the interplay of state and non-state actors in local water service provision, infrastructure development and policy-making, as well as on the role of international organizations as potential gatekeepers of the financial resources and technical expertise needed to effectively engage in water governance processes during armed conflict.

The results emphasize that in order to understand the complexity of water management during armed conflict, we need to look beyond the immediate, easily visible conflict impacts such as infrastructure destruction, to also consider long-lasting reverberating effects that can undermine the functionality and sustainability of a water system long after the conflict subsided. The insights won from this research can support humanitarian programming and policy-making at multiple levels and be an entry point to strengthen the humanitarian-development-peacebuilding nexus. They also have important implications for the application of international humanitarian law on the protection of civilians, civilian infrastructure and the environment, and for ongoing efforts to strengthen the climate resilience of conflict-affected communities.