BRIEF

Three Years into the Water Crisis in Northeast Syria: Main Gaps and Adaptation Efforts Going Ahead

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Although water has traditionally been a scarce resource in Northeast Syria, the past three years have seen a deteriorating crisis with consequences for water, sanitation, and hygiene (WASH), as well as food and livelihoods security.

KEY MESSAGES

- Severe gaps in WASH systems persist. Small communities and informal sites, cut off from water networks, have limited access to safe and affordable drinking water. Populations often rely on untreated water sources and inadequate sewage systems, increasing the risk of waterborne disease spread.
- The water crisis has significantly impacted livelihoods. As farmers in Syria's historical breadbasket contend with higher production costs, this has also led to an increase in consumer prices. Beyond agriculture, all economic sectors have been affected by the shortage in hydropower production.
- Food is largely unaffordable, even as goods are available on markets. Skipping meals and prioritizing food for vulnerable household members have become common coping strategies.

Research points to a century-old drying trend in Northeast Syria related to climate change, which has likely further exacerbated the current water crisis. Climate adaptation should be strengthened through a coordinated response at all levels, from authorities to NGOs, private actors, and communities.

CONTEXT & RATIONALE

The current brief summarizes key findings from the latest situation overview on the Northeast Syria water crisis published by REACH in July 2023. Twelve years into the conflict and ensuing humanitarian crisis, Syria is today also facing severe water shortages with knock-on effects on other needs and sectors.

While water scarcity has historically impacted the region, research indicates the current crisis has likely further been compounded by drying conditions related to climate change. Decreasing rainfall in the past three years appears to be among the main immediate drivers of the crisis, contributing to **20-year record low groundwater levels**[1] and the **lowest flows ever seen on the Euphrates river**[2]. Intensive water usage for agriculture has also contributed to reducing groundwater reserves and the quality of water.

1 Data retrieved from NASA's Gravity Recovery and Climate Experiment (GRACE). https://grace.jpl.nasa.gov/
2 Figures according to WASH Working Group NES. Average of water level by Month and Year. https://app.powerbi.com/

Unequal access to water, public health risks and reliance on humanitarian support

Despite the worsening situation, people's primary sources of water have remained generally the same throughout the crisis. This is most likely explained by the success of humanitarian action, through measures ranging from water trucking to the retrofitting of water stations and the continued supply of electricity through generators. It also suggests that **emergency intervention is still crucial** in facilitating communities' access to water sources.

Larger communities – with at least 5,000 people – reported mainly relying on piped water networks, that generally provide access to more and safer water. Networks are nonetheless **vulnerable to conflict-related shocks, as well as to low water levels and reduced power generation capacity**. The Alouk water station, which normally services one million people in Al-Hasakeh governorate, including Al-Hasakeh city, was largely out of use for a year from August 2022. Since September this year, it has been functioning intermittently, with a recent conflict escalation in October halting its operation again.

Smaller communities – with less than 1,000 people – often depend on **unregulated and expensive private trucking** for drinking water, and on private boreholes for domestic use. Internally displaced people (IDPs) in informal sites also rely on private, or otherwise NGO-provided trucking, and have even reported drinking surface water, with significant associated health risks.

Approx.
22,000
suspected cases of cholera in Northeast Syria[1]

The **lack of adequate sewage management** also further increases the risk of contamination from untreated water**.** Where sewage systems exist, it is still very rare that any form of wastewater treatment is in place. Most of the time, untreated sewage ends up being discharged into rivers, which further raises the prospect of **waterborne disease spread**. The cholera outbreak in September 2022, with almost 22,000 suspected cases[1], highlights how vulnerable people in the region are to contracting diseases from unsafe water sources.

Unaffordable food and declining livelihoods

The drought has also severely impacted the local agricultural and food sectors, with lower yields being reported, increased production costs and more money spent on imported goods. This is doubly affecting populations, as it **diminishes incomes for agricultural workers** – almost a fifth of Northeast Syria's employed population – and makes **food overall unaffordable for consumers**. Coping strategies such as skipping meals, prioritizing food for vulnerable household members or opting for lower quality food have become more widespread. Even as agriculture has started recovering this year, the situation remains precarious.

Beyond agriculture, the drought has indirectly affected economic activity across all sectors through reductions in electric power generation. Because of the region's dependence on the hydroelectric dams on the Euphrates, the river's current record low levels have led to a practical **failure of public electricity networks**. This has pushed people to rely on alternative sources, notably community generators, and sometimes higher-cost options, such as private generators. It has also been reported as an **obstacle in accessing jobs in energy-intensive sectors.**

6 hours or less
of electricity per day
on average for communities in Northeast Syria

1 Figures according to Northeast Syria Health Working Group, REACH (October 2023), NE Syria Cholera Cases Dashboard. https://app.powerbi.com

Looking ahead: What the response says

Research points to climate change and particularly a **long-running drying trend in the region** as factors that could lead to more water crises in Northeast Syria occurring in the future. Drought and other climate hazards will thus require further adaptation.

During three focus group discussions (FGDs), REACH gathered insights from 24 NGO actors operating in Northeast Syria on how to respond to the current crisis and prepare for future extreme conditions. The **humanitarian community has already taken meaningful action to support critical water and electricity infrastructure**. This has included retrofitting water stations to make them operational on lower Euphrates levels, or equipping stations with electricity generators. NGOs have also introduced small-scale sustainable agricultural projects, such as greenhouses or solar panels to power irrigation systems.

Participants in the FGDs made clear, however, that **climate adaptation** measures should be deployed in a **coordinated manner among all relevant actors,** from authorities to affected populations. Some of the main topics and priorities that came out of these discussions included engaging populations on water-saving measures, strengthening cross-boundary cooperation between neighbouring countries with shared water resources, supporting agriculture in reducing water use by means of climate-smart agricultural projects (i.e. rainwater harvesting systems), repairing damaged infrastructure and diversifying away from hydropower towards solar and other energy alternatives.

ABOUT REACH

REACH is a leading humanitarian initiative that collects primary data and produces in-depth analysis to help aid actors make evidence-based decisions in support of crisis-affected people. With this in mind, our flagship research programmes aim to inform the prioritisation of aid according to levels of need - both crisis-level planning and targeted rapid response - as well as decisions around appropriate modalities of aid. Created in 2010, REACH is a joint initiative of IMPACT Initiatives, ACTED, and the United Nations Operational Satellite Applications Programme (UNOSAT).

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