

WHO's Report on water Situation and Diarrheal Diseases in NES

August 2022

Approximately 460,000 people in Al-Hasakah Governorate rely on Alouk water station, which goes out of service frequently, as their primary source of potable water. Additionally, around 500,000 people served by water trucking supplied from station sources, including six camps. Other vital services also rely on Alouk, like healthcare facilities in Al-Hasakah. More than 140,000 IDPs and refugees residing in 11 formal and informal camps with suboptimal living standards. In the absence of reliable clean water, communities have few other options to cover their daily needs of water primarily by purchasing water privately sold at a high cost with potential for contamination and use of unsafe sources. Some news received on households digging their own wells to find water desperately.

Water shortages impose serious public health risks, including outbreaks of water-borne and water-related diseases such as diarrhea, hepatitis, and skin diseases which might eventually further challenge the weakened health system in NES by more than a decade of crisis.

This report summarizes the water testing results and the epidemiological situation of diarrheal diseases in NES and putting necessary recommendations to avoid any water-borne diseases in the area.

I.WASH

Access to safe and sufficient water and adequate sanitation system remain the first line of defense to prevent and control outbreaks. As such, WASH partners support all neighborhoods of Al-Hasakah city by water trucking, disinfection and monitoring the safe water storing and use. Yet, partners collectively are unable to cover the daily needs completely especially with the increasing demand during the summer with extreme rise of temperatures. However, the quality of water for the water trucks and main storing tanks are not monitored regularly. Moreover, disinfecting water trucks seems not possible neither a priority for the private vendors.

Alouk water station in Ras Al-Ain, experiencing frequent interruptions because of different reasons like power outages and political tensions among controlling powers. In 2022, the station stopped working at least four times for extended periods of time. Even when the station is functioning, it operates with limited capacity.

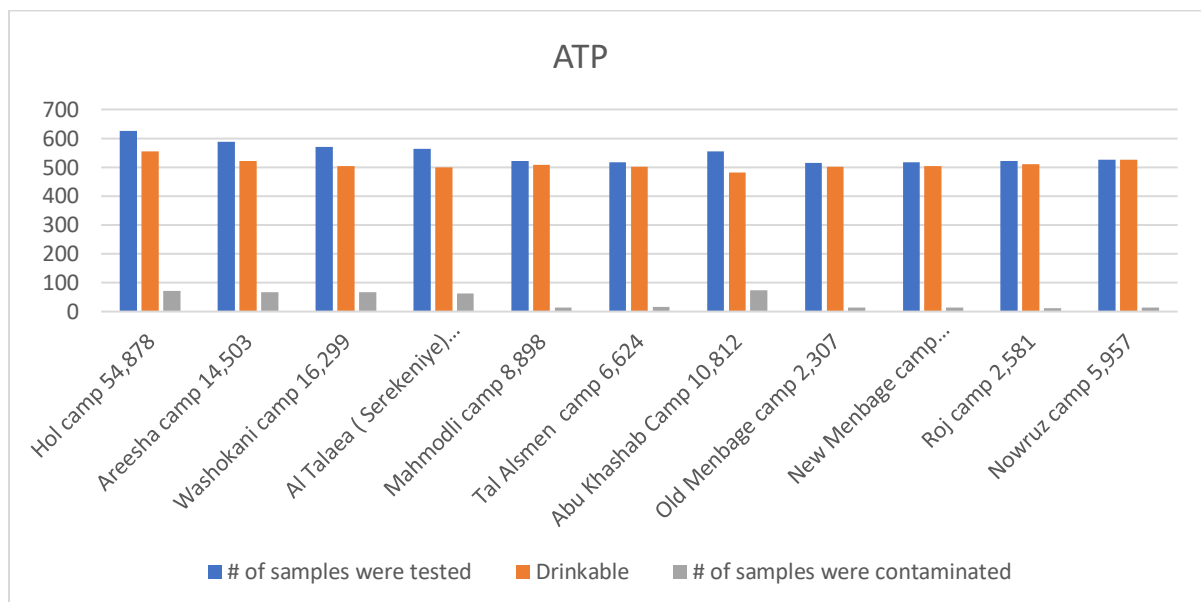
An additional risk is imposed by watering vegetables on the banks of the Gagghagh and Khabour rivers which have every limited level of water and receives mainly the sewage outfalls of Hasakah city. This can be a source of infection transmission for many water-borne diseases.

WHO in coordination with WASH sector conducts tests of drinking water to ensure its safety through a network of trained professionals. This precautionary measure accurately identifies if there is any contamination, source, and level. Result shared regularly with WASH partners biweekly in the summertime and monthly rest of the year. Moreover, WHO recommends necessary actions and follow up measures. In parallel, WHO supports WASH partners with Aqua Tab (Chlorine tablets), and updating the safe drinking water sources.

A. Water quality monitoring in camps NES (2022)

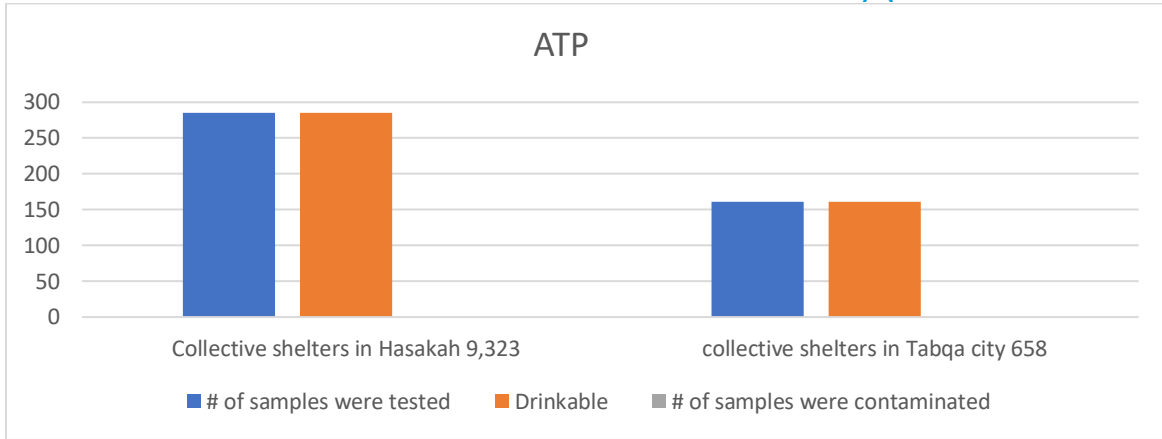
Water quality monitored at camp level carried out as following:

- 11 IDPs camps in NES targeted.
- 6,019 samples were tested
- 425 (7.06 %) samples turned to be contaminated.
- Population covered 140,571
- Field checks showed that contamination of water was on the level of jerrycans and ice samples during (June, July and Aug).
- WASH sector partners in NES have responded to the testing results and WHO's recommendations through:
 1. Cleaning and disinfection of the storing tanks.
 2. Adhering to drinking water sources approved by WHO.
 3. Continuously chlorinating the water.



B. Water quality monitoring in collective shelters

- 43 collective shelters targeted in Hasakah, 285 samples were tested. No sample was contaminated.
- 23 collective shelters in Tabqa city visited, 161 samples were tested. No sample was contaminated.

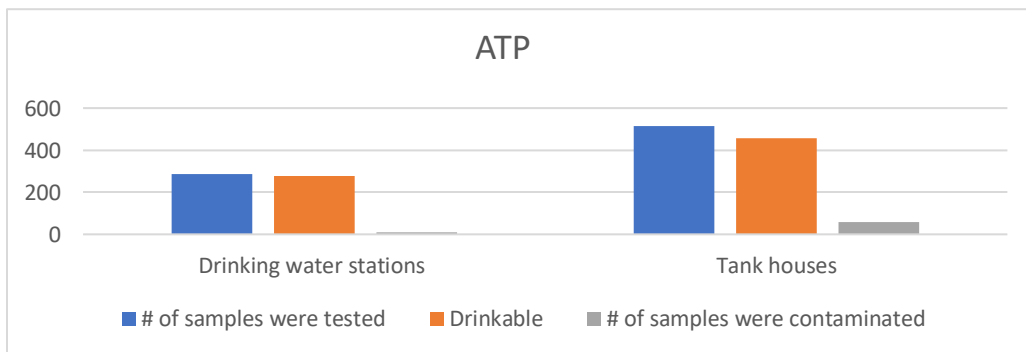


C. Water quality monitoring in Eastern DZ

- 41 drinking water stations visited in rural DZ
- 802 samples were tested.
- 66 samples (8.22 %) were contaminated.
- 648,316 covered population.

Based on field tests, the results showed that contamination happens in few cases at water station level while the majority happens at tank level at houses.

A request was put to the Water Directorate in DZ for the necessity of monitoring and follow-up FRC rate, add of alum and work on repairing malfunctions and maintenance of chlorine injection pumps in all water stations.



D. Water quality monitoring at sources (Boreholes)

- 37 Drinking water sources (Boreholes) tested
- 37 samples were collected.
- 2 samples (5.40 %) were contaminated.
- 900,000 population covered (Hasakah city, Tal Tamer sub-districts, Hol camp, Areesha camp, Washokani camp and Al Talaea (Serekeniye) camp).

Recommendation made to partners to avoid the use of two of the boreholes, one of them (East Shaikh borehole) in Shamouka area and the other in Tel Brake area (Haj Othman AL Hassanee borehole).



E. Ice factories

- 7 ice factories targeted.
- 7 samples tested.
- 0 sample was contaminated.
- 53,478 population covered.

F. Distribution of Chlorine tablets (NaDCC, 1.67gm and 1 gm)

10 WASH sector partners were supported by 2,215,800 NaDCC water purification tablets during 2022, Which is estimated to be sufficient to cover 1,052,189 Beneficiaries until the end of the year.



II. Disease surveillance

Since the beginning of the 19th epidemiological week, 8-14 May, 2022, a rise of diarrhoea cases picked by EWARS run by WHO with the support of health partners in NES. (Figure 1). DZ reported the highest number of diarrheal cases followed by Hassakah then Raqqa. The total number of reported cases seems to be less than the numbers reported last year during the same period. At district levels, Al Hassakah, Kisrah, Al Hol, DZ and Hajin are the top five districts with number of reported cases, respectively (Figure 2).

This increase could be attributed to the acute water shortages in the area and using unsafe water tracking and sources by the affected populations to meet their daily needs.

Governorate	Deir-ez-Zor	Al-Hasakeh	Ar-Raqqa	Total
# Of cases of acute diarrhea 2022	57,587	32,090	9,402	99,079
# Of cases of acute diarrhea 2021	50,854	36,489	10,880	98,223

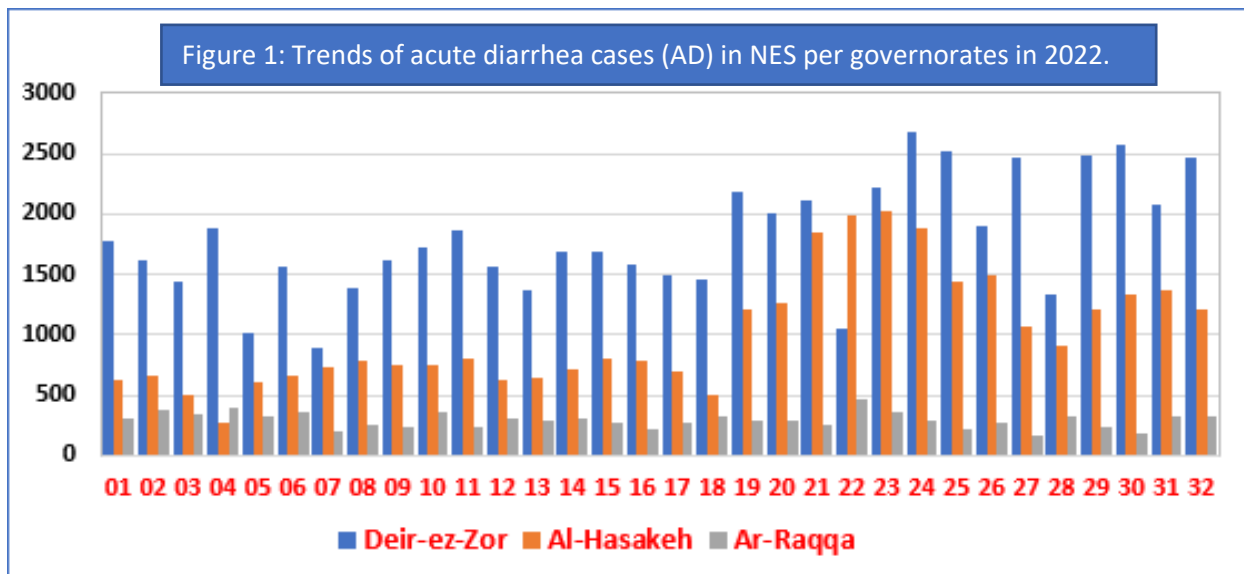
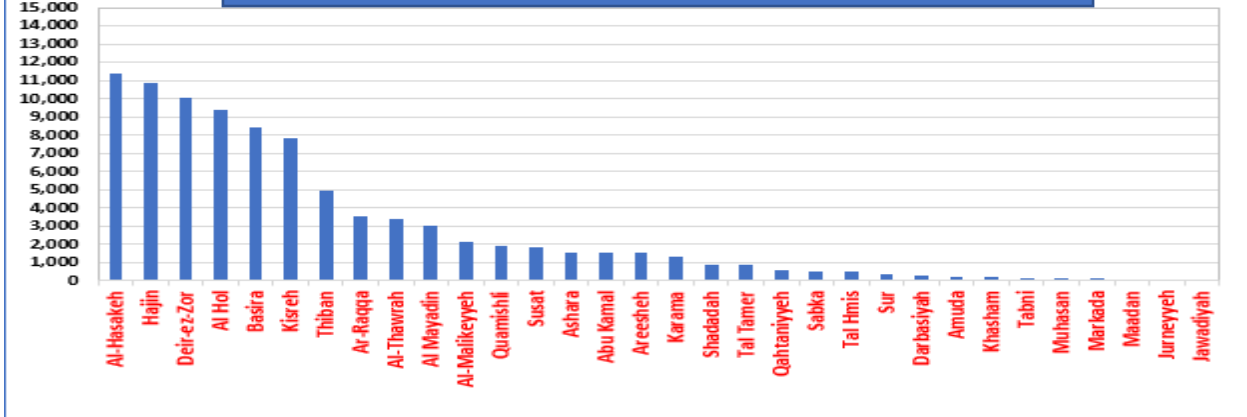


Figure 2: Trends of acute diarrhea cases(AD) in NES by district, 2022



The number of acute diarrhoea cases in Hassakah amounted to 32,090, out of which, 17,025 (53%) are among under 5 age group (Figure 3, 4). Additionally, 511 bloody diarrhoea (BD) cases reported in 2022 and the peak was at week 24 (Figure 5).

Figure 3 :trend of acute diarrheal cases by week in Hassakah 2022

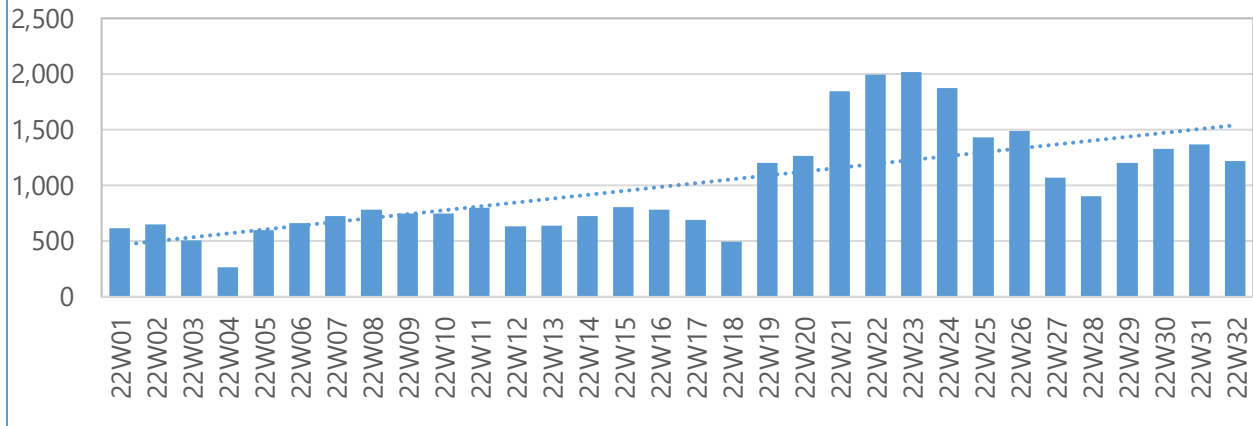
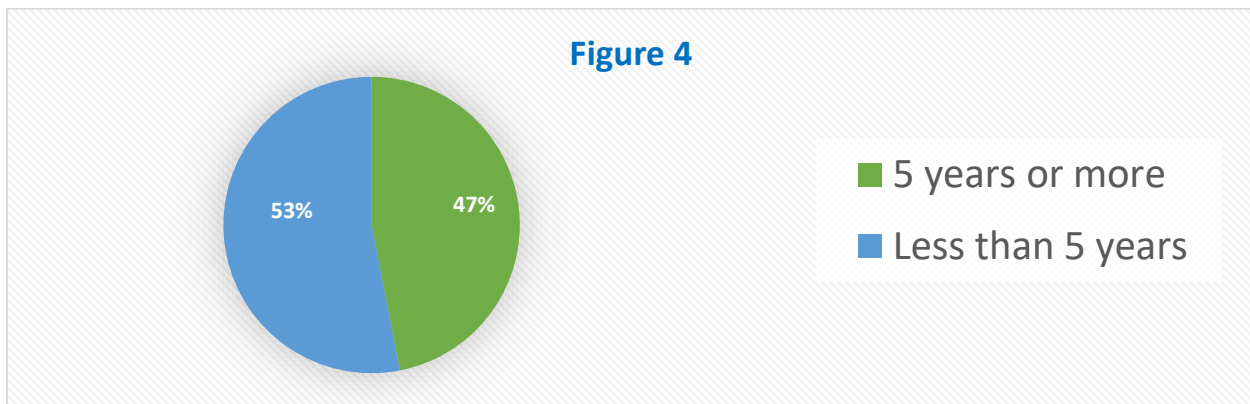
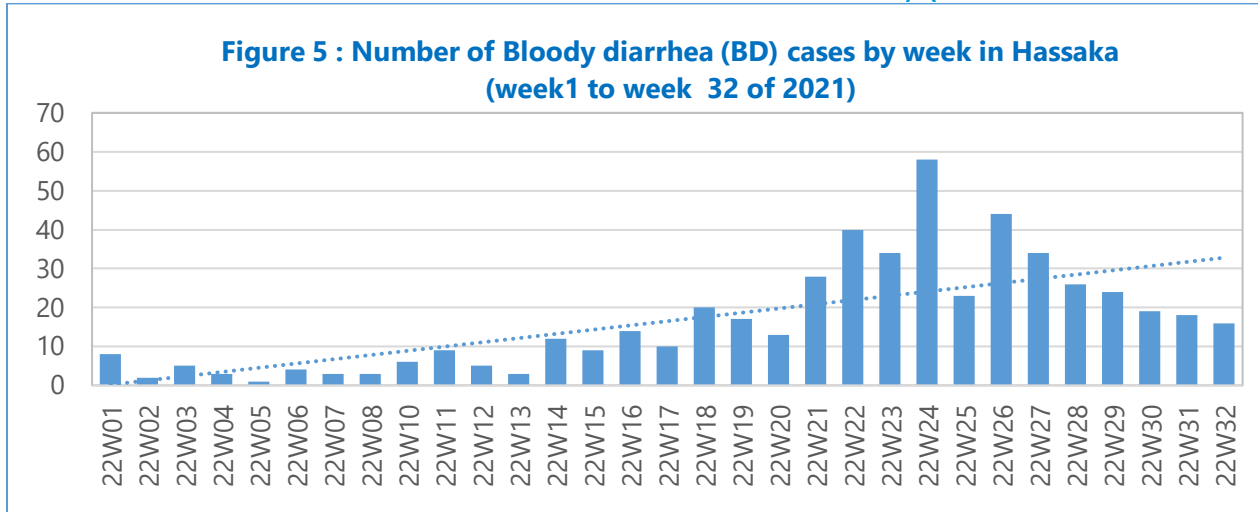
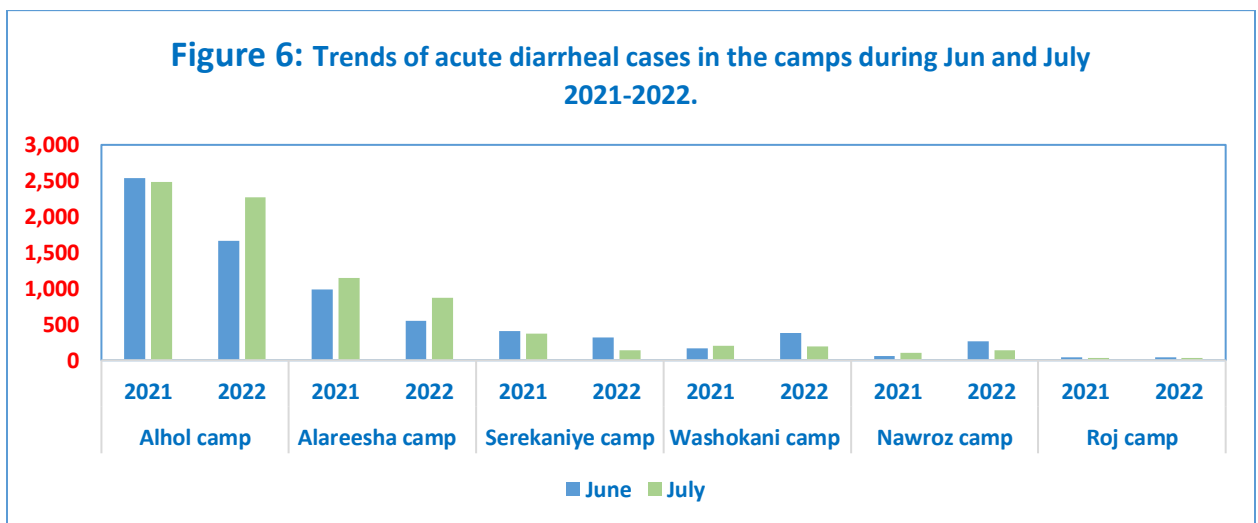


Figure 4





A slight increase of AD cases reported from Washokani and Nawroz camps. While the trends remained less or similar to the trends of last year in the rest of the camps (Figure 6).



Diagnostic Testing capacity for AD in NES

Most cases of acute diarrhea are clinically diagnosed, based on symptoms, signs, and clinical history. Since the majority of acute diarrhea cases are self-limited, diagnostic tests are not systematically conducted. The use of diagnostic tests is limited to patients with AD presenting with signs of severe dehydration, bloody stools, persistent fever, immunodeficient patients, patients on immunosuppressive therapy, or cases with suspected nosocomial infections. Laboratory tests performed for diarrhea patients are:

1. General stool examination
2. Stool culture
3. Routine hematological examinations
4. Serological examinations

5. Rotavirus test
6. Rapid test for Cholera

Admission rates to hospital and prognosis

Diarrheal disease is the second leading cause of death for children under five years of age. However, AD is manageable as outpatient and preventable in case environmental factors controlled.

According to a rapid survey conducted through public and private hospitals and clinics in NES, most of the cases treated as outpatient. A relatively neglectable number admitted into hospitals. No related mortalities reported as of July 2022.

III. Recommendations and action points for WASH and health partners

1. Provision of new jerrycans to families in the camps.
2. Use the aqua tabs for disinfecting the tanks and purification of water.
3. Regular cleaning of water tanks and ensure proper cover for all tanks
4. Chlorinating the water brought from boreholes up to the standard ranges.
5. Adhere to the water sources cleared by WHO.
6. Ensure safe transportation and handling conditions of the ice brought in to the camps.
7. Conducting health awareness campaigns
8. Distribute of hygiene items to all camp and non-camp population.
9. Ensure availability of medical supplies at health facilities including antibiotics, IV fluids, ORS, etc.
10. Monitoring food safety especially at restaurants and other food vendors.
11. Intensify diseases surveillance and conduct refresh trainings of the cases management.