BRIEF

September 2022

Northeast Syria
CHOLERA OUTBREAK

The Outbreak in Syria

Since late August 2022, cases of severe acute watery diarrhoea have been increasingly reported across Syria, concentrated particularly along the Euphrates river. These were later confirmed to be cholera cases.[1] Cholera is a disease caused by bacteria that can be found in faeces, and spreads through people consuming contaminated water or food. It causes severe watery diarrhoea and vomiting which lead to dehydration. If treated immediately, less than 1% of cases result in patients dying. However, if timely treatment is not available, cholera can lead to death within hours in 25 to 50% of cases.[2,3]

The situation is critical in Syria as the local population is facing a severe water crisis due to drought, falling groundwater levels,[4] reduced flow in the Euphrates River,[5] and reduced functionality of Alouk water station.[6] REACH has been monitoring developments in Northeast Syria through regular data collection cycles, remote sensing data, and rapid needs assessments. Relevant outputs include two reports on the water crisis and a dashboard following trends in electricity and water access.

Using this data, this brief aims to highlight factors that may contribute to the spread of cholera and other waterborne diseases in Northeast Syria.

REACH Data Sources in this Brief*

HSOS KI ▲ – Humanitarian Situation Overview in Syria (HSOS) regional key informant (KI) assessment conducted monthly across NES.

Light Profiling ► – Key informant assessment conducted 3 to 4 times a year in informal internally displaced people settlements and collective centres across NES.

Reliance on Unsafe Water

Household access to water has been severely diminished due to the water crises. Groundwater levels have been falling as demand has increased and recharge through rainwater has decreased due to the drought.[4] At the same time, water levels in the Euphrates fell strongly in 2021 and, after briefly recovering earlier this year, have been falling again.[5] Lastly, Alouk water station, which services around one million people in the region,[7] has not been operating since the 9th of August 2022.[6] Hence, KIs in less than a third of assessed communities reported in September 2022 that all households in their communities had access to sufficient water.▲ In informal sites, for internally displaced people (IDP) this rate was even lower at 22% in May 2022.►

The water crisis has not only reduced access to water, but also **increased reliance on unsafe water sources**. Water delivered by trucks from private vendors is particularly important. According to KIs, it was the main source of drinking water for 37% of assessed communities in September▲ (see map 1). For IDP sites in May, 27% reportedly relied mainly on private trucking, though these sites tend to be smaller than average (the average estimated number of households was 84 compared to 118 for sites relying on other sources).► However, the quality of water from private trucks is not monitored and may be unsafe to drink.[8] In fact, the **data shows a correlation between communities relying on water trucking and KIs reporting that water was perceived to be making people sick**. Specifically, KIs in 20% of assessed communities that relied on private water trucking reported water being perceived to be making people sick, compared to 5% in the other communities.▲ For IDP sites, this was 38% for those relying on private trucking and 19% for other sites.►

In a few cases, surface water was reported as the main source of drinking water (notably IDP sites in Ar-Raqqa governorate, see map 2).►▲ Although the prevalence is relatively low, water trucking may also use surface water, which is harder to monitor. The use of surface water is concerning in the context of cholera as it is easily contaminated. For instance, the 2010 cholera outbreak in Haiti, which killed over 9,000 people, was linked to a river that was contaminated with sewage.[9] **The Euphrates is the most important source of surface water in NES, and raw sewage is discharged into it**.[10] Therefore, the risk of spreading cholera and other waterborne diseases through consumption of untreated Euphrates water, is very high. This is made worse by the currently low water levels, which can lead to a higher concentration of bacteria and thus a higher risk of infection.[11]

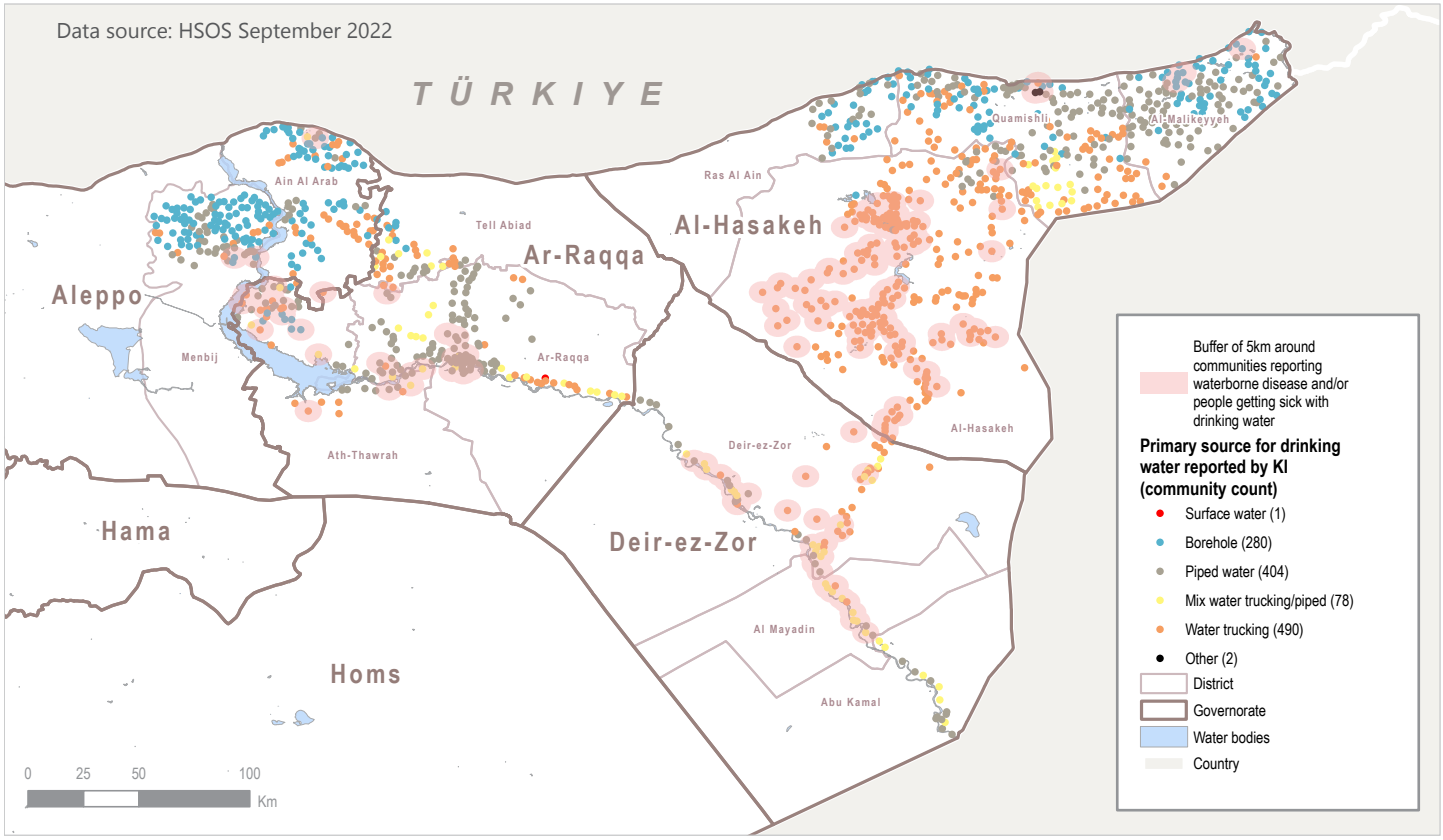
Despite these problems with drinking water, it is not common for households to take measures to make the water safer. KIs in 91% of communities reported households not treating water in September,▲ and 88% in IDP sites in May.►

Spread of Waterborne Diseases

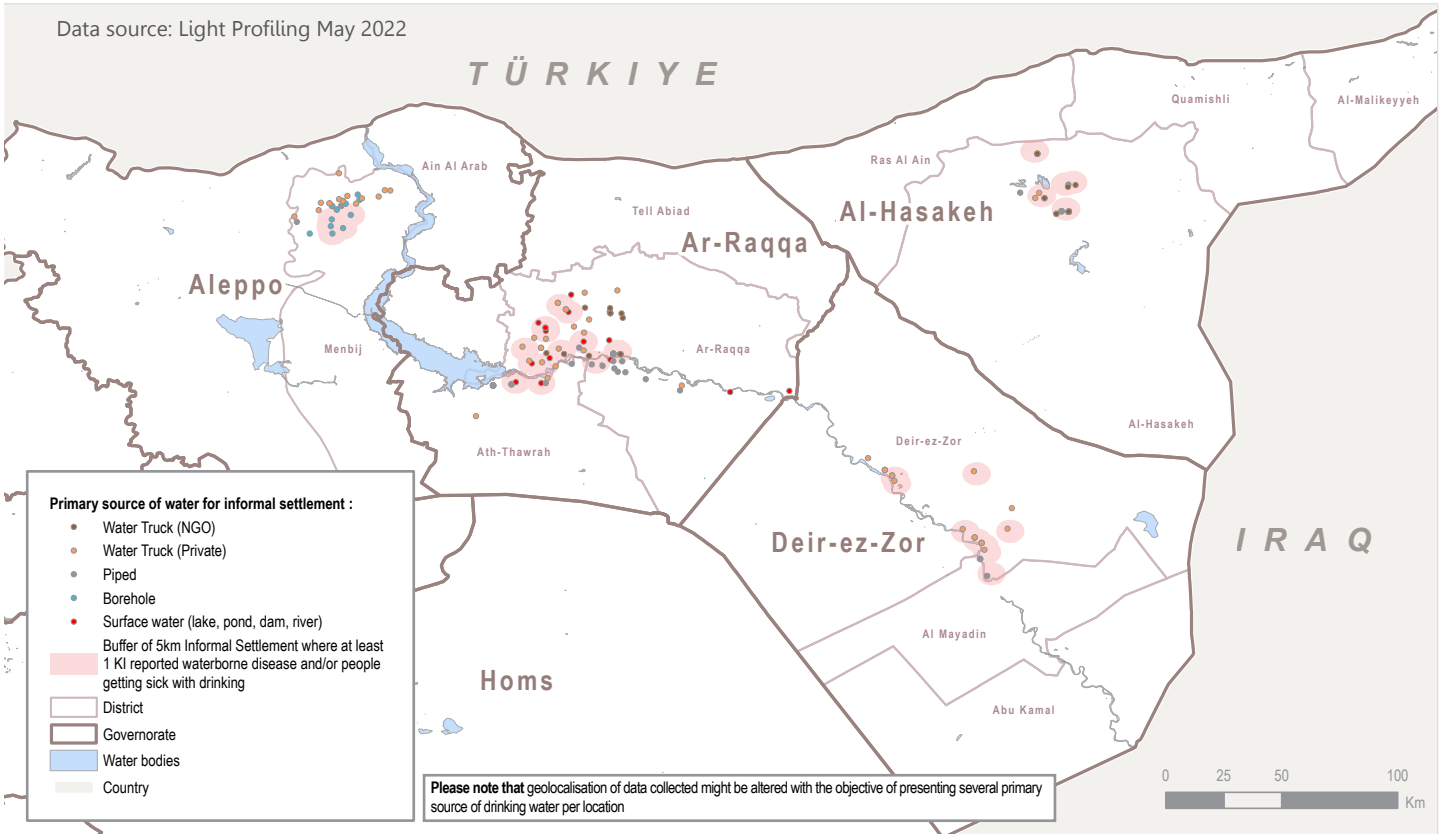
As a result of households relying on unsafe water, **waterborne diseases and diarrhoea are common**. In September, KIs in a quarter of assessed communities** reported cases of waterborne disease, and in three quarters, KIs reported diarrhoea.▲ A similar picture arises from the IDP sites assessed in May – in a quarter of sites, KIs reported waterborne diseases and in 65%, they

REACH Informing more effective humanitarian action

1. Main Source of Drinking Water in Communities and Presence of Waterborne Disease



2. Main Source of Drinking Water in IDP Sites and Presence of Waterborne Disease



REACH Informing more effective humanitarian action

reported diarrhoea. This is partly seasonal, with cases of waterborne diseases increasing during the summer when water needs are greater and access is reduced. However, there was also a substantial increase in acute diarrhoea cases year-on-year (58% increase from August 2021 to August 2022).[12]

The burden of disease is particularly high as access to healthcare remains weak. KIs in almost 90% of assessed communities and 95% of IDP sites reported that **health services were unaffordable**, followed by 78% and 72% respectively where the high cost of transportation to facilities was reported. This is a result of poverty, the lack of funding for health facilities, and years of destruction and a lack of healthcare workers due to the conflict.[13]

These latter factors have also led to a continued lack in available health services. For instance, KIs reported the absence of health facilities (reported by KIs in 41% of communities and 25% of IDP sites), overcrowding (37% of communities, 47% of sites), and the absence or shortage of health workers (10% of communities, 14% of sites). This may limit the health system's capacity to respond to a severe cholera outbreak.

Sewage System in Disrepair

Since cholera is spread through faeces, the issue of wastewater management has become even more urgent. At the national level, at least half of all sewage systems are out of order.[14] At the local level, this translates to **KIs in 79% of assessed communities having reported that the location was not connected to the sewage system**. In informal sites and settlements, the problem goes even further – in over 40% of locations in **Deir-ez-Zor**, KIs reported that there were no latrines available and **over 44% reported open defecation within the site as an alternative to latrines** (for NES overall 11% no latrines and 16% in-site open defecation). Open defecation particularly risks spreading diarrhoeal diseases such as cholera, while also exposing individuals to protection risks.[15]

Even where latrines and a sewage network are present, contamination with faecal matter persists. The most commonly reported sanitation issues in communities in September included soak pits being unsafe (86%) and the sewage system polluting public areas (12%). In informal IDP sites, KIs in almost a tenth of locations reported problems of sewage overflowing in May. This exposes people to higher health risks due to bacteria, viruses, and parasites found in wastewater.

Endnotes

* Two data sources are used in this report. The first is HSOS, which collected **KI data from 1,255 communities (admin 4)** from the 1st to 15th of September 2022. Communities do not include formal camps or informal sites and settlements. In this brief, **these locations are referred to as communities**.

The second data source is the Light Profiling. The last round of data was collected from the 19th to the 23rd of May 2022 from **KIs data in 187 sites and settlements,** such as school buildings or tent sites, where IDPs reside informally. Formal camps are not included in this data collection. In this brief, **these locations are referred to as IDP sites**. Please note that the next round of data collection is currently taking place and this data will be published in October.

Note that due to the KI methodology used, both datasets are only indicative of the situation in assessed locations. Data is reported as percentage of assessed locations, which may differ from percentage of households.

** Assessed communities here only include those where healthcare KIs could be interviewed (306 or 25% of HSOS communities in September 2022)

About REACH

REACH Initiative facilitates the development of information tools and products that enhance the capacity of aid actors to make evidence-based decisions in emergency, recovery and development contexts. The methodologies used by REACH include primary data collection and in-depth analysis, and all activities are conducted through inter-agency aid coordination mechanisms. REACH is a joint initiative of IMPACT Initiatives, ACTED and the United Nations Institute for Training and Research - Operational Satellite Applications Programme (UNITAR-UNOSAT).

Find all the latest REACH Syria information products on our Resource Centre.

Follow REACH on Twitter.